

# MOBILIZING ISLAMIC FINANCE FOR INFRASTRUCTURE PUBLIC- PRIVATE PARTNERSHIPS

REPORT 2017





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## FOREWORD



Governments, the private sector, and the international development community agree that high-quality infrastructure plays a key role in fostering economic growth and supports efforts to reduce poverty. In order to meet the investment needs of the Sustainable Development Goals (SDGs), “the global community needs to move the discussion from ‘Billions’ in ODA to ‘Trillions’ in investments of all kinds: public and private, national and global, in both capital and capacity.”<sup>1</sup> The SDGs expressly seek to “develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.” There is increased recognition of the key role that the private sector can play in partnering with governments to support the efficient and timely provision of infrastructure. The SDGs also recognize the importance of such relationships when emphasizing the need to “encourage and promote effective public, public-private, and civil-society partnerships.”

Islamic finance can play a significant role in supporting inclusive growth. The World Bank Group’s involvement in Islamic finance is directly linked to the Bank’s objectives of reducing poverty, promoting financial-sector development, broadening financial inclusion and building financial-sector stability and resilience in client countries. Estimates from a report<sup>2</sup> jointly published by the Islamic Development Bank and the World Bank suggest that *shari’ah*-compliant assets have grown exponentially in the past two decades, accumulating nearly \$1.9 trillion in assets and spreading across 50 Muslim and non-Muslim countries around the world. Given the growth of Islamic finance, and the fact that its underlying principles support socially inclusive and development-promoting activities, the Islamic financial sector has the potential to contribute to the achievement of the SDGs.

Public-private partnerships (PPPs) can play an important role in closing the infrastructure gap. PPPs are long-term contractual agreements for the delivery of infrastructure or the provision of services in which the private sector bears a significant amount of risk and management responsibility. Given the potential of Islamic finance to support infrastructure development in emerging and developing countries, it is critical to address how to best deploy Islamic project finance in PPP delivery frameworks and how to most effectively identify the relevant policy, legal, regulatory, and institutional interventions that are necessary to successfully attract and expand Islamic financing for such development.

<sup>1</sup> “From Billions to Trillions: Transforming Development Finance Post-2015 Financing for Development: Multilateral Development Finance” prepared jointly by the African Development Bank, the Asian Development Bank, the European Bank for Reconstruction and Development, the European Investment Bank, the Inter-American Development Bank, the International Monetary Fund, and the World Bank Group for the April 18, 2015 Development Committee meeting.

<sup>2</sup> Global Report on Islamic Finance: Islamic Finance—A Catalyst for Shared Prosperity? World Bank and Islamic Development Bank Group. 2017.



*Mobilizing Islamic Finance for Infrastructure Public-Private Partnerships* observes how Islamic finance has been applied in infrastructure PPP projects, what the structural challenges and solutions are, and what can be done to deepen and broaden the use of Islamic finance for infrastructure. The report focuses on two dimensions. The first is enhancing the understanding of the building blocks of Islamic finance as they relate to the financing of PPP projects – paving the way for providers of Islamic finance capital to become partners for infrastructure development. The second, and perhaps less well-understood, is exploring how Islamic finance can fit within a PPP context.

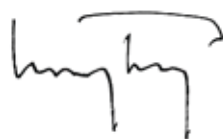
As the international development community continues its efforts to assist governments in delivering high-quality infrastructure, *Mobilizing Islamic Finance for Infrastructure Public-Private Partnerships* aims to raise awareness and to enhance the knowledge of our clients, stakeholders, the private sector, and the public at large on how best to mobilize Islamic finance for PPPs that can successfully support the provision of infrastructure and contribute to the achievement of the SDGs.



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## GLOSSARY OF TERMS

|   |  |
|---|--|
| <b>Concession agreement</b>             | A negotiated contract between a company and a government that gives the company the right to operate a specific business within the government's jurisdiction, subject to certain conditions. <sup>a</sup>   |
| <b>Off-taker agreement</b>              | An agreement that takes place between a producer and a buyer before the construction of a facility that guarantees a market for the future production of a facility. <sup>a</sup>  |
| <b><i>Istiṣnā'</i></b>                  | Manufacturing contract whereby a manufacturer agrees to produce (build) and deliver a specific asset in the future and where the sale price may be spot payable, amortized or deferred. <sup>d</sup>   |
| <b><i>Ijārah</i></b>                    | A lease. More precisely, the sale of <i>manafa'a</i> (usufruct) for a specific rent and for a specific period. <sup>d</sup>  |
| <b><i>Muḍārabah</i></b>                 | A limited partnership whereby one partner (the capital owner) provides capital and the other partner undertakes a business activity (the manager). Profits are shared between them as agreed, but any financial loss is borne only by the capital owner, unless the manager has been grossly negligent or acted in willful default of its duties. <sup>d</sup> |
| <b><i>Muḍārib</i></b>                   | The managing partner in a <i>muḍārabah</i> contract providing work, entrepreneurship, and management. <sup>d</sup>   |
| <b><i>Murābahah</i></b>                 | A sale of goods with an agreed profit mark-up on the cost price. <sup>d</sup>  |
| <b><i>Mushārahah</i></b>                | Partnership whereby all the partners contribute capital in cash or in-kind for a business venture. The partners share profits on pre-agreed ratios, while losses are shared according to each partner's capital contribution. <sup>d</sup>   |
| <b>Parallel financing</b>               | The coexistence of Islamic finance and conventional finance. <sup>d</sup>  |
| <b>Public-private partnership (PPP)</b> | A long-term contract between a private party and a government entity to provide a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance. <sup>b</sup>  |
| <b><i>Shari'ah</i></b>                  | Islamic law. <sup>d</sup>  |



|  |  |
|--|--|
| <b><i>Shari‘ah-compliant finance (Islamic finance)</i></b> | The banking and financial system that offers services and products compliant with <i>shari‘ah</i> . <sup>a</sup>   |
| <b>Special purpose vehicle (SPV) or project company</b>    | This is the corporate entity created to manage the project. It is usually incorporated in the hosting country and in most cases the project company is quoted as the project name. <sup>c</sup>                            |
| <b>Sponsor</b>   | Sponsors are private entities that together have an equity participation in the project contract for greenfield projects, brownfield projects, and management and lease contract. <sup>c</sup>                             |
| <b><i>Sukūk</i></b>  | The equivalent of “Islamic bonds,” but more accurately described as certificates representing a proportionate ownership interest in underlying assets services or other activities that generate a cash flow. <sup>d</sup> |
| <b><i>Takāful</i></b>                                      | Solidarity and mutual support. It is the Islamic version of insurance. <sup>d</sup>  |
| <b><i>Wakālah</i></b>                                      | Agency. A contract whereby a principal appoints an agent to perform a certain task on its behalf, usually for payment of a fee or a commission. <sup>d</sup>   |

*Sources:*

- a. Definitions from the World Bank Group.
- b. Definitions from the *PPP Reference Guide, Version 3.0* (World Bank Group et al. 2017), <https://library.pppknowledge.org/documents/4699>.
- c. Definitions from the Private Participation in Infrastructure database.
- d. Islamic Research and Training Institute (IRTI) Glossary of Islamic Terms Used in the Literature of Islamic Economics, Banking and Finance, as elaborated in *The Global Report on Islamic Finance–Islamic Finance: A Catalyst for Shared Prosperity?* (World Bank and Islamic Development Bank Group 2016), updated for the purposes of the current report with the help of Mohammed Paracha, Head of Islamic Finance at Norton Rose Fulbright.



## ACRONYMS

|               |   |
|---------------|---|
| <b>AAOIFI</b> | Accounting and Auditing Organization for Islamic Financial Institutions                           |
| <b>AsDB</b>   | Asian Development Bank  |
| <b>BOT</b>    | build-operate-transfer  |
| <b>BTO</b>    | build-transfer-operate  |
| <b>CIBAFI</b> | General Council for Islamic Banks and Financial Institutions                                      |
| <b>DFI</b>    | development finance institution   |
| <b>EMDE</b>   | Emerging Markets and Developing Economies   |
| <b>EPC</b>    | Engineering, Procurement and Construction   |
| <b>GCC</b>    | Gulf Cooperation Council  |
| <b>IBRD</b>   | International Bank for Reconstruction and Development   |
| <b>ICD</b>    | Islamic Corporation for the Development of the Private Sector<br>(Islamic Development Bank Group) |
| <b>ICIEC</b>  | Islamic Corporation for the Insurance of Investment and Export Credit                             |
| <b>IFC</b>    | International Finance Corporation (World Bank Group)  |
| <b>IFSB</b>   | Islamic Financial Services Board  |
| <b>IICRA</b>  | International Islamic Center for Reconciliation and Arbitration                                   |
| <b>IIFA</b>   | International Islamic Fiqh Academy  |
| <b>IIFM</b>   | International Islamic Financial Markets   |
| <b>IILM</b>   | International Islamic Liquidity Management Corporation  |
| <b>IIRA</b>   | International Islamic Rating Agency   |
| <b>IMF</b>    | International Monetary Fund   |
| <b>IsDBG</b>  | Islamic Development Bank Group  |
| <b>MDB</b>    | multilateral development bank   |
| <b>MENA</b>   | Middle East and North Africa  |
| <b>MIGA</b>   | Multilateral Investment Guarantee Agency (World Bank Group)                                       |

## ACRONYMS

|             |                                     |
|-------------|-------------------------------------|
| <b>OIC</b>  | Organization of Islamic Cooperation |
| <b>PPP</b>  | public-private partnership          |
| <b>SDG</b>  | Sustainable Development Goal        |
| <b>SMEs</b> | small and medium enterprises        |
| <b>SPV</b>  | special purpose vehicle             |

Note: All dollar amounts are in U.S. dollars.









## OVERVIEW

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Muslims constitute a vast majority of the population in emerging market and developing economies (EMDE) in Asia and Africa. The 57 members of the Organization of Islamic Cooperation (OIC) have a combined population of more than 1.6 billion people (for a list of OIC members, see appendix A). These countries, along with many non-OIC member countries, are facing years of pent-up deficits in infrastructure, inhibiting their ability to exploit their full development potential. In the face of limited public finance, these countries need to attract private capital to build and maintain the critical infrastructure that is essential for sustained economic development. Public-private partnerships (PPPs) have been used successfully to channel private capital for infrastructure investments globally. Many developing countries have implemented PPP schemes to deliver core infrastructure projects and services.

Over the past two decades, Islamic finance has emerged as one of the important sources of finance for a wide variety of infrastructure projects, through both public sector and PPP schemes. Amidst the dearth of conventional infrastructure financing, Islamic finance

offers the prospect of widening the sources of financing needed to meet the massive infrastructure investments in developing countries, including but not limited to Muslim-majority countries.

This report is an attempt to discuss and disseminate information on how Islamic finance has been applied in infrastructure projects through PPP schemes, what the structural challenges and solutions are, and what could be done to deepen and widen the use of Islamic finance for this purpose. This report has two broad dimensions. The first is enhancing the understanding of Islamic finance building blocks as they relate to financing infrastructure PPP projects. Second, and perhaps less well understood, the report explores how the building blocks of Islamic finance can fit within a PPP context, paving the way for providers of the Islamic finance capital to become partners for infrastructure development and thus contribute to its overall global financing pool.

The global need for infrastructure is huge. It extends across all regions, giving rise to a massive deficit in infrastructure investment. Chapter 1 explores the

infrastructure deficit in major regions of the world. It is particularly acute in the region where a vast majority of Muslim population lives—which is one of the contributing factors to the low income level of many of those countries. Many of these countries have started tapping into private capital by introducing PPP projects. Islamic finance can provide a complementary source of financing to these efforts. As noted in a study by the McKinsey Global Institute, while PPPs “account for only about 5 percent to 10 percent of total investment, they are unlikely to provide the silver bullet that will solve the funding gap” (Woetzel et al. 2016). Accordingly, the conditions must be set for PPPs to constitute a much larger share of total investment. This can be done if the readiness of developing countries for PPPs can be improved, and additional sources of finance, such as Islamic finance, can be marshalled for the infrastructure projects.

Chapter 2 provides an overview of the state of global Islamic finance. The Islamic financial market has been growing rapidly around the world. Over the past six decades, the market has reached nearly \$2 trillion, with annual growth nearly at double digits, as reported by the Islamic Financial Service Board (IFSB 2016). The chapter also focuses on the state of Islamic finance among OIC’s 57 members. In tandem with the growth of Islamic finance, a number of supporting institutions have evolved that are playing important roles in setting standards, regulations, policies, and guidelines. These institutions form part of the global Islamic finance ecosystem. This chapter introduces these institutions. As OIC economies continue their above-average growth rates, accentuated by their relatively young yet rapidly growing populations, the volume of the *shari’ah*-compliant financial assets will also grow. The report discusses these motivations as a platform for understanding the potential roles Islamic finance can play for infrastructure PPP projects.

Chapter 3 presents the basics of Islamic finance within the context of a PPP framework.<sup>1</sup> A common feature of all structures of Islamic finance is that no interest can

be charged. Rather, the financier charges a mark-up, leases out an asset, or shares in the profits of the venture by undertaking one of the following trading activities:

- ◆ Entering into sales and purchase transactions
- ◆ Entering into leasing arrangements
- ◆ Participating in equity investments.

While applying Islamic finance instruments to infrastructure PPP projects, financiers need to enter into any or a combination of these three transactions, at the same time creating a structure that aligns with the conventional debt or equity structure. The former ensures compliance with *shari’ah* requirements. The latter conforms to the existing financing frameworks that are being used to finance infrastructure PPP projects, thus allowing Islamic finance to seamlessly integrate with the rest of the capital providers coming from conventional sources.

Several standard Islamic finance instruments are being used to meet the financing needs of infrastructure PPP projects (for definitions, see glossary). These instruments are used, either in isolation or in combination with multiple instruments, to tailor bespoke financing solutions for PPP projects.

*Istiṣnā’* and *ijārah* are the most common forms of Islamic finance instruments for large, longer-term financing arrangements, such as financing for power projects, infrastructure, and transport equipment. These two instruments are used in combination most of the time—*istiṣnā’* for the construction and procurement stage, and *ijārah* for the operation stage. Many power, water, and transport projects have been financed through a combination of *istiṣnā’* and *ijārah* structures. *Istiṣnā’* financing is suitable when it involves construction of assets (such as civil works), whereby the finance parties take construction risks as opposed to sales-based or *ijārah* structures, where the suppliers, not the financing parties, take the risk in constructing or manufacturing assets. Though the Islamic financiers pass the construction risks back to the project company

through an agency arrangement, many Islamic financiers still prefer not to take on direct exposure to construction risks, and follow an *ijārah*-only structure.

Under the *istiṣnāʿ*, the borrower of an infrastructure PPP project agrees to procure/construct assets by a certain date, on behalf of the Islamic financier. The contract price payable by the Islamic financier must be fixed and is paid to the borrower in stages, to match payment obligations that the borrower might incur by any back-to-back construction contracts, such as an engineering, procurement, and construction (EPC) contract.<sup>2</sup> Title to the assets being manufactured or constructed is transferred to the Islamic financier at the end of the construction period. As mentioned earlier, *istiṣnāʿ* is often combined with a forward *ijārah* or a *murābahah* sale.

Under a forward *ijārah*, the project company (as lessee) and the Islamic financier (as lessor) contemporaneously with the *istiṣnāʿ* agreement enter into a lease agreement to lease the assets under construction. During the construction phase, the lessee pays advance rentals to the lessor with respect to the asset that is under construction. The size of these advance rental payments is based upon the drawn-down that has occurred under the *istiṣnāʿ* agreement. Thus during the early stage of project construction, when relatively fewer funds have been drawn on, the advance rental payment will be lower. This payment will continue to increase as the accumulated draw down increases. This approach means that the lessee is, in effect, servicing the advanced funds that have been made available under the *istiṣnāʿ* agreement before the assets are constructed. During the operational phase of the project (the period following delivery of the assets according to the *istiṣnāʿ* agreement) until the final maturity date of the facility, the nature of the lease changes. The forward lease converts into the leasing of the actual assets that have now been delivered. The lease rentals are calculated by aggregating a fixed element (equivalent to principal, in conventional facilities) and a variable element, generally on the basis of a reference such as six-month LIBOR (London Interbank Offered

Rate), plus a margin (equivalent to the applicable margin under the conventional facilities).

Lease rentals can be structured to be made at the same frequency as equivalent repayments under conventional facilities. This is the most common schedule, given that big infrastructure PPP projects tend to be financed by both Islamic and conventional finances.

The majority of transactions using *istiṣnāʿ* and *ijārah* are structured to be on the balance sheet of the Islamic financier. From a risk mitigation perspective, there is a need to ring-fence the liabilities of Islamic financiers. In instances in which insurance is not considered a sufficient mitigant for this risk, it is possible to structure the arrangements so that the Islamic financier acts through a special purpose vehicle (SPV), using structures that are familiar in structured financing transactions.

**Murābahah** is another fairly common form of Islamic finance instrument (although more commonly used in shorter-term financings). This structure involves a contract between the Islamic financier and the client for the sale of goods on a cost-plus mark-up basis —either as a percentage of the cost price or a lump sum. The Islamic financier will purchase the goods as requested by its client and will sell them to the client with an agreed mark-up. The client pays back the Islamic financier over a defined period of time; hence the justification for the mark-up. The profit mark-up must be agreed upon by the buyer and seller before the deal closes and cannot be changed. This conforms to another principle of Islamic finance that there cannot be any uncertainty in Islamic finance transactions.

**Mushārakah** is a partnership between two or more parties that provide capital toward the financing of new or pre-existing projects. The parties share the profits on a pre-agreed ratio, with losses being shared on the basis of equity participation. While used by Islamic financiers in certain countries such as in Malaysia and Pakistan to finance infrastructure PPP projects,



this mode is not very common in other countries for infrastructure PPP projects.

**Sukūk** (sometimes loosely referred to as Islamic bonds) have emerged as one of the most promising developments in the area of Islamic finance. Their application for PPP projects, however, has been limited for the same reasons as any conventional project bonds have also been limited application in infrastructure projects. Essentially, *sukūk* involve the issuance of certificates in the collective legal or beneficial ownership of the asset. The certificate holders receive income derived from the assets of the project. *Sukūk* can be placed on top of any Islamic structure, but traditionally has been combined with the *ijārah* structures. In the context of infrastructure PPP projects, *sukūk* resemble conventional project bonds.

Islamic credit enhancement is an emerging topic and more so in the context of infrastructure PPP projects. Islamic insurance, otherwise known as *takāful*, is based on the principles of mutual insurance, which involves a group of people/parties agreeing to insure one another against given risks. Only a handful of institutions offer *takāful* products for infrastructure PPP projects. The Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC), a member of the Islamic Development Bank Group (IsDBG), is a pioneer and leading the efforts in offering insurance service for infrastructure PPP projects based on *takāful* principle. While the use of *takāful* is recommended, *shari‘ah* scholars allow conventional insurance to be used in infrastructure PPP projects that are financed wholly or partially by Islamic “finance” if Islamic insurance products are not available or are not economically feasible.

Chapter 4 reviews evidence from nine case studies in six countries (Pakistan, Djibouti, Turkey, Saudi Arabia, Jordan, and Malaysia) that illustrate the flexibility of Islamic finance in putting together *shari‘ah*-compliant solutions across different countries and sectors. These cases span power, airports, seaports, health care, and

roads. The countries covered by these case studies vary greatly in terms of their macroeconomic environments, readiness to support PPPs, and institutional maturity vis-à-vis Islamic finance. Yet all of them have applied Islamic finance to infrastructure PPP projects and many of these projects have been financed by both conventional and Islamic financiers. The cases demonstrate that the practitioners were able to create Islamic finance structures that are aligned with the debt financing structure of conventional finance, while complying with *shari‘ah*. This flexibility in structuring various *shari‘ah*-compliant Islamic finance instruments also allows Islamic finance and conventional finance to coexist seamlessly in the same infrastructure project, on equal footing. Although the two facilities are documented separately, the terms and conditions incorporated into the two sets of documents are structured in a way that ensures that both sets of financiers (Islamic and conventional) benefit from the same or very similar commercial terms.

Chapter 4 further illustrates the flexibility and innovation of Islamic finance solutions for infrastructure PPP projects by presenting a number of examples where Islamic finance was deployed in innovative and tailor-made solutions. Some examples are country specific, while others relate to the integration of Islamic and conventional finances in the same infrastructure PPP project.

Overall, the report delves into why and how PPPs can benefit from Islamic financing. The asset-backed nature of Islamic finance structures and their emphasis on shared risks make them a natural fit for infrastructure PPPs. A wide variety of Islamic finance structures are available to provide sufficient flexibility to practitioners to select appropriate financing vehicles. This is a key takeaway from this research and the cases reviewed. The success of PPPs in using Islamic finance has motivated project sponsors (equity investors) in countries such as Bangladesh, Djibouti, Indonesia, Kazakhstan, Malaysia, Mali, Morocco, Nigeria, Pakistan, Saudi Arabia, Turkey, and Uzbekistan to continue to seek Islamic finance, along



with conventional finance, in undertaking future PPPs. The Islamic Development Bank Group (IsDBG) has been pioneer in offering Islamic finance for infrastructure PPP projects. In addition, other multilateral development banks and international financial institutions, including the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA), and the Asian Development Bank (AsDB), have started deploying Islamic finance instruments to support infrastructure projects, thus providing much-needed confidence to commercial lenders to follow suit. For each transaction that takes place, innovations in the structures used contribute to the body of knowledge and experience, and pave the way for future transactions.

Yet Islamic financing is not routinely used in PPPs. More knowledge about Islamic finance is needed within countries seeking infrastructure finance and ways to facilitate the use of Islamic finance instruments to mobilize private investment in infrastructure through PPPs. Given that many stakeholders, including project sponsors and commercial banks, have relatively modest understanding of the application to Islamic finance to infrastructure PPP projects, there is significant room for awareness and knowledge building in this area. This report serves an important milestone in meeting

that goal: as a basis to understand the environments where such transactions have occurred, how those transactions can be structured, and ways they can guide the mobilization of Islamic finance to help bridge infrastructure gaps in many developing countries.

As the chapters that follow will explain, a key feature of Islamic finance is the flexibility of *shari'ah* structures to accommodate needs specific to the country, sector, and project, thus allowing providers of Islamic finance to craft the most appropriate solution. However, this often requires innovative and new structures to be created, within the boundary of *shari'ah* tenets. This may slightly increase costs and the time to deploy them. As more of these deals are undertaken, the additional costs related to structuring the Islamic tranche tend to diminish and even disappear, as practitioners become familiar with the structures and can use past transactions as precedents.

The report ends with a set of recommendations to facilitate the deployment of Islamic finance for infrastructure PPP projects, thus serving both to help developing countries overcome their infrastructure challenges and to further develop Islamic finance within each respective market.





## CHAPTER 1

# THE INFRASTRUCTURE CHALLENGE TO ACHIEVING THE SDGs

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*The huge global need for infrastructure, in all regions, is giving rise to a massive deficit in infrastructure investment. This chapter explores the infrastructure deficit in major regions around the world. The infrastructure deficit in members of the Organization of Islamic Cooperation (OIC) is particularly acute, and is one of the contributing factors to the low income level in many of those countries. Against this backdrop, many countries are resorting to tapping private capital by introducing public-private partnership (PPP) projects. Islamic finance can provide a complementary source of financing to these efforts, given the flexibility in Islamic finance instruments.*

World leaders gathered at the International Conference on Financing for Development in 2015 and adopted the 17 Sustainable Development Goals (SDGs) and 169 related targets (figure 1.1). The 2030 Agenda for Sustainable Development and the Addis Ababa Action Agenda on Financing for Development provide the framework for the SDGs. They are intended to galvanize policy makers across the world through concrete targets for the 2015–30 period to reduce poverty, strengthen food security, improve human health and education, mitigate climate change, construct resilient infrastructure, and meet a range of other objectives across the economic, social, and environmental spheres. The SDGs are ambitious. They will require a significant change in the level of

both public and private investment in all countries. Creative solutions are needed to mobilize private sector investment and innovation, and blend commercial financing with public funding.

Infrastructure is both an explicit and implicit component of the SDGs' goals and targets. Goal 9 of the SDGs, “Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation,”

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The private sector needs incentives to find cost-efficient solutions to solve sustainable development challenges.

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is of particular importance to infrastructure, while investment and scaling up related infrastructure is required to achieve other goals.

The SDGs could provide overarching guidance in articulating and rallying support for infrastructure development policy. Governments can use the SDGs as a framework to foster an enabling environment for infrastructure investment and set important targets to trigger changes in project selection and design. To meet the SDGs, infrastructure investments must be prioritized based on their environmental, social, and economic sustainability. The private sector needs incentives to find cost-efficient solutions to solve sustainable development challenges. Involving the private sector can help not only to increase the stock of infrastructure assets but also to strengthen their resilience, create more sustainable solutions, and improve access to infrastructure services. The SDGs can also help mobilize high-level political action behind various infrastructure projects.

With the vast need for infrastructure comes the question of financing. Traditional public financing is not enough to support the need for scaling up infrastructure investment globally. Policy makers around the world are increasingly looking for innovative solutions to bring more financing into infrastructure development. The Addis Ababa Action Agenda emphasizes the role of PPPs in support of the 2030 Agenda. Moreover, the SDGs may help clarify the goals, targets, and indicators around which a country will frame its development priorities, including the delivery of public services through PPPs. The World Bank Group and other multilateral organizations have been working tirelessly to enhance the economic development of their member countries, thus contributing to meeting the United Nation's Sustainable Development Goal of eliminating poverty by 2030.

**FIGURE 1.1:** The United Nation's Sustainable Development Goals



Source: United Nations, <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>.



One of the most effective ways to help developing countries improve their economic growth rates is by creating conditions within these countries that are conducive to sustained improvements in productivity and economic growth. Both are directly related to improvements in the country's infrastructure. Infrastructure gaps across much of the developing world are significant, have inhibited economic growth, and thus have contributed to sustained, high poverty levels. For the most part, developing economies simply do not have the vast financial resources needed to overcome these infrastructure challenges. As a result, there is a need to mobilize private capital to help bridge these infrastructure gaps.

This report provides background information so that all stakeholders, including governments, the multilateral development banks (MDBs), development practitioners, institutional investors, and financial institutions can better understand how Islamic finance has been emerging as an important source of finance to meet the global quest of financing sources for infrastructure development through PPPs. The report demonstrates

how innovative approaches can bring Islamic finance into the mainstream of financing infrastructure PPP projects. The goal is to move developing countries to a threshold level of development to unleash sustainable growth.

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Emerging economies, including China, will account for 60 percent of the global infrastructure need between 2016 and 2030.

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This report covers two broad dimensions. The first is enhancing the understanding of Islamic finance building blocks as they relate to the deployment of public-private-partnerships. Second, and perhaps less well understood, the report describes how *shari'ah*-compliant solutions fit within a PPP context. It presents numerous examples of ways in which *shari'ah*-compliant financial solutions have been deployed in a variety of contexts, sectors, and partnerships.

## 1.1 THE GLOBAL INFRASTRUCTURE CHALLENGE

Over next 15 years (2016–30), the global economy will need to invest around \$90 trillion in infrastructure assets, according to a recent report by the Brookings Institution (Bhattacharyna, Oppenheim, and Stern 2015). This translates into an annual investment of \$5–6 trillion in cities, transport systems, energy systems, water and sanitation, and telecommunications. This level requires doubling the current infrastructure spending of \$2–3 trillion per year. A similar estimate was put forward by McKinsey Global Institute. The report, *Bridging Global Infrastructure Gaps* (Woetzel et al. 2016), estimates that while the world invests some \$2.5 trillion a year on transportation, power, water, and telecommunications systems, it needs to invest an average of \$3.3 trillion annually just to support currently expected rates of growth. The Brookings

Institution's estimate is higher because it factors in the need for additional investment in infrastructure to fight climate change.

Emerging economies, including China, will account for 60 percent of the global infrastructure need between 2016 and 2030. This group includes many member countries of the OIC.

The developing world has a young and growing population that will further exacerbate the infrastructure gaps—the difference between infrastructure needs and current infrastructure levels. Overcoming underinvestment in infrastructure across the developing world is absolutely needed if the world is to meet the United Nation's Sustainable Development Goals. The

need to fill critical infrastructure gaps has become an increasingly important priority for governments and development organizations, including MDBs, given the implications of underinvestment.

The next few sections highlight the infrastructure deficit in two major regions of the world—Asia and Africa—followed by discussions of specific OIC member countries.

## 1.2 THE INFRASTRUCTURE DEFICIT IN ASIA

Developing countries in Asia will need to invest \$26 trillion from 2016 to 2030, or \$1.7 trillion per year, if the region is to maintain its growth momentum, eradicate poverty, and respond to climate change, the AsDB reports (AsDB 2017). Without investments for climate change mitigation and adaptation, \$22.6 trillion will be needed, or \$1.5 trillion per year (baseline estimate). Of the \$26 trillion estimate (including investments for climate change needs) over 2016–30, \$14.7 trillion will be for power, \$8.4 trillion for transport, \$2.3 trillion for telecommunication, and \$800 billion for water and sanitation.

