

Islamic Financing for Large Infrastructure Projects

Jasper Camacho
International Financial Mgmt, Section 1
Fall 2005

Summary

This paper examines the growing Islamic finance market and how it is becoming an important source of capital to fund infrastructure projects in the Muslim world. The paper starts by introducing basic tenants of Islamic finance and the problems as it relates to large capital projects. Innovations in Islamic project financing are then introduced along with the complexity that those have to innovations address. The paper concludes with a description of selected recent infrastructure development projects that use Islamic financing.

Islamic Project Development Needs

Increasing population throughout the Muslim world and the appetite for demand in investment for infrastructure in Muslim populated countries has led an increase need for capital that conforms to Islamic standards (see exhibit 1 for list of Organization of Islamic Countries).¹ In many of these countries especially in the Middle East, Central Asia and South East Asia, oil and natural gas deposits push the need for companies to build extraction, transport and refining capacity. In developing countries such as the ones in Africa, Pakistan, and Afghanistan, there is an increasing need for electricity and water desalination stations. These projects are capital especially capital intensive in nature.

Islamic Financing Basics

Islamic financing is the method of financing that complies with the *Shari'ah* (Islamic jurisprudence). The sources of the *Shari'ah* include the *Qur'an* (text in which Muslims' believe

captures the actual words of God), the *Hadith* (Prophet Muhammad's sayings and deeds and its interpretations also known as the *Sunna*), *Ijma* (Islamic community bases for legal decision making), *Qiyas* (judicial precedent based on the *Qur'an* and the *Haddith*), and *Ijtihad* (opinion based on an Islamic jurist based on the *Qur'an* and the *Sunna*).²

There are five areas that broadly define Islamic financing versus what is commonly known as western or conventional financing. These areas include the prohibition of collecting interest on transactions (*riba*), prohibition in entering an uncertain contract (*gharar*), prohibition of gambling (*masir*), prohibition of the use of "un-Islamic" products such as alcohol and pork, and the idea of socially responsible investing.³

There are two forms of *riba*, one form is money is exchanged hand to hand but for different quantities and the other is where money is exchanged for money with deferment⁴. The latter form is what is also known as usury or interest and what conventional financing method is largely based on. It is helpful to note that *riba* doesn't preclude one party from charging a premium on a loan based on the riskiness of a project, nor does it prevent deferred payments. However, the idea of *riba* does forbid charging a premium or structuring the payment schedule around financing costs.

The *Shari'ah* also forbids parties from entering a transaction with uncertainty, also known as *gharar*. This is difficult to express since there are almost no transactions that exist without any certainty. Rice University Professor Mahmoud Amin El-Gamal gives a good example of how to comply with the principle of *gharar*:

Prohibition of (*gharar*) pertains to a person paying a fixed price for whatever a diver may catch on his next dive. In this case, he does not know what he is paying for. On the other hand, paying a fixed price to hire the diver for a fixed period of time is permitted.

Transactions can often avoid *gharar* by being specific and defining what the exchange is taking place. Another issue of *gharar* is the use of insurance because the notion of insurance contracts is

by themselves in nature uncertain. I will explain implications of this and possible solutions to insurance contracts in infrastructure development later in this paper.

Masir, the prohibition of gambling, prevents the use of financial derivatives such as futures and options because it can be viewed very much as a form of gambling. This can have an impact on infrastructure development project financing because a lot of the risk that could have been hedged away using conventional financing techniques will still be prevalent under Islamic financing techniques.

The last two principles are the prohibition of dealing with non-*hamal* products such as alcohol and pork and the idea of socially responsible investing. It should be noted that the prohibition of dealing with non-*hamal* product doesn't prevent the sell of something like alcohol. For example, if Islamic financing was used to fund the transactions of airplanes to an airline, then alcohol still could be served during in flight service. Because the main source of revenue was the airlines and not the sale of alcohol, the financing of the airplanes could still take place in order to comply with Islamic financing.⁵ Socially responsible investing is a very broad definition according the Islam. Because society is viewed to benefit from an emergence of a new business, most transactions are seen to comply with socially responsible investing. Thus most infrastructure development projects are seen to comply with the *shari'ah*.

Difficulties with Islamic Finance in Infrastructure Development Projects

Most large scale infrastructure projects are financed non-recourse to the sponsoring companies. This type of financing is commonly known as project finance. Typical project finance deal can have a debt to value ration as high as 80%. Many of the project finance structure can be very long in duration as high as 20 to 30 years. Because the goal of project financed is to transfer risk to parties that can managed it the best, insurance and financial derivatives are often used. As we will see below, Islamic financing and typical project finance deal are sometimes at odds with each other.

