Derivatives in Islamic Finance: *There is No Right Way to Do the Wrong Thing—Opportunities for Investors*

ANDREAS A. JOBST

ANDREAS A. JOBST
is a chief economist at the Bermuda Monetary Authority (BMA) in Hamilton, Bermuda.
ajobst@bma.bm

Despite their demonstrable importance for financial sector development, derivatives are few and far between in countries where commercial transactions are subject to Islamic law. Islamic finance is governed by the *shari'ah*, which bans interest, short selling, and speculation, and stipulates that income must be derived as profits from shared business risk rather than guaranteed return. From the standpoint of Islamic jurisprudence *(fiqh al-muamalat)*, financial contracts must satisfy a number of requirements that seem absent in the use and trading of conventional derivatives. Since risk-shifting fundamentally violates basic principles of *shari'ah* law, derivatives are not readily accepted in Islamic finance as permissible financial instruments due to their often speculative and unfunded nature.[1]

As Islamic finance continues to develop rapidly, the rising opportunity cost of limited *shari'ah*-compliant risk transfer mechanisms has raised questions about the scope of religious restrictions on the use of derivatives. So far, Islamic investors have either resorted to existing conventional derivatives or developed specific *shari'ah*-compliant technologies (if permissible) to manage risks. However, the use of derivatives remains controversial.

Legal scholars allege that derivatives contain excessive uncertainty *(gharar)*,[2] encourage speculative behavior akin to gambling *(maisir)*, and/or enrich claimants unjustly from exchanges between counterparties where money alone (rather than the creation of real assets) is the primary subject of the transaction—three concepts that contravene fundamental principles of Islamic law.[3] Thus, prevailing legal hindrances have arrested the development of risk management in Islamic finance, but means of derivatives.

Notwithstanding existing reservations and religious constraints, investors stress the important benefits of viable hedging instruments, helping to bring discussions on the utility from derivatives in Islamic finance to a head. Many *shari'ah* scholars now accept the application of hedging of actual exposures as an essential element of sound risk management and acknowledge the opportunity cost imposed by a lack of Islamic hedging tools. Risk diversification through derivatives contributes to the continuous discovery of the fair market price of risk. Derivatives also enhance liquidity management, supplement cash markets at lower funding cost, and ensure an efficient transmission of funds from lenders to borrowers. The limited availability of suitable *shari'ah*-compliant risk transfer mechanisms deprives financial institutions and investors alike of these advantages.

Legal hindrances to the development of a wide range of hedging products for managing risks have put many investors and institutions involved in Islamic finance at a disadvantage. In particular, the lack of standardized docu-

mentation based on universally acceptable terms often delays the execution of transactions in Islamic finance. As the use of derivatives is gradually gaining ground, various standard-setting bodies have intensified their collaboration to enunciate immutable Islamic finance principles for the benefit of consistent application of religious norms. Also, several private-sector initiatives are underway to advance the application of Islamic derivatives and enhance their standardization.

Against this background, and based on the current use of accepted risk-transfer mechanisms in Islamic finance, this article explores the validity of derivatives in accordance with fundamental legal principles of the *shari'ah* and summarizes the key issues in the scholastic debate surrounding derivatives in this area (Section 2). The article argues that there are already a number of Islamic financial instruments with derivative-like features that can help investors design *shari'ah*-compatible derivatives. Based on a review of accepted contracts and existing industry solutions (or *explicit* Islamic derivatives), the article offers axioms for the permissibility of certain types of derivatives (Section 3). Section 4 summarizes the main legal challenges going forward and explains the first standardization efforts in this nascent market. Finally, Section 5 concludes by discussing the prospects for *shari'ah*-compliant derivatives.

WHY ARE CONVENTIONAL DERIVATIVES CONTROVERSIAL IN ISLAMIC FINANCE?

General Tenets of Shari'ah in Islamic Finance

Islamic finance encompasses all transactions by two (or more) contractual parties whose actions are subject to religions norms defined by *shari'ah* law in keeping with the *qu'ran* and the *sunnah* as religious sources.[4,5] More specifically, it stipulates ethical standards that govern the manner in which these contracting parties can generate profits that serve the public good in a general sense *(maslaha)*.

Shari'ah law requires contractual certainty regarding the generation and distribution of profits arising from mutual contributions of transacting agents. Any financial transaction binds contractual parties to mutual obligations arising from clearly identifiable rights and obligations, for which investors are entitled to receive commensurate return in the form of unsecured, state-contingent payments based on direct participation in asset performance. While the reliance on a real or non-monetary asset, or "asset-backing," might imply risk-sharing between contractual parties as an end result, *shari'ah* law discourages risk-taking per se regardless of economic significance. Instead, Islamic finance aims at the creation of heterogeneous goods and/or services by two or more participating parties ("co-generation"), while prohibiting activities that involve profits from exchanges of the same goods and/or services.