The \$1.7 trillion annual estimate is more than double the \$750 billion the Asian Development Bank (AsDB) estimated in 2009. While the inclusion of climate-related investments is a major contributing factor, a more important factor is the continued rapid growth forecast for the region, which generates new demand for infrastructure. Currently, the region invests an estimated \$881 billion each year in infrastructure (in the 25 economies with adequate data, comprising 96 percent of the region's population). The infrastructure investment gap—the difference between investment needs and current investment levels—equals 2.4 percent of projected GDP for the five-year period from 2016 to 2020 when climate mitigation and adaptation costs are

incorporated. Without China, the gap for the remaining economies rises to a much higher 5 percent of their projected GDP.

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Developing countries in Asia will need to invest \$26 trillion in infrastructure from 2016 to 2030.

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The Asian Development Bank estimates that fiscal reforms in Asian countries could generate additional revenues equivalent to 2 percent of GDP to bridge around 40 percent of the gap for these economies. For the private sector to fill the remaining 60 percent of the gap—or 3 percent of GDP—it would have to increase investments from about \$63 billion today to as much as \$250 billion a year over 2016–20.

Asia hosts a large number of OIC member countries, including the three most populous—Indonesia, Bangladesh, and Pakistan. All three countries are familiar with Islamic finance and have vibrant Islamic banking sectors. These countries have also deployed Islamic finance successfully to finance infrastructure PPP projects—paving the way for other OIC members in Asia and elsewhere to follow suit.

## 1.3 THE INFRASTRUCTURE DEFICIT IN AFRICA

Both North Africa and Sub-Saharan Africa have huge infrastructure deficits. The infrastructure needs of Sub-Saharan Africa exceed \$93 billion annually, according to a report by the World Bank (Foster and

Briceno-Garmendia 2010). Less than half that amount is being provided, leaving a financing gap of more than \$50 billion annually to fill. The poor state of infrastructure in Sub-Saharan Africa—its electricity,

water, roads, and information and communications technology (ICT) —cuts national economic growth by 2 percentage points every year and reduces productivity by as much as 40 per cent.

Implementing an ambitious program to address Africa's infrastructure needs would cost around \$93 billion a year (about 15 percent of the region's GDP). Some two-thirds of this total relates to capital expenditure, and the remaining third to operation and maintenance. About 40 percent of the total spending needs are associated with power, reflecting Africa's particularly large deficits.

About one-third of the power investment needs (some \$9 billion a year) are associated with multipurpose water storage for hydropower and water resource management. After power, water supply and sanitation and then transport are the most significant items.

Twenty-four countries in Africa, from the North Africa and Sub-Saharan Africa regions, are members of OIC. As the continent is striving to attract private capital to fill its massive infrastructure needs, Islamic finance can play a pivotal role.

## 1.4 INFRASTRUCTURE LEVELS IN OIC AND OTHER DEVELOPING ECONOMIES

To understand the infrastructure challenges within OIC members and other developing countries more broadly, table 1.1 compares the infrastructure ranking

of developing countries and OIC member countries. While OIC has 57 members, data are available for only 38 of them.

**TABLE 1.1: Global Rankings on Infrastructure for Selected OIC Members and other Developing Economies**

|   | All developing economies, except for OIC members |             |              |             | OIC members  |             |              |             |
|---|--|-------------|--------------|-------------|--------------|-------------|--------------|-------------|
|   | Highest rank                                     | Lowest rank | Average rank | Median rank | Highest rank | Lowest rank | Average rank | Median rank |
| Overall infrastructure                        | 26   | 139         | 82           | 81          | 2            | 140         | 84           | 88          |
| Roads   | 19   | 139         | 81           | 84          | 1            | 140         | 83           | 86          |
| Railroad infrastructure                       | 16   | 108         | 64           | 63          | 13           | 107         | 68           | 70          |
| Port infrastructure                           | 7  | 139         | 83           | 85          | 3            | 140         | 80           | 81          |
| Air transport infrastructure                  | 6  | 140         | 82           | 83          | 2            | 139         | 84           | 86          |
| Available airline seat km/week, millions      | 2  | 140         | 82           | 85          | 5            | 136         | 77           | 72          |
| Electricity supply                            | 17   | 138         | 79           | 79          | 10           | 140         | 90           | 103         |
| Mobile telephone subscriptions/100 population | 8  | 140         | 74           | 78          | 2            | 136         | 73           | 85          |
| Fixed telephone lines/100 population          | 7  | 137         | 76           | 74          | 22           | 140         | 95           | 98          |
| Global Competitiveness Index                  | 14   | 122         | 70           | 71          | 14           | 140         | 88           | 97          |

Source: World Bank, based on the World Economic Forum's 2016 Global Competitiveness Report.

Note: Data are available for only 38 of the 57 OIC members. OIC = Organization of Islamic Cooperation. 1 = highest-ranked; 140 = lowest ranked.

The numbers in table 1.1 represent global rankings. An entry of one would indicate that country has the best infrastructure in the world. The higher the number in the table, the lower is the country's ranking on infrastructure and hence the worse is the quality of the country's infrastructure. These measures reveal the extent to which these OIC members are in need of infrastructure investment. On global ranking of infrastructure, the median rank for these OIC members is 88—worse than the median of 81 for other developing countries. As noted, these rankings would be even worse for the sample of OIC members if the 19 OIC members excluded because of lack of data were included. This table indicates that OIC members need significant infrastructure investments in all areas. The lowest ranking for OIC members is in electricity supply, where the median rank is 103, followed by telephone lines, where the rank is 98. With the emergence of mobile phones, the need for fixed lines is diminished, but even here, the median rank is 85. The OIC members ranked as a group do best in railroads, where the median rank is 70, although it remains below developing country ranking of 63.

In addition to the financial resources, these countries also need expertise to overcome their infrastructure challenges. To that end, enabling an environment conducive to PPPs can help. Enabling both PPPs (private sector participation) and Islamic finance would then help bridge infrastructure gaps in OIC members.

Given the extent of infrastructure gaps, governments need to maintain a high priority on infrastructure investments even during times of fiscal uncertainty—that is, at times where governments feel the need to reduce infrastructure spending to finance government budget deficits. Deferring these expenditures increases infrastructure gaps, thus creating the need for higher future infrastructure spending while reducing efficiency and growth associated with larger infrastructure gaps. In addition to mobilizing private capital, governments must become more creative in increasing their funding streams through measures such as increasing user charges, capturing property values, or selling existing assets

and channeling the proceeds into new infrastructure (Woetzel et al. 2016). Funding from both national and subnational governments through bond issuances, as well as the deployment of pension fund capital, should be increased.

In parallel to these efforts, it is therefore essential that policy makers explore using more creative approaches to facilitate the flow of global capital into needed infrastructure projects across the world's developing economies, as well as enhancing the role of the private sector to deploy their needed expertise. There has been a great deal of attention paid to enhancing the role of institutional investors as well as an expanded role for private sector through public-private partnerships. As noted in the McKinsey study, PPPs “will continue to be an important source of financing in the future. But since they account for only about 5 percent to 10 percent of total investment, they are unlikely to provide the silver bullet that will solve the funding gap. Public and corporate investment remain much larger issues” (Woetzel et al. 2016). As such, the conditions should be set for PPPs to provide a much larger share of total investment.

To reap the benefit of deploying PPPs, two separate yet relevant issues are important: preparation of bankable PPP projects and mobilizing additional financing for PPP projects. Preparation of bankable PPP projects is a necessary condition to attract any private capital. Global leaders and development practitioners are paying increasing attention to this area. The need to mobilize additional financing sources makes the case for exploring Islamic finance for infrastructure PPP projects. Islamic finance can offer complementary sources of financing, considering the dearth of financing to meet the global infrastructure deficits.

In order to better comprehend the value proposition of Islamic finance in helping to reduce the infrastructure deficit reduction through PPPs, it is helpful to understand the state of global Islamic finance markets. The next chapter delves into this area.





## CHAPTER 2

# GLOBAL ISLAMIC FINANCE MARKET

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*Islamic financial market has been growing rapidly across the globe. Over the past six decades, the market has reached nearly \$1.9 trillion, with a near double-digit annual growth, as reported by the Islamic Financial Services Board (IFSB) in their latest Islamic Financial Services Industry Stability Report (IFSB 2017). This chapter presents an overview of global Islamic financial market by region and asset class. It also focuses on the state of Islamic finance among the Organization of Islamic Cooperation (OIC)'s 57 members and a number of supporting institutions that are evolving and playing important roles in setting standards, regulations, policies, and guidelines.*

The Islamic finance industry in its modern form is very young. It can be traced back to the first Islamic bank, which was opened in Egypt in 1963. Since then, the industry has grown tremendously. The growth of Islamic finance industry globally has been accompanied by the growth of complementary institutions that all work together to facilitate the growth and standardization of Islamic finance globally. Together, they form the ecosystem for Islamic finance.

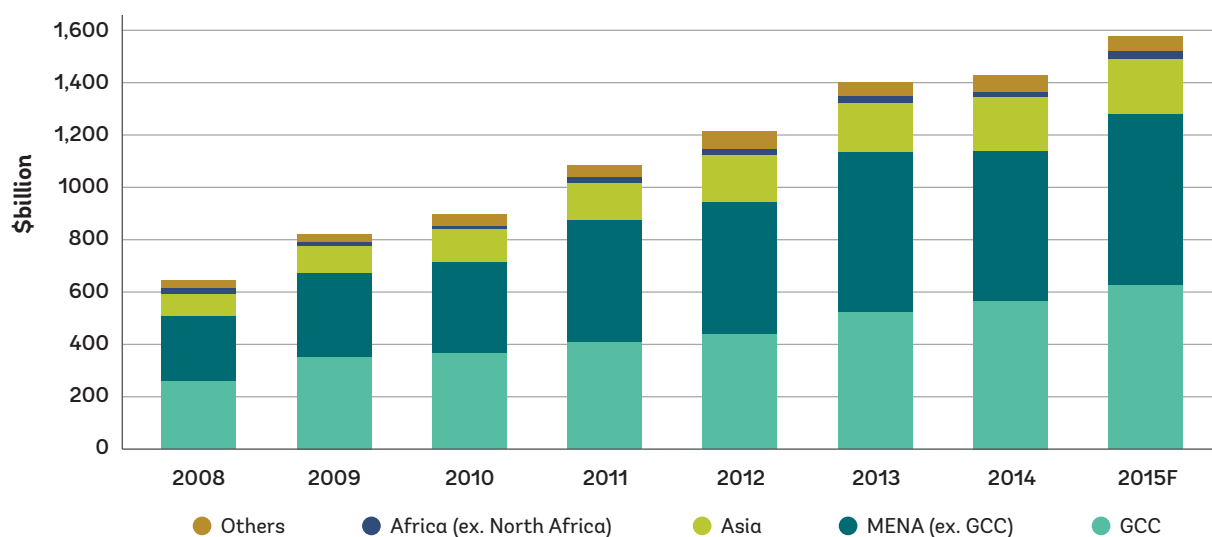
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The global Islamic finance industry reached \$1.88 trillion as of 2015.

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The global Islamic finance industry reached \$1.88 trillion as of 2015. Assets in the Islamic banking industry doubled between 2008 and 2012 (figure 2.1). Growth slowed in 2015–16 due to a slowdown in many key Islamic finance markets, attributable in large part to the fall in oil prices.

As of 2015, the Islamic finance industry was composed of four broad components: Islamic banking assets, which constitute \$1.5 trillion, or 79 percent of the overall market; *sukūk* at \$318.5 billion, or 17 percent; assets of Islamic funds of \$56.1 billion, or 4 percent; and *takāful* (solidarity, mutual support) of \$25.1 billion, or 1 percent. The Gulf Cooperation Council (GCC) (consisting of Bahrain, Kuwait, Oman, Qatar, Saudi

**FIGURE 2.1: Growth of the Global Islamic Finance Market**

Source: IFSB 2016.

Note: GCC = Gulf Cooperation Council; MENA = Middle East and North Africa.

Arabia, and the United Arab Emirates) has the largest share of *shari'ah*-compliant assets, at 42 percent of the global total, followed by the remainder of the Middle East and North Africa region (excluding GCC) at 30 percent, and the rest of Asia at 22 percent. These three regions together account for the bulk of the world's Islamic finance assets, at 95 percent (table 2.1).

In terms of specific economies, the IFSB's 2017 report identifies 12 countries whose Islamic financial sectors

are "systemically important," defined as those where the country's total Islamic banking assets exceed 15 percent of the total domestic banking assets. These 12 countries are the Islamic Republic of Iran, Sudan, Brunei Darussalam, Saudi Arabia, Kuwait, the Republic of Yemen, Qatar, Malaysia, the United Arab Emirates, Bangladesh, Djibouti, and Jordan (figure 2.2). These twelve markets together account for 88 percent (\$1.31 trillion) of Islamic banking assets.

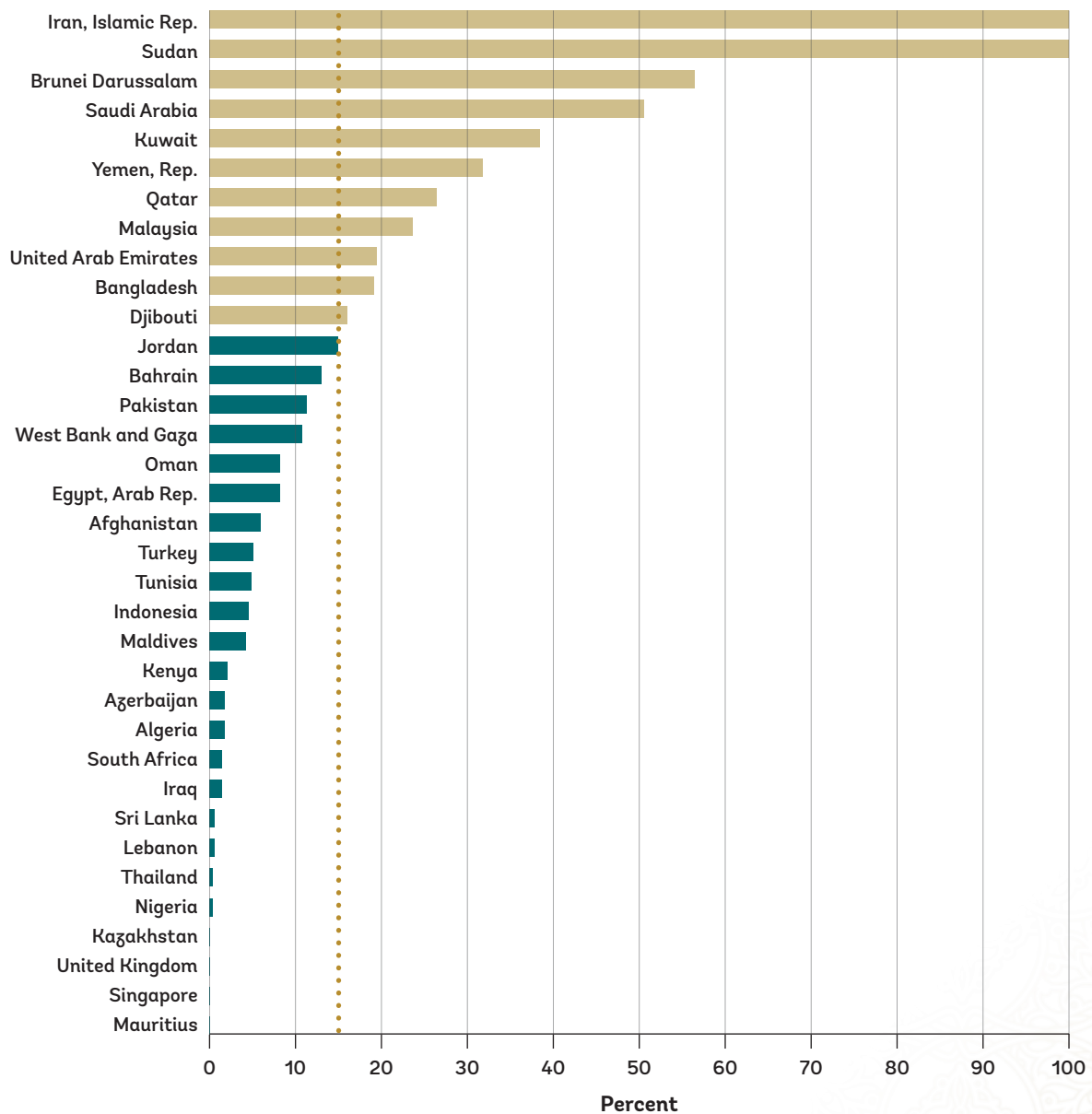
**TABLE 2.1: Islamic Finance Segments by Region, 2016**

|                                 | Islamic banking (\$billion) | <i>Sukūk</i> outstanding (\$billion) | Islamic funds assets (\$billion) | <i>Takāful</i> contributions (\$billion) | Total (\$billion) | Distribution by region (%) |
|---------------------------------|-----------------------------|--------------------------------------|----------------------------------|--|-------------------|----------------------------|
| Asia                            | 218.6                       | 182.7                                | 19.8                             | 4.4                                      | 425.5             | 22%                        |
| GCC                             | 650.8                       | 115.2                                | 23.4                             | 11.7                                     | 801.1             | 42%                        |
| MENA (excluding GCC)            | 540.5                       | 16.6                                 | 0.2                              | 8.4                                      | 565.7             | 30%                        |
| Africa (excluding North Africa) | 26.6                        | 1.9                                  | 1.5                              | 0.6                                      | 30.6              | 2%                         |
| Others                          | 56.9                        | 2.1                                  | 11.2                             | --                                       | 70.2              | 4%                         |
| Total                           | 1,493.40                    | 318.5                                | 56.1                             | 25.1                                     | 1,893.10          | 100%                       |
| Distribution, by segment (%)    | 79%                         | 17%                                  | 3%                               | 1%                                       | 100%              |                            |

Source: IFSB 2017.

Note: GCC = Gulf Cooperation Council; MENA = Middle East and North Africa.

**FIGURE 2.2: Islamic Banking’s Share in Total Banking Assets, by Country, 1H2016**



Source: IFSB 2017

Note: Beige bars indicate countries that satisfy the criterion of having a share of Islamic banking assets that exceeds 15 percent of their total domestic banking sector assets, and hence are categorized as systemically important. Data are as of the first half of 2016 (1H2016).

Figure 2.3 demonstrates that from 2008 to 2013, Islamic banking and Islamic deposits grew faster than their conventional equivalents in Malaysia, Indonesia, Turkey, Saudi Arabia, the United Arab Emirates, and Qatar, indicating a growing number of people in these countries are using Islamic banks rather than or in addition to conventional banks.

*Sukūk* comprise 15 percent of all assets in the Islamic finance market (for more on *sukūk*, see chapter 3). The market for *sukūk* was nascent in the late 1990s. Growth rates accelerated through the 2000s (figure 2.4). Between 2011 and 2016, the compound annual growth rates for *sukūk* outstanding was 12.36 percent.

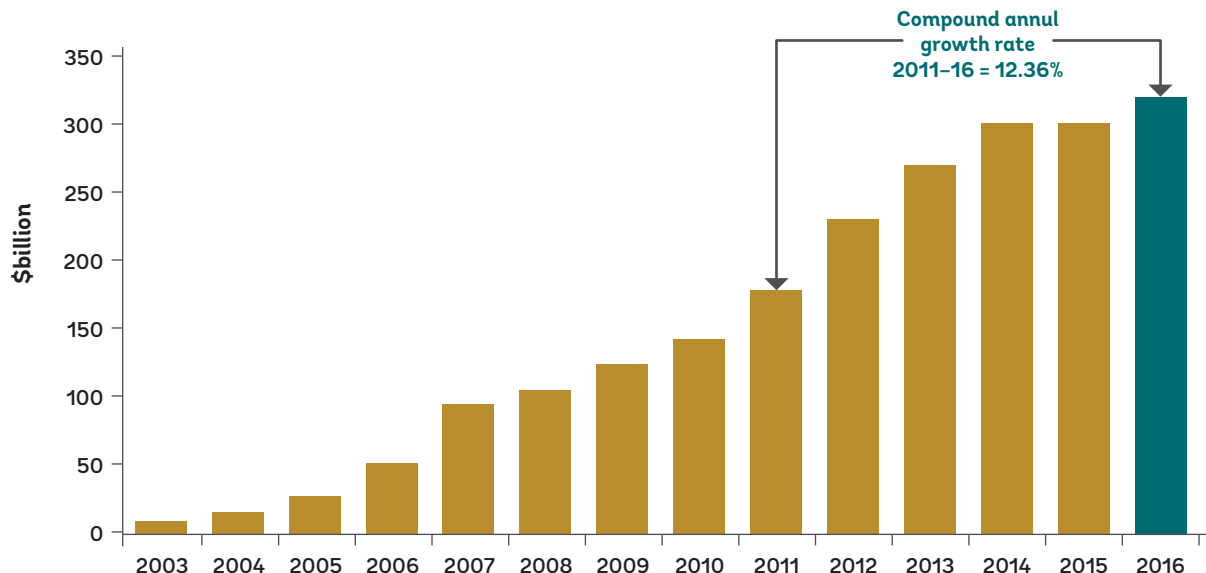
**FIGURE 2.3: Growth of Islamic Banking and Conventional Banking Assets and Deposits, Selected Countries, 2008–13**



Source: IFSB 2017



**FIGURE 2.4:** Growth in the Global Sukūk Market, 2003–2016



Source: IFSB, 2017

An important question that immediately arises is: why has Islamic finance continued to grow rapidly? There are two fundamental reasons: the increased demand from

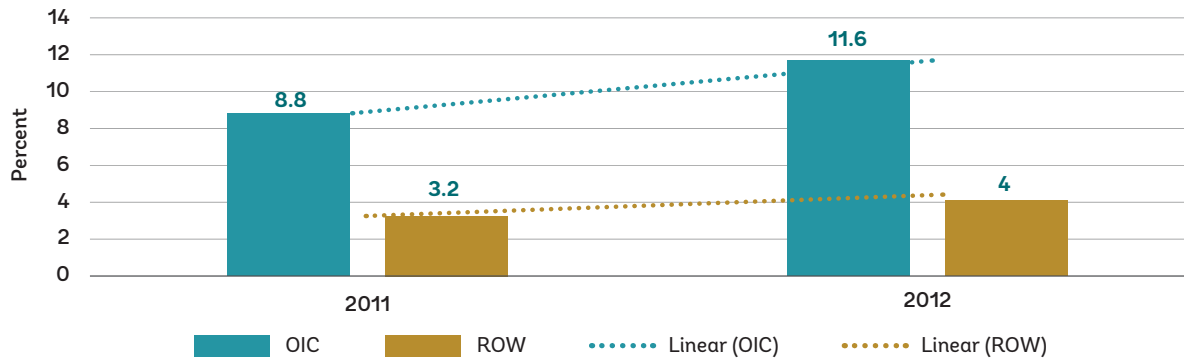
OIC members and the relative stability of the Islamic finance market and hence its good track record. These are discussed next.

## 2.1 DEMAND FROM OIC COUNTRIES

While one-quarter of the world’s population belong to the Islamic faith, only 1 to 2 percent of the world’s financial assets are *shari’ah*-compliant. Evidence suggests that many people, including many Muslims, do not use conventional financial services for religious reasons (figure 2.5). In 2011, 8.8 percent of people in OIC members did not have a bank account for religious reasons—a much higher share than the 3.2 percent in the rest of the world. Both these percentages grew over the following year—by 25 percent in the rest of the

world (to 4 percent) and by 32 percent in the OIC (to 11.6 percent). According to the 2016 Islamic Financial Services Industry Stability Report, the deployment of Islamic finance solutions can potentially attract those who have voluntarily withdrawn from the financial system for religious reasons. Moreover, an increasing number of non-Muslim clients bank with Islamic financial institutions for various reasons, including their convenience, attractive offerings, and perception as an ethical finance practice.

**FIGURE 2.5: Share of the Population Not Having a Bank Account for Religious Reasons**



Source: World Bank Financial Inclusion Dataset, 2011, 2014.  
 Note: OIC = Organization for Islamic Cooperation; ROW = rest of world.

Furthermore, despite comprising 25 percent of the world’s population, the members of the OIC represent approximately 15 percent of the world’s economy. The GDP per capita, or average income, for OIC residents is only 60 percent of the world average. As is well known from the economic growth literature, countries with lower GDP per capita tend to grow faster than richer economies as convergence sets in. Indeed, OIC members are growing faster than wealthier economies, on average (Thomson Reuters and TFSA 2015).

however, the share of the global economy accounted for by the OIC members has been systematically rising since 1980, reflecting the region’s above-average growth over this period (panel b). Panel c provides growth rates in the OIC group of countries relative to three country groups: the world, the advanced economies, and emerging market and developing economies. Since the 1990s, the OIC group has been growing faster than the world average and the average growth across the developed world, but less rapidly than the emerging market and developing economies. As the OIC members’ economies continue to grow, so will the Islamic finance industry globally.

As can be seen in panel a of figure 2.6, emerging market and developing economies have been growing at a higher rate than developed economies. Most importantly,

**FIGURE 2.6: Real GDP Growth, Shares of World Real GDP, and Real GDP Growth Rates by Country Groups, 1980–2021**

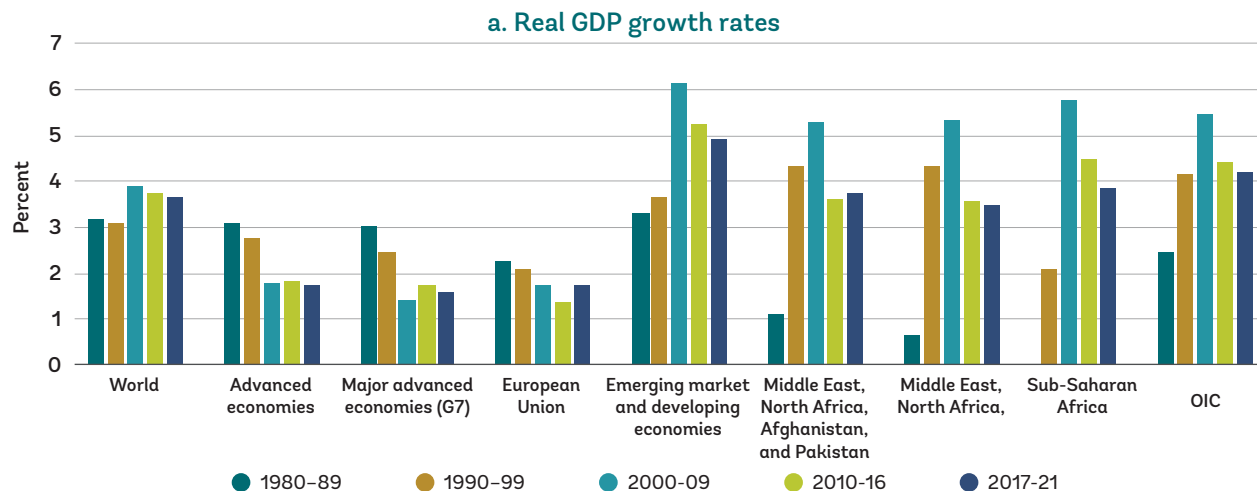
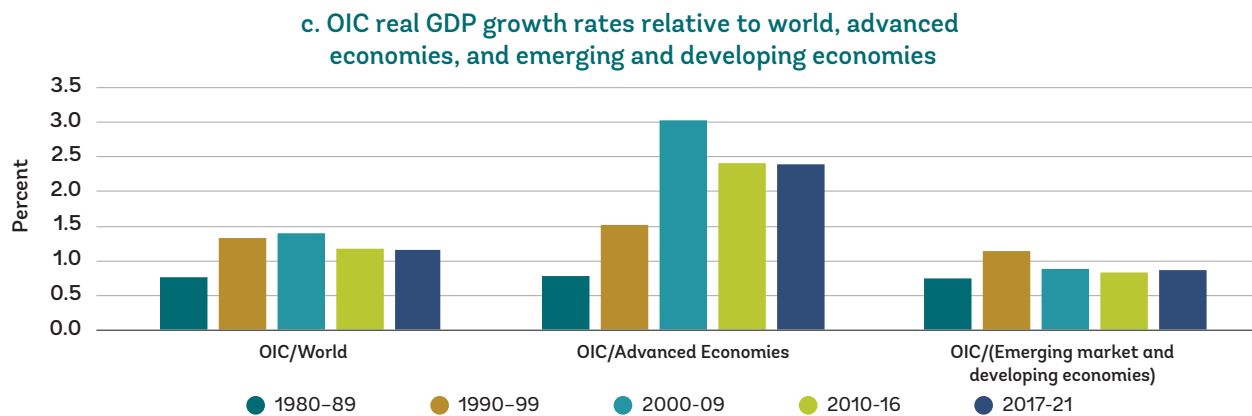


figure continues next page



Source: World Bank, using data from the IMF’s *World Economic Outlook* database. Data for 2017–21 are IMF forecasts.  
 Note: The IMF does not provide data for the OIC as a group. The OIC data in panel ‘a’ were created using a weighted average of real GDP growth, where the weights were the within-OIC shares. IMF = International Monetary Fund; OIC = Organisation of Islamic Cooperation.