The most serious barrier to the growth of Islamic financing for infrastructure projects is the structure of Islamic banks prevents them from taking on long term financing. Islamic banks are not allowed to leverage their balance sheets by taking on debt in order to have the necessary liquidity needed for long term financing.⁶ In addition, since many Islamic bankers have limited dealing with long term financing, there will need to be a significant change to those banks' culture of taking on deals with longer duration.⁷ Because a lot of infrastructure projects have a financing life span of well over 10 years, sources of Islamic financing will have to find ways to take on longer term deals and change the banking culture away from "short-termism".

Another problem that projects have in terms of attracting Islamic style of financing is the lack of capital. This is driven partly because of the short term nature of Islamic banks. But the lack of capital is also driven by western banking institutions' lack of knowledge of Islamic techniques.⁸ Related to lack of knowledge, western style banks are reluctant to enter in Islamic financing because of possible compliance costs issues. These barriers to entry issues could prove to be very lucrative to a western bank that has enough liquidity and the expertise in place to cater to Islamic style of financing.

The last major barrier to accessibility to Islamic financing for infrastructure projects relates to institutional issues. Governments, investors, and banks can differ in the ways that the *Shari'ah* should be interpreted. As bankers try to find innovative solutions to try to attract capital to fund Islamic style contracts, the certainty to know whether an interested party will interpret a contract to be Islamic will grow larger. Majid al Refai of the International Investor addressed a conference in Abu Dhabi: "The nightmare scenario is that you get to the day of closing and someone says there's a *haram* (forbidden) issue and you can't go ahead."⁹ Another institutional barrier is the lack common accounting practices which also increases transaction costs and uncertainty.¹⁰

Innovations to Islamic Project Financing

The restrictions of collecting interest, using insurance and financial derivatives, and entering uncertain contracts coupled with the institutional barriers of aversion for long term contracts, lack of western knowledge of Islamic financing techniques and lack of uniform agreement on *hamal* contracts has left a huge opportunity to those who can find innovative solutions in Islamic project financing. Al Tawari of The International Investor puts it this way:

The way to understand Islamic finance is to replace the word Islamic with the word structured. Like all structured finance deals, you have constraints that must be overcome with creativity and innovation. Here, the constraints are based on the principles of *Shari'ah*. The question is how to structure a deal given these constraints.¹¹

There are deal makers looking to take advantages of these opportunities by finding innovative solutions to raise capital for infrastructure development. The seminal transaction came in 1996 with \$200 million Islamically structured financing tranche for the Equate petrochemicals facility in Kuwait which will be covered later in this paper.¹² This section explores some of the latest innovation in Islamic project financing including the uses of *istisna* (commission to manufacture contract), *murabaha* (cost plus sale), *ijara* (financial lease), *sukuk* (Islamic bond), and western co-financing or blending. In addition, there are two material changes that affect Islamic project financing which include the allowance of use of the *adl* (trustee) and the establishment of a uniform Islamic finance body and accounting practices.

In an *istisna* contract one party agrees to buy goods made by a second party with payments occurring at some future date or dates. In most Islamic project finance case, the bank becomes the end user.¹³ *Istisna* is heavily used during the construction phase of a project. Most construction *istisna* involves a “back to back” structure which usually involves a sales contract and a hire to produce or manufacture contract. Under the sales contract, a customer agrees to purchase an asset from the bank upon completion. Under the hire to produce contract, the Islamic

banks agrees to pay the manufacturer to build the asset in question (see exhibit 2). The advantage of the *istisna* contract is that it is a fixed rate contract with profit margins set at signing. The critical disadvantage is that it is usually used only for the construction phase a project and as such exposed to refinancing risks.¹⁴

Murabaha contracts involve the bank making a physical purchase of a completed asset and re-sell it for a higher price. The bank may collect payments during maturity of the contract or on an installment basis. The profits that may be collected by the bank are said to cover the risk that the bank takes by holding on to the asset.¹⁵

In an *ijara* contract, the Islamic bank purchases an asset and then leases it for a rate that is reviewed and can be adjusted. The profit from the lease compensates the bank for owning the assets and taking on operating risk. Options for the lessor to purchase the asset at the end of the lease are illegal because it introduces uncertainty into the transaction.¹⁶

