

Designing Islamic Contracts for Financing Infrastructure Development

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ABSTRACT

The present paper undertakes an Islamic evaluation of the system of infrastructure contracting. The maxim “*al-kharāj bi al-damān*” underlies all forms of financial contracting in Islamic jurisprudence. It requires that benefits (returns) and liabilities (risk) go together, and while it appears simple and straightforward, the required link may not be explicit in composite financial structures used in infrastructure development. In the context of such structures, with a multitude of risk factors and parties involved, identification of *gharar* and its reduction assumes greater importance. Islamic law also requires parity between the risk borne by a party and the reward it deserves: this is a crucial issue for overall system efficiency. History has shown that the success of infrastructure development programs largely depends on the extent to which risks and rewards are shared equitably between the parties. This paper therefore discusses these issues and suggests specific *sharī‘a*-compliant mechanisms that ensure an efficient and ethical allocation, mitigation, and management of risk and that may be used in designing infrastructure contracts.

I. INTRODUCTION

Infrastructure financing is a desirable investment product for Islamic financial institutions. It is in line with the mission of Islamic banking and finance. Investments in highways, airports, power generation and distribution, telecommunication networks, oil and gas pipelines etc. in developing Muslim economies is believed to accelerate the process of economic development, as well as create value and wealth in these societies. Such desirable outcomes are directly in contrast to those of the Islamic equity funds, which generally involve an outflow of capital from these resource-starved economies into the developed ones.

The last decade has witnessed a surge in private financing of infrastructure development creating major opportunities for Islamic banks and financial institutions. Private participation has received approval and encouragement from policy makers all over the globe, largely because of a reduced capital and investment demands on the governments for provision of goods and services. This has been a major reason why many developed and developing nations unable to mobilize the required resources through taxation, borrowing and other means have sought private participation in the development process. Some other benefits flowing from private participation in infrastructure as compared to government provision may be: (i) quicker planning and implementation of privately designed and developed projects, since there is an incentive to generate revenues as early as possible, (ii) lower project costs because of a quicker schedule in an inflationary environment, (iii) greater efficiency in responding to the demands of the market because of availability of price signals leading to introduction of innovative products and services and (iv) economies of scale, scope, experience and benefits of diversification with involvement of multinational companies in the process.

Private financing of infrastructure also raises some concerns. Public-private partnerships substitute government investments in infrastructure with private capital; these also replace taxation with privately collected user fees or other forms of remuneration to pay for use in infrastructure. It is also possible that privatized projects may ultimately involve higher project cost because of tendering costs, higher private financing costs, and of course, the profits for various private parties. There is also the possibility of imperfect project selection because, the private parties would be more interested in financial profitability rather than economic profitability and tend to ignore various externalities and intangible effects of the investment alternatives. The projects may involve costs in the form of environmental degradation, which is not properly accounted for in financial profitability estimates. The projects may also involve a disproportionate incidence on the poor or the disadvantaged. For instance, an individual living near and hence, being forced to use, a private-financed highway may feel genuinely discriminated against when roads in other parts of the locality not frequented by him may continue to be free for public use. Another major cause for concern is related to monopoly behavior of the private parties. The large initial outlays involved in

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infrastructure projects combined with low marginal costs associated with operation of the facility create ideal conditions for monopolistic tendencies to emerge with all their undesirable consequences. Obviously, some cost factors have potential ethical consequences, and hence are of legitimate concern to Muslims. Though there is generally a consensus among scholars regarding the permissibility of the basic idea of “private” participation in the process of infrastructure development, a comparison of the macro-level benefits and costs needs to be undertaken in the *fiqh* framework of *Maslahah Mursalah* before a particular project is found acceptable. Of course, the contractual mechanism used to achieve the same must conform to the established principles of Islamic law and be free from *ribā*, *gharar*, *maysir*, *darar*, and the like

An increasing number of infrastructure projects all over the globe are being established on a Build-Operate-Transfer (BOT) structure. Under this model a government or government entity enters an agreement with a private sector company under which the company agrees to finance, design and build a facility at its own cost, and is given a concession, usually for a fixed period to operate that facility and collect revenues from its operation before transferring the facility back to the government at the end of the concession period. There are a number of variants of the BOT, such as Build-Own-Operate (BOO) with no eventual transfer to the government, Build-Transfer-Operate (BTO), Build-Own-Lease-Transfer (BOLT), and a range of such other structures. The difference between these structures primarily relates to the allocation of risk and rewards among various parties involved in the process. History has shown that the success of such programs largely depends on the extent to which risk and rewards are shared equitably between the parties.ⁱ The association between risk and reward is also central to Islamic finance. The maxim “*al-kharāj bi al-damān*” underlies all forms of financial contracting in Islamic jurisprudence. The maxim, in simple terms, requires that benefits (returns) and liabilities (risk) go together. A party in a financial contract is entitled to returns only if it bears risk.ⁱⁱ Islamic law also requires a parity between risk borne by a party and the reward it is entitled to,ⁱⁱⁱ though this issue seems to have attracted lesser attention of scholars of Islamic jurisprudence and is much less explicit in the existing literature on Islamic financial contracting. The same is, however, extremely crucial from the standpoint of overall system efficiency. Arguably, the required link between risk and return may not be easily intelligible and explicit in the above composite structures used in infrastructure finance. Such structures often incorporate a large number of elements that need to be combined and integrated and require an extensive network of interrelated and often inter-conditional contracts.

In the present paper, we seek to examine each component of the popular BOT structure for the possible presence of *ribā*, *gharar*, and other unethical elements and explore ways to avoid the same. For instance, in the presence of *gharar*, Islamic scholars have suggested various ways to reduce such excessive uncertainty (such as, through embedded options) and bring it down to acceptable levels. In the context of composite financial structures, with multitude of risk factors and parties involved in the process, identification of elements of *gharar* and its reduction to permissible levels assumes great importance. There is a pressing need, therefore for a proper appreciation of risk factors and their allocation among various parties, and the use of various risk-mitigating strategies. This should enable the Islamic banks to model the composite financial structures as Islamic modes of financing.

The scope of the paper is limited to privatized initiative in infrastructure and does not cover projects that are developed either entirely in public sector or fall within the ambit of *awqāf*. The rest of the paper is organized as follows. Section 2 subjects the popular conventional structures and their various components to tests of the *sharīʿa*, and identifies some *sharīʿa*-based parallel forms of contracting. It reveals various contractual choices available in the Islamic framework for the purpose of infrastructure financing. Section 3 seeks to highlight some agency problems that would arise under the identified Islamic structures and suggests some ways to overcome them. Section 4 examines how various risk factors may be shared between the parties under these contractual mechanisms. It also discusses certain risk-mitigating strategies and tools of risk management with are in line with Islamic rationality and which might reduce *gharar* to permissible levels. Section 5 provides a summary and conclusion.

II. THE CONTRACTUAL CHOICES

Islam provides a basic freedom to enter into contracts. However, this freedom is not unrestrained and all systems of contracting must not violate the various norms of Islamic ethics. Below, we subject each element or agreement forming part of the popular BOT structure to the test of the *sharīʿa*. Wherever these do not clearly fit into the category of classical *sharīʿa*-nominate contracts, we attempt to identify the *sharīʿa*-based alternatives that serve the purpose.