## 2.2 STABILITY OF ISLAMIC FINANCE AND ISLAMIC FINANCIAL INSTITUTIONS

During the financial crisis of 2007–08, Islamic financial institutions performed much better than their conventional counterparts. In a study of Islamic and conventional banking in Pakistan, Farooq and Zaheer (2015) note that “financial inclusion of faith-based groups may enhance the stability of the banking system.” They find that Islamic banks were less prone to withdrawals during the financial crisis in comparison to conventional banks, thus allowing Islamic banks to continue to offer financing to the real economy during the crisis period. Furthermore, in some cases, deposits

to Islamic banks actually increased during the crisis period (Farooq and Zaheer 2015). These findings are supported by the work of Hasan and Dridi (2010), who find the different business model underlying Islamic banking resulted in their contributing to “financial and economic stability by posting higher credit and asset growth rates than conventional banks.” A study by Beck, Demirgüç-Kunt, and Merrouche (2013) of 141 countries from 1995 to 2007 finds that the performance of Islamic banks was superior on many metrics, including having

a higher intermediation ratio, asset quality, and better capitalization rates.

The inherent structure of Islamic banks lends stability to this banking system. As highlighted by Askari et al. (2011), in addition to the strict prohibition of interest-based activities and speculative transactions, Islamic finance is an equity-based system under which Islamic banks own real assets and participate directly in production and trade activities. As the growth of Islamic finance is strictly determined by real economic growth, when an Islamic bank engages in investment activity, the bank engages directly in risk taking through trade, leasing, and productive investment in agriculture, industry and services. As Askari et al. (2011) note, the most important characteristic of this activity is that it is immune to the unbacked expansion of credit. An Islamic bank matches deposit maturities with investment maturities. Islamic bank remains a direct owner/party in all its investments and throughout the entire investment process. In such a system, the Islamic bank participates directly in the evaluation, management, and monitoring of the investment process (as opposed to just lending money). The Islamic bank's returns to

invested funds are generated after the profits or losses of the operation are distributed to all the risk-takers in the venture. The inherent structure of the Islamic banking system and its link to the real economy makes it a stable financing system.

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The significant growth in Islamic finance during the crisis period has been largely driven by its stability, which can be attributed to its asset-backed nature.

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This feature of Islamic finance has generated significant interest from both government policy circles and the private sector operating in the conventional finance space. Many parties are working to understand more about how the nature and structure of Islamic finance underpin this stability. The significant growth in Islamic finance during the crisis period has been largely driven by its stability, which can be attributed to its asset-backed nature. In this sense, the world financial system is increasingly recognizing the merits associated with financial structures that are *shari'ah*-compliant.

## 2.3 THE GLOBAL ISLAMIC FINANCE MARKET ECOSYSTEM<sup>3</sup>

Underlying global Islamic finance is a variety of institutions that form part of the ecosystem for Islamic finance industry. These institutions have been helping to standardize global Islamic finance practices and establish sound policies and procedures. These institutions are discussed next.

◆ **The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI)** (<http://aaoifi.com>), established in 1991 and based in Bahrain, is the leading international not-for-profit organization primarily responsible for development and issuance of standards for the global Islamic finance industry. Among its most remarkable

achievements is the issuance of 94 standards in the areas of *shari'ah*, accounting, auditing, ethics, and governance. Its standards are adopted by central banks and regulatory authorities in many countries, either on a mandatory basis or as the basis of guidelines. AAOIFI is supported by many institutional members—including central banks and regulatory authorities, financial institutions, accounting and auditing firms, and legal firms—from over 45 countries. Its standards are currently followed by the leading Islamic financial institutions across the world and have introduced a progressive degree of harmonization of international Islamic finance practices.



- ◆ **The Islamic Financial Services Board (IFSB)** (<http://www.ifsb.org/>) is an international standard-setting organization that started operations in 2003. It promotes and enhances the soundness and stability of the Islamic financial services industry by issuing global prudential standards and guiding principles for the industry, broadly defined to include banking, capital markets, and insurance sectors. The standards prepared by the IFSB follow a lengthy due process as outlined in its Guidelines and Procedures for the Preparation of Standards/Guidelines. Under this process, exposure drafts are issued and workshops are held, along with public hearings, when necessary. The IFSB also conducts research and coordinates initiatives on industry-related issues, and organizes roundtables, seminars, and conferences for regulators and industry stakeholders. To this end, the IFSB works closely with relevant international, regional, and national organizations, research/educational institutions, and market players. IFSB's landmark yearly publication, the *Islamic Financial Services Industry Stability Report*, has become an industry reference point for the state of global Islamic finance market.
- ◆ **The International Islamic Financial Markets (IIFM)** (<http://www.iifm.net/>) is a standard-setting body of the Islamic financial services industry, focusing on standardization of Islamic financial contracts and product templates relating to the capital and money market, corporate finance, and trade finance segments of the Islamic financial services industry. IIFM plays its role in market unification by developing best practices at the global level and achieving *shari'ah* harmonization through its support for the creation of a robust, transparent, and efficient Islamic finance industry. IIFM also creates industry awareness by organizing specialized seminars and workshops, as well as publishing research reports.
- ◆ **The International Islamic Fiqh Academy (IIFA)** ([www.iifa-aifi.org](http://www.iifa-aifi.org)), headquartered in Saudi Arabia, is the leading organization to advance the theoretical interpretation of *shari'ah* matters. IIFA studies contemporary issues from the *shari'ah* point of view and tries to find solutions in conformity with the *shari'ah* through an authentic interpretation of its content. Many of IIFA's rulings have become the guiding principles of Islamic finance practices globally.
- ◆ **The International Islamic Rating Agency (IIRA)** (<http://iirating.com/corprofile.aspx>) provides independent assessments to issuers and issues that conform to principles of Islamic finance. IIRA's special focus is on the development of local capital markets, primarily in OIC members, and providing impetus through its ratings to ethical finance across the globe.
- ◆ **The International Islamic Center for Reconciliation and Arbitration (IICRA)** (<http://iicra.com/>) focuses on meeting the needs of the Islamic finance industry in settling their disputes according to Islamic *shari'ah* principles. IICRA organizes and supervises reconciliation and arbitration services to help financial institutions overcome difficulties arising from various disputes. It seeks to make the judgments issued under its sponsorship and supervision subject to terms compatible with *shari'ah*, and to facilitate the implementation of the judgments if requested by the national judge. It also provides a list of arbitrators and experts from within the Islamic world and beyond.
- ◆ **The International Islamic Liquidity Management Corporation (IILM)** (<http://www.iilm.com/>) was established by central banks, monetary authorities, and multilateral organizations to create and issue short-term Islamic financial instruments to facilitate effective cross-border Islamic liquidity management. By creating more liquid Islamic financial markets

for institutions offering Islamic financial services, the IILM aims to enhance cross-border investment flows, international linkages, and financial stability. IIFM was established in 2010 and is headquartered in Kuala Lumpur. The current shareholders are from the central banks and monetary agency of Indonesia,

Kuwait, Luxembourg, Malaysia, Mauritius, Nigeria, Qatar, Turkey, the United Arab Emirates, and the Islamic Corporation for the Development of the Private Sector, an entity of the Islamic Development Bank Group.

## 2.4 THE NATURAL FIT BETWEEN ISLAMIC FINANCE, INFRASTRUCTURE PROJECTS, AND PUBLIC-PRIVATE PARTNERSHIPS (PPPs)

The asset-backed approach that underlies the stability and growth-enhancing potential of Islamic finance rests on its core principles. These principles, outlined in box 2.1, advocate for the just, fair, and equitable distribution of income and wealth among the parties involved. Islamic finance's approach to redistribution is based on a balanced blend of income-based redistribution through redistributive instruments and asset-backed redistribution through the notion of risk sharing. The asset-backed redistribution is basically a risk-sharing approach; it allows the capital providers to participate in the economic activities, thus contributing to the social and economic development. Rewards are shared, and so is risk (Mirakhor 2015).

Applying Islamic finance to infrastructure projects is thus a natural fit, and it serves the very purpose of asset-backed redistribution discussed earlier. The global Islamic financial market has developed significantly, the regulatory and standard-setting institutions guiding Islamic finance practices are well established, and so is the risk-sharing philosophy of Islamic finance. All these factors are conducive to deploying Islamic finance to infrastructure PPP projects and thus contributing to the global journey to achieve the Sustainable Development Goals (SDGs) (for the work of the World Bank in the area of Islamic finance, see appendix B).

### BOX 2.1: PRINCIPLES OF ISLAMIC FINANCE

The operations of Islamic finance are characterized by the avoidance of *ribā* (in the broad sense of an unjustified increase) and *gharar* (uncertainty, speculation) and the focus on what is religiously permissible (*ḥalāl*). Islamic finance adheres to certain key principles:

- ◆ Returns to Islamic financiers should generally be linked to the profits of an enterprise and derived from the commercial risk taken by the financier.
- ◆ *Shari'ah* principles encourage Islamic financiers to become partners in the project to share the profits and risk in the business instead of being pure creditors. Profits should not be assured and therefore fixed returns on investment should not be guaranteed.
- ◆ Transactions should be free from speculation or gambling (*maysir*). The prohibitions of *shari'ah* do not usually extend to general commercial speculation as seen in most transactions, but aim to prevent speculation that may be considered gambling.
- ◆ The existence of uncertainty (*gharar*) in a contract is prohibited. Transactions where the price, time of delivery, or the subject matter are not determined in advance may not be compliant with *shari'ah* principles.
- ◆ Investments relating to alcohol, drugs, gambling, weapons, or other activities prohibited by *shari'ah* are not permitted.

Source: Cross et al. 2012.

The following points summarize how the asset-backed redistribution approach works in the context of infrastructure projects:

- ◆ First, the foundation of Islamic finance structures is their asset-backed nature, along with a degree of risk sharing. Tangible or physical assets, such as infrastructure, serve as the basis for Islamic finance structures. Given the long-term and stable nature of infrastructure investments generally, they allow for long-term stable rates of return to capital providers, commensurate with the risks they take.
- ◆ Second, Islamic finance solutions are in no way restricted to countries with sizable Muslim populations. Rather, they can be deployed in any jurisdiction if the financing arrangement can fit within the local legal and regulatory environment. To the extent that *shari'ah*-compliant capital can be mobilized, it can work to alleviate infrastructure gaps and promote economic development all over the world.
- ◆ Third, there is no requirement that any transaction be wholly *shari'ah* compliant. That is, to the extent that *shari'ah*-compliant capital can be mobilized, it can be used in transactions that have tranches that deploy Islamic finance and tranches that draw on conventional finance. As a result, *shari'ah*-compliant capital can work together with pools of conventional capital to address infrastructure gaps in developing countries. In other words, Islamic finance can join with other global players in the common cause of infrastructure development.

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Islamic finance instruments have been used successfully across countries in many infrastructure PPPs.

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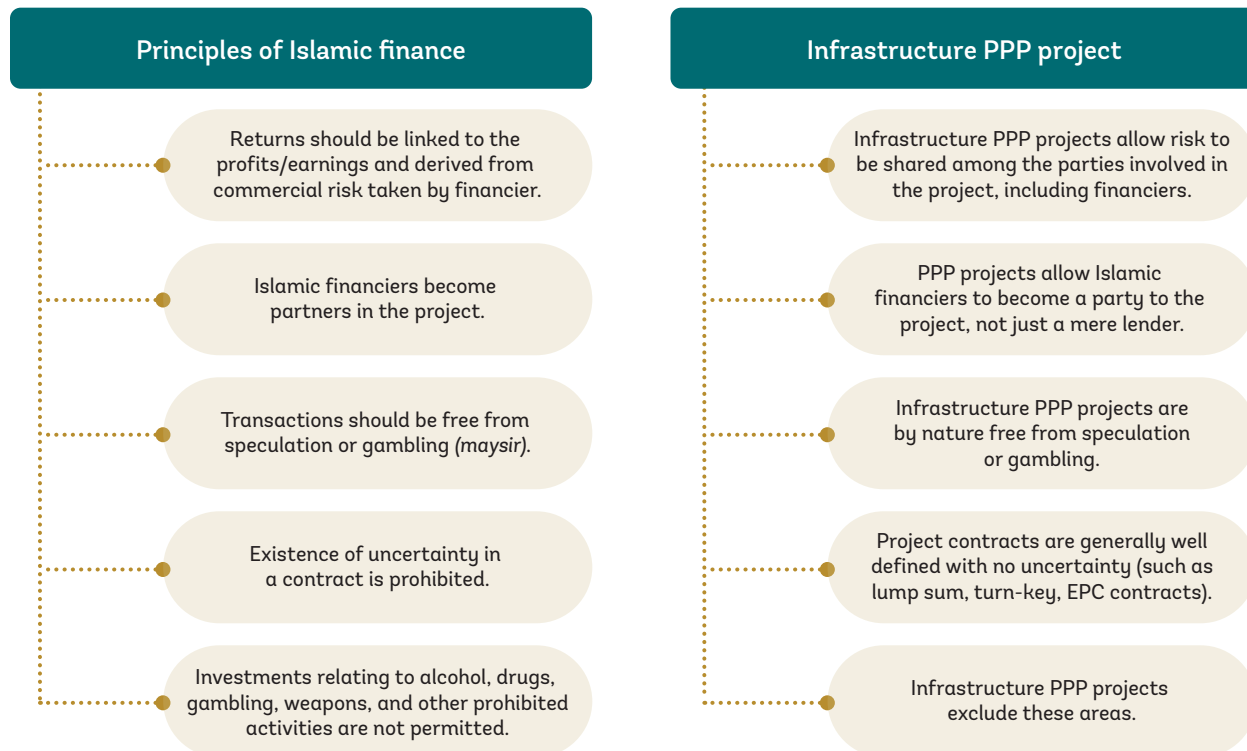
Islamic finance instruments, as discussed in more detail in subsequent chapters, are well suited for PPP structures. These instruments have been used

successfully across countries in many infrastructure PPPs. Given that the hallmarks of Islamic finance structures are their asset-backed nature together with shared risks, they are wholly consistent with and can work well within infrastructure PPPs.

An important motivation for integrating PPPs into the Islamic finance framework relates to the natural tendency for infrastructure projects—particularly those that take the form of public-private partnerships—to comply with *shari'ah*. (This is, of course, not to say that this is sufficient to be *shari'ah* compliant, as being *shari'ah* compliant involves much more than having risk-sharing and asset-backed features.)

Those seeking financing for large infrastructure projects would likely consider every possible source of finance, considering the large investments these projects require. Infrastructure projects, designed in a PPP scheme, are in better position to attract Islamic finance because these projects offer many features that are well suited to the fundamentals of Islamic finance, such as asset backing and risk sharing. The assets of PPP projects are “ring-fenced”: that is, these assets are not mingled with rest of the assets of the project sponsors. This is an ideal situation for Islamic finances to clearly identify the assets they are using in their transactions. PPP projects allow risks to be allocated to the parties involved; hence Islamic financiers, along with other financiers, assume certain risks of the project. Thus PPP projects are a natural fit for Islamic finance not by design, but rather by default, given the nature of these projects. In other words, PPP projects using conventional financing do not need any structural changes to accommodate Islamic finance. In considering whether to embrace such financing arrangements, project sponsors (equity investors) would simply consider the commercial issues such as the cost of financing, tenors, and fees.

Figure 2.7 highlights how the basic Islamic finance principles, as discussed in box 2.1, can be matched in a typical infrastructure PPP project, thus confirming the natural fit of Islamic finance for PPPs.

**FIGURE 2.7: Natural Fit of Islamic Finance and Infrastructure PPP Projects**

Source: World Bank.

Note: EPC = engineering, procurement, and construction; PPP = public-private partnership.

The many different structures available for Islamic financing provide significant flexibility for project teams and Islamic finance practitioners to choose the most appropriate financing vehicle depending on the nature of the project. The success of PPPs through Islamic financing has provided significant motivation for

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Different structures available for Islamic financing provide significant flexibility to choose the most appropriate financing vehicle to fit the nature of the project.

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project sponsors in many countries such as Bangladesh, Djibouti, Indonesia, Jordan, Malaysia, Morocco, Pakistan, and Turkey, as well as other developing countries, to continue to seek Islamic financing as an additional source of financing for PPP projects.

In short, the asset-linked and risk-focused natures of PPPs make them a perfect investment opportunity for Islamic financing. Such financing has significant liquidity and growth potential to provide a suitable financing match for PPPs. In this way, Islamic finance and PPPs can support sustainable development and positive socioeconomic outcomes.





## CHAPTER 3

# ISLAMIC FINANCE STRUCTURES FOR INFRASTRUCTURE PPP PROJECTS

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*To understand how Islamic finance can be used to finance infrastructure public-private partnership (PPP) projects, an understanding is needed in project finance techniques and frequently used Islamic finance instruments. It is through the combination of these two that Islamic finance finds ways to support an infrastructure finance transaction. This chapter first introduces project finance techniques, and follows with a discussion of the basic Islamic finance instruments that are often used in infrastructure PPP projects. The structural similarity between Islamic finance and conventional finance will become clear. This similarity is important while financing large infrastructure project with a mix of Islamic and conventional finances.*

Islamic finance is based on a philosophy of sharing risk: the financier must share some forms of risks. Moreover, Islamic finance should promote social and economic development by creating real assets, not just by generating transactions that are merely financial. In this context, infrastructure PPP projects are a natural fit for Islamic finance. Financing these projects entails certain level of risk sharing with other project parties, and the projects serve the larger purpose of social and economic development by creating essential assets in the public interest.

The primary focus of this chapter is to explain certain Islamic finance instruments and the way they are deployed in financing large-scale infrastructure PPP projects through project finance techniques. The chapter also discusses the structures necessary for any particular Islamic finance instrument to be used to finance an infrastructure PPP project. Subsequent chapters will elaborate on the concepts described in this chapter with the aid of case studies and a discussion of some pertinent issues.

### 3.1 PROJECT FINANCE TECHNIQUES

Around the world, the use of project finance techniques has emerged as a primary method to mobilize financing for infrastructure PPP projects. The technique has been refined and customized to address a wide variety of infrastructure asset classes. For example, project finance techniques are used to finance power generation assets; upstream, midstream, and downstream assets in the oil and gas industries; petrochemical, paper, and mining projects; and the entire panoply of infrastructure projects, including roads, airports, hospitals, and desalination plants.

Project finance refers to a particular *method* of financing projects. Project finance is always tailored to the particular features of the investment. Broadly, debt in a typical project may be financed through two different methods: corporate finance and project finance.

In the case of corporate finance, the lending decision is based on the overall financial condition of the borrower, including its corporate balance sheet. Even if the project to which loan has been extended is not performing well, the lenders can still expect to get paid as long as the corporate entity as a whole remains healthy.

In case of project finance, the lending decision is primarily based on the evaluation only of the project. The source of debt repayment is limited to the project's assets and mainly to its cash flows. Therefore, the assets of the project sponsors (equity investors) are not offered as security for debt repayment, except for some limited cases. Project finance is usually on a nonrecourse or limited recourse basis. Corporate finance, by contrast is often based on full recourse, meaning that all the assets of the corporate entity and the project sponsors are at stake to repay the debt.

Corporate finance is not the preferred technique to raise financing for infrastructure PPP projects. Project sponsors have a strong aversion to guaranteeing a project loan or other financing and to otherwise

incurring a balance sheet liability with respect to a project. This is particularly true of companies that may have to reflect the guarantee liability, or consolidate project debt, in a parent company balance sheet under generally accepted accounting principles.

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Project finance techniques are most suitable for capital-intensive projects, most of which are characterized by highly leveraged debt.

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Project finance techniques, on the other hand are most suitable for capital-intensive projects, most of which are characterized by highly leveraged debt. Several factors make project finance techniques suitable as a way to finance infrastructure PPP projects. For equity investors (sometimes referred to as the sponsors of the project), they offer several advantages. They allow sponsors to mobilize large amount of debt to implement capital-intensive infrastructure projects. They permit them to do so with relatively small equity contributions. In a typical project finance deal, the debt-equity ratio could be 70:30 or even higher. Moreover, they can mobilize this debt without exposing their corporate balance sheet.

Project finance is also favorable to lenders. It allows them to focus their due diligence on the project's intrinsic features without too much reliance on the corporate health of the sponsors. Project finance techniques have also become possible because financial and legal innovations have improved the identification, mitigation, and allocation of project risks among various participants of the project.

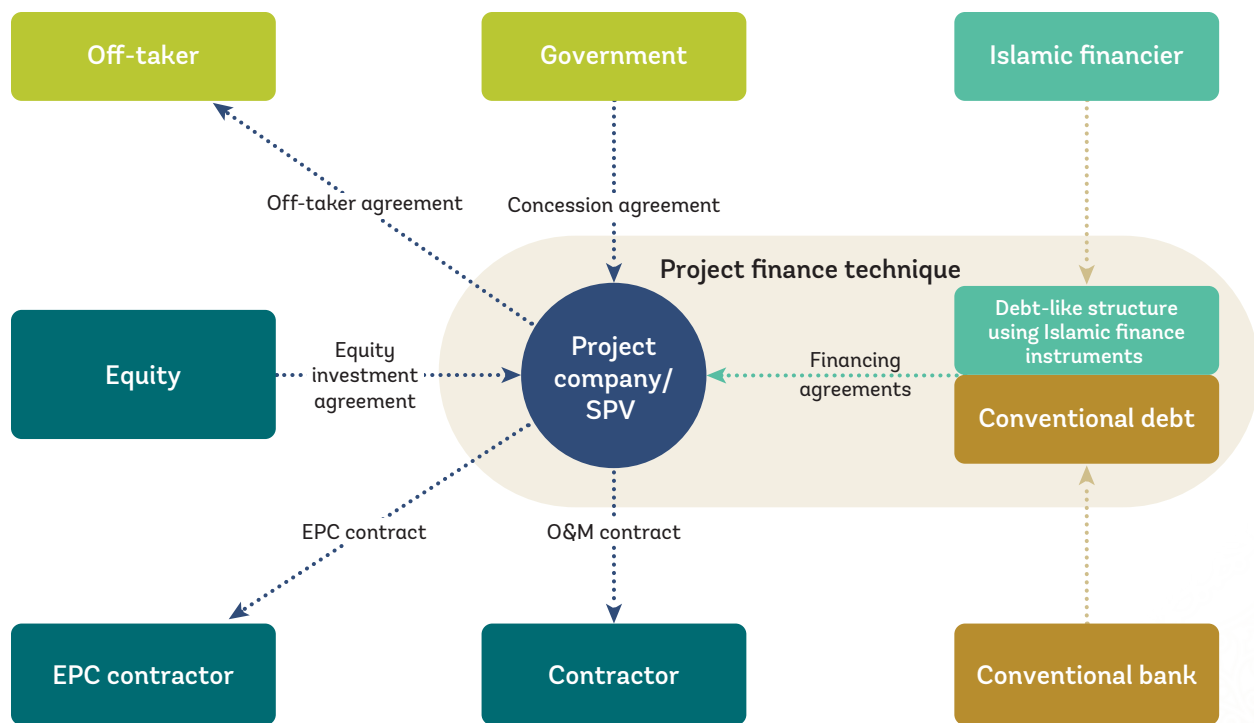
Figure 3.1 presents a typical structure for an infrastructure PPP. The government entity implementing the project typically has a concession agreement with the special purpose vehicle (SPV). The SPV then contracts with the engineering, procurement, and construction

(EPC) contractor to manage design and construction of the project, and another company for operations and maintenance (O&M).

Typically, both equity investors and lenders provide equity and debt capital, respectively, for the project. For a large-scale PPP infrastructure project, there may be one or more equity investors and a group of financiers,

including conventional and Islamic. It is important to note that there is nothing in Islamic finance that requires the entire transaction to be *shari'ah* compliant for Islamic financiers to participate.<sup>4</sup> The sponsors are free to use project finance techniques to raise financing from different financiers, as highlighted in the shaded area of figure 3.1.

**FIGURE 3.1: Project Financing and Islamic Finance for Infrastructure PPP Projects**



Source: World Bank.

Note: EPC = engineering, procurement, and construction; O&M = operations and maintenance; SPV = special purpose vehicle.

It is important to recognize that Islamic finance, when applied to infrastructure PPP projects, needs to adhere to the basic principles of project finance techniques: that is, limited or nonrecourse financing. Since in many infrastructure PPP projects that include Islamic financiers, conventional banks are offering conventional financing to the same projects, there is an additional requirement on Islamic financiers to address issues that are common to all financiers—Islamic and conventional alike. For example, one common principle that all financiers need to ensure is the senior and *pari passu*

Islamic finance, when applied to infrastructure PPP projects, needs to adhere to the basic principles of project finance techniques.

status of all financing parties (that is, that the parties are equal in all respects) (assuming the project is not benefiting from any subordinated financing). These

### BOX 3.1: WHEN DO PUBLIC-PRIVATE PARTNERSHIPS WORK?

Infrastructure PPP projects require large capital investments. In the context of emerging market and developing economies (EMDEs), that invariably entails international capital flow. The trend in infrastructure PPP projects in EMDEs began in the early 1990s, when multilateral development banks and many international and regional banks started big-ticket lending for infrastructure PPP projects. The early success of PPPs encouraged a number of developing countries to opt for PPPs to implement large-scale infrastructure projects.

However, many infrastructure PPP projects did not work out. A common misconception is that PPP is a panacea and once a project is designed as an PPP, investments will automatically follow. The success of an infrastructure PPP project depends on a host of factors. Country-specific and macroeconomic factors play a very important role, including country risk rating, foreign currency availability and convertibility, protection of international investors under the local laws, government's supports to the project in terms of concession and various guarantees, fiscal and monetary policies.

When exploring Islamic finance for infrastructure PPP projects, host governments should recognize these factors. Islamic finance capital providers, like their conventional counterparties, will need to be comfortable with the overall investment climate of the country before deciding to invest in an infrastructure PPP project in that country.

issues and a number of others are addressed in the lessons learned section in chapter 5. Box 3.1 discusses when PPPs work best in infrastructure projects.

While applying Islamic finance instruments for infrastructure PPP projects, the financiers use the Islamic finance instruments to enter into transactions that are permissible under *shari'ah*,<sup>5</sup> thus ensuring compliance with the *shari'ah* requirement. At the same time, the Islamic finance instruments mirror the conventional debt or equity structure, thus allowing Islamic finance to seamlessly integrate with rest of the capital provided.

The determination by a conventional bank or Islamic financier as to whether to provide financing to an infrastructure PPP projects using project finance techniques centers around the project economics, the strength of security package, and the risk mitigants available to the financiers. This is a pure commercial decision. There seems to be a misconception that Islamic financiers assume additional risks when providing risk capital to an infrastructure PPP project.

Once an Islamic financier is comfortable with the risk profile of an infrastructure PPP project and decides to

provide financing, the financial structuring stage commences. The Islamic finance instruments that are most suitable for the project in the particular context must be found. The Islamic finance structure used for a particular project is always a bespoke solution. Each structure is developed in the context of a specific project and the risks surrounding that project. The next section will introduce the basic building blocks of Islamic finance instruments that are used to develop an Islamic finance structure for an infrastructure PPP project.

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**The Islamic finance structure used for a specific project is always a bespoke solution.**

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It is important to recognize that infrastructure PPP projects are capital intensive, by nature. Thus they require more than one financier. This provides the opportunity for Islamic finance and conventional finance lenders to provide parallel financing to the same project in most cases. Chapter 4 discusses a number of infrastructure PPP projects. Most have been financed by a combination of Islamic and conventional finance.



## 3.2 ISLAMIC FINANCE INSTRUMENTS

There are several building blocks, or basic Islamic finance instruments, that Islamic financiers deploy when entering into PPP infrastructure transactions.

These instruments can be used by themselves (stand-alone) or in combination.

### 3.2.1 IJĀRAH (LEASING)

*Ijārah*, or leasing, is a widely used Islamic mode of finance. It is a contract of letting on lease, under which the owner of an asset sells a definite usufruct (right to enjoy the use and advantages of the property, as long as it is not wasted or destroyed) of the asset in exchange for a periodic rent. Many Islamic financiers use a “lease-to-own” structure on a medium- to long-term basis. The financier (as lessor), purchases an asset and subsequently transfers the right to use it (usufruct) to the client (lessee) for a rental payment for a specific period (the lease period/tenor). Throughout this lease period, the Islamic financier retains ownership of the asset. At the end of the lease period, the financier transfers the title of the asset to the client, with a nominal or no consideration.