Another product innovation that has been catching momentum recently is blending Islamic finance tranche with a conventional finance tranche. This blending is also called co-financing. Projects in Islamic countries benefit from co-financing because it is a way to deepen the capital pool that would otherwise be limited with Islamic only financing. Conventional debt can benefit from the conditions set for Islamic finance such as when the government gives concessions in commodity offered (for example a discount in oil or gas in one of the oil producing states) or making the deal look attractive to customers of the Muslim faith¹⁷

There are issues that emerge with blending Islamic and conventional financing structures. First, the parties involved have to specify the governing body in the case where the creditors are in dispute with each other or in the case that the project goes into default. If the dispute goes to a Western court, would it respect the traditions of Islam? The second issue involves payment delays. Conventional financing allows the charge of penalty while Islamic finance requires the penalized party to contribute to a charity fund in cases of late payment. The third issue surrounding co-financing involves litigation.¹⁸ If the project were to be liquidated, how would the

courts determine who gets what since the Islamic investor have to actually own the asset. For example, the Islamic investor would have rights to the turbines in order to finance a power plant. This would leave very little value remaining for the conventional investor since power plants are worthless with out ownership of the turbines.

Other developments in the Islamic financing world include the usage of the *adl* (trusted person), formation of an Islamic insurance function and a developing trend to create a uniform Islamic finance body.

Under *Shari'ah* there is no concept of the trustee. The use of a trustee is a crucial component of project financing. Islamic law does allow for the concept of the *adl* or a trusted and honorable person selected by both the borrower and the lender. Unlike the trustee, the *adl* has fiduciary duty to both the lender and the borrower. This means the lender who is use to exercising large control of projects may find itself ceasing more power then under the traditional trustee relationship.¹⁹

Insurance in its western form is prohibited from being used for Islamic project financing because of the prohibition of *gharar*. Many of the risks involved with project financing involve using insurance to mitigate certain risks such as political, operational, and economic risks to name a few. *Cooperative insurance* is a new concept that can perform the function that conventional insurance performs. In cooperative insurance arrangements, a group of subscribers contribute to a pool of funds. Whenever one of the members makes a legitimate claim, they draw money out of the pool thus creating insurance for the member.²⁰ Other forms of risk management can take place by creating other types of reserve accounts or by diversifying assets

As mentioned previously, there is a problem in that there are no universal Islamic finance decision making body or accounting standards. It can be very possible that what is determined to be Islamic in one country can be determine un-Islamic in another. This raises transaction costs and uncertainty in structured deals. There is a movement, albeit small, for Islamic states to model their interpretations of *shari'ah* law after each other. There is a similar absence of uniform

accounting practices. The most significant achievement to conforming accounting standards for Islamic transactions is the formation of the Account and Auditing Organization for Islamic Financial Institutions (AAOIFI). Along with promoting standards unique to Islamic financing, the AAOIFI focuses on compliance and reporting on social activities and Islamic law.

Brief Survey of Modern Islamic Infrastructure Projects

The following are recent examples of infrastructure projects that incorporate some sort of Islamic project finance innovation.

Equate Petrochemicals Company²¹

PIC (a Kuwaiti state owned petrochemicals company) teamed with Union Carbide to finance, build and construct, and operate a \$2 billion petrochemical plant. The construction phase was finance using the *istisna* contract structure. The post construction phase was structured using *ijara* structure. The final deals that was closed included a \$400 million regional bank tranche and a \$600 million international bank tranche. Each tranced also had a \$100 million Islamic *ijara* facility for a total package of \$1.2 billion. See exhibit 3 for a layout of the deal structure.

The deal was closed as a demonstration that conventional and Islamic financing could indeed be blended while satisfying the needs of the parties involved. It is interesting to note that Equate project accepted Islamic funding only because there was a shortfall of conventional funds.²²

Jimah Energy Ventures²³

Jimah Energy Ventures (JEV), a company owned by the royal family of the Malaysian state of Negeri Sembilan was closed recently. The capital was raised to fund a construction for a 1400 MW Greenfield IPP in Malaysia. Most of the \$1.6 billion capital was raised by an Islamic bond issue (other wise known as a *sukuk*). However the deal also included a significant amount of conventional finance through a bank guarantee facility and a standby letter of credit.

Thuraya Satellite²⁴

The \$1.1 billion satellite project combined aspects of equity, structured loan and Islamic financing. The Islamic tranche was secured against the satellite's ground station which more than covered the \$100 million at risk. This deal is special because it signifies the largest Islamic tranche ever assembled for a project finance blend to date.