In general terms, under the BOT structure, a government or government entity enters an agreement with a private sector company under which the company agrees to finance, design and build a facility at its own cost, and is given a concession, usually for a fixed period, to operate that facility and collect tolls or other revenues from its

operation before transferring the facility back to the government at the end of the concession period. The intention is that the company is to receive sufficient revenues during the operational phase to service its debt incurred in designing and building the facility, to cover its working capital and maintenance costs, to repay its equity investors, and, hopefully, also provide a reasonable profit for its investors.

BOT structures involve multiple parties, and a multitude of risk factors.

Government: The government grants the concession for the construction and operation of the facility. This is achieved through enabling legislation specific to the project in question. The government is expected to monitor the progress and operation of the project. Since the government would resume possession and operation of the facility after the expiry of the fixed concession period, it seeks to ensure that the quality of the facility is such that the facility has a long usable life with low maintenance costs.

Project Company: The project company is usually a single purpose company and is the grantee of the concession. It is responsible for securing finance, procuring the design and construction of the project, the operation of the project during the concession period and the eventual transfer back to government. The project company is also responsible for servicing debt incurred in the implementation of the project.

Investors: There are generally two types of investors in the project company. One type is project sponsors whose participation in the project is not restricted to their role as investor, such as, a construction company that intends to undertake or participate in the construction of the project, an operating company that intends to operate the completed project, a bank providing debt for the project, and the host government. The second type are long-term investors whose only interest in the project is as an investment and who will often take little role in the management of the project company. Such investors are normally institutional investors or other long-term investors.

Lenders: The lenders usually comprise banks and certain other financial institutions that are empowered to lend money or extend credit under relevant legislation. Project loans are usually on a non-recourse or limited recourse basis. There are certain special considerations for the lenders financing BOT, as opposed to other, more conventional, projects. BOT projects have a complex risk profile due to several factors including the length of the term of the loan, the susceptibility to political and economic risk, the low market value of the security package and the limitations on enforcing security.

Contractor: The main contractor for the project is often also the principal sponsor of the project. One of the greatest elements of risk in a BOT project is completion risk and lenders will often wish to place this risk on the project sponsors, e.g. by completion guarantees. Where the contractor is the principal sponsor, the project company normally passes on these risks to the contractor through time, cost and quality warranties to be given by the contractor to the project company and with the project lenders taking assignments of the benefit of these warranties.

Consultants: A wide variety of consultants will be involved in BOT projects including financial consultants, engineers and technical consultants, insurance advisers and legal advisers. Merchant banks acting as financial advisers play a large part in structuring BOT projects. In a BOT project, independent technical consultants are often employed to monitor the works. Often the independent consultants will be employed by the project company but will owe their primary duties to the government.

Operator: Where the operation of the privatized facility is complex, it is preferable to sub-contract the work to an operator with previous experience in the particular area of operations. The government, lenders, and investors may prefer the operator to be one of the project sponsors and to be committed as a shareholder to the project for a certain minimum time period. Alternatively, the project company may itself undertake the operation of the facility.

Users: Users supply the revenue for the project and in the case of bridges, tunnels and highways are often the toll-paying public. Where the facility has a product, e.g. a power station, the users may be the host government, utility companies, or other product purchasers. In these cases, off-take agreements are often negotiated as an essential element of the contractual structure of the overall project. These off-take agreements will often be on a “take-and-pay” or “take-or-pay” basis.

Given this background, we now turn to various *shari‘a*-based contractual choices that may be designed for the various parties in various phases of the project. Prior to that, it is pertinent to note here that the various agreements and contracts or components of the financial structure need to be independent (though these may be executed in parallel fashion) in spite of their interrelated nature in order to avoid the possibility of *gharar*. A well-known principle of *fiqh* asserts that there cannot be two contracts within one. With multiple interdependent contracts forming part of one contract, the possibility that the rights and obligations of the parties to the contract would not be honored in future greatly increases, since default in one component of the structure may lead to defaults in others.

A. Designing the Concession Agreement

This is an agreement between the government authority and a project company. This is the cornerstone of the structure as it effectively gives the project company the right to carry out the project. Various parties that come together to form the project company may include the project sponsors, such as, the contractor or construction company, the operation or utility company, banks as lenders, the host government and also other long-term investors.

The initial transfer of land rights in favor of the project company followed by the eventual transfer of the facility back to the government on a future date without any consideration or fee does not seem to have a parallel in *sharīʿa*-nominate contracts. One possibility is to model the initial transfer as a gift (*heba*) contract in favor of the project company by the government. The reverse transfer on a future date however is problematic, as a gift (*heba*) contract on a future date may not be admissible in Islamic law. A possibility of revoking the initial contract is also ruled out subsequent to the development of the land and creation of the facility. Thus a build-operate-transfer (BOT) structure does not seem to be *sharīʿa*-compatible if modeled as a gift (*heba*) contract. It may be noted here that a concession for a build-own-operate (BOO) structure or full-scale privatization perfectly fits into this framework. A gift (*heba*) contract may be conditional and in this sense, the initial transfer of land in favor of the project company, subject to the condition that it would develop the facility in a desired manner seems to be *sharīʿa*-compatible.^{iv}

The partnership between the government and the private parties with the provision that the government (or the state company having a degree of autonomy from government) ultimately becomes the sole owner of the project, may indeed be modeled as a diminishing *mushāraka* (*mushāraka yantahi bi al tamlik*) contract between the parties. The project company formed as a diminishing *mushāraka* would imply that the stake of the private parties in the project declines over time to zero, ultimately leading to full ownership by the government. The government as the partner would also legitimately enjoy its discretion to exercise varying degrees of control as specified in the partnership contract. The outcome under this arrangement would be similar to that under the build-operate-transfer (BOT) structures though the process of achieving the same is different. Under diminishing *mushāraka*, profits and losses are shared according to the *mushāraka* principle, that is, profit are shared according to a mutually agreed ratio while losses are shared using the participation ratio of both parties in the capital. Further, a proportion of profits accruing to the government is kept in an escrow account. As soon as the value of this account becomes equal to the value of the private partners' capital contribution in the project, payment from this account is made to the private parties and the government becomes the sole owner of the project.

The two crucial variables in this structure which would be determined after taking into consideration the project risk factors, revenue growth, expected return, investment time horizon of the financier etc., are the profit-sharing ratio and the ratio of profits accruing to the government that would be transferred to the escrow account. The other dimensions of this structure are given without any element of uncertainty.

It may be noted here that the concept of diminishing *mushāraka* is not a classical *sharīʿa*-based contract. It is an excellent example of Islamic financial engineering. Like many other products of financial engineering or innovation, this too is not free from divergence of views. The major objections from some scholars relate to the *sharīʿa* basis of forward commitments involved in the contract and when the *mushāraka* contract is seen to contain several contracts of forward sale.^v However, the diminishing *mushāraka* contract may also be viewed as containing a promise by a party (as a condition) to sell a part of its ownership on a future deal. This is generally considered to be binding on the promisor(s).^{vi} At the same time the counterparty is not making any promise to purchase as a condition to the contract. Thus, there is in fact an option to purchase for the counterparty, which may or may not be exercised.