Leasing is suitable for financing fixed assets and capital equipment (movable assets, in certain cases) such as machinery and equipment for projects. Lease financing can be extended to governments and government-backed entities as well as private sector companies, including SPVs. In case of a power generation project, for example, an Islamic financier can use *ijārah* to finance gas turbines for the plant.

Under *shari'ah* principles, the lessor would not necessarily hold the title of the *ijārah*. Instead, if the lessor has the usufruct right, it can lease the usufruct right to the SPV. This flexibility allows Islamic financiers to finance infrastructure PPP projects by using *ijārah* financing in cases in which the government wants to retain title to the project's assets, mainly because of the public nature of the assets.

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Islamic financiers are essentially financial institutions. It is not their business nor expertise to physically procure assets and maintain them.

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Typically, *ijārah* entails the following legal documentation:

- ◆ *Ijārah*/lease agreement: This agreement stipulates the terms and conditions of the lease operation, including the mark-up rate and tenor of financing. It also provides for the transfer of the title of the asset from the lessor to the lessee at the end of the lease period.
- ◆ Agency agreement: Through this agreement, the lessee is appointed to act as an agent on behalf of the Islamic financier to procure the asset.
- ◆ Service agency agreement: Through this agreement, the lessee is appointed to act as an agent on behalf of financier to maintain the asset. Under *shari'ah* principles, unlike in conventional operating leases, the financier, in its capacity as lessor, is responsible for all major maintenance (typically repair, replacement, and maintenance of a capital nature, without which the assets could not reasonably be used by the project). The financier is responsible for all ordinary maintenance (typically repair, replacement, and maintenance other than major maintenance). The financier is also responsible for insurance of the assets. To limit the financier's

liability and ensure that third parties do not have any claims on the financier or its assets, the SPV and the financier enter into a service agency agreement, under which the SPV is appointed as agent of the financier for the purpose of carrying out the major maintenance and procuring the insurance. Should the SPV fail to effect any repairs or replacements, or obtain the insurance, the financier may do so and will be indemnified by the SPV for all amounts paid or costs incurred by the financier.

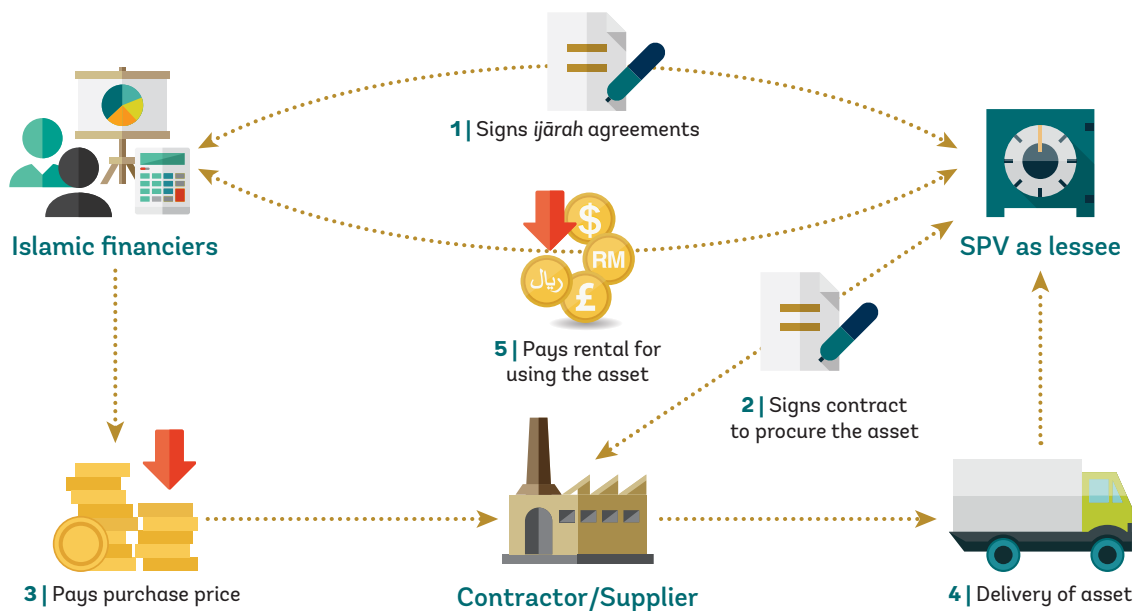
It is important to understand the rationale behind the agency agreement and the service agency agreement. Islamic financiers are essentially financial institutions. It is neither their business nor expertise to physically procure assets and maintain those by themselves. Through these two agreements, Islamic financiers delegate these roles, which are supposed to be performed by the lessor, to the lessee. A typical *ijārah* financing structure and steps involved are shown in figure 3.2.

In the context of an infrastructure PPP project, the special purpose vehicle assumes the role of lessee.

That is, the SPV enters into a lease agreement with an Islamic financing institution so that it can make use of any particular component for the project, in exchange for a payment of rent to the Islamic financiers. In the case of a power generation plant, for example, the SPV can rent a generator from the Islamic financiers. In the case of a seaport project, the SPV can rent cranes from the Islamic financiers. In both cases, the Islamic financier remains owner of the assets.

As mentioned, Islamic finance, when applied to infrastructure PPP projects, needs to adhere to the basic principles of project finance techniques. If an infrastructure PPP project is financed by a group of lenders—which is normally the case—then *ijārah* financing will raise the issue of sharing security with other lenders. Under a typical security arrangement for an infrastructure PPP project, all the project's assets should be used as security in favor of all lenders. The Islamic structure is flexible enough to address this issue. Security sharing and some other issues that are common while applying Islamic finance for PPP projects are discussed in chapter 5.

**FIGURE 3.2: *Ijārah* Structure and Related Steps**



Source: World Bank.

Note: SPV = special purpose vehicle.

In some transactions, the financiers may be required to place the insurance with Islamic insurers on a *takāful* (cooperative) basis. If the SPV is negligent in the use or maintenance of the property, or in procuring insurance or performing its obligations, it assumes principal liability for any of these lapses and will be required to indemnify the Islamic financiers for any related losses.

are addressed via provision of early lease payment mechanics. In conventional financing, prepayments entail penalty fees. In Islamic finance, certain Islamic financiers do not accept penalty payments, or if they do, they donate these fees to charity. Treatment of fees that are not compliant with *shari'ah* is explained in chapter 5.

The financier and the SPV are typically also parties to a purchase undertaking that requires the SPV to purchase the assets from the financier under certain circumstances. The circumstances that trigger this right are specific to the deal. A provision in the purchase undertaking under which the SPV agrees to purchase the assets in event of default is, however, standard. In *ijārah* financing, voluntary and mandatory prepayments

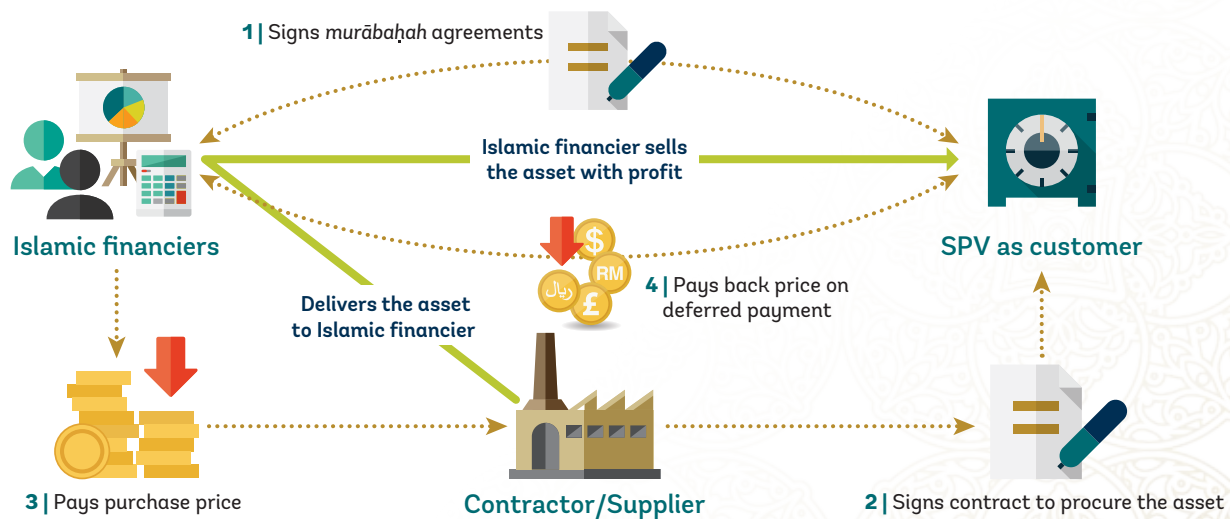
There are also differences in the way that an *ijārah* operates from country to country as to the price the project company must pay for the assets. Depending on the view of the applicable *shari'ah* committees, in some countries the SPV will purchase the assets at the end of the lease period for a predetermined price. In other countries, the assets will be gifted to the SPV.

### 3.2.2 MURĀBAḤAH

**Murābahah** is a widely used mode of finance among Islamic financing institutions. It is a contract for the purchase and resale of an asset that allows a customer to make a purchase without having to take out a conventional loan—and hence avoid paying interest. The steps involved in the transaction are displayed in figure 3.3.

The Islamic financier purchases the goods on behalf of the customer from a supplier in the market, and then simultaneously sells the goods to the customer for a price that includes an agreed-upon profit mark-up. The customer pays the Islamic financier for these goods on a deferred basis, in installments.

**FIGURE 3.3: Murābahah Structure and Related Steps**



Source: World Bank.  
 Note: SPV = special purpose vehicle.

By entering into this financial arrangement, the customer is able to obtain credit without paying interest. The *murābahah* is commonly used in short-term financings. Since *murābahah* is usually short term in nature, it typically is not used for infrastructure finance, which requires long-term financing. Financiers of infrastructure projects prefer variable mark-up of pricing over time because of the long-term financing nature of PPPs, and *murābahah* does not allow this flexibility. Using the same example applied to explain the *ijārah* instrument (financing the purchase of gas turbines for a power generation plant), an Islamic financier can use *murābahah* to sell equipment to the SPV of an electricity generation plant. Unlike *ijārah*, the ownership of the equipment will be transferred to the SPV. Thus this mode more easily addresses the issue of security sharing among all lenders. On the other hand, while the *ijārah* mode allows Islamic financiers to accept variable rent (similar to the variable rates conventional lenders would charge for the same project), *murābahah* and some other Islamic instruments allow Islamic financiers to accept only a fixed price from the SPV (similar to the fixed rates a conventional lender would charge). As discussed later, Islamic structures

are flexible enough to address this situation without compromising the *shari'ah* requirement.

Both the *murābahah* and *ijārah* structures are appropriate when there is an existing asset underlying the transaction. In the case of assets that are to be built, as in the case of greenfield infrastructure projects, *murābahah* and *ijārah* structures could be applied only after the construction phase of the project. That is, once infrastructure assets are built and in place, those assets could be used for *murābahah* and *ijārah* transactions. Under most PPPs schemes, the project/assets need to be transferred back to the government at a certain stage of the project. Using one of these structures, the government can either buy the infrastructure asset back through a *murābahah* or use an *ijārah* agreement.

Since the *murābahah* and *ijārah* structures are not well suited in a situation when there is no existing asset, and in particular when construction will occur or is ongoing, Islamic financiers use another Islamic structure for construction phase, known as *istiṣnā'*, which allows for the advance funding for constructing particular assets/projects.

### 3.2.3 ISTIṢNĀ'

*Istiṣnā'* is a sale where the transaction is executed before an asset exists. A purchaser orders a manufacturer/EPC contractor to make a specific asset according to the purchaser's specifications and deliver it at a pre-agreed delivery date for a pre-agreed price, which is payable either in lump sum or installments.

Islamic financiers use *istiṣnā'* on a medium- to long-term basis. The financier, in the capacity of a purchaser, appoints the SPV as its agent, which becomes the owner of the asset constructed by an EPC contractor. When the asset is constructed and accepted by the financier, the latter transfers the title of the asset to the SPV, which pays back the sale price of the asset in deferred payments to the Islamic financier.

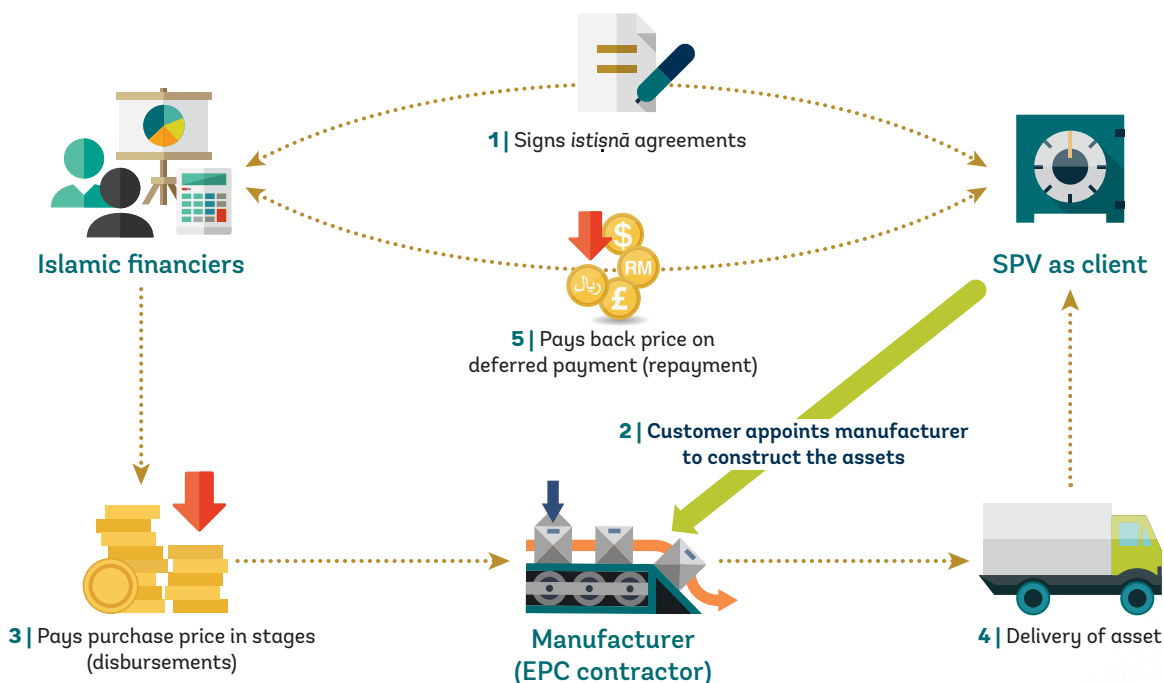
*Istiṣnā'* is suitable for greenfield infrastructure projects because these projects need to be built according to specific specifications. The following agreements are typical of *istiṣnā'* transactions:

- ◆ *Istiṣnā'* agreement: This agreement provides for the terms and conditions of the *istiṣnā'* operation, including the sale price, tenor of financing, description of the asset, delivery terms and date, and payment schedule. Once the asset is constructed to the satisfaction of the SPV, the title of the asset is transferred to the SPV, which would now be liable to pay the sale price in accordance with the *istiṣnā'* agreement.



- ◆ In some cases, instead of transferring the title to the client, the Islamic financiers may retain the title of the assets, and allow the client to use the assets under an *ijārah* agreement. Thus two modes of finance would be combined in the same project. This is common in many PPP projects being financed by Islamic financiers.
- ◆ *Istiṣnā'* agency agreement: This agreement lists the guidelines to which the client (SPV) must abide to procure the asset. The client acts as an agent on behalf of Islamic financier. The purchaser will provide the financier with all progress reports and any other reports and information requested by the financier during the construction phase.

**FIGURE 3.4:** *Istiṣnā'* Structure and Related Steps



Source: World Bank.

Note: EPC = engineering, procurement, and construction; SPV = special purpose vehicle.

Figure 3.4 presents a typical *istiṣnā'* structure that would be appropriate when no asset is in place but funds must be deployed to build the assets—as is typically the case for greenfield infrastructure PPP projects. Under the *istiṣnā'*, the borrower (the SPV) agrees to procure assets by a certain date, on behalf of the Islamic financier. Once the construction of the infrastructure asset is complete, the Islamic financier would sell the asset to the SPV, using a *murābahah* structure, or lease it back, using an *ijārah* structure.

Sometimes, Islamic financier(s) may decide to create a separate entity that will act on behalf of the Islamic

financiers as the purchaser under the *istiṣnā'* agreement. This additional layer has benefits for both the Islamic financiers and the SPV. The financiers are protected from the risks associated with the ownership of the assets, such as an environmental liability. In the case of the SPV, because the assets are not held by the Islamic financiers directly, the project company and the assets are isolated from the risk of an Islamic financier's insolvency.

During the project's construction period, the project company (through the SPV) is entitled to reduce the total project cost payable by the Islamic financiers by

altering the specifications of the assets (equivalent to a cancellation under conventional facilities). Because the *istiṣnāʿ* agreement provides for a maximum amount the Islamic financiers must pay to the SPV for their procurement obligations, if the cost of constructing the assets is greater than that amount (whether as a result of a change order or a change in law), the SPV must pay the excess. The Islamic financiers have no obligation under the *istiṣnāʿ* agreement with respect to the excess.

In addition to its liability for any cost overruns, the SPV is required to pay liquidated damages to the Islamic financiers if the assets are delivered behind schedule; the

assets do not conform to the pre-agreed specifications; or the procurement agreement or *istiṣnāʿ* is terminated before the project is completed.

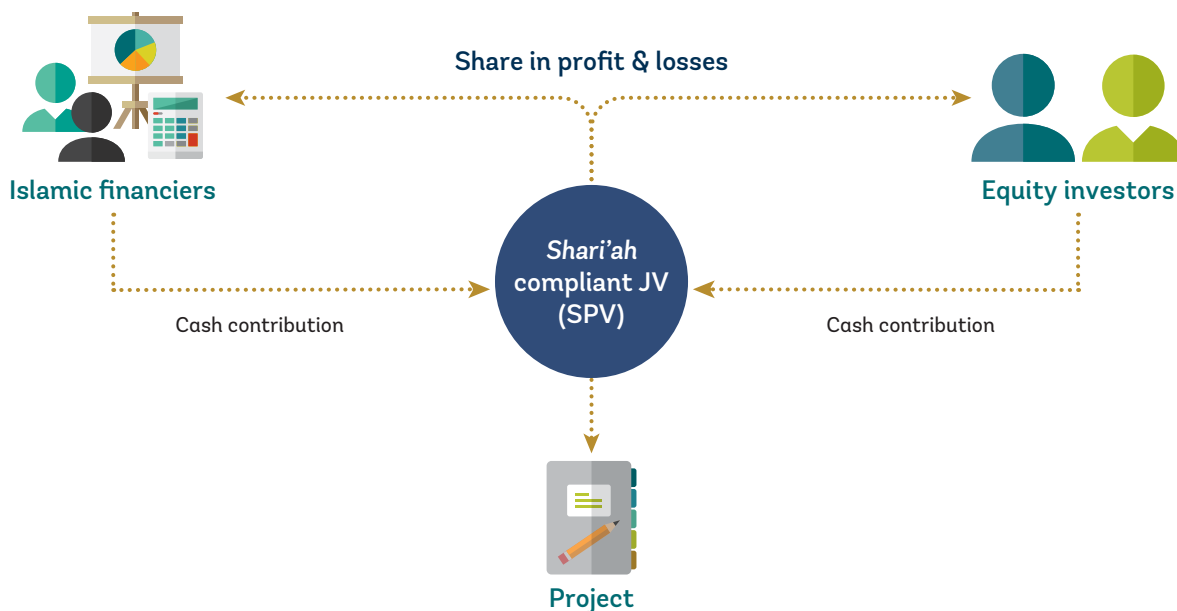
Because the Islamic financiers are repaid from lease payments and lease payments can be made only after the assets are constructed and operational, the liquidated damages provision enables the Islamic financiers to receive monies equivalent to the lease payments they would have received had the lease transaction commenced as scheduled (in the case of a delay); or to all amounts paid by Islamic financiers to the SPV to procure the assets (in the case of nonconforming assets or termination of the procurement agreement).

### 3.2.4 MUSHĀRAKAH

The term *mushārahah* means partnership. Under a *mushārahah* structure, the parties involved in the transaction remain vested in the project for a defined period of time and are required to share the risks and rewards, like the equity partners in a venture. *Mushārahah* structures require that the parties agree

upon a profit-sharing ratio. The profit-sharing ratio does not necessarily need to be in proportion to their respective investments. However, any losses must be shared in proportion to the amount invested. Figure 3.5 shows a typical *mushārahah* structure.

FIGURE 3.5: *Mushārahah* Structure and Related Steps



Source: World Bank.

Note: JV = joint venture; SPV = special purpose vehicle.

In the context of an infrastructure PPP project, through a *mushārah* structure, both the financial institution and the customer (the equity investors) contribute in the same way to the SPV of the infrastructure project. For example, the government would provide the land on which the infrastructure would be built, and stipulate all the legal and regulatory requirements, while the private sector would provide the capital, expertise, and construction. However, unlike the use of a *murābahah* to sell the asset to the government after construction or an *ijārah* to lease the asset back after the construction phase, in the case of a *mushārah*, the two parties would remain vested in the project, sharing in the profits and losses from the underlying project: that is, they would share the risk. In the case of public infrastructure such

as a public highway, the asset does not always generate a direct cash flow, unlike utilities, power plants, or toll roads. Hence some consideration must be given to the cash flows that would be associated with the project. *Mushārah* modes could apply during the operational phase of a PPP transaction. The continuing partnership arrangement increases the importance of mitigating project risk in infrastructure PPPs. Development banks can mitigate risk by mobilizing Islamic financing for PPP projects.

*Mushārah* can be closely associated with equity-like instruments due to its loss-sharing principle, as previously explained.

### 3.2.5 MUḌĀRABAH

**MuḌārah** refers to an investment made on the customer's behalf by a person with greater expertise, who is referred to as the *muḌārib*. This arrangement is executed through a profit-sharing, loss-bearing contract in which one party (*rabb al-māl*) provides capital and the other party (*muḌārib*) provides expertise to manage a business enterprise. Any profit earned is shared in a pre-agreed ratio. Any loss is borne solely by the capital provider (*rabb al-māl*), except in case of negligence and misconduct by the *muḌārib*.

As shown in figure 3.6, this arrangement is similar to infrastructure fund management in conventional practices, whereby the fund manager takes responsibility for investing the fund in eligible infrastructure projects and the capital providers or investors take the investment risks. Similarly, through a *muḌārah* arrangement, one Islamic bank can assume the role of *muḌārib* manager, while other Islamic financial institutions or investors can put their funds for investments into infrastructure projects to be identified by the *muḌārib*.

**FIGURE 3.6: MuḌārah Arrangement and Related Steps**



The *muḍārib* must conduct all the relevant due diligence to determine the financial viability of the projects in which to invest. The *muḍārib* needs to ensure that the financing will be used only for *shari'ah*-compliant ventures. The risk of the project is borne by the investors. The Islamic finance institution that is acting as a *muḍārib* has a fiduciary responsibility to invest the capital in a prudent manner. To ensure this, most of the time, the

capital providers require the *muḍārib* to invest some of its own capital in the project, as well.

The *muḍārib* can decide to invest the capital provided by the *rabb al-māl* in debt or equity-like instruments, depending on the mandate given to the *muḍārib* by the *rabb al-māl*.

### 3.2.6 SUKŪK (INVESTMENT CERTIFICATES)

**Sukūk** are another important pillar of Islamic finance, although they are not widely used in the context of infrastructure PPP projects.

*Sukūk* are formally defined as financial instruments representing an undivided ownership share in an underlying asset or interest held by the issuer. They are commonly referred to as investment certificates, which distinguishes them from both conventional bonds (which represent debt obligations of the issuer) and conventional equities (which represent ownership interests in the issuer itself). With this ownership share, the *sukūk* holder is then entitled to a proportionate share of the returns generated by the underlying asset(s). *Sukūk* structures are attractive for several reasons. *Sukūk* meet the changing and differentiated demands of the modern economy by supporting innovative financial structures and products; and they achieve such issuances at competitive pricing (Aziz 2014). These attractive features have resulted in the increasing interests in the *sukūk* market by “sovereigns, multilateral institutions, and multinational and national corporations from advanced, emerging, and developing economies to finance investments in a wide range of economic activities and development projects” (Kammer et al. 2015).

There are various dimensions involved in structuring *sukūk*. One dimension relates to the parties involved: the originator; the *sukūk* holders; and the SPV. In the context of infrastructure project, the originator would be the government seeking to pursue the infrastructure

project. The *sukūk* holders would be the investors. The SPV would represent the entity where the assets or the infrastructure investment project would be placed.

Many governments and corporations globally issue *sukūk* to raise financing from the capital markets and from institutional investors. *Sukūk* are also a preferred mode of investment of many institutional investors because *sukūk* have the distinct feature of tradability: that is, investors can buy or sell *sukūk* certificates. The majority of *sukūk* are issued on the back of the existing assets and their future incomes. If issued by the corporations, proceeds from the *sukūk* can be used for general corporate purposes or for specific uses. Similarly, governments can issue *sukūk* for general public expenditures or for specific purpose such as infrastructure projects. Between 2001 and the first half of 2013, infrastructure *sukūk* within Malaysia accounted for 71 percent of all infrastructure *sukūk* globally, followed by Saudi Arabia (16 percent), and the United Arab Emirates (11 percent). Together, these three countries accounted for 98 percent of the global total (Abdelkafi and Bedoui 2016). Success in these countries suggests the potential of mobilizing *shari'ah*-compliant capital across developing countries more broadly.

Currently, *sukūk* are not the most suitable instruments for greenfield infrastructure PPP projects, as explained box 3.2. Industry practitioners are very keen to address these issues to bring in *sukūk* as a major instrument in financing PPP infrastructure projects. New product development in this area is expected.



### BOX 3.2: WHY SUKŪK ARE NOT WIDELY USED FOR GREENFIELD PPP PROJECTS

Infrastructure projects have long gestation/construction periods that can last anywhere from one to four years (or even more for major projects such as integrated mining/power projects or hydro dams). These projects need injections of funds at different times throughout their construction periods. For example, a \$1 billion project might need \$50 million in first year of construction, \$650 million in second year, and the remainder in the third year. This pattern of capital expenditure is known as the S-curve. However, because a project is in a dynamic state, the S-curve can change due to a host of factors during construction. This aspect of greenfield infrastructure projects poses a unique challenge to using *sukūk* during construction phase. *Sukūk* raise finances through a subscription process in the market. The entire financing is raised on the first day of subscription to achieve financial closure, while the funds are released over a relatively long period of time. This leads to financial inefficiency as the money raised will start accumulating mark-up/margin right away, which will be an additional financial burden on the project. This problem, known as “cost of carry” is not only typical for *sukūk*, but is also common for conventional project bonds. This problem explains why *sukūk* as well as project bonds are used less often to finance greenfield infrastructure PPPs.

### 3.2.7 TAKĀFUL (INSURANCE)

Insurance is an important tool for mitigating the risk of infrastructure PPP projects. *Takāful*—the *shari‘ah*-compliant version of insurance—has begun to be applied in this field (Stagg-Macey 2007). *Takāful* is based on the principle of mutual insurance. A group of people agree to insure one another against given risks. Each participant in this mutual insurance contributes to the fund, and receives payment in the event the participant or any other participant to the fund incurs a loss due to the covered risks.

In the case of conventional insurance providers, which are owned by third-party investors and not by the policy holders, profits of the insurance provider flow to the owners. When the aggregate claims paid to the policy holders are lower than the premiums collected, the policy holders typically do not benefit from the profitability of the insurance provider. This is in sharp contrast to *takāful*, where the company is owned by the policy holders, and hence any profits of the insurance provider flow back to the policy holders. Therefore, it is difficult to mobilize capital into *takāful* because it is hard to keep these kinds of companies solvent in the event of large losses. The inability to attract capital limits their ability to grow.

In the past 20 years, *takāful* operations have been established in various countries that have large Muslim communities. In the Far East, Malaysia has been at the forefront of *takāful* development. Brunei Darussalam, Indonesia, Singapore, and Tanzania have also developed *takāful* operations. In South Asia, Bangladesh, Pakistan, and Sri Lanka are also taking a more active role. In the Middle East, *takāful* has developed in Bahrain, the Islamic Republic of Iran, Qatar, and Saudi Arabia, with new operations recently opening in Egypt, Kuwait, and the United Arab Emirates. Steps have been taken in Europe and the United States, but these are still very young markets, even compared to the overall emerging global market for *takāful*.