Dolphin Gas Project

The most recent Islamic project finance deal to close is the Dolphin Gas Project. The project involves gas extraction and processing in Qatar and the construction of a pipeline to the UAE which secures a \$1 billion *Ijara* and *Istisna* bridge financing for four years. The deal is blended with a \$2.45 billion conventional tranche.²⁵ Using both Islamic and conventional tranches, \$3.5 billion was raised – the largest amount to be raised for an oil and gas project in the Middle East Gulf.²⁶

Conclusion

This past summer, I encountered two instances of development projects that required financing that adhere to the requirements of the *shari'ah*, one projects being in Bangladesh and the other in Iran. It was my lack of knowledge of Islamic financing that prompted my interest to write a paper on Islamic financing for infrastructure projects.

There is and will continue to be a great need to find capital for infrastructure projects that are located in Islamic countries. The restriction of certain aspects prevalent in western style finance should not be a barrier to finding creative solutions to sustainably fund projects. Some recent innovative solutions include blending of Islamic finance and conventional finance, new structures such as the *ijara*, *istisna*, or *murabaha*, or finding

other ways to mitigate risks that insurance normally covers. At the same time, deal structurers should take caution and respect the notion that the Islamic financing pools are still rather small and illiquid and that there are certain institutional problems that will raise the cost of financing these projects.

Exhibit 1

List of OIC Member Countries

Afghanistan, Islamic State of	Indonesia, Republic of	Qatar, The State of
Albania, Republic of	Iran, Islamic Republic of	Saudi Arabia, Kingdom of
Algeria, People's Democratic Republic of	Iraq, Republic of	Senegal, Republic of
Azerbaijan, Republic of	Jamahiriya, Socialist People's Libyan Arab	Sierra Leone, Republic of
Bahrain, Kingdom of	Jordan, Hashemite Kingdom of	Somalia, Democratic Republic of
Bangladesh, People's Republic of	Kazakhstan, Republic of	Sudan, Republic of the
Benin, Republic of	Kuwait, The State of	Suriname, Republic of the
Brunei Dar-us-Salam, Sultanate of	Kyrgyzstan, Republic of	Syrian Arab Republic
Burkina Faso	Lebanon, Republic of	Tajikistan, Republic of
Cameroon, Republic of	Malaysia	Togo, Republic of
Chad, Republic of	Maldives, Republic of	Tunisia, Republic of
Comoros, Union of the	Mali, Republic of	Turkey, Republic of
Côte d'Ivoire, Republic of	Mauritania, Islamic Republic of	Turkmenistan, Republic of
Djibouti, Republic of	Morocco, Kingdom of	Uganda, Republic of
Egypt, Arab Republic of	Mozambique, Republic of	United Arab Emirates, The State of
Gabon, Republic of	Niger, Republic of	Uzbekistan, Republic of
Gambia, Republic of	Nigeria, Federal Republic of	Yemen, Republic of
Guinea, Republic of	Oman, The Sultanate of	
Guinea-Bissau, Republic of	Pakistan, Islamic Republic of	
Guyana, Cooperative Republic of	Palestine, The State of	

Source: Organization of Islamic Countries, "Assession Dates of OIC Member Countries", OIC Website, <http://www.sesrtcic.org/oic/oicaccda.shtml>, accessed December 2005.