Another alternative model for the project company could be a special purpose *mudāraba* with limited liability of the partners and the private parties agreeing to gradually reduce their stake in favor of the government. The advantage in case of a *mudāraba* as compared to a *mushāraka* structure is in the limited liability of the parties involved in it. The various private parties that may come together to form the *mudāraba* include the project sponsors as *mudārīb*, such as, the construction company, the government, the operating or utility company, and the parties that are entrusted with managerial or monitoring responsibilities. Long-term investors who are non-sponsors may be part of the *mudāraba* as *rabb al-māl*.

B. Designing the Construction and Related Agreements

The second element of a build-operate-transfer (BOT) structure is the construction contract between the project company and the construction company. This is generally in the form of a comprehensive turnkey contract, which provides for the project to be handed over and to be ready for immediate operation. Some variations are also possible when the project company is directly and partially involved in the creation of the facility. The project

company may enter into an equipment supply agreement(s) with suppliers(s). In order to finance these activities, the project accompany would also enter into credit agreement with the bank(s). The construction company may also enter into direct credit agreement with the banks(s). Since the credit agreements in the conventional structure would involve *ribā*-based loans, alternative financing arrangements may be sought in the Islamic framework. The financing mechanisms that are already being used or have good potential are *bay'c-istisnāc*, *bayc bithaman ajil*, *ijāra*, and *bayc-salam*.

An Islamic bank may act as an intermediary between the project company and the construction company or the supplier(s) as the case may be. The bank may undertake financing of the entire or a component of the project by selling the facility or equipment to the project company in need of financing through *istisnāc* or *bayc bithaman ajil*. The project company may now make payments to the bank on a deferred basis. Prior to this, the Islamic bank would purchase the facility or the equipment from the construction company or the supplier as the case may be. Since the facility or equipment would be of a specialized nature, the Islamic bank may have to make progressive or advance payments to the construction company or the supplier under *istisnāc* or *salam* as the case may be. The Islamic bank may also act as a lessor to the project company and supply the facility or equipment under *ijāra*, acquired from the construction company or the supplier. The bank may also opt for variations of *ijāra* such as, *ijāra wa iktina* or *ijāra thummal bayc*, which allows the lessee to purchase the facility at the end of the lease period. It is also possible that the construction company may be in need of financing in which case an Islamic bank may provide finance in the same manner as described above. Indeed, various alternative financing structures are possible with combinations of the above contracts because of the fact that various parties involved in the process: the project company, the construction company, the supplier, the operating or utility company, and the Islamic financiers may not be different entities and may also act as agents of each other.

In the recent example of PUTRA LRT II project in Malaysia, Islamic banks are providing financing during the construction phase in the following manner. The Islamic financiers would purchase the original contract(s) to supply goods and services to the project company from the supplier(s), and agree to the subsequent sale of the goods arising from this contract to the project company at a fixed profit markup.^{vii}

Another structure involving *ijāra* was used in the famous Hub River Power Project in Pakistan. In an *ijāra* between the project company as the lessee and the Islamic financier as the lessor, the former acted as an agent of the latter and entered into a purchase contract with the supplier of an equipment. On satisfactory delivery of the equipment to the lessee, the lessor would make payment of the purchase price and other expenses directly to the supplier. Thereafter the lease contract would be activated and have a definite maturity period at the end of which the lessor would make a gift of the leased equipment to the lessee.^{viii} It may be noted here that if the *heba* (gift) contract is an independent contract, then forward commitment involved may be problematic as cited earlier. If the *heba* (gift) is part of the *ijāra* (lease) contract then the situation is similar to the case of *ijāra thummal bayc* (hire-purchase) with two contracts being executed within one contract. The combination of two contracts is believed to be a source of *gharar*. However, the above structure has been found acceptable by some scholars apparently on the ground that there is hardly any uncertainty about the parties' ability to deliver and settle the transaction in future, since the asset is already in the possession of the lessee.

C. Designing the Operating and Related Agreements

In cases where the operating and maintenance is to be undertaken by the project company there is no need for this agreement. But where it is to be undertaken by a utility or operating company having specialized competence, a separate agreement for the operating and maintenance of the facility is needed. After the construction phase is over, the status of the project company as discussed above may be that of an owner or of a lessee with a purchase option. The project company may enter into a contract of *joala* with the utility company under which the former purchases from the latter for a predetermined fee or commission a service relating to maintenance and collection of tolls and other user fees. The commission may be in the form of an absolute amount or a ratio of the revenues.^{ix}

Another alternative could be that the project company enters another *ijāra* agreement with the operating or utility company for a time period, perhaps matching with the time till the full ownership of the facility by the government is effected. With the *ijāra* contract the project company transfers all the rights of collection of revenues in the form of tolls or others user fees in favor of the lessee, that is, the utility company in lieu of the rental payment in future. It may be noted here that a narrow definition of *ijāra* implies using an object without reducing its substance or consuming its usufruct only. In this sense, only *ijāra* of specific equipment would be permissible, but not of entire facility. Nor would it be permissible to sell the unrealized tolls and user fees for a price because of the condition of *gharar* (uncertainty).

A solution to these problems may be found by drawing a parallel between the above situation and the contract of *damān* prevalent in Damascus during the seventh century of Hijrah and discussed extensively in the writings of Ibn Taymiyyah. Being construed as a combination of *musaqat* (partnership in fruit-trees) and *ijāra* (rent) this contract provides the letting of ground including the different fruit-trees growing on it in return for a fixed amount as a rent. Whereas the contract of *musaqat* belongs to the category of *mushāraka* in which the contracting parties, that is to say, both the landowner (*rabb al-ʿard*) and the *amil*, who irrigated the fruit-trees, get a stipulated percentage of the crop, *ijāra*, is regard as a kind of sale in which the renter has to pay a fixed amount. The case of *damān* was extensively debated amongst the jurists. The *damān* contract took place when A, the owner of an orchard, wanted to sell the fruits altogether to B, although the fruits were not yet ripe. Obviously, this practice is unlawful and one of the solutions is the contract of *damān*. Thus, Ibn Taymiyyah suggested to A to let his ground with fruit trees to B for a fixed amount, so that B himself can irrigate the trees and gather the fruits, when they had ripened. Ibn Taymiyyah attempted to refute the existing narrow interpretation of *ijāra* as using a thing without reducing its substance, by drawing extensive legal inferences from the tests. He asserted that the contract for *ijāra* includes the consumption of at least parts of the object.^x

Given this background, one may perhaps discern a possibility that the owner of a project or facility or the project company may enter into the contract of *ijāra* with the operating company. The project company would receive predetermined rentals and hand over the facility to the operating company. The latter would be responsible for maintenance and collection of revenues generated by the facility, which may again be shared between both the parties in an agreed manner. The Islamic acceptability of this arrangement of course, needs further debate, discussion, and *ijtihad* by Islamic scholars.