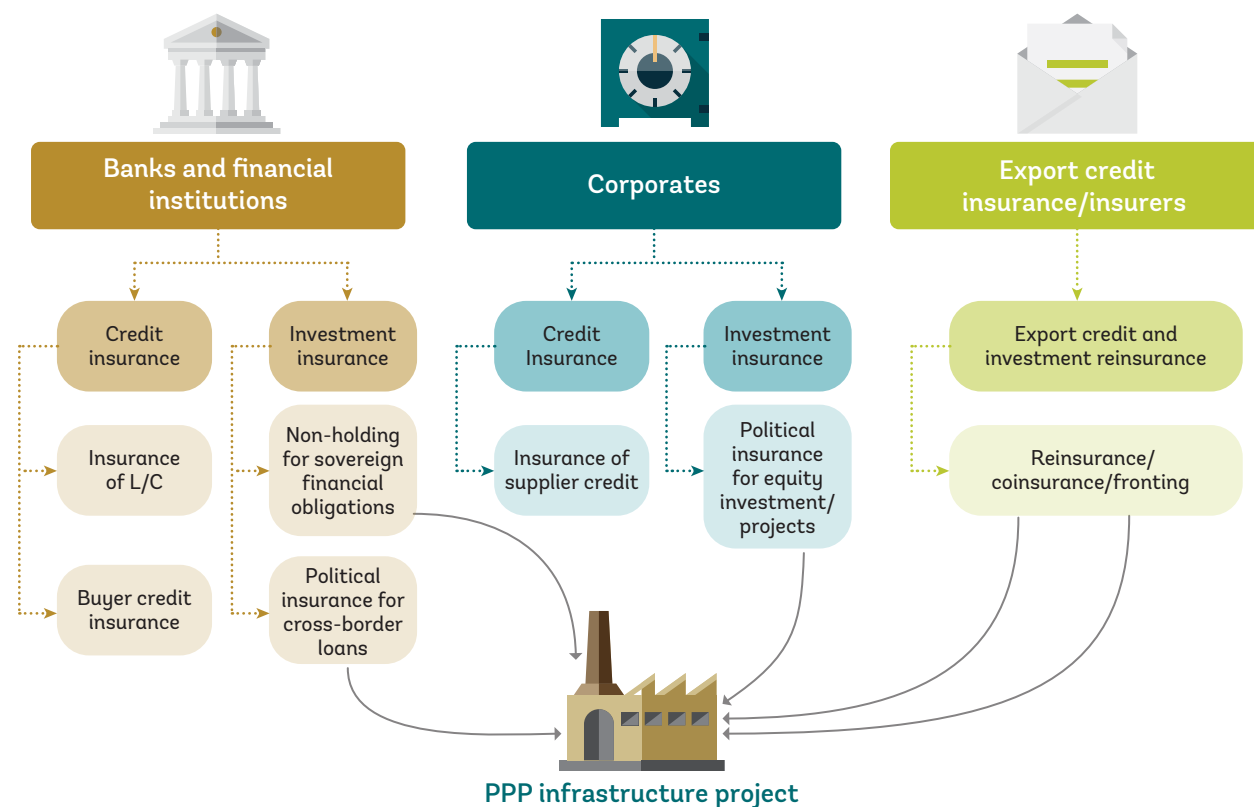
From the perspective of the *takāful* operator, two main business models are used in the *takāful* industry: *muḍārabah* and *Wakālah*. The *muḍārabah* model is commonly used in Malaysia. The *takāful* operator manages the *takāful* fund in return for a share of the underwriting and investment profits. The *Wakālah* model is more prevalent in the Middle East. In this model, the *takāful* operator acts as an agent for the policy holders (who are also participants of the fund) and manages the *takāful* fund in return for a defined fee.

Contributions of participants are made into the risk pool of *takāful* fund. From this pool, expenses and claims are paid. If there is a surplus, this is shared among participants. Deficits are made up with additional contributions from participants or with an interest-free loan extended by the *takāful* operator. Accounting practices in the *takāful* model are slightly different from the conventional insurance companies. Payout of the *takāful* fund's surplus to participants at the end of the contract is contingent upon when the participant made its contribution to the *takāful* fund. For instance, the participant would receive only three-quarters of the annual surplus if it made its contribution at the end of the first quarter. The operator's management expense is treated separately from other costs such as payment of claims, re-*takāful*, and reserves, and is not paid from the risk pool. Only direct expenses related to claims or investments may be paid out of the risk pool (the participants fund).

Most *takāful* operators are in emerging markets and the market is still evolving, which partly explains why *takāfuls* are underperforming compared to their conventional counterparts. In addition, *takāfuls* have higher expenses, less capital, lower employee productivity, and less income on assets. However, *takāfuls* also have higher retention ratios and solvency margins.

Only a handful of institutions offer *takāful* products for infrastructure PPP projects. The Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC), a member of the IsDBG, is pioneer and leading the efforts in offering insurance service for infrastructure PPP projects based on the *takāful* principle. Figure 3.7 shows the range of products ICIEC offers, including those that can be applied in the context of infrastructure PPP projects.

**FIGURE 3.7: ICIEC Products and Application for Infrastructure PPP Projects**



Source: World Bank.

Note: ICIEC = Islamic Corporation for the Insurance of Investment and Export Credit; L/C = letter of credit; PPP = public-private partnership.



## CHAPTER 4

# CASE STUDIES

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*This chapter discusses eight examples of infrastructure PPP projects where Islamic finance has been used successfully. Many of these projects were financed by both conventional and Islamic financiers—the most common arrangement when Islamic finance is used to finance infrastructure PPP projects. The examples illustrate that Islamic finance structures can be used across different infrastructure asset class in different countries and contexts, demonstrating the wider applicability of Islamic finance.*

Applying the Islamic finance instruments described in previous chapters, this chapter examines a number of Islamic finance structures used in a variety of infrastructure public-private partnership (PPP) projects in some members of the Organization of Islamic Cooperation (OIC). Irrespective of the diversity of infrastructure PPP projects across various sectors and settings, all these projects were able to accommodate Islamic financing.

These cases highlight the feasibility and potential of deploying Islamic finance within a PPP framework for developing country infrastructure projects. These case studies cover six countries: Pakistan, Djibouti, Turkey, Saudi Arabia, Jordan, and Malaysia. Projects are selected from a range of infrastructure categories, spanning road transportation, power, airports, seaports, and hospitals.

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A common feature of some of the cases is the seamless coexistence of Islamic finance and conventional finance—otherwise known as parallel financing—in the same infrastructure PPP project.

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In several of the projects, conventional finance coexisted alongside Islamic finance. Seamless coexistence of Islamic finance and conventional finance—otherwise known as parallel financing—in the same infrastructure PPP project is a common feature. Nothing in *shari‘ah* prevents Islamic financiers from financing an infrastructure PPP project if conventional financing is also being used. The next chapter will examine some specific transaction features

that practitioners use to accommodate these financing streams in the same project.

An intuitive way to understand how Islamic finance is used for infrastructure PPP projects is to replace the word “Islamic” with the word “structured.” As in any structured finance deal, constraints must be addressed with creativity and innovation. Here, the principles are based on the principles of shari’ah. The question is how to structure the deal within the tenets of *shari’ah*.

For the purposes of simplicity and brevity, the cases that follow focus only on the Islamic finance structure of the projects. Different structural solutions can be applied to a project.

Thus the solution that was used in any specific project was not the only way to apply Islamic finance for that transaction. This point illustrates the flexibility of Islamic finance and its applications.

## 4.1 CASE 1: KARACHI THATTA DUAL CARRIAGEWAY PROJECT IN PAKISTAN

| Quick Facts                |                    |
|----------------------------|--------------------|
| Sector                     | Transportation     |
| Subsector                  | Road               |
| Country                    | Pakistan           |
| Islamic finance instrument | <i>Mushārahkah</i> |
| Parallel financing         | No                 |

The project involves the construction and development of 49-kilometre section of National Highway (N-5) in Pakistan. The Provincial Government of Sindh (GoS) used a PPP structure to design, build, finance, operate, and transfer (DBFOT) the project. A special purpose vehicle (SPV), the Karachi Thatta Construction & Management Pvt Ltd (KATCAM), was incorporated to execute a concession agreement with the GoS (figure 4.1).

The banks deployed a *mushārahkah* structure to finance this project. Under this arrangement, the banks are known as co-owners (sometimes also referred to as *mushārahkah* financiers), and the SPV is known as the managing co-owner. The banks appointed an investment agent, who entered into a “*mushārahkah* agreement” with the SPV to build and jointly own the *mushārahkah* assets: that is, the project assets.

The banks (co-owners/*mushārahkah* financiers) agreed that the SPV would retain the legal title and beneficial

ownership of the *mushārahkah* assets (project assets) on behalf of all the joint owners. In contrast, the mortgage rights over the project site remain with the GoS due to their public nature as public goods and the essential public service the projects provide. This is a common feature in many countries.

During the construction phase, the SPV supervised the construction of the assets and ensured that the construction was being done as per the agreed design. The role of “agent” is another important feature of the Islamic finance structure for infrastructure PPP projects. Islamic finance requires that the financial institution becomes a party to the contract underlying the project assets—not merely a party to the financing agreements (that is, not just a money lender). As such, the Islamic financiers must assume roles such as asset construction contractors, asset owners, and asset managers. However, because they are financial institutions, they cannot perform these tasks. In practice, Islamic financiers appoint the SPV, as their agent, to do these jobs.

Funds are disbursed by each co-owner (*mushārahkah* financier), in proportion to its respective ownership of the project assets. The disbursement request is known as the contribution request. The SPV also contributes its *mushārahkah* investment in cash.



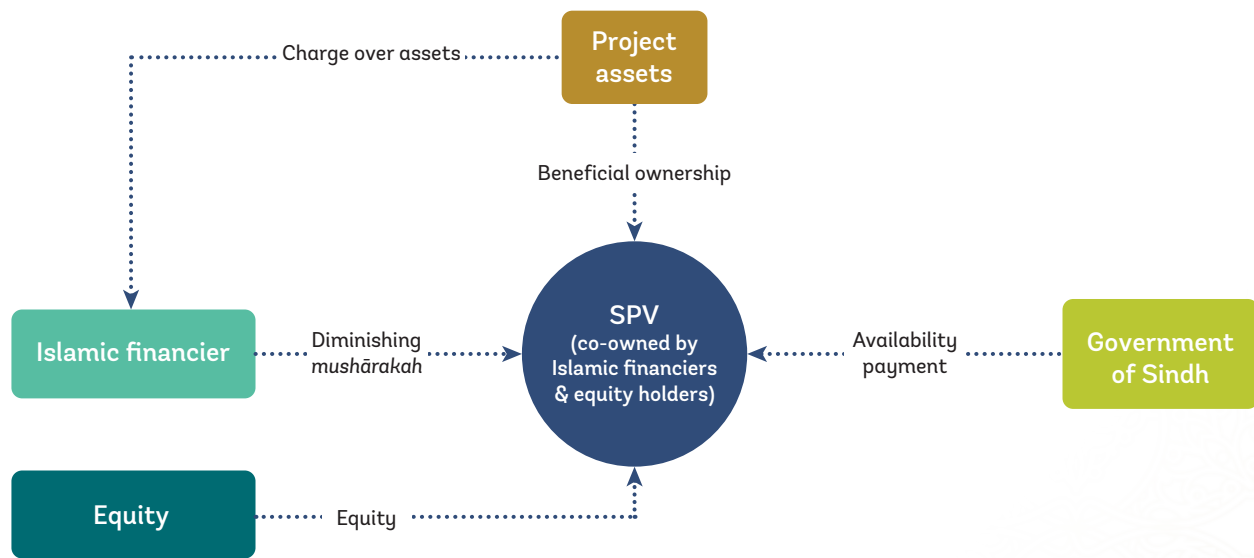
This arrangement to disburse funds during the construction phase is similar to the disbursement arrangements used by conventional lenders, where all the lenders disburse funds in proportion to their respective loan amount. The disbursement is also pro-rata among the lenders and equity holders. In an Islamic financing structure, this pattern of disbursement is also followed, although the underlying contractual arrangements differ from those of conventional disbursements.

Once construction is complete and the project meets its deadline for commercial operation, the SPV purchases

Different Islamic financial structures could be applied to the same PPP project, depending on the needs of the project.

*mushārah* units of the assets from the co-owners (financiers), as per the agreed schedule, paying the outstanding buy-out price on the buy-out payment date. This arrangement, under which the SPV buys out assets from the financiers, is tantamount to repaying debt service and the amortization of debts of conventional financing.

**FIGURE 4.1:** Karachi Thatta Dual Carriageway Islamic Finance Structure



Source: World Bank.  
 Note: SPV = special purpose vehicle.

## 4.2 CASE 2: DORALEH CONTAINER TERMINAL PROJECT IN DJIBOUTI

| Quick Facts                 |   |
|-----------------------------|---|
| Sector                      | Transportation                                  |
| Subsector                   | Seaport   |
| Country                     | Djibouti  |
| Islamic finance instruments | <i>Mushārahah, istiṣnāʾ, ijārah and takāful</i> |
| Parallel financing          | No  |

This project entails the development, design, construction, management, operation, and maintenance of a greenfield container port terminal in the city of Doraleh, Djibouti. The terminal was developed under a 30-year concession, granted by the government of Djibouti to the main sponsors—DP World of the United Arab Emirates and Port Autonome International of Djibouti—via their SPV, the Doraleh Container Terminal S.A. (DCT) (figure 4.2). The terminal has a total quay length of 2,000 meters and an annual handling capacity of 1.5 million 20-foot container equivalent units.

The World Bank’s Multilateral Investment Guarantee Agency (MIGA) issued guarantees totaling \$427 million—\$5 million for DP World’s equity investment in DCT and \$422 million for Islamic project financing—against the risks of restrictions on currency transfers, expropriation, breach of contract, and war and civil disturbance. This project is an excellent example in which multiple Islamic modes have been used along with political risk insurance from MIGA.

The Islamic project financing was designed to reflect a “debt-type” profile, while satisfying the commercial requirements. The transaction combines four Islamic finance instruments: *mushārahah*, *istiṣnāʾ*, *ijārah*, and *takāful*.

- ◆ Through the *mushārahah* agreement, the SPV and the project financiers agree to procure assets for the project jointly and commit to making respective

capital contributions according to the debt-to-equity ratio of the financing plan.

- ◆ Through the *istiṣnāʾ* agreement, the parties appoint the SPV as their agent to procure and construct the container terminal and ensure delivery of assets at the end of the construction period. Capital contributions under the *mushārahah* are paid to the SPV, which is equivalent to multiple drawdowns under a conventional lending arrangement.
- ◆ The lease agreement (*ijārah*) allows the project financiers (the lessor) to lease their co-ownership interest in the project to the SPV (the lessee) in exchange for periodical rental payments linked to a floating benchmark. During the construction phase, the documentation allows the project financiers to receive advance lease rentals. After commercial operations commence, the project financiers receive periodical lease rentals based on both floating and fixed rates, reflecting amortization of the loan.
- ◆ The Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC), a member of the Islamic Development Group, participated in this transaction by providing *takāful* reinsurance for \$50 million to MIGA.

The financing structure also entailed:

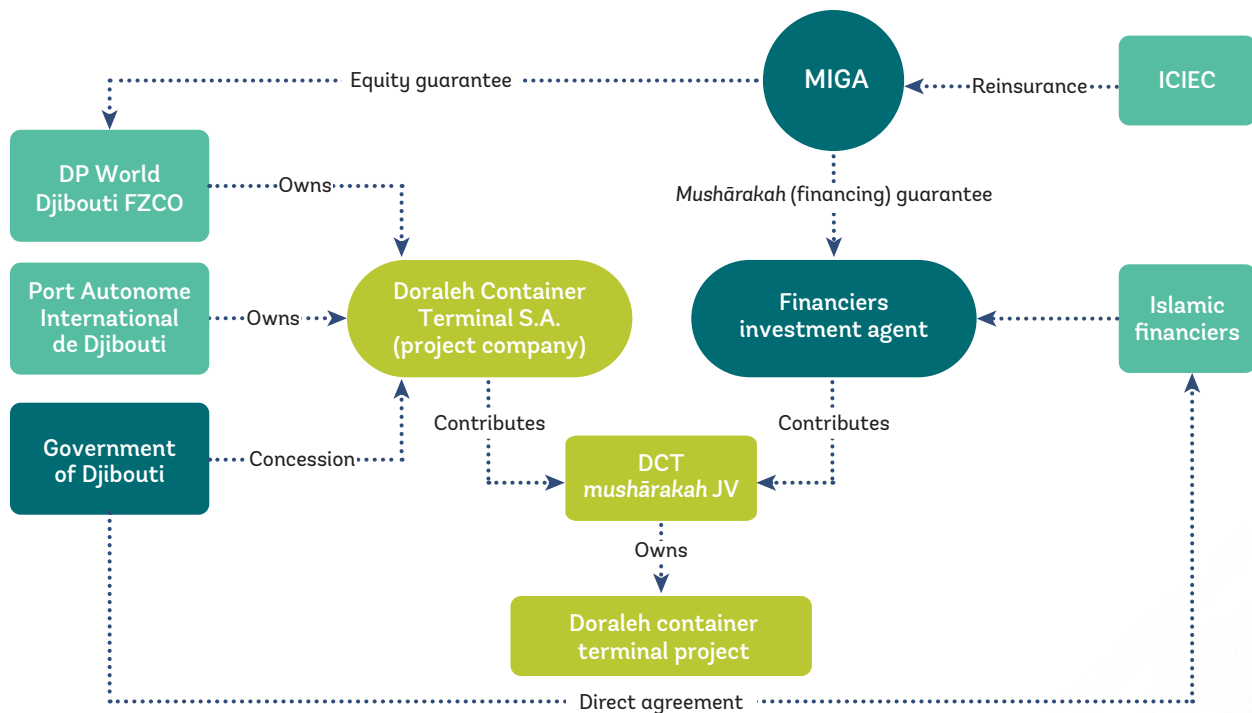
- ◆ A purchase undertaking, which allows the project financiers to sell their co-ownership interest to the SPV in case of a dissolution event (such as default or change in circumstances). The exercise price under this undertaking is an amount equal to the outstanding facility amount, any accrued and unpaid lease rentals, and any other outstanding amount under the financing documents.
- ◆ Allowance for the SPV to prepay the financing via a sale undertaking (a call option). The SPV has the

right to buy out its partner (the project financiers) in return for paying off its contribution in full (equivalent to the principal of the financing).

MIGA's main challenge was that the project's Islamic finance structure had payment obligations spread out across a number of agreements, while MIGA's guarantee coverage for third-party lenders normally considers

such obligations under a single loan agreement. MIGA structured its guarantee in a way that addressed the key risks that concerned the project financiers, while meeting the strict requirements governing the Islamic structure. This resulted in MIGA's first-ever guarantee coverage of an investment supported by an Islamic finance structure.

**FIGURE 4.2: Doraleh Container Project Islamic Finance Structure**



Source: World Bank.

Note: DCT = Doraleh Container Terminal S.A.; FZCO = Free Zone Company, a limited liability partnership within the Free Zone; JV = Joint Venture; MIGA = Multilateral Investment Guarantee Agency.

### 4.3 CASE 3: MASTER WIND ENERGY LIMITED IN PAKISTAN

| Quick Facts                 |                        |
|-----------------------------|------------------------|
| Sector                      | Energy                 |
| Subsector                   | Electricity generation |
| Country                     | Pakistan               |
| Islamic finance instruments | Musharakah and ijārah  |
| Parallel financing          | Yes                    |

Master Wind Power Project is a 50-MW wind farm in the Province of Sindh, Pakistan, implemented at a cost of \$132 million. The Alternate Energy Development Board (AEDB) of Pakistan signed an implementation agreement on behalf of the government of Pakistan (GoP) with the SPV, Master Wind Energy Limited (MWEL). The GoP provided a sovereign guarantee backing the Alternative Energy Development Board

(AEDB), the power off-taker’s performance and payment obligation (figure 4.3).

Islamic financiers used a combination of *mushārah* and *ijārah* to finance this project. The *mushārah* was used during construction phase and *ijārah* was deployed during the operation phase.

Islamic financiers and the SPV entered into the *mushārah* agreement in order to own the *mushārah* assets (the project assets) as per the agreed ratio. This is similar to the debt-equity ratio used in conventional project financing.

Furthermore, the *mushārah* agreement appointed the SPV as managing co-owner to supervise the construction of the project on behalf of *mushārah* parties. The financiers (co-owners) also appointed one of the financiers—Meezan Bank Limited (MBL)—to act as agent on behalf of all the financiers.

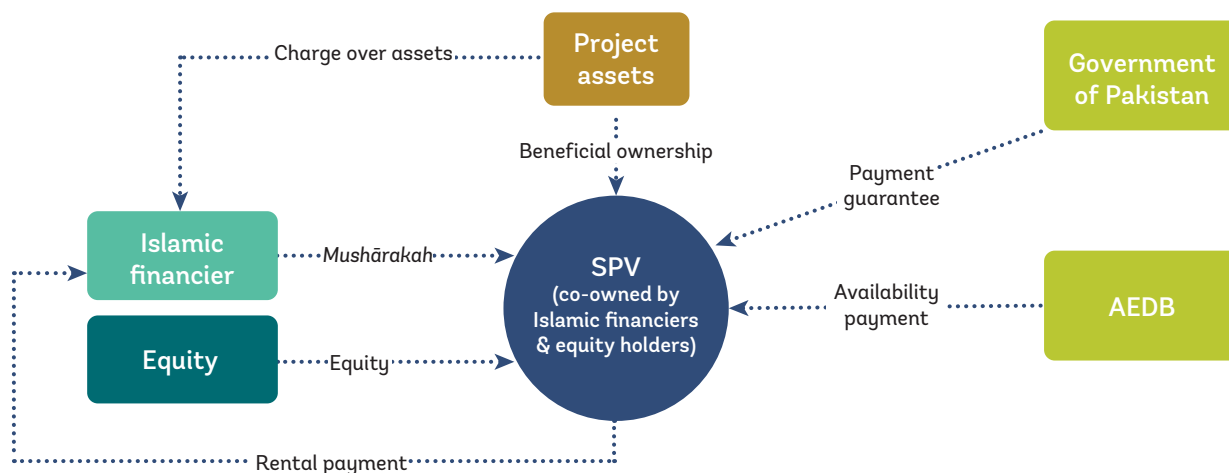
The legal title of the *mushārah* assets (project assets) remains in the name of the SPV, which holds the title on behalf of the financiers in accordance with their undivided share.

Once the project has been constructed under the *mushārah* arrangement, the *ijārah* arrangement kicks in. The SPV leases the assets from the financiers and starts paying lease rental on a quarterly basis.

The SPV, as an agent of the financiers, is responsible for maintenance, insurance, security, and payment of ownership expenses and taxes with respect to *mushārah* assets. The financiers agreed to reimburse the SPV for these expenses. Under the *ijārah* structure, *shari’ah* requires that the Islamic financiers, as owner of the assets, are responsible for asset maintenance, insurance, and so on. As discussed, the Islamic financiers are not in the position to physically maintain the project assets; thus they appoint the SPV as an agent to perform these tasks.

The SPV is responsible for arranging insurance of the assets. In case of total loss/destruction of the *mushārah* asset, any insurance claims received will be shared among financiers and the SPV in the ratio of their *mushārah* investment. The insurance payment by the insurance company must restore the plant or any damages. If the plant cannot be restored, the insurance proceeds will be shared according to the same arrangement.

**FIGURE 4.3: Master Wind Project Islamic Finance Structure**



Source: World Bank.

Note: AEDB = Alternate Energy Development Board; SPV = special purpose vehicle.



One of the major challenges was to structure the transaction according to MIGA guidelines to pool financing from multiple sources in an efficient and fair manner. A syndicate of conventional and Islamic banks working together in a project is a common practice in Pakistan. The conventional banks understand the mechanism used to structure the transaction in a *shari'ah*-compliant way. However, one of the parties, the U.S. Overseas Private Investment Corporation (OPIC), is a foreign institution. Significant effort was needed to align the understanding of OPIC and local Islamic banks

with respect to the *shari'ah* mechanism. One of OPIC's main concerns was that under the Islamic financing agreements, the implied (not legal) ownership transfers to Islamic financiers. The transaction also included other foreign parties such as the engineering, procurement, and construction (EPC) contractors. Certain clauses had to be added in the financing documents pertaining to the EPC mechanism as per *shari'ah* guidelines to keep the transaction fair and free of any conflict of interests. Chapter 5 discusses these kinds of challenges.

#### 4.4 CASE 4: KONYA INTEGRATED HEALTH CAMPUS IN TURKEY

| Quick Facts                |                 |
|----------------------------|-----------------|
| Sector                     | Health care     |
| Subsector                  | Hospital        |
| Country                    | Turkey          |
| Islamic finance instrument | <i>Istisnā'</i> |
| Parallel financing         | Yes             |

The Konya Integrated Health Campus is designed to be an 838-bed general hospital. The project is part of the series of PPP hospital projects being undertaken by the government of Turkey to revamp the country's health care system. The project follows a typical PPP model, with a construction period of three years followed by operating period of twenty-five years (figure 4.4).

Designed along the lines of the United Kingdom's private finance initiative, under the concession, the SPV constructs the facility, procures all nonmedical equipment listed in the concession agreement, and operates the facility. The SPV will not provide any core medical services, and will not be liable for services that are to be performed by the doctors, nurses, or administrative personnel. These remain the sole responsibility of the Ministry of Health (MoH). The SPV receives:

- ◆ **Availability payments:** These are guaranteed by MoH, denominated in Turkish lira, adjusted

quarterly for inflation (100 percent) and devaluation (87.5 percent), and collected independently of hospital occupancy.

- ◆ **Service payments:** These are paid monthly by MoH for support services. MoH guarantees payments for certain minimum percentage of the total service payments, irrespective of the number of patients, adjusted for inflation annually. Each service is market- tested every five years, whereby the SPV is required to float tenders to the market to see if any other provider can offer the services at a cost-competitive price. This ensures the value for money the MoH pays for the services.

- ◆ **Commercial revenues:** Revenues from the commercial use of certain properties within the hospital complex, such as rents from shops or fees from car parking, are limited to less than 2 percent of total turnover where third-party risk is taken.

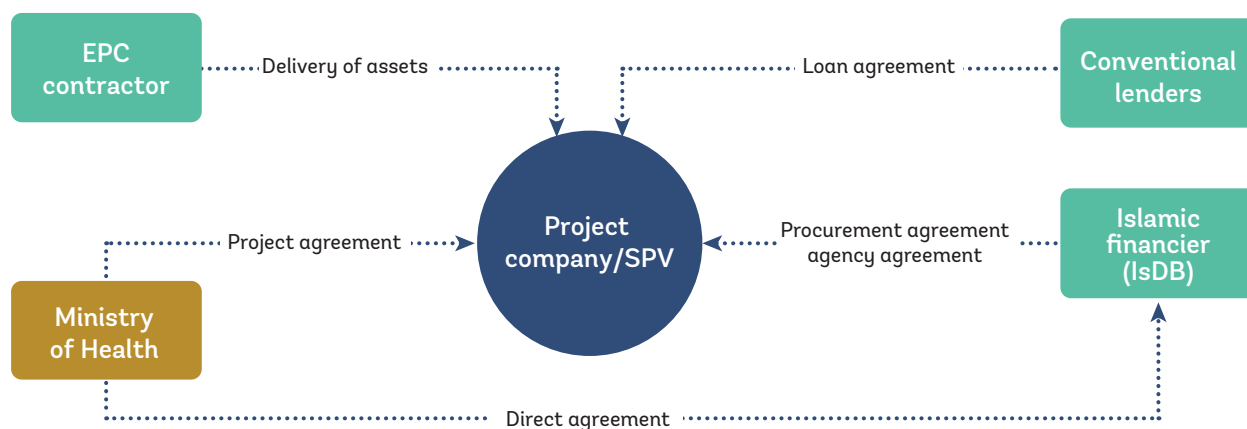
*Istisnā'* was used to facilitate Islamic financing for this project. The SPV enters into a procurement agreement with the Islamic financier to subcontract its obligations under the project agreement to design, engineer, procure, construct, develop, and deliver specified assets. Through the procurement agreement, the Islamic financier (the Islamic Development Bank Group)

becomes responsible for procuring and delivering the asset. Because the Islamic financier is not the EPC contractor, the Islamic financier appoints the SPV to perform this work through another parallel agreement, known as an agency agreement. The SPV, in turn, appoints the EPC contractor. In other words, the Islamic financier essentially passes the tasks of procurement and construction to the EPC contractor through a combination of procurement and agency arrangements.

The agency agreement dictates how the Islamic financier would disburse funds to the SPV, as per the construction schedule. The SPV, as the agent of the Islamic financier, makes the payments due to the EPC contractor under the EPC contract.

When construction is complete, assets are delivered directly to the SPV. This settles the agent's obligation to deliver the asset to Islamic financier under the agency agreement, and the Islamic financier's obligation to deliver the assets to the SPV under the procurement agreement.