Exhibit 2

Diagram of an Istisna Contract Structure

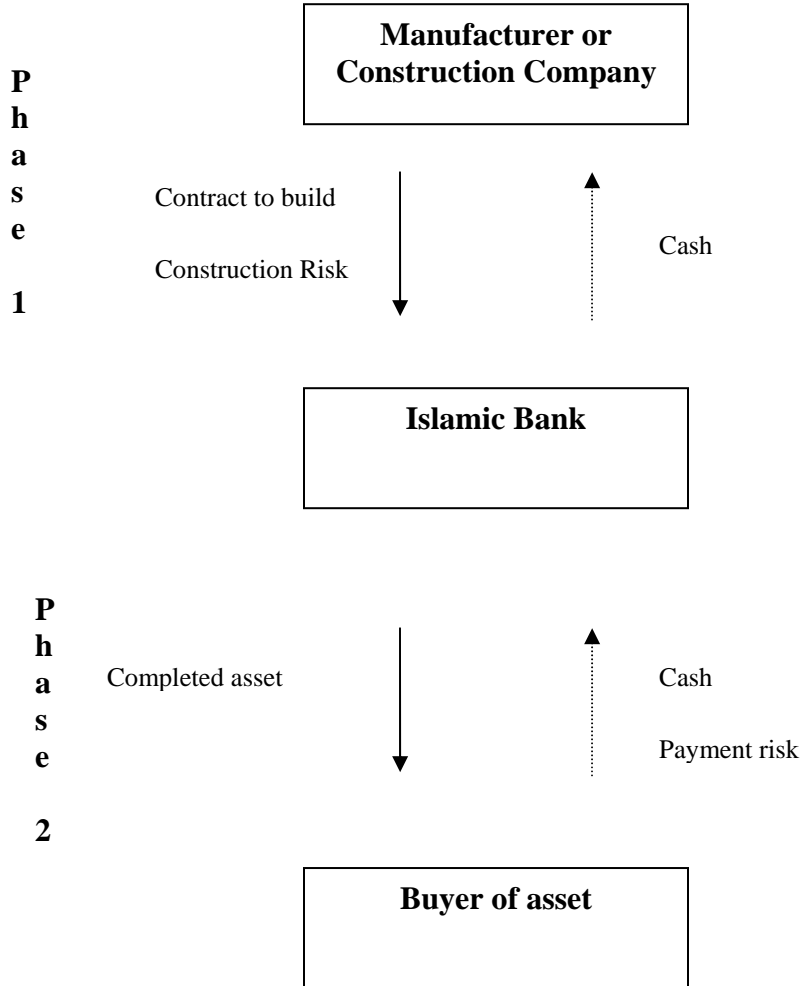
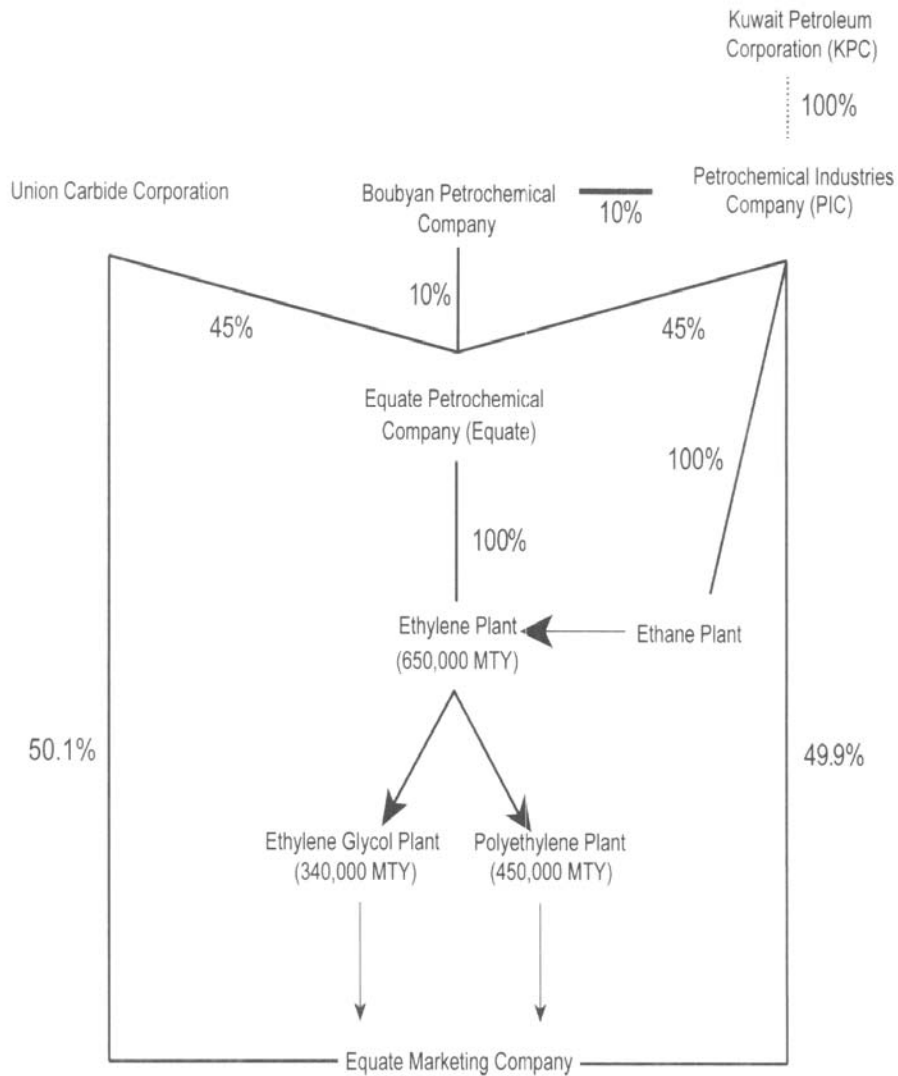


Exhibit 3
Overview of the Equate Project



Source: Based on published sources and company reports.