In projects such as gas and electricity generation, the structure may be very different from what has been outlined above. In gas and electricity generation projects, the generation process is continuous and the producer is also entrusted with the operation and the maintenance of the facility. Further, since spot or retail market sales of the output in these projects are ruled out, there is a need for long-term off-take or purchase agreements between the power producer and the project company. The distribution of electricity and gas is entrusted to the utility company, which may enter into the off-take agreement with the producer as an agent of the project company. If this agreement were modeled as *bayʿ-istiṣnāʿ* or *bayʿ-salam*, this would require prior determination of the price, quantity and the specification of output to be purchased by the utility company. However, if the agreement is modeled as *bayʿ-istijrar*, there is scope for greater flexibility. The flexibility relates to timing of payments. Unlike *salam*, payments can now be made in the beginning of the contracting period or any time thereafter. It allows for contracting with a definite or a normal price in the market. It also admits the possibility of stipulating options for either or both parties to the contract. This flexibility is understandable in view of the fact that under *istijrar*, by definition, purchases are to be made from a single producer.^{xi}

III. ISSUES IN DESIGN: AGENCY PROBLEMS AND THEIR RESOLUTION

As stated earlier, various contracts forming part of a financial structure must be independent (though these may be executed in parallel fashion) in spite of their interrelated nature in order to avoid the possibility of *gharar*. It is a well-known principle of *fiqh* that there cannot be two contracts within one. The underlying rationale seems to be that, with multiple interdependent contracts forming part of one contract, the possibility that the rights and obligations of the parties to the contract would not be honored in future greatly increases, since default in one component of the structure may lead to defaults in others. However, it must be recognized that even if the contracts are made independent of each other, the contractual structure referred to above can result in considerable conflicts between the various interests of a particular party within the structure. Often this is referred to as a party wearing “two or more hats.” It is important in formulating the structure and in negotiating the parties’ overall aims to constantly bear in mind these conflicting interests. Below, we highlight some such possibilities and explore ways of resolving the same. Such conflicts of interest arise primarily with the project sponsors whose participation in the project is not restricted to their role as investors and who may play a major role in the management of the project company that may follow a *mushāraka* or *muḍāraba* structure.

A. The Construction Company as a Project Sponsor

The classic conflict of interest under this BOT model is the majority shareholder in the project company who is also to be the main contractor for the project appointed under the construction documentation. Accordingly, this party’s ultimate interest in participating in the project is not necessarily the same as the interest of certain other project sponsors or shareholders, especially the long-term investors.

For example, this party would wish to receive monies from the project as early as possible and the easiest method of achieving this is to obtain a lucrative *istisnāʿ* contract. Payments under this *istisnāʿ* contract would usually be on a periodic or staged basis and will be made during the course of the construction phase. In contrast, a long-term equity investor in the project company will only obtain payments from the project through declarations of dividends, which will not be made until such time as the project has been built and is generating a reasonable return.

Whilst the long-term investors would appreciate that the contractor must obtain reasonable payments under the construction contract to ensure that the project is actually built on time, their obvious concern is that these payments should not be overly generous, as the sums paid are part of the overall development cost of the project which the shareholders are financing through their injection of funds into the project company.

The directors on the board of the project company representing these minority shareholders would therefore want to ensure that the directors representing this majority shareholder do not take advantage of their position to ensure a more favorable deal is made for the contractor with the project company.

There are several agency problems that arise here. For example, whether the project company is modeled as a *mudāraba* or *mushāraka*, a *mudārib* or a member of the board of directors owes a fiduciary duty to act in the best interests of the project company. The directors appointed by this majority (contractor) shareholder should therefore act in the project company's best interests when they make decisions in their capacity as directors on the board of the project company. However, having said that, it is often extremely difficult to prove a breach of this type of fiduciary duty by these directors in making decisions to favor the actual company which has appointed them to the board and with whom they are usually in full-time employment. Examples of conflicts that could arise would be the directors of the project company contemplating legal action against the main contractor on the construction documentation, or considering how best to defend or negotiate claims made by the contractor against the project company.

The preferred mechanism for dealing with these particular conflicts lies in the shareholders' agreement regulating the internal affairs of the project sponsors in the project company. It would not be incompatible with a *mudāraba* or *mushāraka* structure, for example, to stipulate that certain decisions would require the consent of not only the majority shareholders, but also all, or at least a higher percentage of the board of directors. The same situation applies to decisions to be taken by the project sponsors in their capacity as shareholders in the company. Such items may include the following non-exhaustive list: any proposed amendments or variations to the construction documentation, the bringing of any claim or the commencement or settlement of any litigation, arbitration or claim (whether or not above a certain monetary amount). Indeed, if such a claim is contemplated by or against the project company against or by any shareholder, such a shareholder or any director appointed by it may well be disenfranchised by the terms of the shareholders' agreement from voting in determining whether such a claim should be brought, or the terms of settlement thereof, the approval of entry by the project company into a contract with a subsidiary or associate company of any shareholder.

B. The Operating Company as a Project Sponsor

A utility company will obviously want to have as favorable an operating agreement as possible between it as operator and the project company and may again try to use its shareholding in or representation on the board of directors of the project company to obtain such a favorable agreement. Again, the *mudāraba* or *mushāraka* underlying the project company may stipulate that approval by the board of directors of the project company of the terms of the operating agreement will require directors, other than those appointed by the operating company, to vote in its favor. Alternatively, the directors appointed by the operating company may be disenfranchised from voting on this issue.

C. An Islamic Financier as a Project Sponsor

An Islamic bank that provides debt facility to the project company through *bayʿ-bithman-ajil*, or *murābaḥa*, or *ijāra*, or *istisnāʿ*, may also be a project sponsor or investor in the project company. It is usually a condition in the loan documentation that no dividends to shareholders be paid out by the project company without the prior approval of the banks providing debt capital to the project company. In such case, there is firstly a conflict of interest in a bank's own internal position should it be both a shareholder in the project company, as well as a member of the syndicate of banks providing debt finance to the project company.

The bank, in its capacity as an investor in the project company, would, like the other investors, want as much dividend as possible to be paid out at as early a stage as possible. However, the bank in its capacity as a debt-provider to the project company would, as a general rule, require the repayments of the installments, or at least would have to be satisfied that forthcoming payments of installments can be made, before it would approve the payment out of any dividend by the project company.

D. Financial Adviser to the Project Company as Arranger of the Syndicated Finance

The project company may appoint an Islamic investment bank as its financial adviser on how to structure and finance the overall project. This investment bank would negotiate on behalf of the project company, with other Islamic banks, leasing companies etc. to provide third party finance to the project company for the project. It may not itself, however, participate in the provision of third party syndicated finance. This may be the preferred situation as it mitigates a possible conflict of interest in that the investment bank would only have the interests of its client (the project company) in mind in negotiating the financial terms. Another view is that this bank as financial adviser, in negotiating and putting together the finance package, and in having perhaps the best overview of the project in total, should itself take up a portion of the third party finance.

The above is by no means an exhaustive list of the potential agency problems and conflicts of interest. The presence of a large number of parties in the financial structures with many parties performing multiple roles is certain to raise many moral and ethical problems. These potential areas of conflict of interest need more exhaustive investigation and must be minimized through appropriate stipulations in the *mudāraba* and *mushāraka* structures used for the purpose.