**FIGURE 4.4:** Konya PPP Hospital Project Islamic Finance Structure



Source: World Bank.

Note: EPC = engineering, procurement, and construction; SPV = special purpose vehicle.

Once the asset is delivered to the SPV, the SPV repays the price of the asset to the Islamic financier on a deferred payment basis. The payment price includes a built-in calculation of the Islamic financier's profit for extending the financing. This deferred payment is made in installments,

synchronized to the SPV's repayment of the conventional loan to the conventional lenders. The project established a precedent for further parallel financing, as described in box 4.1.

#### BOX 4.1: A FOLLOW-ON CASE: THE MANISA TRAINING AND RESEARCH HOSPITAL IN TURKEY

Following the success of the Konya Integrated Health Campus PPP case, a very similar *shari'ah*-compliant PPP was developed in Turkey. The Manisa Hospital, to be constructed in Manisa, Turkey, will have a total capacity of 558 beds consisting of a general hospital and technical buildings for training and research. The sponsor of the project is a Turkish company, YDA Insaat Sanayi ve Ticaret A.S. Under the concession agreement, the project company will construct the facility, procure all medical and nonmedical equipment listed in the concession agreement, and operate the facility. However, the provision of all the medical services remains the responsibility of the Ministry of Health. The project is expected to be completed by 2019.

*box continues next page*

The Islamic Development Bank Group (IsDBG) was the mandated lead arranger in the transaction. The senior finance facility has garnered significant Islamic finance support. About 80 percent of the funding commitments consist of Islamic finance tranches. The cumulative fund arrangement was oversubscribed by almost 35 per cent. Islamic finance commitments make up about 60 percent of the total cost of the project.

The overall structure, including availability and service payments and commercial revenue, was the same as Konya Integrated Health Campus project. The financing mode was also *istiṣnā'*, and parallel lenders participated.

The Manisa Hospital transaction confirms the fact that once a PPP transaction using Islamic finance is successful in a country, it creates a precedent, and subsequent transactions follow rather quickly.

### 4.5 CASE 5: LIBERTY POWER TECH LIMITED IN PAKISTAN

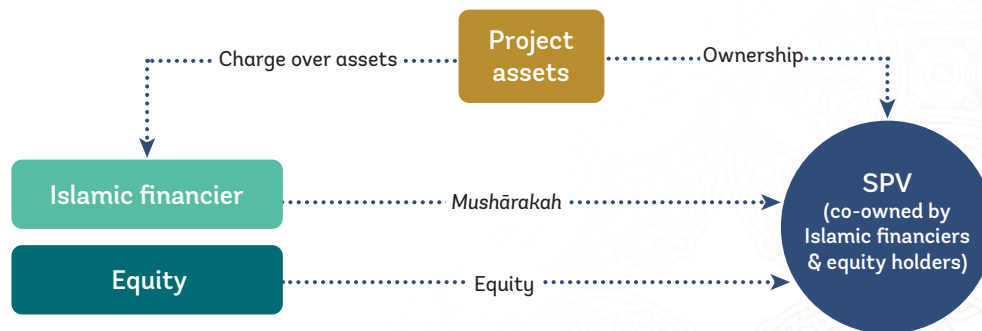
| Quick Facts                 |                        |
|-----------------------------|------------------------|
| Sector                      | Energy                 |
| Subsector                   | Electricity generation |
| Country                     | Pakistan               |
| Islamic finance instruments | Mushārahkah and sukūk  |
| Parallel financing          | No                     |

Liberty Power is a 195-MW residual-fuel-oil-based power project located in Faisalabad, Pakistan, in the province of Punjab. The project was implemented at a cost of \$240 million. The Private Power & Infrastructure Board (PPIB) signed an implementation agreement on behalf of the government of Pakistan (GOP) with the SPV, Liberty Power Tech Limited (LPTL). The GOP provided a sovereign guarantee to the project, which covers the performance and payment obligations of the power purchaser under the project agreements.

The Islamic financier (co-owner) and the SPV (as managing co-owner) entered into a *mushārahkah* agreement to jointly build and own the *mushārahkah* assets according to a pre-agreed investment ratio. The SPV, as an agent of the financiers of the *mushārahkah* partners, supervises the construction of the project (figure 4.5).

The legal title of the *mushārahkah* assets remains with the SPV, on behalf of the Islamic financier with respect to its undivided share. Once the project is complete, the SPV, on behalf of the Islamic financier, issues *sukūk*, based on the *mushārahkah* assets the Islamic financier owns at the project. In other words, it was a project-specific *sukūk*, issued once the project is complete. A consortium of financiers bought the *sukūk*. Drawing an analogy to conventional finance, the Islamic financier was able to refinance itself by selling its investment to the project to other banks.

FIGURE 4.5: Liberty Power Project Structure (Construction Stage)

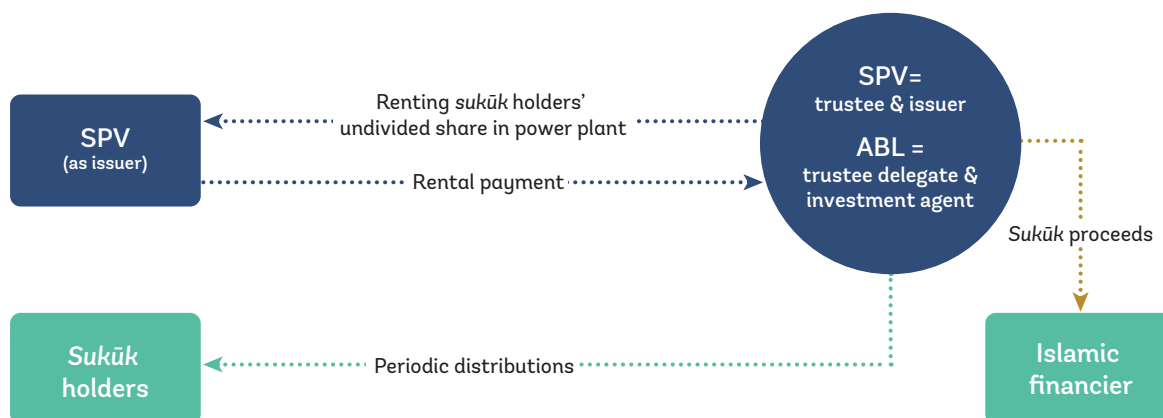


Source: World Bank.  
 Note: SPV = special purpose vehicle.

The investors in the *sukūk* take the project risks, and the SPV, as the user of the project asset, continues to pay periodic coupons to the *sukūk* holders (figure 4.6).

This unique structure of placing a *sukūk* over a *mushārah* structure increased the marketability and liquidity of the transaction many times because *sukūk* can be easily traded in the secondary and tertiary markets in specific denominations as the market demands.

**FIGURE 4.6:** Liberty Power Project Islamic Finance Structure (Operation Stage)



Source: World Bank.  
 Note: ABL = Allied Bank Ltd; SPV = special purpose vehicle.

## 4.6 CASE 6: PRINCE MOHAMMAD BIN ABDULAZIZ INTERNATIONAL AIRPORT IN SAUDI ARABIA

| Quick Facts                 |                                   |
|-----------------------------|-----------------------------------|
| Sector                      | Transportation                    |
| Subsector                   | Airport                           |
| Country                     | Saudi Arabia                      |
| Islamic finance instruments | <i>Istiṣnā'</i> and <i>ijārah</i> |
| Parallel financing          | No                                |

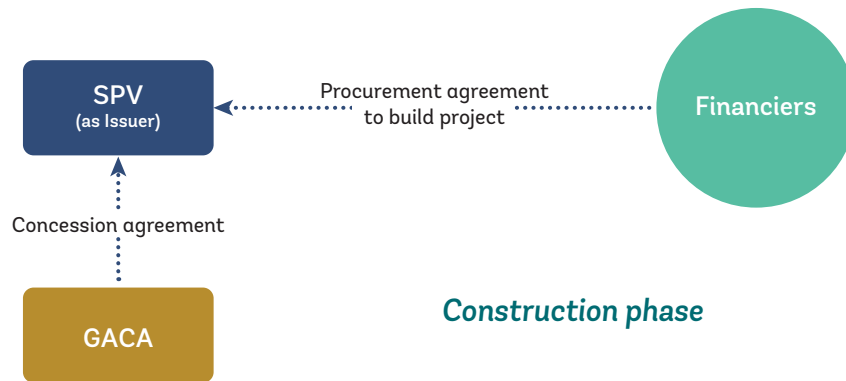
This project rehabilitates and expands the Prince Mohammad Bin Abdulaziz International Airport (Madinah airport) in Saudi Arabia under a PPP model. The project was designed to increase capacity from 5 million passengers per year to 8 million passengers per year initially, with the potential for further expansion to 16 million passengers per year. The concession was awarded to the TIBAH Consortium, comprising Al Rajhi Holding (KSA), Saudi Oger Ltd (KSA), and TAV Airports Holding (Turkey).

Two Islamic finance modes were used to finance the project, in two stages. During the construction stage, the Islamic financiers used *istiṣnā'*, under which the SPV transferred certain rights contained under the BTO (build-transfer-operate) concession agreement to the financiers (figure 4.7). In the next stage, the financiers gradually transferred the ownership of asset to the SPV against rental payments through a lease agreement with a put and call option for sale and purchase undertaking (figure 4.8).

Because the SPV did not own the project assets, a leasing (*ijārah*) structure based on the ownership of project assets, as typically used in a BOT project, could not be used. Therefore, an innovative structure combining the *istiṣnā'* structure during the construction phase and assignment of commercial rights during the operations phase was successfully employed.



**FIGURE 4.7: Madinah PPP Airport Project Islamic Finance Structure (Construction Stage)**



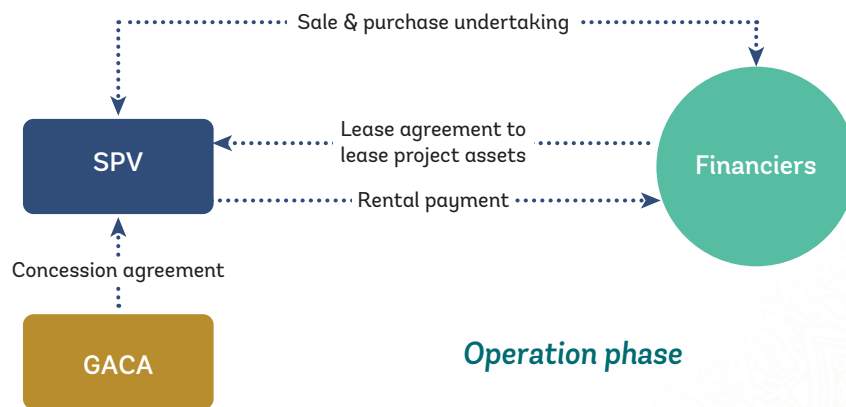
Source: World Bank.

Note: GACA = General Authority of Civil Aviation; SPV = special purpose vehicle.

When the construction of the assets was complete, the ownership of the project assets was transferred to the public authority, while commercial rights were transferred to the SPV through the concession agreement. During the operations period, the SPV assigned its commercial rights of the project assets, under the concession agreement, to the Islamic financiers. The SPV is designated from the outset as

the manager of the project: that is, it is the party that will be responsible for implementing all the rights under the BTO concession. Because this is a PPP scheme, the financiers also obtained direct agreement with the SPV and the government authority in case of default of the SPV. By virtue of the direct agreements, the government authority will pay the financiers, if the project is terminated because the SPV defaults.

**FIGURE 4.8: Madinah PPP Airport Project Islamic Finance Structure (Operation Stage)**



Source: World Bank.

Note: GACA = General Authority of Civil Aviation; SPV = special purpose vehicle. .

## 4.7 CASE 7: QUEEN ALIA INTERNATIONAL AIRPORT IN JORDAN

| Quick Facts                 |  |
|-----------------------------|--|
| Sector                      | Transportation   |
| Subsector                   | Airport  |
| Country                     | Jordan   |
| Islamic finance instruments | <i>Istisnā'</i> , <i>ijārah</i> , and <i>muḍārabah</i> |
| Parallel financing          | Yes  |

The Queen Alia Airport is Jordan's main international airport and a key component of the country's transport, trade, and tourism infrastructure. It was the first successful airport public-private partnership in the Middle East. This airport was financed in two phases: the initial financing and financing for expansion. In both phases, Islamic financing was used. The description that follows relates to the original financing only (figure 4.9).

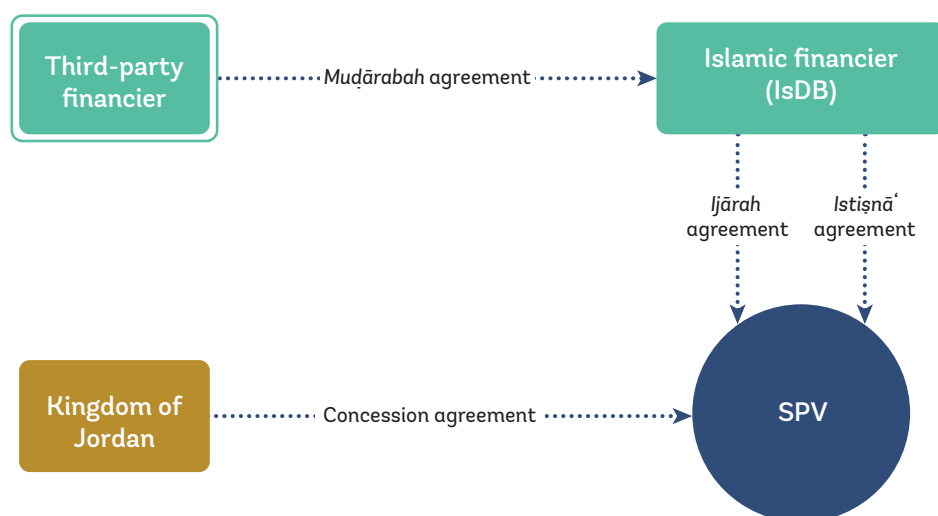
The Islamic financier (the Islamic Development Bank Group) provided financing of \$100 million through a leasing mode. The concession agreement requires that the ownership of the project must remain with the

government. This requirement was easily accommodated by *shari'ah*, as it is not a *shari'ah* requirement that the lease asset must be owned by the lessor, as long as the lessor has a usufruct right over the lease asset.

The Islamic facility for this project was executed through the following set of documents:

- ◆ An *istisnā'* agreement between the Islamic financier as employer and the SPV allowed the SPV to construct the asset.
- ◆ Once construction was complete, the Islamic financier and the SPV signed a lease agreement, whereby the Islamic financier leases the asset to the SPV.
- ◆ The Islamic financier also mobilized third-party financing for this project through a *muḍārabah* agreement.

**FIGURE 4.9:** Queen Alia PPP Airport Project Islamic Structure (Initial Financing)



Source: World Bank.

Note: SPV = special purpose vehicle.

## 4.8 CASE 8: THE EAST KLANG VALLEY EXPRESSWAY PROJECT IN MALAYSIA

| Quick Facts                 |                        |
|-----------------------------|------------------------|
| Sector                      | Transportation         |
| Subsector                   | Highway                |
| Country                     | Malaysia               |
| Islamic finance instruments | <i>Sukūk murābahah</i> |
| Parallel financing          | No                     |

The East Klang Valley Expressway (EKVE) is a 36.16-km closed-toll, dual-lane expressway between Bandar Sungai Long and Ukay Perdana in Malaysia. The project was initiated by the Ministry of Works of the government of Malaysia (GoM). EKVE forms the eastern segment of the Kuala Lumpur Outer Ring Road (KLORR), serving as an orbital system of ring roads around the greater Kuala Lumpur area.

The project was financed by a *sukūk* structure. The financiers established an SPV, named EKVE Sendirian Berhad, which is Malay for “private limited.” EKVESB then became the agent of the *sukūk* holders pursuant to the agency agreement.

The *sukūk* were issued in the form of Islamic medium-term notes facility of up RM1 billion. The *sukūk* facility was a one-time issue with a tenor of 22 years. It finances the sale and purchase of commodities carried out in four basic steps:

- a | The financiers (*sukūk* holders) buy commodities at market price from a commodity seller.
- b | The financiers sell the commodities to the SPV (EKVESB) at a deferred price, with a profit component, so that the sales price plus the profit component match an amortization schedule on a loan.
- c | The SPV sells back the commodities to a commodity purchaser at the original sales price.

Since this all happens instantaneously, the commodities never actually change hands. The transactions are recorded by book entry only, so that the financier directly funds the SPV and the SPV repays the financier in instalments. Expanding on the four basic steps already described, the *sukūk* for EKVE was carried out in the following six steps:

- 1 | EKVESB issued a purchase order to itself as the agent of the *sukūk* holders. This purchase order states that EKVESB irrevocably undertakes to purchase the commodities from the *sukūk* holders at the deferred sale price, payable on a deferred payment basis in instalments.
- 2 | Upon receiving the purchase order, EKVESB, acting as agent of the *sukūk* holders, appoints the CTP (Commodity Trading Participant) to purchase commodities from the commodity seller at the purchase price on the issuance date of the *sukūk murābahah* on a spot basis.
- 3 | Once it has purchased the commodities from the commodity seller via the CTP, EKVESB, as the SPV, issues *sukūk murābahah* to the *sukūk* holders. The *sukūk murābahah* certifies the *sukūk* holders’ ownership of the commodities and all related rights (including all rights against EKVESB under the purchase order and entitlement to the deferred sale price once the commodities are sold to EKVESB).
- 4 | Next, EKVESB, as the agent, pays the purchase price to the CTP using proceeds of the *sukūk murābahah* received from the *sukūk* holders. The commodity trustee declares a trust in favor of the *sukūk* holders over the commodities (as long as title is vested in the SPV).

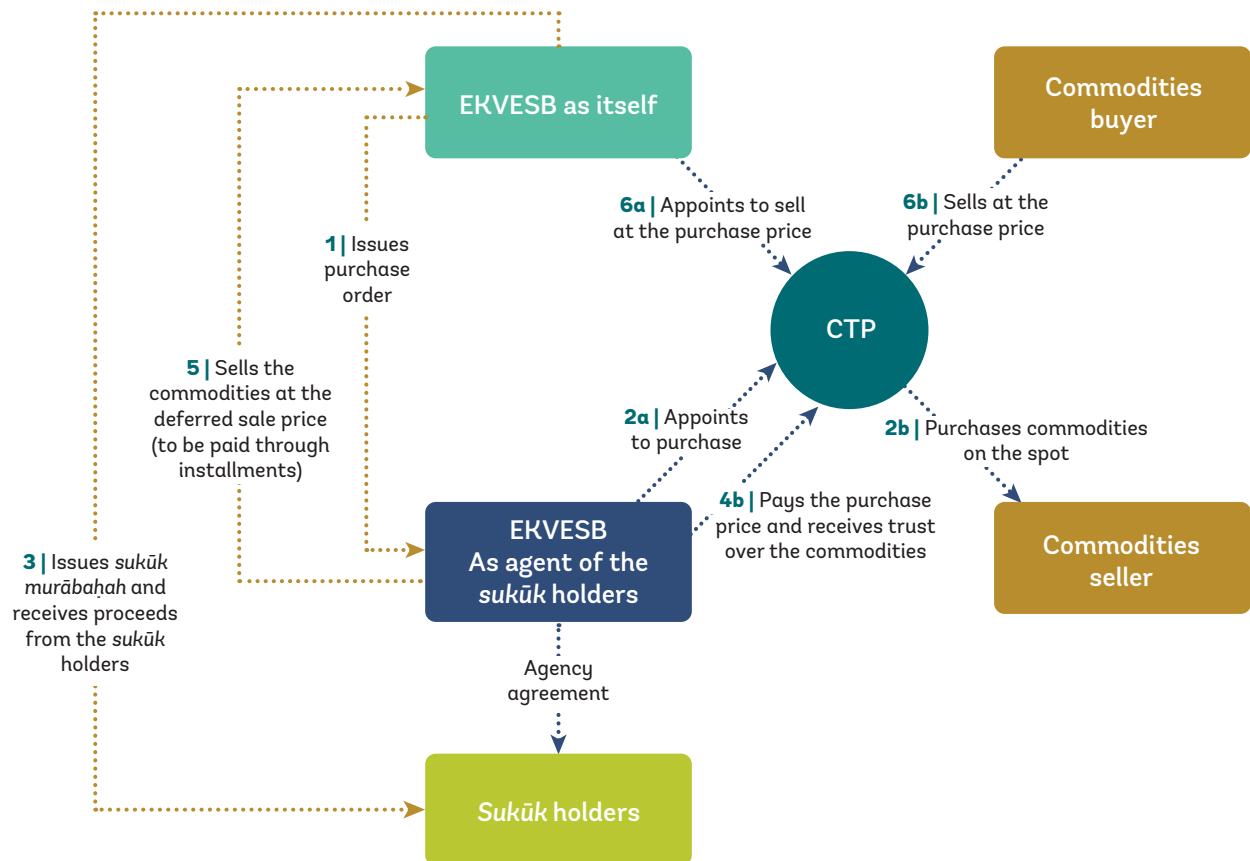
- 5 |** EKVESB (on behalf of the *sukūk* holders) sells the commodities to EKVESB, under the *shari‘ah* principle of *murābahah*, at the deferred sale price. The deferred sale price will be paid by EKVESB to the *sukūk* holders through the *sukūk* trustee on an installment payment basis during the tenure of *sukūk murābahah*.
- 6 |** EKVESB appoints the CTP to sell the commodities to the ultimate commodity buyer on a spot basis for cash consideration for an amount equal to the purchase price of the respective series of *sukūk murābahah*.

During the tenure of *sukūk murābahah*, the SPV will make periodic payments on the periodic payment date

and pay the nominal value of *sukūk murābahah* on the maturity date of the *sukūk murābahah*, pursuant to its obligation to pay the deferred sale price to the *sukūk* holders. Figure 4.10 illustrates the Islamic finance structure for these steps.

Pursuant to the guarantee facilities (*kafālah*), each of the guarantors (AAA-rated Maybank Islamic Berhad and Bank Pembangunan Malaysia Berhad) severally agrees to guarantee the payment of the deferred sale price that is due and payable on the relevant maturity date and/or the periodic payment dates, for the relevant *sukūk murābahah* that are then outstanding. The guarantors also agree to guarantee the dissolution amount upon declaration of a dissolution event, pursuant to their obligation to pay the deferred sale price. The guarantee

**FIGURE 4.10: EKVE Road Project Islamic Finance Structure**



Source: World Bank.

Note: CTP = Commodity Trading Participant; EKVESB = East Klang Valley Expressway Sdn Bhd (the SPV).



of the dissolution amount may exclude all amounts due by EKVESB in relation to the *sukūk murābaḥah*, as well as any payment obligation on *ta'wīd* (compensation to

the Islamic banking institution, based on the actual loss incurred due to default).

## 4.9 CONCLUSION

The case studies in this chapter demonstrate that Islamic finance structures are flexible enough to finance different infrastructure PPP projects. Through the structural exercise, the practitioners are able to craft Islamic finance structures that are compatible with the conventional debt financing structure, within the purview of *shari'ah*. This flexibility of Islamic finance structure allows Islamic finance and conventional finance to coexist seamlessly in the same infrastructure project, on an equal footing basis. Although the two facilities will be documented separately, the terms and conditions incorporated

into the two sets of documents are structured in a way that ensures that both sets of financiers (Islamic and conventional) benefit from the same or very similar commercial terms. The documentation ensures that both facilities rank as senior and the two syndicates share security on a pro rata and *pari passu* (equal footing) basis. In order to achieve this end, the two sets of financiers commit to set inter-creditor and security sharing terms and conditions.<sup>6</sup> Some of these issues are discussed in the next chapter.







## CHAPTER 5

# LESSONS LEARNED AND CONCLUSION

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*New and innovative structures of Islamic finance are constantly evolving, demonstrating the flexibility and ability of Islamic finance to cater to diverse needs. Drawing on examples from the previous chapter, this chapter presents lessons learned on how Islamic finance can be utilized and seamlessly integrated with conventional finance to support infrastructure public-private partnership projects. The chapter concludes with a set of recommendations based on the main take-aways from this report.*

Because infrastructure projects require relatively large investments, almost all infrastructure public-private partnership (PPP) projects face the need to mobilize more than one financial institution to provide syndicated/pooled financing. Thus most infrastructure PPP projects that use Islamic finance include conventional finance in the same transaction. The preceding chapters highlight the natural alignment between Islamic finance structures, PPPs, and infrastructure investments. Despite this natural fit, because Islamic financing is not routinely used, PPP practitioners, policy makers, and other stakeholders know relatively little about the structural issues associated with Islamic finance structures for infrastructure PPP projects.

Despite its relatively recent application compared to conventional finance, Islamic finance has funded a diverse set of infrastructure projects in different jurisdictions, ranging from power generation project in Morocco to transport projects in Malaysia, and from hospital projects in Turkey to a seaport project in Djibouti. By finding innovative and resourceful solutions, the practitioners of Islamic finance have been able to devise pragmatic and compatible structures and mechanisms that have made Islamic finance adaptable to various jurisdictions and project structures. Each project is unique, and so is the financing structure. As more infrastructure PPP projects tap into Islamic finance, the pool of solutions will enlarge, creating a set of precedents for later transactions to follow. Since Islamic finance is a relatively new entrant to the market for infrastructure PPP projects compared to its

conventional counterpart, the structural solutions to tackle various issues have been emerging. Thus, the issues discussed in this chapter are not exhaustive, but touch upon the most common issues found in some recent transactions.

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As more infrastructure PPP projects tap into Islamic finance, the pool of solutions will enlarge, creating precedents for later transactions to follow.

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When parties to a project decide to use Islamic finance, in addition to agreeing on the commercial terms and conditions with the Islamic financiers (reflecting the position agreed with the conventional lenders), the company/special purpose vehicle (SPV) should also gain an understanding of the Islamic financing structure

that the Islamic financiers are expecting to adopt for the Islamic facility. The structure for the Islamic facility will depend on numerous factors, as discussed in previous chapters. The type of Islamic structure used will also depend on the guidance of the *shari'ah* committee of respective Islamic finance institutions, which would approve the compliance of the structure with *shari'ah* principles (box 5.1). This report has not discussed *shari'ah* issues, which are beyond the scope of this study, though it is important to recognize that *shari'ah* plays an important role in structuring Islamic facilities, and not all *shari'ah* boards or committees would necessarily suggest the same structure for a project. It is fair to state that while this may pose challenge to standardization, it offers flexibility in applying various structures using the same financing instrument.

Sections 5.1–5.6 highlight some common issues that arise when Islamic finance is applied alongside conventional finance in the same project.

### BOX 5.1: SHARI'AH COMMITTEES/BOARDS AND STANDARDS

The *shari'ah* adjudication system in each country is different. Some countries have a system in which each Islamic finance institution has a *shari'ah* advisor/committee that gives an opinion on each transaction and product that the institution is about to participate in. In other countries, *shari'ah* rulings and principles are centralized and regulated. Irrespective of the organizational structure, the basic premise is that the *shari'ah* advisor or committee will provide an independent, ethical, and expert opinion on the *shari'ah* compliance of each transaction and product.

Several organizations have been working to provide broad principles and guidelines for *shari'ah* matters by promoting standards, although these are only advisory in nature. For example, the Islamic Financial Services Board (IFSB), which is based in Kuala Lumpur, has issued 27 standards, guiding principles, and technical notes for the Islamic financial services industry. The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) specializes in issuing accounting and auditing standards for Islamic finance, and has issued 54 standards to date.

## 5.1 LESSONS LEARNED

### 5.1.1 OWNERSHIP OF THE ASSETS OF PPP INFRASTRUCTURE PROJECTS

Ownership of project assets is an important aspect of Islamic finance structuring. Islamic financing is asset based, and the Islamic financiers should be able to enforce ownership of assets, if need be. Infrastructure

PPP projects generally allow tangible assets and concessions to be ring-fenced to enforce the rights of the financiers. This makes PPPs ideal for the Islamic mode of financing. However, different jurisdictions



and ownership structures may pose challenges in this respect. This issue remains pivotal and has captured the attention of Islamic financiers in various ways.

In certain jurisdictions, for example, the public sector does not allow transfer of ownership of the project assets to the private parties because infrastructure assets are considered public assets and the ownership needs to remain with the government itself or government-owned and controlled entities such as parastatals. Governments, in the capacity of concessionaires, instead grant the SPV the right to construct project assets, without any ownership rights over the assets.