The process-driven view on the permissibility of profits lies at the heart of *shari'ah*-compliant contracts. Such contracts substitute the permanent transfer of funds at a specified interest rate (underpinning the "self-generating" profit proposition in conventional finance) with the profitable transfer of assets, which restricts financial transactions to only interest-free forms of exchanges (Subhani [2011]). While interest payments in conventional finance represent the contractible cost for funds tied to the amount of principal over a pre-specified lending period, *shari'ah*-compliant finance prohibits interest *(riba)*.[6] In this regard, interest income is not seen as the *effect* of business transactions, but as the result of an undesirable *process* by which such an effect is achieved. Thus, the prohibition of interest applies to any capital gain derived from the quantitative inequality of two goods or services whose values are determined by purchase and sales contracts (Jobst [2007a]; Jobst et al. [2008]).[7]

In addition to prohibiting interest-based forms of income, *shari'ah* also prohibits betting and gambling *(maisir)* as unethical (or socially detrimental and sinful) activity *(haram)* in contracts with a remote probability of positive payoffs to the investor ("game of chance") and preventable contractual uncertainty *(gharar)*.[8] Both concepts stand in opposition to the contingency risk of actual performance of financial derivative instruments and agreements aimed at speculative trade (rather than genuine hedging[9] and/or equitable risk-sharing *(sahrik)*) that result in payments *without* an underlying asset transfer.

These overarching requirements for a sale to be considered valid *(sahih)* under Islamic contract law distill a number of more specific conditions, which pertain to *shari'ah*-compliant derivatives:

1. *Price certainty and balance between borrowers ("protection buyers") and lenders ("protection sellers") without manipulation of risk.* While the fair value of an asset, and the return from investment, are inherently uncer-

tain, the *shari'ah* prohibition of *maisir* stipulates that transactions are tantamount to gambling or speculation if they 1) generate returns from money as a store of value (rather than a medium of exchange to execute trade or shared investment) and 2) have the manipulation of risk as their primary or sole purpose. Uncertain returns or payment obligations that are incalculable ex ante and divorced from (required) asset performance and/or the rendering of a service can amount to speculation. However, contracts that are premised on the reduction of risk to facilitate trade (and quite possibly enhance productivity) could be considered acceptable under the religious maxims of *shari'ah* (see Exhibit 1).

2. *Identifiable characteristics and certainty about delivery results (in terms of quantity and quality).* In order to avoid *gharar* ("that with hidden consequences" or "that whose nature and consequences are unknown") and *jahl* (ignorance), sales must be immediate and absolute. This means that the object of a *bona fide* trade or exchange must exist (or come into existence based on demonstrated real capital input) and its characteristics must be clearly identifiable before the transfer of title takes place. Exchanges involving asymmetric information between contracting agents imply the risk of delusion or deception (Al-Suwailem [1999–2000]), especially if payment obligations and delivery results differ from rational expectations. Such contractual uncertainty could lead to exploitation (Vogel and Hayes, [1998]) if it generates unilateral (or zero-sum) gains from state- or time-contingent prices, resulting in divergent impacts on different agents.
3. *Asset ownership and prohibition of leverage (underfunding).* *Shari'ah* principles align financial claims with investments in real assets. This marginalizes the possibility of underfunding through leverage while fostering equity ownership (in lieu of financial leverage from debt creation without underlying asset values).[10,11] Thus, any reference asset is required to be in the (constructive) ownership and possession of the creditor (or, in the context of risk management, the protection seller) at the inception of a transaction in order to ensure the asset-backing of financial obligations (which also "collateralizes" the performance of contractual obligations) and the risk and reward sharing that follows from it.

With these considerations in mind, it is possible to examine the reasons that several scholars have assessed the suitability of derivative instruments in Islamic finance.

Current Discussion on Derivatives under Shari'ah Law

Since the object of a transaction may not exist at the time a contract is signed, Islamic scholars argue that derivatives can lead to excessive uncertainty, unnecessary risks *(gharar)*, or speculation that verges on gambling *(maisir)* due to state-contingent pricing and the absence of predetermined object characteristics, and points 1 and 2 above. Of particular concern is the fact that absence of an absolute reference value can result in zero-sum payoffs of both sides of the bargain (Kamali [2007]) and possible exploitation of the ignorant (Smolarski et al. [2006]). That being said, standardized contract specifications, advanced market conduct, and supervisory controls may render the latter argument invalid. That leaves only the question of how the ex ante protection against downside risk via premium payments can be reconciled with the potential for unlimited upside potential in contracts that may pay off at a pre-determined time in the future, such as options.