IV. ISSUES IN DESIGN: RISK ALLOCATION AND MANAGEMENT

Major infrastructure projects are characterized by big risks. Below, we outline the risk factors related to construction and operation of the project. We also highlight some risk factors that arise because of a specific contractual mechanism being used. We discuss how these risk factors are managed and shared between various parties under alternative financial structures—both conventional and Islamic.

A conventional BOT project may be regarded as a high-risk construction project followed by a low-risk utility project. The various parties among which these risk factors are allocated include the government, the project company, the banks and financial institutions, multilateral credit agencies, the construction company, the operating company, insurance companies, and equipment and other suppliers. The project company is generally seen as a mere pass-through mechanism of both risk and return to the sponsors and non-sponsoring equity providers. In general, in a conventional structure, the market risk factors are borne by the sponsors, which includes the project and operating companies, the government, and the project lenders. The construction and the operating companies bear most construction and operation related risk respectively. Risk of *force majeure* is transferred to insurance companies. The non-sponsoring equity providers bear the residual risk. The major difference between a conventional and Islamic structure is that while conventional lenders are exposed to risk of default only, the Islamic financiers are supposed to share risk in a more significant way.

A. Construction-related Risks

Risk factors during the design, construction and commissioning of the project include, *inter alia*, the unexpected and adverse topographic and geotechnical conditions, weather conditions and labor relations that may adversely affect the project budget and schedule adherence, risk in application and absorption of a new technology resulting in construction and operational defects, cost overruns due to increase in financing costs and/or increase in prices of inputs during inflation (these are in practice the major risks), environmental damage, and *force majeure* events. These risk factors may lead to either delays and defaults in construction of the facility, or non-conformity of the facility to the desired specifications. These risks are often allocated to the construction company, as the project company would like to enter into fixed price, fixed time, and turnkey construction contracts. This is not always achieved, as some costs and timing risks are not borne by the construction company. The risks of environmental damage and *force majeure* events are borne by the party causing the damage or the insurance company. As highlighted earlier, in the Islamic contractual structures, the construction phase of project may be financed through *bay'-'istisnā'*, *bay' bithaman ajil*, and *ijāra*. There is a need therefore to examine the allocation of the risk factors among various parties under these alternative mechanisms.

Considering the case of *istisnā'* first, as discussed earlier, a contract between the Islamic bank as the seller and the project company as the buyer will provide for the manufacturing or construction of the facility or equipment(s) conforming to the specifications required by the latter and the delivery thereof within the stipulated time for an agreed price to be paid by the latter, normally on deferred basis.

The Islamic bank will then enter into another *istisnā'* contract as a buyer with the manufacturer or the construction company to purchase the same facility or equipment(s) which is the subject of the first contract and then deliver them to the Islamic bank within a stipulated time that will coincide with the time for the delivery under

the first contract, for a price which is less than the price under the first contract by a margin that represents the return to the Islamic bank under the first contract.

The price under the second contract will normally be paid in a manner that is commensurate with the progress of works under the contract. The manufacturer or construction company under the second contract will deliver the facility or equipment(s) to the Islamic bank which would in turn deliver them to the project company, or directly to the project company on the orders of the Islamic bank. If the manufacturer or construction company fails to deliver the facility or equipment(s) as per specifications, the Islamic bank would equally be in default of its obligations under the first contract.

A pertinent issue here is whether the *istisnā'* contract is binding on both parties from its inception or not. In other words, does the contract oblige the seller to manufacture and deliver the goods and oblige the buyer to take delivery of the goods and pay the price if the goods are manufactured in conformity with the specifications? The predominant view among the classical jurists is that the contract is revocable by either party at any time. In conventional parlance, both the parties, the Islamic bank as the seller and the project company as the buyer (or the construction company as the seller and the Islamic bank as the buyer) have an option withdraw from their commitments. While the option does provide flexibility to either party and may be of value, it also implies great risk for the counterparty.

Fortunately, the contemporary view in this regard, is that the *istisnā'* contract is binding on both parties from the moment the contract is concluded by offer and acceptance. Either party will be in breach of his obligations if it fails to perform its part of the bargain. The only situation in which the buyer can revoke the contract is where the seller delivers goods that do not conform to the specifications.^{xii} Thus, in the first contract between the project company as the buyer and the Islamic bank as the seller, the latter bears the construction completion and commissioning risks. These are passed on to the construction company in the second contract between the Islamic bank as the buyer and the construction company as the seller.

A possible variation in the *istisnā'* contract between the Islamic bank and the project company, in addition to providing for the manufacturing of the facility or equipment(s) conforming to the specifications within a certain time for an agreed price, may also provide that the project company agrees to take delivery from the construction company. It may also provide that the project company agrees to supervise (through a consultant or other expert) the execution of the contract with the construction company in a manner that will ensure that no progress payment under the contract will be effected unless the project company's consultant certified that the work for which payment is sought has been carried out in conformity with the contract and that the issuing by the project company's consultant of the final payment certificate under the contract with the construction company will *ipso facto* operate as acceptance of the goods under the first contract. This arrangement has the advantage of ensuring that no progress payment will be made unless the project company is satisfied that the execution of the work is progressing satisfactorily in conformity with its specifications. Consequently, if all progress payments are released only on the certification of the project company's consultant, it will be extremely unlikely that the project company would reject the facility on the ground of its non-conformity to the specifications. This also implies that all risks arising out of non-conformity of the facility to specifications remain with the manufacturer or the construction company alone and the risk to the Islamic bank is reduced to minimum.^{xiii}

In addition to the above, there is also a risk that the manufacturer or construction company may delay or default in adhering to schedules. Except due to *force majeure* events, this may be caused by a variety of factors, as stated earlier, including the insolvency or bankruptcy of the construction company. Under the conventional structures their risks are managed through security on assets refundment bonds, performance guarantees, and liquidated damages. The scope for use of such tools also exists in the context of an *istisnā'* contract.

The most effective means of reducing risk due to insolvency of the manufacturer or the construction company is to undertake a rigorous examination of the financial standing, technical and administrative capability of a company before its selection as the contractor or the construction company. Even then bankruptcy risk cannot obviously be reduced to zero, and hence there is need of some risk management tools. One alternative for the Islamic bank would be to take a mortgage of or a charge on the parts of assets that have been created or over all the assets of the manufactures though this may not be very effective since the process is likely to be cumbersome and time consuming. And if the charge is on the incomplete assets, then sale of these assets in the secondary market is not likely to cover the progress payments made by the bank. Another alternative could be to take a refundment bond or performance bond or a bank guarantee. Unlike a security that could be enforced only in the event of the liquidation of the construction company, a refundment bond guarantee could be made cashable in all cases where there is a failure to deliver the facility as per specifications. Where the construction of the assets is being done on the land of the buyer as in the case of a building a power station or a toll road it may be sufficient for the Islamic bank to require a performance bond and retention money.