For example, Turkey undertook a multiyear country-wide PPP program to build a number of big hospital projects. Hospitals are considered assets of national interest in Turkey; thus the government must retain ownership of the projects. This situation bars the use of *ijārah* for financing hospital projects in Turkey, as the *ijārah* arrangement requires that the Islamic financiers own the assets, and lease them to the SPV. Instead, the Islamic financiers use the *istiṣnāʿ* instrument to address this issue. Under this structure, the Islamic financier constructs the hospital building for the SPV (in practice, the Islamic financier appoints the SPV as its agent to undertake the construction works, which the SPV in turn hands over to the EPC contractor). Once the hospital is constructed, the SPV makes deferred payments to the Islamic financier to pay back the financing.

In Pakistan, for road projects, the government transfers only commercial rights to road concessionaires while

retaining the mortgage rights over the project assets. The government is concerned that the private parties might exploit the right of way of the project for commercial activities that might infringe upon the public nature of the assets. On the other hand, the Islamic financiers were used to creating mortgage charges over the project assets they financed. A middle ground was found. The assets were bifurcated into mortgage rights and beneficial ownership. The government kept its mortgage rights over the assets, while the private sector was granted beneficial ownership that consisted of revenue rights through toll collection, advertising, rent payments by utilities, and the like.

Similarly, an airport in Saudi Arabia was implemented with a build-transfer-operate (BTO) concession, where the ownership of the project must be retained by the public authority. As in the case of Turkey's hospitals, the challenge here was that because the SPV did not own the project assets, a leasing (*ijārah*) structure typically used in a BTO concession could not be used. Therefore an innovative structure combining the procurement (*istiṣnāʿ*) structure during the construction phase and assignment of commercial rights during the operations phase was successfully employed. The SPV employed a procurement agent to construct the project assets. When the construction phase was complete, the ownership of the project assets was vested with the public authority. During the operations period, the SPV assigned its commercial rights to the project assets under the concession agreement to the Islamic financiers. The Islamic financiers in turn, appointed the SPV as their manager to manage the project assets.

### 5.1.2 SECURITY SHARING AMONG CONVENTIONAL AND ISLAMIC FINANCIERS<sup>7</sup>

In many projects where Islamic financiers provide financing, conventional lenders are also present. This arrangement is generally referred to as parallel financing or co-financing. One frequently asked question is how these two financing classes can be integrated in a single project. Another common question concerns

the security charge. How can the security charge over the project assets be created and shared by both group of financiers?

During the normal course of project's operation, conventional and Islamic banks are paid from the

project's cash waterfall<sup>8</sup> side by side, in a *pari passu* manner, so that the payments are scheduled or voluntary. Scheduled payments refer to payments that the project would make regularly under the financing agreements, such as quarterly rental payments to Islamic financiers for *ijārah* assets and quarterly debt service to conventional lenders.

The test of coexistence of Islamic and conventional financiers comes when the project defaults. Through the financing or project documents, Islamic finance practitioners have put in appropriate structures to ensure that the exercise of remedies between the conventional and Islamic financiers are harmonized in case of default. This is because the project is an indivisible whole. As an inter-creditor matter, it would not be acceptable for one tranche to be accelerated/repaid as a result of default, while others must wait to obtain payment—or not be paid at all.

This issue is addressed through a concept known as the common security pool, which is shared *pari passu* (on equal footing) among all financiers—conventional and Islamic alike. In the event of default, the Islamic financiers substitute their ownership right of an asset (in *ijārah* transactions) in favor of the common security pool.

### 5.1.3 VARIABLE VERSUS FIXED PRICING<sup>9</sup>

Because interest rates fluctuate in the world of conventional finance, it is almost a universal requirement in project finance transactions that the project as a borrower would need to hedge its exposure against future fluctuations in debt service. In such cases, banks require the project to hedge as much as 75–90 percent of its total debt, including exposure to Islamic financing. In some cases, this requirement can go as high as 100 percent. Islamic finance also poses similar risks in project finance transactions when the pricing of the Islamic finance facility, especially the leasing mode of finance, is set with reference to variable benchmarks such as LIBOR (the London Interbank Offered Rate) or EURIBOR (the Euro Interbank Offered Rate).

Take the simple case of financing a power plant, where both conventional and Islamic financiers are participants. In case of *ijārah* financing, the Islamic financier would be owner of a particular asset, such as the turbine or generator. This may raise a concern among the conventional financiers that the Islamic financiers are at an advantage in terms of security of the project assets because they own key project assets. In other words, it may seem that the Islamic financiers may have carved out an asset in their name and conventional lenders would not benefit from this particular asset, and the *pari passu* nature of the project's overall security package would be compromised.

The common security pool solves this problem. The Islamic financier in such a case would agree that in the event of default, the generator or turbine that the Islamic financier owns would become part of the common security pool. Thus it would be liquidated along with the other secured assets and the proceeds would be shared by all financiers. In this manner, Islamic financing has facilitated other means of financing by accepting Islamic financiers' rights over the assets in specific circumstances without compromising their risk and ownership principles.

However, if an Islamic financier offers a fixed rate for its financing, while in the same transaction other financiers, including conventional banks, are offering variable pricing, then there is a need to make sure that these two groups of financiers are charging equivalent pricing to the project. In other words, one group of financiers should not charge more than the other group since both are taking the same project risks. This can lead to multiple complexities, such as determining the fixed rate that would make the Islamic financier charge the “equivalence” of other lenders' variable rates, and deciding when the rate will be fixed. Fixing the rate too early may not be economically viable for either the financiers or the project, as it is generally

not certain about how much time it will take for the project to comply with the “condition precedents”<sup>10</sup> of the financing documents before drawing on the financing facilities. On top of that, there are shari’ah requirements to meet. Under certain Islamic modes, such as *istiṣnā’*, the obligor—hence, the project—must know what price it will be paying to the financiers in advance of drawing down the *istiṣnā’* facility.

In practice, this issue is addressed through a mechanism known as the “hedge neutral fixed rate.” Under this

mechanism, the fixed rate of the Islamic tranche will be same as the all-in fixed rate that the project would pay under the hedging arrangement for its variable rate tranches. Had the Islamic bank provided variable rate financing, the project would have paid the same all-in rate to hedge this portion; hence, it is hedge neutral. Moreover, the financing agreements require the project to enter into hedging agreements a few days before the first draw-down. As such, it also meets the criteria of fixing the price before draw-down under the Islamic facilities, as required by *shari’ah*.

#### 5.1.4 ISLAMIC FINANCING BY CONVENTIONAL BANKS

As Islamic finance for infrastructure PPP projects is a relatively new concept for many conventional banks, certain banks may find it difficult to offer Islamic financing. Their investment mandate may not permit them to offer Islamic financing, or their investment and credit committees might not be comfortable with this relatively new mode of financing.

In such situations, conventional banks can still offer Islamic financing, either by providing funding or non-funded risk capital through the *muḍārabah* structure. Under a *muḍārabah* structure (described in chapter 3), a conventional bank can provide the funds to an Islamic financier. The latter, in the capacity of *muḍārib* (fund manager), can invest those funds through Islamic instruments in infrastructure PPP projects. The Fund for International Development (OFID) of OPEC (the Organization of Petroleum Exporting Countries) and the Saudi Fund for Development (SFD) have both used

this conduit to support infrastructure PPP projects by channeling their fund through the Islamic Development Bank Group (IsDBG).

The innovation and flexibility of Islamic finance structure can also allow conventional banks to provide Islamic financing by providing non-funded risk capital. This structure was successfully applied to two wind energy projects in Pakistan. The Asian Development Bank (AsDB), alongside the IsDBG, co-financed these projects under an Islamic structure. The AsDB issued a guarantee mechanism to facilitate full financing for the projects through the IsDBG. The AsDB guaranteed IsDBG’s additional financing amount (over its exposure limits) through a counter-guarantee of its risk capital. All the money was invested by the IsDBG, while the AsDB facilitated the transaction by guaranteeing the additional exposure of IsDBG through a risk capital guarantee at the back end.

#### 5.1.5 FEES THAT DO NOT COMPLY WITH SHARI’AH

*Shari’ah* requires that fees or charges should be rendered only when an actual service has been provided. That is why certain fees that are typical for infrastructure finance transactions are not allowed by some Islamic financing institutions. These fees may include commitment fees,

late payment fees, and default fees. The practice may vary among different Islamic finance institutions, depending on the ruling of their own *shari’ah* committee. That means that in the same project, conventional lenders may be charging some fees, while the Islamic financiers

are not. As a result, despite reservations about certain fees that do not comply with *shari'ah*, some Islamic financiers under certain circumstances charge these fees to avoid the unintended situation of moral hazard

by obligors, especially in parallel financing. However, the Islamic financiers collecting these fees, in turn, donate them to charity.

### 5.1.6 ISLAMIC AND CONVENTIONAL FINANCE DOCUMENTATION

In an infrastructure PPP project, although the Islamic and conventional facilities are documented separately, the terms and conditions incorporated into the two sets of documents are structured in a way that ensures that both group of financiers benefit from the same or very similar commercial terms. The documentation ensures that both facilities rank as senior and the two syndicates share security on a pro rata and *pari passu* basis.

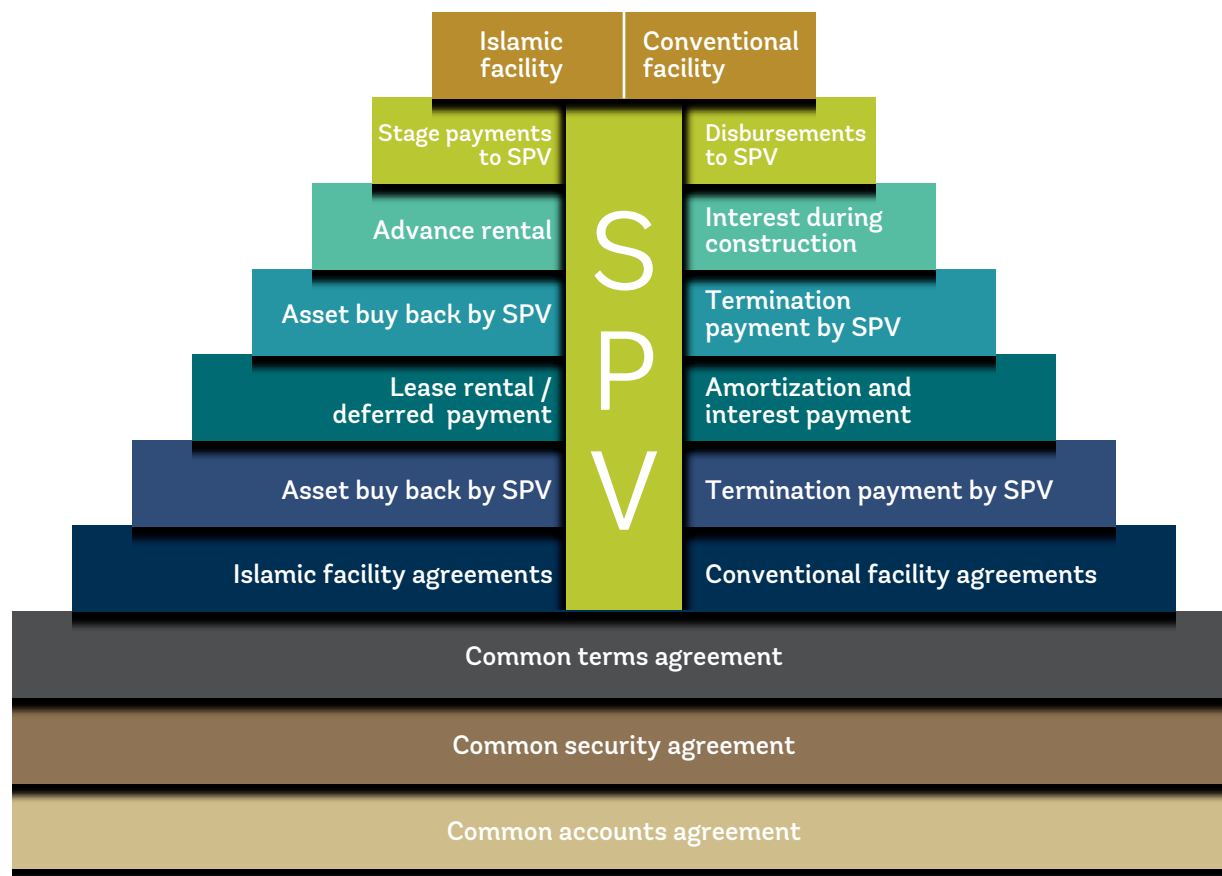
In order to achieve the senior and *pari passu* status and to ensure the smooth integration of Islamic and conventional finance in the same infrastructure PPP transaction, the two group of financing institutions become parties to a single set of financing agreements, in addition to their respective facility agreements. This single set of financing agreements includes, but is

not limited to, a common terms agreement, an inter-creditor deed, and a common accounts agreement. Figure 5.1 compares the arrangements for Islamic and conventional financiers when both of groups are present in the same transaction.

While introducing Islamic finance into an infrastructure PPP project may entail additional documentation, it does not necessarily add any complexity to the overall documentation structure of a project. Islamic finance documentation for infrastructure PPP projects has become standard to a great extent across various sectors and asset classes. Major international and local law firms have set up internal dedicated Islamic finance teams that are very familiar with Islamic finance documentation.



**FIGURE 5.1: Islamic and Conventional Financing in Infrastructure PPP Projects**



Source: World Bank.  
 Note: SPV = special purpose vehicle.

## 5.2 CONCLUSION AND RECOMMENDATIONS

Over the next 15 years, between 2016 and 2030, the global economy will need to invest around \$90 trillion in infrastructure assets. This translates into \$5–6 trillion of investments per year in cities, transport systems, energy systems, water and sanitation, and telecommunications. The current infrastructure spending of \$2–3 trillion per year needs to double to meet this demand (Bhattacharyna, Oppenheim, and Stern 2015; Woetzel et al. 2016). Facing the dearth of infrastructure financing, an increasing number of countries—notably, emerging markets and developing economies—are turning to PPPs to tap private capital.

While PPPs and private project finance cannot fully close this gap, they can still provide significant financing when viable projects are carved out. OECD economies can attract private capital for PPP projects relatively easily because of their better regulatory and risk profile, sound macroeconomic fundamentals, and well-established property rights, among other factors. Attracting private capital for PPP projects in emerging markets and developing economies, however, remains a difficult task.

Against this backdrop, Islamic finance offers an additional source of financing for infrastructure PPP projects in emerging markets and developing economies. Infrastructure PPPs funded with Islamic finance have

proliferated in the Middle East, and have flourished in other countries in Africa, Central Asia, South Asia, and East Asia. The growth of Islamic finance and its increasing application to infrastructure PPP projects offer excellent opportunities for many developing countries that have yet to explore mobilizing Islamic finance for their infrastructure development.

To facilitate this transition, this report offers six main take-aways:

- ◆ The hallmark of Islamic finance structures is their asset-backed nature. That is, a tangible physical asset must underlie the transaction. Hence, Islamic finance is a natural partner for infrastructure PPP projects.
- ◆ Islamic financing practices and their application to finance infrastructure PPP projects have evolved and matured. Islamic finance can now be applied to finance a wide variety of infrastructure PPP projects, including roads, power generation, airports, seaports, and hospitals.
- ◆ Ways for conventional finance and Islamic finance to coexist in the same infrastructure PPP projects have been tested widely, with great success, in a variety of countries, sectors, and contexts. These two streams of financing are complementing each other to meet the global infrastructure finance gap.
- ◆ The case studies reviewed in this report make the case that Islamic finance structures are flexible enough to accommodate various needs specific to the project, sector, and country. The flexibility associated with Islamic finance, and the ability of Islamic finance practitioners to address project- and country-specific issues, make it possible to apply Islamic finance to infrastructure PPP projects in nearly all jurisdictions.
- ◆ In most of the countries where Islamic finance for infrastructure PPP projects has been deployed, the first few projects have been financed by multilateral development banks or development finance institutions. This has created the precedents for commercial lenders to follow. Accordingly, there is a need for “market making” in applying Islamic finance in infrastructure PPP projects.
- ◆ Sometimes it may be the fear of unknown that can prevent project sponsors and conventional banks from exploring Islamic finance. Efforts are needed to familiarize practitioners with Islamic finance structures to finance infrastructure PPP projects.

The report recommends nine actions to facilitate greater use of Islamic financing in infrastructure PPP projects.

### 5.2.1 RAISE AWARENESS

While the infrastructure challenges of many developing countries are well known, the deployment of PPPs to mobilize private capital and expertise is less well known, and the use of Islamic finance even less so. There is a significant knowledge gap concerning the ways Islamic finance could be mobilized for infrastructure PPP projects to help overcome infrastructure challenges in developing countries. There is much to be gained from closing this gap.

Growing awareness creates a virtuous cycle. As more investors and other stakeholders become more aware of the merits and feasibility of Islamic finance solutions, the environments within developing countries will become more amenable to the deployment of Islamic finance for infrastructure PPP projects.

### 5.2.2 DEVELOP A COMPREHENSIVE LIST OF PROJECTS, MORE CASE STUDIES, AND A DATA REPOSITORY, ON ISLAMIC FINANCE FOR INFRASTRUCTURE PPPs

To build the basis for a body of knowledge, more case studies should be prepared. A global list of infrastructure PPP projects that have been undertaken using Islamic finance should be prepared. This will provide an important source of data for those wishing to undertake research in this area. This list should be linked to case studies on each of the transactions listed. This would serve as an important resource for practitioners, academics, and students. Given the significant innovation occurring with respect to project structuring, case studies will provide invaluable insights for those engaged in this area. This body of knowledge can be widely disseminated to ensure that current and future generations of managers and business executives with an interest in PPPs, global capital flows, development, and Islamic finance are exposed to the lessons of this report—specifically how Islamic finance can work well within a PPP framework. The experience of multilateral development banks (MDBs) working on Islamic finance for PPPs should be documented, and used to enhance the library of case studies.

A significant challenge in undertaking this study was obtaining access to comprehensive, consistent, and current data on Islamic finance for infrastructure PPP projects. Commercial information is difficult to obtain at the deal level because of non-disclosure agreement that every project parties must adhere to. At present, there is no publicly available repository of data that practitioners, academics, researchers, and others can go to for this purpose. An important recommendation of this study, therefore, is that the MDBs integrate data on Islamic finance for PPPs into a data warehouse. Together with the library of case studies, these efforts would enable further research into this area, enhance clarity, and lay the foundation for further growth of Islamic finance for PPPs. The World Bank Group's Private Participation in Infrastructure (PPI) Database can be supplemented with information on Islamic finance for infrastructure PPP projects.

### 5.2.3 BUILD CAPACITY

The capacity to pursue Islamic finance for infrastructure PPPs must be built across all stakeholder groups, but particularly among stakeholders in the countries where the infrastructure projects will occur, including local governments, regulators, the private sector, and central banks. It is important that this capacity building be extended to include financial institutions within the local economy as well as from countries where capital might originate, and potential investors through investor conferences and other forums. Working with experts in the field of Islamic finance from academia can help ensure that relevant academic and executive training curricula related to PPPs can reflect these opportunities.

The MDBs could create a working group of Islamic finance PPP practitioners. This group would include experts from within the World Bank Group and other MDBs that have experience in this area, and practitioners from outside the MDBs. The group can meet one a year (or more) on a regional basis. These annual meetings can focus on sharing best practices at transaction levels and any innovative approaches, as well as insights from experts from academia with a practical perspective on emerging themes and empirical evidence on best practices and implications of structures for outcomes. The first step would involve creating a list, or stock, of practitioners inside and outside the MDBs and development finance institutions (DFIs), as well as academics.

MDBs and DFIs should continue work to provide technical assistance to developing country governments to help facilitate the deployment of Islamic finance for

infrastructure PPP projects. Such technical assistance may include a project preparation facility that aims at using both Islamic and conventional finance.

#### 5.2.4 IDENTIFY PILOT PROJECTS

Experts who have worked on Islamic finance for infrastructure PPPs have indicated that legal or regulatory obstacles did not prevent any deal from being completed. This theme has also been demonstrated in the many case studies referenced in this report. Islamic finance solutions are sufficiently flexible to fit within local legal and regulatory environments, but require innovative solutions to cope with complexities specific to the deal.

Getting the first few deals done is necessary to stimulate further mobilization of Islamic finance for infrastructure PPPs. The innovations in structuring will then be available, thus reducing transactions costs and processing time in subsequent transactions. This was demonstrated in Turkey by the implementation of the Manisa Health PPP right after the Konya Hospital PPP was launched, using a very similar structure and financing mode (see chapter 4).

To this end, the MDBs could identify pilot projects and pursue them within given sectors and particular countries, especially where Islamic finance for infrastructure PPPs has not been tested yet. Pilot projects should be fully developed from the initial design phase all the way through to the operation and transfer stages, with each step carefully documented. This process will also allow significant learning by all stakeholders, and help develop case studies to supplement the body of knowledge in this area.

The World Bank Group and other MDBs can have an important demonstration effect. Identifying pilot projects that can be championed by the MDBs, and carefully documented, can go a long way toward demonstrating that Islamic finance structures can materialize within given markets and given industries.

#### 5.2.5 DEVELOP NEW PRODUCTS AND EXPAND OLD ONES

MDBs and DFIs can take a leading role in developing new financial products. They can also work to tailor the existing portfolio of conventional financial products to accommodate Islamic finance. As the MDBs and

DFIs increase their deployment of Islamic finance for infrastructure PPPs, they are in a position to take a leading role in the development of innovative products that comply with the principles and needs of Islamic finance.

#### 5.2.6 STANDARDIZE DOCUMENTATION AND APPROACHES

Project-related documents and contracts need to be standardized. While each transaction is unique and must be modified to fit the local context, to the extent that standardization can be undertaken, this will help many Islamic finance practitioners understand the most common credit and legal aspects involved in Islamic

finance for PPPs. MDBs and DFIs can develop common approaches and toolkits to disseminate. Such toolkits and portfolios of standardized contracts and other documents can give practitioners a starting point, as well as a framework, to structure more infrastructure PPPs with Islamic finance.



### 5.2.7 MOBILIZE LOCAL SHARI'AH CAPITAL

Local Islamic finance can be mobilized, as part of the bigger initiative of mobilizing the global pool of Islamic finance for infrastructure PPP projects. With the growth of Islamic finance assets, many countries now have significant Islamic finance capital that can be channeled to infrastructure PPP projects. This

could be achieved many ways, such as creating a local currency tranche in an infrastructure transaction, allowing local Islamic banks to take a minority equity stake in the infrastructure projects, and/or creating a local currency infrastructure finance fund to which local Islamic finance institution subscribe.

### 5.2.8 SET UP SHARI'AH-COMPLIANT INFRASTRUCTURE FUNDS

The MDBs and DFIs can work together to establish an infrastructure fund dedicated to the development of infrastructure across the developing world but focused on solutions using *shari'ah*-compliant structures. Developing such a fund dedicated to the development of infrastructure that utilizes *shari'ah*-compliant solutions

would serve as an important platform and catalyst for the mobilization of capital into infrastructure PPPs. The Islamic Development Bank Group and the Asian Development Bank undertook such an initiative by establishing Islamic Infrastructure Fund.

### 5.2.9 CREATE AN ENABLING ENVIRONMENT

A vibrant Islamic financial sector depends on a robust enabling environment. A strong legal and regulatory framework is needed. The regulatory and supervisory agencies also need adequate capability to regulate and supervise Islamic financial institutions. Political will,

clear policy from the government, and support from regulators to actively fill the gaps in laws, regulations, and regulatory and supervisory capacity are necessary for Islamic finance to develop.



## APPENDIX A: MEMBERS OF THE ORGANIZATION OF ISLAMIC COOPERATION (OIC)\*

|                         |                           |                      |
|-------------------------|---------------------------|----------------------|
| Afghanistan             | Guyana                    | Pakistan             |
| Albania                 | Indonesia                 | Palestine            |
| Algeria                 | Iran, Islamic Republic of | Qatar                |
| Azerbaijan              | Iraq                      | Saudi Arabia         |
| Bahrain                 | Jordan                    | Senegal              |
| Bangladesh              | Kazakhstan                | Sierra Leone         |
| Benin                   | Kuwait                    | Somalia              |
| Brunei Darussalam       | Kyrgyz Republic           | Sudan                |
| Burkina Faso            | Lebanon                   | Suriname             |
| Cameroon                | Libya                     | Syrian Arab Republic |
| Chad                    | Malaysia                  | Tajikistan           |
| Comoros                 | Maldives                  | Togo                 |
| Côte d'Ivoire           | Mali                      | Tunisia              |
| Djibouti                | Mauritania                | Turkey               |
| Egypt, Arab Republic of | Morocco                   | Turkmenistan         |
| Gabon                   | Mozambique                | Uganda               |
| Gambia, The             | Niger                     | United Arab Emirates |
| Guinea                  | Nigeria                   | Uzbekistan           |
| Guinea-Bissau           | Oman                      | Yemen, Republic of   |

\*Country list as per defined by the Organization of Islamic Cooperation

## APPENDIX B: THE WORLD BANK GROUP'S EXPERIENCE WITH ISLAMIC FINANCE

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The World Bank Group has had extensive experience with Islamic finance. This experience, together with its embedded expertise in public-private partnerships (PPPs) and many other areas, including its reach and relationships across the developing world, can play a pivotal role in further facilitating Islamic finance for infrastructure PPP projects—thus contributing to the overall goal of channeling more resources for global infrastructure development.

The World Bank Group's involvement in Islamic finance is directly linked to the Bank's objectives of:

- ◆ **Reducing poverty.** The sustainable development of Islamic finance offers benefits for promoting economic growth, reducing poverty, and fostering shared prosperity. Islamic finance can significantly contribute to economic development, given its direct link to physical assets and the real economy.
- ◆ **Promoting financial sector development.** By expanding the range and reach of financial products, Islamic finance can help improve financial access and foster the inclusion of those deprived of financial services. Islamic finance emphasizes partnership-style financing, which could be useful in improving access to finance for the poor and microenterprises and small businesses.
- ◆ **Broadening financial inclusion.** Islamic finance can help meet the needs of those who do not currently use conventional finance because of religious reasons. Of the 1.6 billion Muslims in the world, only 14 percent use banks. Islamic finance can help reduce the overall gap in access to finance because non-Muslims are not prohibited from using Islamic financial services.
- ◆ **Building financial sector stability and resilience in client countries.** As the 2007–08 global financial crisis ravaged financial systems around the world, Islamic financial institutions were relatively untouched, protected by their fundamental operating principles of risk sharing and the avoidance of leverage and speculative financial products.

### THE IBRD AND ISLAMIC FINANCE

The International Bank for Reconstruction and Development (IBRD) is an international financial institution within the World Bank Group that offers loans to middle-income developing countries.

In 2013, the IBRD established its Global Islamic Finance Center in Istanbul, a Knowledge Hub for developing Islamic finance globally, conducting research and training, and providing technical assistance and advisory services to World Bank Group client countries interested in developing Islamic financial institutions and markets.

The Center, in turn, established the Global Islamic Finance Development Program, with the aim of fostering the development of Islamic finance around the world through the design and delivery of client-oriented activities. These activities have four focuses.

### *Advisory Services*

The Center supports regulators, central banks, and policy makers through:

- ◆ Development of national Islamic finance strategies and master plans
- ◆ Diagnostics and advisory services to strengthen frameworks for regulation and supervision
- ◆ Targeted training and capacity building for regulators, supervisors, and other policy makers
- ◆ Development of Islamic capital markets.

For example, in Bangladesh, the IBRD assisted the government in strengthening its Islamic banking supervision. In Kuwait, IBRD provided comments on the draft *Sukūk* Law. In Kyrgyz Republic, the IBRD helped implement a Risk-based Supervision for Islamic Banks. In Libya, the IBRD helped design a National Islamic Finance Strategy.

### *Financial Services*

The program supports the deployment of Islamic financial instruments by:

- ◆ Incorporating Islamic finance instruments in World Bank lending
- ◆ Promoting the use of Islamic finance instruments in individual countries.

Some of the instruments the IBRD deployed are a *shari'ah*-compliant World Bank line-of credit to small and medium enterprises (SMEs) in Turkey, Islamic financial leasing for SMEs in Egypt, and an Islamic finance guarantee program for SMEs in Jordan and Palestine. The World Bank has also been a pioneer in the design and issuance of *sukūk* to raise funds for immunization of children in low-income countries.

### *Convening Services*

The program supports the development of global standards by:

- ◆ Participating in technical committees of standard setters such as the Islamic Financial Services Board (IFSB) and Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI)
- ◆ Promoting adoption of Islamic finance standards at the country level
- ◆ Encouraging and leading dialogue on cross-cutting and cross-border issues.

For example, IBRD contributed to the development of IFSB Core Principles for Regulation and Supervision of Islamic Banks, prepared Guidance Notes for the implementation of AAOIFI accounting and auditing standards, and organized a roundtable of standard setters to discuss insolvency issues.



### *Generation and Dissemination of Knowledge*

The program address knowledge gaps through:

- ◆ Policy-oriented research on various aspects of Islamic finance
- ◆ Workshops, conferences, roundtables, and seminars on technical and policy issues
- ◆ Development of handbooks, toolkits, and reference guides.