Notes: Dashed lines signify ownership; bold solid lines indicate product flow.

MTY is metric tons per year. A metric ton equals 1,000 kilograms (kg), or approximately 2,200 pounds (lb.).

Source: Esty, Benjamin, “The Equate Project: An Introduction to Islamic Project Finance”, Journal of Project Finance, New York: 2000, Vol.5 Issue 4.

Endnotes

- ¹ Kahn, Nadim and Inglis, John, “Developments in Islamic Project Finance”, Norton Rose.
- ² Millet, Mathew and Quareshi, Fuaad, “Introduction to Islamic Finance” HBS No. 9-200-002. Boston: Harvard Business School Publishing, 2000.
- ³ Millet, Mathew and Quareshi, Fuaad, “Introduction to Islamic Finance” HBS No. 9-200-002. Boston: Harvard Business School Publishing, 2000.
- ⁴ El-Gamal, Mahmoud Amin, “A Basic Guide to Contemporary Islamic Banking and Finance”, Rice University, June 2000.
- ⁵ Esty, Benjamin, “The International Investor: Islamic Finance and the Equate Project”, HBS No. 9-200-012, Boston: Harvard Business School Publishing, 2003.
- ⁶ “Islamic Opportunities”, Project and Trade Finance, London, May 1997, Issue 169.
- ⁷ “Changing Natures”, Middle East Economic Digest, April 2000.
- ⁸ Kahn, Nadim and Inglis, John, “Developments in Islamic Project Finance”, Norton Rose.
- ⁹ Fitzgerald, Tara, “Interview- Islamic project finance sees rising interest.”, Reuters News, January 2000.
- ¹⁰ Lonergan, Eric, “Islam’s Financial Trap”, Project & Trade Finance, London: July 1996, Issue 159.
- ¹¹ Esty, Benjamin, “The International Investor: Islamic Finance and the Equate Project”, HBS No. 9-200-012, Boston: Harvard Business School Publishing, 2003.
- ¹² “A Bold New Backer Behind the Big Deals”, The Times, Islamic Banking 6, October 2003.
- ¹³ Millet, Mathew and Quareshi, Fuaad, “Introduction to Islamic Finance” HBS No. 9-200-002. Boston: Harvard Business School Publishing, 2000.
- ¹⁴ Esty, Benjamin, “The Equate Project: An Introduction to Islamic Project Finance”, Journal of Project Finance, New York: 2000, Vol.5 Issue 4.
- ¹⁵ Esty, Benjamin, “The Equate Project: An Introduction to Islamic Project Finance”, Journal of Project Finance, New York: 2000, Vol.5 Issue 4.
- ¹⁶ Millet, Mathew and Quareshi, Fuaad, “Introduction to Islamic Finance” HBS No. 9-200-002. Boston: Harvard Business School Publishing, 2000.
- ¹⁷ “Islamic Blending”, Project Finance, London: September 2005.
- ¹⁸ Esty, Benjamin, “The Equate Project: An Introduction to Islamic Project Finance”, Journal of Project Finance, New York: 2000, Vol.5 Issue 4.
- ¹⁹ Stoakes, Christopher, “Unlocking Islamic Project Finance”, Euromoney, London: August 1998, Issue 352.

²⁰ El-Gamal, Mahmoud Amin, “A Basic Guide to Contemporary Islamic Banking and Finance”, Rice University, June 2000.

²¹ Esty, Benjamin, “The Equate Project: An Introduction to Islamic Project Finance”, Journal of Project Finance, New York: 2000, Vol.5 Issue 4.

²² “Islamic Opportunities”, Project & Trade Financing, London: May 1997, Issue 169.

²³ “Jimah Energy: Upfront Equity”, Project Finance, London: June 2005.

²⁴ Nelthorpe, Tom, “The Making of Thuraya”, Project Finance, London: November 1999, Issue 199.

²⁵ “Islamic Blending”, Project Finance, London: September 2005.

²⁶ “Dolphin Finalizes Finance”, International Petroleum Finance, New York: August 8, 2005.