The time-related risks or the possibility of losses due to delays on the part of the construction company may be minimized by obliging it to pay liquidated damages for this delay. As per the OIC Fiqh Academy's resolutions, the imposition of a penalty clause for the payment of liquidated damages is acceptable in the Islamic framework. The possibility of damages to the assets during the construction phase due to factors, such as vandalism, acts of war, employee theft, accidents may be insured against and the risks may be shared through *takāful* or mutual Islamic insurance. Under the agreement the construction company may be required to seek insurance against specific risk factors from a *takāful* company and assign the proceeds to these policies in favor of the Islamic Bank.

Another alternative contractual mechanism used for financing the construction phase is *bay' bithaman ajil* under which an Islamic bank purchases a facility or equipment(s) as required and specified by the project company from the construction company or the manufacturer and sells the same to the project company at a higher price on a deferred basis. Similarly it may also extend direct financing to the construction company through *bay' bithaman ajil* under which it purchases supplies and sells the same to the construction company at a higher price on a deferred basis. The process involves a risk that subsequent to purchase by the Islamic bank from the original supplier, it may not be in the interest of the client any longer to buy the same from the bank. While according to some scholars the promise by the bank's client to purchase is binding and the bank may demand compensation based on the actual loss suffered, this is not free from controversy. The compensation is paid from *hamish gedyyah*, an amount that is paid with the purchase order to the Islamic bank by the client to ensure that the latter is serious about purchase. If the actual loss exceeds *hamish gedyyah* then the bank would have recourse to the client for the excess.^{xiv} The management of the above risk is also possible in the *khiyar al-shart* framework under which the Islamic bank may retain an option for itself at the time of purchase from the original supplier. Subsequently, if the client buys the same as promised the option would automatically expire and the earlier contract would become binding. However, if the client fails to honor its commitment, then the Islamic bank would be in a position to exercise its option and rescind the purchase contract. This option enables the Islamic bank to shift the above risk to its original supplier. It is also quite realistic that the Islamic bank may have to forgo a part of its profits since the original supplier may charge a higher price in case of the sale with option as compared to a sale without option. This is ethically justifiable since, the original supplier is now exposed to greater risk, and also Islamically valid as long as price is inclusive of the compensation for risk.

A third alternative for financing the construction phase is *ijāra*. It seems to be a popular mode of financing with Islamic banks for financing acquisition of long-term assets, such as land, building, plant and machinery by the construction company and/or the project company. The Islamic bank may either purchase or get an asset as specified by the client on *ijāra* from the original supplier and enter into a second contract of *ijāra* with its client. As in case of *bay' bithaman ajil*, this involves a risk that the client may not honor its commitment to enter into the second contract after the asset has been acquired by the bank for onward *ijāra*. *Ijāra* transaction also admits of stipulation of options and hence the risk may be managed in a similar manner in the *khiyar al-shart* framework. Another issue of considerable significance in *ijāra* relates to sharing of risk relating to wear and tear, or to partial or total destruction of the object of lease. Since the lessor is the owner of the asset it is supposed to bear the above risk even in a long-term *ijāra* (often with a purchase option resulting in ultimate transfer of ownership in favor of the client) except when the loss is due to misuse or negligence on the part of the lessee. The above risk may be mitigated by the bank seeking a *takāful* cover and including the cost of the cover in the *ijāra* rentals. According to some scholars, this risk may also be mitigated by making the lessee specifically liable for damages, theft, loss, or destruction of assets except in the case of *force majeure*.^{xv} The risk of delays and defaults by the lessee may be mitigated by the Islamic bank seeking advance rentals as a security deposit against these risks.^{xvi}

B. Operations-related Risks

As discussed earlier, after the construction phase is over the project company may either enter into a contract of *joala* or an *ijāra* with the operator or the utility company. When the contract is *joala* for an absolute fee, the risk of revenue fluctuation is borne by the project company and the operators or the utility company receives a reward which is known and unaffected by the risk factors. When the contract is *joala* for a proportionate share in revenues the project company and the utility company jointly share the risk of revenue fluctuation. Under *ijāra* the risk is further magnified due to use of leverage and borne by the operator of utility company.

Ijāra implies higher leverage for the lessee-operator and increases its financial risk. If the leverage is already too high (as in case of the aviation industry for example), the lessee-operator may be reluctant to increase its financial risk further. An alternative may be to link the *ijāra* rentals to the actual utilization of the object of leasing, (say, flying hours in case of an aircraft *ijāra*). However, this arrangement also exposes the lessor-project company to greater risk, as its revenues in the form of *ijāra* rentals would now be susceptible to the business risk of the operator. Stipulations of *khiyar al-shart* can offer various possibilities of risk sharing between the lessor and the

lessee. The lessor-project company may for instance, stipulate that rentals would be linked to actual utilization (flying hours) of the object of *ijāra* (aircraft) subject to a minimum utilization. In other words, if the actual utilization falls below a lower bound, it would have an option to rescind the contract. A similar option may also be provided for the operator-lessee.

Other risk factors relevant during the operation phase may be the risk of insolvency of the operator, risk of incurring liabilities in a litigious society, fluctuations in revenues caused by service interruptions due to accidents, weather conditions, equipment failure, natural disasters etc. Here too, as discussed in the context of construction-related risks, the risk for the parties may be mitigated, transferred or shared through the mechanism of liquidated damages, specific stipulations in *ijāra* agreements or passed on to the *takāful* company.

Risk due to fluctuations in revenues is at times passed on to sponsoring governments. The governments may provide a guarantee for growth in traffic and consequently in revenues and any shortfall may be met by the government. This is very much in line with the framework of *kafāla*. Such guarantees provided by the sponsoring governments usually involve a trade-off between quantity guaranteed and price.

C. Financial and Other Risks

Financial risk factors relevant in infrastructure finance may be in the nature of risks due to inflation, interest rate changes and currency rate changes. Inflation poses a risk when it results in an increase in the cost of the project: an increase in recurring costs without a corresponding increase in revenues. Interest rate increases are also caused by inflation to the extent the same is anticipated by the market and adversely affect the bottom line by increasing the financing costs. To the extent that markups and *ijāra* rates are influenced by interest rates, Islamic financing is vulnerable to interest rate risk. Below we discuss how inflation and interest rate risk may be managed in *ijāra* transactions both in the construction and operation phases of the project.

A major source of risk for Islamic banks as lessors and their clients as lessees is due to the fixed nature of the rentals. In a dynamic economy, rates of returns undergo continuous shifts. If in future the rates of returns were expected to increase driving the cost of funds for the lessor, then the Islamic banks would be clearly at a disadvantage. Similarly if rates were expected to fall, the lessee would be reluctant to go for a fixed commitment of lease rentals. A fixed rent *ijāra* can of course be converted into a floating rate *ijāra* by entering into several short-term parallel fixed rent *ijāra* contracts. To consider a simple two-period case, let us assume that the Islamic bank expects the rentals to increase from 'x' percent during current period to 'x+y' percent during the next period. Instead of committing itself for an *ijāra* with two-period maturity at the current 'x' percent and be exposed to risk of loss, it may opt for two one-period *ijāra* contracts: the first for *ijāra* at 'x' percent beginning from now but with a maturity of one period only; and the second beginning from one period hence through the second period at 'x+y' percent. The forward commitment to lease involved in such contracting is permissible.^{xvii}

However, in such an arrangement the issue is only partially resolved since the bank would still have to specify the rental (as per its expectations at 'x+y' percent). What if the rates turn out to be different from 'x+y' percent? Another problem could be due to the fact that the expectations of the lessee may be diametrically opposite to that of the lessor (i.e. if the lessee expects rates to go down in the second period) in which case, no contracting is perhaps feasible. A possible solution can however be found in the framework of *khiyar al-shart*. Both the Islamic bank as lessor and its client as lessee may enter into the contract for the second period and stipulate option for either or both of them. The bank may stipulate that if the rate increases beyond 'x' percent or any other definite upper bound, it would have an option to confirm or rescind the contract. Similarly the lessee may stipulate that if the rate decreases beyond 'x' percent or any other definite lower bound it would have the option. They can stipulate according to the risk they are willing to bear and the way they decide to share risk.