For example, the IBRD participated in a conference on leveraging Islamic finance for SMEs (with the Group of Twenty and the Islamic Development Bank Group); a conference on corporate governance for Islamic banks (with the General Council for Islamic Banks and Financial Institutions, CIBAFI); and a high-level forum on strengthening Islamic banking regulation and supervision in the Arab countries (with the Arab Monetary Fund and the International Monetary Fund). The IBRD has also conducted various training programs on *sukūk*, *takāful*, and Islamic bank supervision (with the Arab Monetary Fund).

Most importantly, the IBRD has been promoting the systematic and sustained use of relevant knowledge of Islamic finance to raise awareness, build consensus, and promote the worldwide use of Islamic financing instruments through knowledge products (box B.1).

#### **BOX B.1: SELECTED RECENT WORLD BANK PUBLICATIONS ON ISLAMIC FINANCE**

Among the World Bank's most recent studies and working papers on Islamic finance are the following publications:

Ahmed, Habib, Mahmoud Mohieldin, Jos Verbeek, and Farida Aboulmagd. 2015. "On the Sustainable Development Goals and the Role of Islamic Finance." Policy Research Working Paper 7266.

<https://openknowledge.worldbank.org/handle/10986/22000> License: CC BY 3.0 IGO.

Demirgüç-Kunt, Asli, Leora Klapper, and Douglas Randall. 2013. "The Global Findex Database: Islamic Finance and Financial Inclusion." Findex Note No. 12.

<http://documents.worldbank.org/curated/en/634371468163441059/The-Global-Findex-database-Islamic-finance-and-financial-inclusion>.

Iqbal, Zamir, and Abbas Mirakhor. 2013. *Economic Development and Islamic Finance*. Directions in Development–Finance.

<https://openknowledge.worldbank.org/handle/10986/15787> License: CC BY 3.0 IGO.

Mohieldin, Mahmoud. 2012. "Realizing the Potential of Islamic Finance." Economic Premise No. 77. <https://openknowledge.worldbank.org/handle/10986/10051> License: CC BY 3.0 Unported.

Mohieldin, Mahmoud, Zamir Iqbal, Ahmed Rostom, and Xiaochen Fu. 2011. "The Role of Islamic Finance in Enhancing Financial Inclusion in Organisation of Islamic Cooperation (OIC) Countries." Policy Research Working Paper 5920. <http://documents.worldbank.org/curated/en/393491468321563341/The-role-of-Islamic-finance-in-enhancing-financial-inclusion-in-organization-of-Islamic-cooperation-OIC-countries>.

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Mylenko, Nataliya, Zamir Iqbal, and Nataliya Mylenko. 2016. "Developing Islamic Finance in the Philippines."

[http://documents.worldbank.org/curated/en/748841468087856489/Developing-islamic-finance-in-the-Philippines.](http://documents.worldbank.org/curated/en/748841468087856489/Developing-islamic-finance-in-the-Philippines)

World Bank and Islamic Development Bank Group. 2016. *Global Report on Islamic Finance: Islamic Finance —A Catalyst for Shared Prosperity.*

<https://openknowledge.worldbank.org/handle/10986/25738> License: CC BY 3.0 IGO.

World Bank Group/Islamic Development Bank/Islamic Research and Training Institute. 2015. *Leveraging Islamic Finance for SMEs.* <http://www.irti.org/English/News/Documents/Islamic%20SMEs%20Finance%20Report%20on%20Leveraging%20Islamic%20Finance%20for%20SMEs.pdf>.

## IFC AND ISLAMIC FINANCE

The International Finance Corporation (IFC) is the member of the World Bank Group that focuses exclusively on strengthening the private sector in developing countries.

IFC's engagement in Islamic finance involves investments, mobilization by IFC's Treasury through *sukūk*, and advisory services.

### *Investments*

On the investment side, IFC is able to provide equity and financial/investment products that are adapted to the requirements of Islamic financing (including structured products and trade financing). IFC's investments span financial and real sector projects in the Middle East and North Africa, Sub-Saharan Africa, and East Asia and Pacific regions.

IFC's investments in the financial sector have supported leasing, asset management, housing finance, SME financing, and insurance (*takāful*). IFC's most recent financial sector investment (committed in 2012) is to the Gulf African Bank (GAB), the first fully Islamic bank in Kenya, involving equity and trade financing.

IFC has recently put together its first Islamic syndicated loan: a \$375 million financing package to address some of Iraq's challenges with power infrastructure. The investment, to a leading private Iraqi power company, Mass Global Energy Sulimaniya (MGES), will help strengthen the power infrastructure for the region and its residents.

- ◆ With IFC's investment, MGES will add 500 megawatts of capacity to a 1,000-megawatt power plant in Kurdistan. This will provide power to 3 million people, allowing them to cook food, heat living spaces, and power up medical facilities. The funds will also help complete a new power plant near Baghdad that will supply about half the Iraqi capital's electricity requirements.
- ◆ IFC helped arrange this innovative debt and equity package, which includes \$250 million from IFC's own account and \$125 million from long-time client Bank Audi of Lebanon.

On the real sector side, IFC has supported projects in the health care, agribusiness, and education sectors in the Middle East and North Africa region.

The IFC has also structured projects where Islamic finance has been used, including the Hajj terminal and Madinah airport in Saudi Arabia and the Queen Alia airport in Jordan.

### ***Mobilization of Resources through Sukūk***

IFC's Treasury has issued three *sukūk*. The first was issued in 2004 in the Malaysian market. The MYR 500 million *Wawasan sukūk* matured in 2007. The second was issued in 2009 in the Gulf Cooperation Council (GCC) region. The \$100 million *hilal sukūk*, a non-amortizing issue with a five-year maturity through Nasdaq Dubai and the Bahrain Stock Exchange, matured in 2014. The most recent *sukūk*, issued in 2014, was a \$100 million *Wakālah sukūk*, an amortizing issue with a five-year maturity through Nasdaq Dubai.

IFC has also set up a special purpose vehicle, the IFC *Sukūk* Company, which issued \$100 million in trust certificates in 2015. The certificates were oversubscribed, revealing the high level of demand from both traditional *sukūk* investors and conventional investors, including those with a focus on socially responsible investment. The successful subscription also illustrates that it is possible to merge Islamic finance with conventional sustainable investment.

### ***Advisory Services***

IFC's advisory services have engaged with Islamic banks in the Middle East and North Africa region to help them scale up SME financing by assisting them in realigning their business models, segmenting their respective client bases, introducing innovative Islamic products, revamping risk management, and assessing and building staff capacity. The banks include two of Saudi Arabia's largest Islamic banks, Al-Rajhi Bank and Bank AlBilad.

IFC's engagement, especially in the financial sector, has been limited to date, given the significant liquidity in most Islamic banks, particularly in the Middle East and North Africa region, and the concentration of Islamic bank operations in Gulf countries. A key element of IFC's strategy is to support Islamic banks in expanding operations outside their traditional markets in the Middle East and North Africa. IFC's engagements are targeted to enhance financial inclusion and to support unserved and underbanked segments in domestic markets. A good example of such collaboration is IFC's support to Al Salam Bank (of Bahrain) and Bank Muscat (of Oman) through the Gulf African Bank (GAB) to expand into Africa, starting with Kenya, where IFC has a strong presence in SME lending. IFC is also seeking to partner with the Islamic Development Bank Group and its private sector financing affiliate, the Islamic Corporation for the Development of the Private Sector (ICD), which has a significant involvement in private Islamic financial institutions.



### ***MIGA and Islamic Finance***

The Multilateral Investment Guarantee Agency (MIGA) is the member of the World Bank Group that promotes foreign direct investment (FDI) in developing countries to help support economic growth, reduce poverty, and improve people's lives. MIGA's operational strategy is to attract investors and private insurers into difficult operating environments by providing political risk coverage for investments in areas with great risk but also great impact.

Islamic finance products present opportunities not only to underwrite new projects, but also to enter new markets and provide support for investments into developing countries. Even though the Islamic Development Bank Group's *takāful* insurance affiliate, the Islamic Corporation for the Insurance of Investment and Export Credits (ICIEC), provides political risk insurance (PRI), it accounts for only about 7 percent of ICIEC's insurance portfolio. This leaves ample space for other actors to participate. "[MIGA] recognize[s] the growing role of Islamic financial markets in supporting developmentally important investments, and we are committed to working with investors in providing political risk insurance for these transactions," noted Izumi Kobayashi, MIGA's Executive Vice President.<sup>11</sup>

MIGA has been increasing its coverage of Islamic finance deal structures.

***MIGA committed to developing a standardized shari'ah-compliant guarantee template.*** In 2009, the Dubai International Financial Centre (DIFC) and MIGA signed a Memorandum of Understanding (MoU) to promote foreign direct investment in the Middle East and North Africa. As part of the MoU, DIFC and MIGA committed to collaborate to design and implement a standardized *shari'ah*-compliant guarantee template to cover *sukūk* and other Islamic financial instruments.

***MIGA has extended cooperation with the Islamic Development Bank Group in support of the Doraleh Djibouti port.*** In 2007, MIGA was asked to provide political risk insurance for a critical project in Djibouti that was being funded through an Islamic finance structure. MIGA issued guarantees totaling \$427 million—\$5 million for DP World's equity investment in the Doraleh Container Terminal (DCT) and \$422 million in Islamic project financing—against the risks of currency transfer restriction, expropriation, breach of contract, and war and civil disturbance.

MIGA created a guarantee structure to address the key risks that concerned the project financiers, while meeting the strict requirements governing the Islamic structure. This resulted in the agency's first-ever guarantee coverage of an investment supported by an Islamic finance structure.

Usually, MIGA's non-shareholder loan contract contemplates coverage of scheduled payments of principal and interest under a single loan agreement. If the loan is accelerated by the lenders, MIGA still pays under the original schedule. However, the project's Islamic finance structure had payment obligations spread out across numerous agreements. To create a parallel obligation under Islamic financing, MIGA agreed to cover the following:<sup>12</sup>

- ◆ Advance rental and rental under the forward lease agreement
- ◆ In the event that construction is not completed, the termination payment under the *istiṣnā'* agreement (but under the original lease schedule)



- ◆ In the event that the purchase undertaking is exercised, DCT's payment obligation to purchase the assets from the project financiers (but under the original lease schedule)
- ◆ In the event of an unwinding of the partnership and where none of the above amounts are payable, the amount owed by DCT as partner to the financiers under the *mushārah* agreement (but under the original lease schedule), which will only include the "profit" component to the extent determined by a judge according to the *mushārah* agreement.

In keeping with Islamic finance social agenda, "interest" accrued under the contract was replaced with "late payments," which would be donated to charitable foundations.

The success in putting together this project opened the door for private risk insurance to support future complex projects with Islamic financing.

***MIGA covered the murābahah facility to expand Indonesia telecommunication services.*** In 2011, MIGA provided \$450 million in investment guarantees to support the expansion of telecoms in Indonesia through a *murābahah* financing facility underwritten by Deutsche Bank and Saudi British Bank.

The total project is a \$1.2 billion financing package for the expansion of Indonesian telecom company PT Natrindo Telepon Seluler (NTS), known by the brand "Axis." Axis is a GSM and 3G cellular service provider offering wireless communication services in more than 400 cities across Indonesia. The objective is to reach lower-income segments of the market as well as remote islands of the archipelago, where telecommunications is a particular challenge.

MIGA's guarantees are protecting the lenders against the risks of transfer restriction, expropriation, and war and civil disturbance for a period of up to seven and a half years. The political risk insurance placement was brokered by Marsh, USA Inc.

## APPENDIX C: THE ISLAMIC DEVELOPMENT BANK GROUP'S CONTRIBUTION TO ISLAMIC FINANCE

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The Islamic Development Bank Group (IsDBG), a multilateral Islamic financial institution comprising 57 members, has played a pioneering role in developing Islamic finance since its establishment in 1975. Over the years, IsDBG has supported the integrated development of the Islamic finance sector through various initiatives, such as (i) assisting in building the enabling environment for Islamic finance; (ii) establishing and promoting Islamic financial institutions; (iii) establishing and supporting Islamic Financial Infrastructure Institutions and contributing to the development of Islamic financial architecture; (iv) enhancing financial inclusion by developing the Islamic microfinance sector; (v) leading the development and promotion of the *awqāf* sector; (vi) holding research and training activities in disciplines of Islamic economics, banking, and finance; (vii) creating knowledge and information dissemination services; (viii) developing financial products/funds; and (ix) promoting and organizing events and policy dialogues to create and spread awareness about Islamic finance.

In particular, IsDBG has helped in the establishment of more than 50 Islamic financial institutions, including banks, *takāful*, microfinance institutions, and leasing companies. IsDBG has also helped establish almost all of the Islamic financial infrastructure institutions: the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), the General Council for Islamic Banks and Financial Institutions (CIBAFI), the Islamic Financial Services Board (IFSB), the International Islamic Center for Reconciliation and Arbitration (IICRA), the International Islamic Financial Markets (IIFM), the International Islamic Liquidity Management Corporation (IILM), and the International Islamic Rating Agency (IIRA).

IsDBG pioneered the first Islamic public-private partnership financing in 2005. As of 2017, IsDBG's total PPP approvals exceed \$4.5 billion, with 58 operations spanning 21 countries. Traditionally, most projects have been in hard infrastructure. Lately, IsDBG has introduced PPP to soft infrastructure (health care). The Islamic PPP structures have become widely recognized and many other financiers and multilateral institutions have entered the market.

IsDBG has taken several initiatives and increased its efforts to mobilize resources from conventional banks, increase awareness about Islamic finance, and expand Islamic finance practices by working with multiple co-financiers that participate in Islamic PPP structures. In this respect, IsDBG scales up and leverages its own resources through project syndication, co-financing, and other off-balance-sheet strategies to mobilize resources.

One of IsDBG's priorities is to use specialized products to scale up and catalyze resources. For instance, through its partnerships and networks, IsDBG has established and invested into few thematic funds, such as the IsDBG Infrastructure Fund initiated by the Bank and supported by other investors. The fund is focusing on the development of member countries by providing finance for infrastructure projects.

The IsDBG launched the first IsDBG Member Countries Public-Private Partnership Forum in 2017 at a time when many members must contend with major economic challenges—mostly due to weak oil prices—while facing immense pressure to build or update infrastructure. The Forum increased awareness of the importance of PPP within the region by bringing together more than 300 government figures and private-sector business leaders.

The third annual IsDBG Sovereign Investments Forum held in 2017 provided a networking platform between sovereign wealth funds and pension funds from IsDBG member countries. More than 320 participants made up of sovereign wealth funds and pension funds, fund managers, policy makers, government development agencies, and the private sector attended the three-day event in Bali, Indonesia. The Forum facilitated cooperation in investment opportunities, including PPPs. The first Forum was held in Saudi Arabia in 2015 and the second Forum was held in Morocco in 2016.

## NOTES



- .....
- <sup>1</sup> All definitions of PPPs used in this report are consistent with the *Public-Private Partnerships Reference Guide Version 3.0* (<https://library.pppknowledge.org/documents/4699>).
  - <sup>2</sup> In an engineering, procurement, and construction (EPC) contracting arrangement, the EPC contractor is responsible for all the activities of a project from design, procurement, construction, to commissioning and handover of the project to the owner or end-user.
  - <sup>3</sup> The Islamic Development Bank Group (IsDBG) was instrumental in establishing a number of institutions discussed in this section. IsDBG has been playing a critical role in setting trends in Islamic finance, both by sponsoring many Islamic finance institutions and by undertaking transactions that are becoming industry standards. See appendix C for more details on the role of IsDBG in Islamic finance.
  - <sup>4</sup> This applies only to Islamic “debt” finance. In case of Islamic equity investors, there might be restriction on how much of the total capital of the project can be raised from conventional sources
  - <sup>5</sup> *Shari’ah* permissibility refers to two aspects: the structuring aspect that avoids, for example, interest- based instruments; and trades or commodities that are not permissible under *shari’ah*, such as gambling, alcohol, or weapons.
  - <sup>6</sup> An inter-creditor agreement is an agreement between two or more creditors agreeing in advance how their competing interests in their common borrower will be dealt with.
  - <sup>7</sup> This section is based on Rana (2015).
  - <sup>8</sup> A waterfall payment is a repayment system by which senior lenders receive principal and interest payments from a borrower first, and subordinate lenders receive principal and interest payments after that.
  - <sup>9</sup> This section is based on Rana (2016).
  - <sup>10</sup> A condition precedent is an event or state of affairs that is required before something else will occur. In contract law, a condition precedent is an event that must occur, unless its nonoccurrence is excused, before performance under a contract becomes due: that is, before any contractual duty exists.
  - <sup>11</sup> “MIGA Covers *Murābahah* Facility for Indonesia Telecoms Expansion,” Project Example of Agency’s Work with Islamic Finance Deal Structures, *MIGA News Brief*, June 16, 2011.
  - <sup>12</sup> <https://www.miga.org/documents/Doralehbrief.pdf>.



# REFERENCES

- Abdelkafi, Rami, and Houssein Eddine Bedoui. 2016. "Challenges in Infrastructure Financing through Sukuk Issuance." Working Paper. doi: 10.13140/RG.2.2.22554.64963.
- AsDB (Asian Development Bank). 2017. *Meeting Asia's Infrastructure Needs*. Manila: Asian Development Bank.
- Askari, Hossein, Zamir Iqbal, Noureddine Krichenne, and Abbas Mirakhor. 2011. *The Stability of Islamic Finance: Creating a Resilient Financial Environment for a Secure Future*. John Wiley and Sons.
- Aziz, Z. A. 2014. "Strengthening Financial Stability and Growth Dimension of Islamic Finance." Speech at the IMF Middle East and Central Asia Department Governors' Discussion on Islamic Finance, IMF/World Bank Annual Meetings, October 9.
- Beck, Thorsten, Asli Demirgüç-Kunt, and Ouarda Merrouche. 2013. "Islamic vs. Conventional Banking: Business Model, Efficiency and Stability." *Journal of Banking and Finance* 37: 433–47. doi:10.1016/j.jbankfin.2012.09.016.
- Bhattacharyna, Amar, Jeremy Oppenheim, and Nicholas Stern. 2015. "Driving Sustainable Development through Better Infrastructure: Key Elements of a Transformation Program." Global Working Paper, Brookings Institution, Washington, DC.
- Cross, Christopher G., Craig R. Nethercott, Harjaskaran Rai, and Mohammed A. Al-Sheikh, Latham & Watkins LLP. 2012. "Islamic Project Finance." Practical Law Company. <https://www.lw.com/thoughtLeadership/islamic-project-finance>.
- Farooq, Moazzam, and Sajjad Zaheer. 2015. "Are Islamic Banks More Resilient during Financial Panics?" *Pacific Economic Review* 20 (1): 101–24. doi:10.1111/1468-0106.12096.
- Foster, Vivien, and Cecilia Briceno-Garmendia, eds. 2010. *Africa's Infrastructure: A Time for Transformation*. Africa Development Forum, Agence Française de Développement, and the World Bank. Washington, DC: World Bank.
- Hasan, Maher, and Jemma Dridi. 2010. "The Effects of the Global Crisis on Islamic and Conventional Banks: A Comparative Study." IMF Working Paper WP/10/201, International Monetary Fund, Washington, DC.
- ICD (Islamic Corporation for the Development of the Private Sector)–Thomson Reuters. 2016. *Islamic Finance Development Report 2016: Resilient Growth*. Thomson Reuters.
- IFSB (Islamic Financial Services Board). 2013. *Islamic Financial Services Industry Stability Report 2013*. Kuala Lumpur: IFSB.
- , 2016. *Islamic Financial Services Industry Stability Report 2016*. Kuala Lumpur: IFSB.
- , 2017. *Islamic Financial Services Industry Stability Report 2017*. Kuala Lumpur: IFSB.
- Kammer, Alfred, Mohamed Norat, Marco Piñón, Ananthakrishnan Prasad, Christopher Towe, Zeine Zeidane, and IMF Staff Team. 2015. "Islamic Finance: Opportunities, Challenges, and Policy Options." IMF Staff Discussion Note SDN/15/05, International Monetary Fund, Washington, DC.

- Mirakhor, Abbas. 2015. "Risk Sharing and Shared Prosperity." Paper presented at the inaugural World Bank–Islamic Development Bank Guidance Financial Symposium on Islamic Finance and Shared Prosperity, Istanbul, September 8–9.
- Rana, Fida. 2015. "Integrating Conventional and Islamic Tranches in PPP Projects" (blog) June 23. <https://www.linkedin.com/pulse/integrating-conventional-islamic-tranches-ppp-projects-fida-rana>.
- , 2016. "Hedge Neutral Fixed Rate: Islamic Finance Solution in PPP Projects" (blog), January 4. <https://www.linkedin.com/pulse/hedge-neutral-fixed-rate-islamic-finance-solution-ppp-fida-rana>.
- Stagg-Macey, Catherine. 2007. "An Overview of Islamic Insurance." Takaful Article No. 8, January, International Cooperative and Mutual Insurance Federation (ICMIF).
- Thomson Reuters. 2016. *Sukuk Perceptions & Forecast Study 2017*. <https://ceif.iba.edu.pk/pdf/ThomsonReuters-SukukPerceptionsForecastStudy2017.pdf>.
- Thomson Reuters and TFSA (Toronto Financial Services Alliance). 2015. *Canada Islamic Finance Outlook 2016*. Thomson Reuters. [http://www.tfsa.ca/storage/reports/Canada\\_Islamic\\_Finance\\_2016.pdf](http://www.tfsa.ca/storage/reports/Canada_Islamic_Finance_2016.pdf).
- Woetzel, Jonathan, Nicklas Garemo, Jan Mischke, Martin Hjerpe, and Robert Palter. 2016. *Bridging Global Infrastructure Gaps*. McKinsey Global Institute, McKinsey & Company, June.
- World Bank Group, PPIAF (the Public-Private Infrastructure Advisory Facility), AsDB (Asian Development Bank), and IDB (Inter-American Development Bank). 2017. *Public-Private Partnerships Reference Guide: Version 3.0*. Washington, DC: World Bank. <https://library.pppknowledgelab.org/documents/4699>.
- World Bank and Islamic Development Bank Group. 2016. *The Global Report on Islamic Finance–Islamic Finance: A Catalyst for Shared Prosperity?* Washington, DC: World Bank. doi:10.1596/978-1-4648-0926-2.
- World Economic Forum. 2016. *Global Competitiveness Report*. Geneva: World Economic Forum.

# BIBLIOGRAPHY

- Agénor, Pierre-Richard, Nihal Bayraktar, and Karim El Aynaoui. 2008. "Roads Out of Poverty? Assessing the Links between Aid, Public Investment, Growth, and Poverty Reduction." *Journal of Development Economics* 86 (2): 277–95. doi:10.1016/j.jdeveco.2007.07.001.
- Akin, Tarik, Zamir Iqbal, and Abbas Mirakhor. 2016. "The Composite Risk-Sharing Finance Index: Implications for Islamic Finance." *Review of Financial Economics* 31: 18–25. doi:10.1016/j.rfe.2016.06.001.
- Alawode, Abayomi A. 2015. "Unlocking Islamic Finance for Long-Term Growth and Development." World Bank Presentation, 2nd Turin Islamic Economic Forum, World Bank, Washington, DC.
- Allen, Franklin, Elena Carletti, Jun Qian, and Patricio Valenzuela. 2013. "Growth, Finance, and Crises." Paper prepared for the Global Citizen Foundation project on "Towards a Better Global Economy."
- Aschauer, David A., and Ulrich Lachler. 1998. "Public Investment and Economic Growth in Mexico." Policy Research Working Paper 1964, World Bank, Washington, DC.
- Behrman, Jere R., and Hans-Peter Kohler. 2013. "Quantity, Quality, and Mobility of Population." Paper prepared for the Global Citizen Foundation project on "Towards a Better Global Economy."
- Bergere, François. 2016. "Ten Years of PPP: An Initial Investment." *OECD Journal on Budgeting* 93 (2): 31–123. doi:10.1787/budget-15-5jm3rx2qbxq.
- Burnside, Craig, and David Dollar. 2004. "Aid, Policies, and Growth: Revisiting the Evidence." Policy Research Working Paper 3251, World Bank, Washington, DC.
- Damak, Mohamed, and Jan W. Plantagie. 2015. *Islamic Finance Outlook: 2016 Edition*. Standard & Poor's Financial Services LLC.
- Dintilhac, Clio, Fernanda Ruiz-Nuñez, and Zichao Wei. 2015. "The Economic Impact of Infrastructure and Public-Private Partnerships: Literature Review." Draft Version 1.0, World Bank, Washington, DC.
- Dobbs, Richard, Herbert Pohl, Diaan-Yi Lin, Jan Mischke, Nicklas Garemo, Jimmy Hexter, Stefan Matzinger, Robert Palter, and Rushad Nanavatty. 2013. *Infrastructure Productivity: How to Save \$1 Trillion a Year*. McKinsey Global Institute.
- Esty, Benjamin. 2000. "The Equate Project: An Introduction to Islamic Project Finance." *Journal of Project Finance* 5 (4): 7–20.
- Gatti, S. 2014. "Private Financing and Government Support to Promote Long-term Investments in Infrastructure." OECD Working Paper on Finance, Insurance and Private Pensions No. 37, Organisation of Economic Co-operation and Development.
- Ghemawat, Pankaj. 2001. "Distance Still Matters: The Hard Reality of Global Expansion." *Harvard Business Review* 79 (8): 137–47.
- Ismail, Suhaiza, and Fatimah A. Harris. 2014. "Challenges in Implementing Public Private Partnership (PPP) in Malaysia." *Procedia-Social and Behavioral Sciences* 164: 5–10. doi:10.1016/j.sbspro.2014.11.044.



- Kaufmann, Daniel, and Aart Kraay. 2002. "Growth Without Governance." Policy Research Working Paper 2928, World Bank, Washington, DC.
- Laldin, Mohammad A. 2008. "Islamic Financial System: The Malaysian Experience and the Way Forward." *Humanomics* 24 (3): 217–38. doi:10.1108/08288660810899377.
- Li, Cindy. 2016. "Islamic Finance in Asia: Recent Developments and Regulatory Issues." *Asia Focus*, Federal Reserve Bank of San Francisco.
- Lucas, Robert E. 1988. "On the Mechanics of Economic Development." *Journal of Monetary Economics* 22 (1): 3–42.
- Milbourne, Ross, G. Otto, and G. Voss. 2003. "Public Investment and Economic Growth." *Applied Economics* 35: 527–40.
- Naim, Asmadi Mohamad, Mohamed Yazid Isa, and Mohd Liki Hamid. 2013. "The Effects of New AAOIFI Standards on Sukūk in Choosing the Most Authentic Islamic Principles." *Journal of Islamic Accounting and Business Research* 4 (1): 77–93.
- Plummer, Michael G., Peter J. Morgan, and Ganeshan Wignaraja, eds. 2016. *Connecting Asia: Infrastructure for Integrating South and Southeast Asia*. Edward Elgar Publishing.
- Robinson, James A., and Daron Acemoglu. 2012. *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. New York: Crown Publications.
- Rodrik, Dani. 2014. "The Past, Present, and Future of Economic Growth." *Challenge* 57 (3): 5–39. doi:10.2753/0577-5132570301.
- Sadikot, Rishad. 2012. "Islamic Project Finance: Shari'a-Compliant Financing of Large Scale Infrastructure Projects." *Online Journal on Southeast Asia and Islamic Civilization*, Spring, The Fletcher School, Tufts University.
- Soomro, Mohsin A., and Xueqing Zhang. 2011. "An Analytical Review of Transportation Public Private Partnerships Failures." *International Journal of Sustainable Construction Engineering & Technology* 2 (2): 62–80.
- Sundararajan, Satheesh, and Sara Ahmed. 2015. "Infrastructure Regulation: Developing Countries." PPIAF Issue Brief, February, Public-Private Infrastructure Advisory Facility, World Bank, Washington, DC.
- Tan, Jeff. 2008. *Privatization in Malaysia: Regulation, Rent-Seeking and Policy Failure*. New York: Routledge.
- Tavares, Silvana A. 2014. "The Contract Management in Public-Private Partnership." <https://fenix.tecnico.ulisboa.pt/downloadFile/395144992772/Resumo%20alargado.pdf>.
- World Bank. 2015. "PPP Knowledge Lab." Washington, DC. <https://www.pppknowledgelab.org/>.
- , 2016. *Poverty and Shared Prosperity 2016: Taking on Inequality*. Washington, DC: World Bank. doi:10.1596/978-1-4648-0958-3.
- Zou, Patrick X. W., Shouqing Wang, and Dongping Fang. 2008. "A Life-Cycle Risk Management Framework for PPP Infrastructure Projects." *Journal of Financial Management of Property and Construction* 13 (2): 123–42. doi:10.1108/13664380810898131.





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