It may be noted that conventional floating rate leases take care of this problem by linking the rentals to a benchmark index such as the LIBOR. The rentals for future are made dependent on the future level of the interest rates as captured in LIBOR. For Islamic scholars not comfortable with use of a benchmark interest rate, such as LIBOR, this may be substituted with another Islamic benchmark rate, such as, the Consumer Price Index. There is however considerable divergence of opinion on this possibility, as many Islamic scholars do not seem to be in favor of leaving the rental unknown on grounds of *gharar*.

From the above it follows that under *ijāra* there are possibilities of mitigating and managing inflation risk by making the lease rentals variable and perhaps linking the same to some macro economic index. When the contract involves *bayʿ*, is there any possibility of making the price and returns vary with dynamic changes in the economy? This is obviously not possible in *bayʿ-salam* or pure *bayʿ* unless forward contracting is made acceptable or some flexibility is accorded regarding fixation of the contractual price in future. Fortunately, such flexibility exists when purchases are made from a single producer, such as, when the utility company purchases gas or electricity from the producer, or when the final consumers buy goods and services from the single utility company.

The agreement would now be governed by the rules of *bay'c-istijārar*. *Bay'c-istijrar* permits fixation of price at a normal level over a time period and also allows for payment of price at the end of the time period. *Istijrar* also admits the possibility of options in the *khiyar al-shart* framework. With such flexibility, a host of risk management possibilities with alternative contractual mechanisms emerge. To cite an example, one specific contract may contain options for both the buyer and seller that are activated if the market price pierces an upper or lower bound respectively, during a definite time period. The option provides a right to a party to fix the sale price at the average of the market prices prevailing during the financing period. Note that average of market price reflects the “normal price.” If the options do not get activated or are not exercised, then the price is settled at the predetermined contractual price. Both the client-firm and the bank agree on a public undisputed source of price information and also a sampling interval for observing prices. The average price is calculated from these observations.^{xviii}

In a contract between the power producer and the utility in a Power Purchase Agreement, the producer which is likely to be adversely affected with inflation may retain an option for itself (it is also possible to make it conditional upon extreme movements, that is, the option would get activated only when inflation rate exceeds a certain rate) to fix the price at a “normal” level as against the level initially set by the contract. *Bay'c-istijrar*, unlike *bay'c-salam*, by admitting the possibility that the settlement price may differ from the contractual price (*thaman*), thus opens up a number of possibilities through which risks can be shared and managed by the parties.

Another important risk arises out of exchange rate fluctuations. In infrastructure projects in particular, requiring massive investments, the large blocks of capital are often not available within the borders of the country where construction is taking place. International capital flows are frequent because of involvement of parties from multiple countries. In the Islamic framework with its emphasis on spot settlement of transactions, the problems of currency risk largely remains to be addressed. Some Islamic scholars have favored the idea of deferred settlement from one end, which can address the issue in a limited way. The conventional mechanisms of options, futures, and swaps are generally not found to be acceptable on various grounds. Some banks use Islamic swaps to reduce currency risk though complete transfer of risk is not possible under this arrangement.^{xix} In project finance one acceptable alternative seems to be a guaranteed exchange rate from the host government regarding conversion of inflows and outflows relating to the project. This voluntary bearing of currency risk on the part of the government which has been practiced in the Hub river Project in Pakistan, is quite sound in the framework of *kafāla*.

Liquidity risk is another significant risk factor that may affect the development of infrastructure projects. In view of the fact that such projects require massive investments committed for the long term and that investors in Islamic banks typically have a short time horizon, imparting liquidity to investments assumes great significance. In the absence of liquidity Islamic banks would be constrained to remain out of infrastructure financing to avoid an asset-liability mismatch. Securitization has been suggested as mechanism to impart liquidity to investments in infrastructure and to ensure participation of the average investors in the process. For example, this process may involve a sale of the facility owned by the project company to a special purpose vehicle (SPV) created for this specific purpose and taking it back on lease, The predetermined stream of lease rentals expected to flow to the SPV may now be securitized. The SPV would issue securities entitling the holders a pro rata share in the rental income. The process involving sale and lease back is known as *bay'c-istighlal*, a variant of *bay'c-bil-wafa* and is free from any controversy.^{xx} The PUTRA LRT II project follows a similar mechanism of securitization. The securities created may also involve a pro rata share in revenues. Such possibilities of sharing revenues exist, as discussed earlier, with contracts of *damān* and *joala*. Other forms of securitization, such as involving *bay'c-bithman-ajil* and *istisnā'c* receivables are also being practiced and found acceptable in the Islamic framework. There are however few other dimensions of such securitization process, such as sale of receivables or debt (*bay'c al-dayn*) in the secondary market at price lower than the nominal value of the debt, and repurchase (*bay'c al-einah*) of assets, which have generated a lot of controversy and divergence of opinion regarding their acceptability. These are rejected primarily on the ground of opening up the doors of *ribā*.

V. CONCLUSION

Islamic finance has a lot to offer for developing the infrastructure sector, specifically in the developing Muslim societies. It provides an ethical alternative while retaining all the advantages of conventional finance. It is demonstrated in this paper how the conventional and popular BOT structure may be modeled and used Islamic contracts. The paper also highlights some agency problems that must be kept in mind while designing an Islamic structure. As it is shown, some of the problems can be easily tackled within the Islamic contractual framework.

Privatized initiative in the infrastructure sector may bring in certain advantages. The benefits expected from privatization are also associated with risk factors. These risks may however be mitigated by suitable government initiative. There is nothing inherently un-Islamic about privatized initiative in infrastructure

development and a realistic cost-benefit comparison must be undertaken in the framework of *masalahah mursalaha* for each such project before a decision is taken regarding their permissibility.

Infrastructure projects are characterized by substantial risks. These risk factors must be properly allocated, shared, and managed if privatized initiative in infrastructure development is to succeed. The contractual structure of infrastructure financing is often quite complex incorporating a large number of elements which need to be combined and integrated and require an extensive network of interrelated and often inter-conditional contracts. Various contracts that form part of the structures and lead to risk allocation among the parties include: the concession agreement, the construction agreement, the operations agreement, the credit agreement, the shareholders' agreement, the offtake agreement, the tariff agreement, the agreements relating to insurance, guarantees, and derivatives for managing currency risk. The paper identifies some *sharī'a*-based contractual structures that would result in allocation of risk among the parties concerned but in an Islamically acceptable manner that is free from *ribā* and *gharar*. The concession agreement that underlies the formation of the project company may be modeled as diminishing *mushāraka* or *mudārabā*. *Bay' -istiṣnā'*, *bay' -bithman-ajil*, *ijāra* are found to be useful mechanisms during the construction phase. The operations phase may involve use of *ijāra*, *joala*, *damān*, and *bay' -istijrar* contracts. Various risk management tools involving the framework of *kafāla*, *takāful*, *khiyar al-shart* may be used to facilitate risk sharing and management among various parties. Islamic securitization offers solutions to problems of liquidity and asset-liability mismatch for Islamic banks participating in the financing process.

ⁱ Kopp, John Christopher. Private Capital for Public Works: Designing the Next Generation Franchise for Public-Private Partnerships in Transportation Infrastructure. Unpublished Thesis, Department of Civil Engineering. Evanston: Northwestern University, 1997. p. 4.

ⁱⁱ Two articles in Majalla underscore this: Article 85 (The benefit of a thing is a return for the liability for loss from that thing); and Article 86 (Payment of hire and indemnity for loss do not go together). See Majallahel-Ahkam-I-Adliya. Trans. C.R. Tyser. Lahore: Law Publishing Company, n.d.

ⁱⁱⁱ Article 88 of Majalla asserts that the burden is in proportion to the benefit and the benefit in proportion to the burden. However, existing literature on Islamic financial contracting deals with the risk-return relationship in a broad sense and does not necessarily require risk-return parity. This is because it supposedly deals with permissible contracts, which are not necessarily optimal, though the importance of the latter is hardly ruled out. For example, *murābaḥa* transactions, though permissible, may contain an element of exploitation. The markup rate in some cases appears high compared to the minimal risk borne by the financiers. The issue of parity is left to be handled under externally imposed constraints, such as the abolition of monopolistic tendencies in a market. Islamic markets are competitive markets; competition would ensure parity between risk and return.

^{iv} See Articles 854, 856, 869, and 855 respectively of the Majallahel-Ahkam-I-Adilyya.

^v Bendjilali and Khan (1995) describe the unresolved *sharīʿa* issues as follows in the case of a diminishing *mushāraka* between the bank as a financier (with a declining stake) and the entrepreneur: “The *sharīʿa* problem, as discussed by the expert, revolves around the fact that the diminishing *mushāraka* contract contains a sale provision. The financier agrees to sell certain part of its ownership share every year to the entrepreneur. To some scholars this agreement, even if it may merely be a promise, implies that a sale contract has effected, i.e. the bank has sold its ownership; what then entitles the financier for his claim on the profits of the enterprise? Second, if a sale contract has effected, what is the exact amount of the price and what is the exact description of the object of sale? In the absence of the two, a sale provision of the diminishing *mushāraka* contract becomes null and void. Third, it is unjust to make the entrepreneur binding to purchase something in future. Similarly, it is unjust to fix tomorrow’s price today.” See Bendjilali, Boualem and Tariqullah Khan. “Economics of Diminishing *Mushāraka*.” Islamic Research and Training Institute, Research Paper No. 31. Jeddah: Islamic Development Bank, 1995. p. 18.

^{vi} Article 84 of Majalla asserts, “Promises when they take a conditional form are binding.” See Majallahel-Ahkam-I-Adliya

^{vii} The PUTRA Light Rail Transport System II Project in Malaysia involves the design, construction, operation, and maintenance of the Light Rail Transport System II for the city of Kuala Lumpur and the undertaking of ancillary services as defined by the concession agreement between the government of Malaysia and Projek Usahasama Taransit Ringan Automatik Sdn, Bhd, (PUTRA). The project is being financed through several sources, conventional and Islamic. The Islamic tranche is being co-financed by Bank Islam Malaysia Bhd, Commerce International Merchant Bankers Bhd, and Commerce MGI Sdn Bhd. For details, see Hamdan, Mohd. Bintang. “The PUTRA LTR II Project: A Case Study on *Al-Ijāra* Financing.” Paper presented at the International Capital Market Conference. Kuala Lumpur, Malaysia, July 15-16, 1997.

^{viii} Khan, Mansoor H. “Designing an Islamic Model for Project Finance.” International Financial Law Review (June 1997). p. 14.

^{ix} Cizacka, Murat. “Islamic Project Financing Conference: A Personal Observation.” New Horizon (May 1997). p. 6.

^x Baker, Mohamed Daud. “Al-Suyulah: The Islamic Concept of Liquidity.” Paper presented at the International Capital Market Conference. Kuala Lumpur, Malaysia, July 15-16, 1997. pp. 7-9.

^{xi} Umar, Mohammad Abdul Halim. “*Sharīʿa*, Economic, and Accounting Framework of *Bayʿ al-Salam* in the Light of Contemporary Application.” Islamic Research and Training Institute, Research Paper No. 33. Jeddah: Islamic Development Bank, 1995. p. 62.

^{xii} The OIC *Fiqh* Academy examined the contract of *istiṣnāʿ* in its Seventh Session and resolved (Resolution No. 67/3/7), “*Istiṣnāʿ*, which is a contract the subject matter of which are the goods identified by description and the provision of services, is binding on both parties if the constituent conditions and terms are satisfied.” Further, “It is necessary for the validity of *istiṣnāʿ* that the nature, quality, quantity, and description of the thing to be manufactured are known and that a time is fixed for manufacturing the goods. It is permissible in a contract of *istiṣnāʿ* to defer the price or pay it in installments within a fixed time period. It is permissible to include in a contract of *istiṣnāʿ* a penalty clause, if the parties so agree, save for cases of force majeure.”

^{xiii} Hamid, Mohammed El-Fatih. “*Istiṣnāʿ*: Classical Concept in a Modern Framework.” New Horizon (February 1997). pp. 3-7.

^{xiv} Accounting and Auditing Standards for Islamic Financial Institutions. Manama: Accounting and Auditing Organization for Islamic Financial Institutions, 1996. p. 142.

^{xv} Hussain, Syed Mohammed. "Leasing" and "Lease-based Investments." Papers presented at the World Islamic Banking Finance and Investments Summit. Kuala Lumpur, Malaysia, September 23-24, 1996.

^{xvi} Kamil, Wan Abdul Rahim. "Financing through *Al-Ijāra*." Paper presented at the International Capital Market Conference. Kuala Lumpur, Malaysia, July 15-16, 1997.

^{xvii} See Article 440 of the Majallahel-Ahkam-I-Adliya.

^{xviii} For a detailed discussion on *istijrar* with options, see Obaidullah, Mohammed. "Financial Engineering with Islamic Options." *Islamic Economic Studies* 6(1).

^{xix} For a more in-depth discussion of currency-risk management, see Obaidullah, Mohammed. "Contracting in Currency Markets: An Islamic Evaluation." *Journal of King Abdulaziz University*. (forthcoming).

^{xx} See Articles 118 and 119 of the Majallahel-Ahkam-I-Adliya.