Another key argument presented against derivatives in Islamic finance pertains to the counterparty risk (and associated potential of avertable uncertainty) from the sale of a non-existent asset or an asset not in the possession of the seller *(qabd)* (i.e., taking possession of the item prior to resale, which negates the *hadith* "sell not what is not with you"). Derivatives supplement cash markets as alternatives to trading underlying assets by providing hedging and low-cost arbitrage opportunities. However, many derivatives contracts are used for speculation (and are deficient of actual hedging need), which belies equal risk-sharing *(sharik)* in actual ownership of the reference asset(s) by all contractual parties subject to religious restrictions governing lending and profit-taking (Jobst [2007b]; Ahmad [2000]).[12]

A majority of scholars continue to reject futures and options as unconcluded contracts, because unfunded or partially funded transactions do not imply legal ownership (and possession) of the reference asset, which would guarantee the delivery of the contractual asset with certainty at a future date (Usmani [1999]). Although Khan [1995] concedes that even in the contemporary form of futures trading "some of the underlying basic concepts as well as some of the conditions for such trading are

exactly the same as [the ones] laid down by the Prophet [Mohammed *(sallallâhu 'alayhi wasallam)*] for forward trading," he also cautions about the potential of unnecessary risks arising from speculation, exploitation (given that payment obligations are contingent on the intertemporal valuation), and the perceived lack of a physical asset ownership.[13,14]

Other criticism that has been raised by a number of Islamic scholars relates to the deferment of both actual asset delivery and final payment in conventional derivatives contracts, such as futures. Futures are generally priced *marked-to-market* (MTM),[15] which requires interim payments ("margin calls") by the party whose contingent claim has lost value ("out of the money").[16] Parties to the transaction tend to cash settle the price difference upon close-out or maturity. While such arrangements typically help mitigate the contingency risk of asset delivery and ensure definite performance by means of cash settlement (if physical delivery fails or one party defaults), they have been deemed non-compliant with Islamic law, given that the same object of exchange cannot be bought and sold between two parties at different prices and with time delay of payment, delivery, or both (*bay al' inah*).

Scholars find that the interim cash payments due to margin requirements and cash settlement (rather than physical delivery of underlying assets) do not meet the *shari'ah* principles of underlying asset transfer and certainly not those of final payment obligations.[17] Intertemporal (re-)pricing[18] turns the contract into a debt sale without the element of a genuine transfer of asset ownership. Similarly, offsetting a contractual obligation via cash settlement (contingent on a particular economic outcome) would portend to a pure cash exchange without asset ownership and/or the creation of real assets.[19]

However, futures-like instruments do exist in Islamic finance. For instance, the exchange of currencies or means of payment in a *sarf* contract requires the transaction to take place at spot before the contracting parties disperse (see Exhibit 2). Also, future delivery of commodities is permissible (as in *salam* and *istisna*), but payment must be immediate, which rules out MTM pricing (Jobst [2008b]).[20]

For similar reasons, several scholars also consider options to be in violation of Islamic law. Options redress the contingency risk of definite asset delivery (and the associated exposure to discretionary nonperformance) in forward and futures in return for the payment of an upfront, nonrefundable premium. Usmani [1999] observes that "according to the principle of the *shari'ah*, an option is a promise to sell or purchase a thing at a specific price within a specified period. Such a promise in itself is permissible and is normally binding on the promissor [like

EXHIBIT 1

The Five Axioms of Shari'ah-Compliant Financial Derivatives.[21]

In principle, financial derivatives may be compatible with *shari'ah* law if they:

1. Reflect genuine hedging demand associated with effective and intended ownership *(qabd)* in an identifiable asset or venture;[22]
2. Guarantee certainty of payment obligations and clearly defined object characteristics and/or delivery results, mitigating the risk of exploitation from ignorance *(jahl)*;
3. Disavow deferment of contractual obligations *(nasi'a)* from the actual and direct transfer of a physical asset as the object of an unconditional transaction, except for cases when the doctrine of extreme necessity applies, and/or established forward contracts on agricultural commodities *(salam)* or manufactured goods *(istisna)* with delayed delivery and payment respectively, whose premise of creating commercial value ("diversity of trade") overrides the prohibition of term contingencies until fulfillment of the contract;
4. Contain collateralized payment for the use of risk protection, but rule out provisions aimed at generating unilateral gains from interim price changes of the underlying asset beyond the original scope of risk-sharing *(sharik)* among counterparties parties;[23] and
5. Eschew all prohibited sinful activities *(haram)*, in particular those deemed similar to gambling *(maisir)* and speculation due to uncertainty *(gharar)*.

In addition, *shari'ah*-compliant derivatives must be employed in keeping with the precept of maintaining an equitable system of distributive justice as a public good *(maslahah)*.

a *wa'ad* contract]. However [,] this promise cannot be the subject matter of a sale or purchase. Therefore, the promissor cannot charge the promisee a fee for making such a promise."[24]

Nonetheless, it seems that the question of whether there is scope for options under Islamic law has not been answered conclusively so far (see Exhibit 1).[25] In many instances, *arbun* (down payment) and *wa'ad* (unilateral promise) have been used to design *shari'ah*-compliant instruments that resemble call options (El-Gamal [2006]; Uberoi et al. [2009]). Given that the intrinsic value of an option is determined by changes in the fair value of the reference asset with zero-sum payoffs, however, only the time value of an option (independent of the realization of unilateral gains) appears permissible. The inherent leverage in options and their detachment from the reference asset(s) remain controversial. Nonetheless, Bacha [1999] suggests that disqualifying options on the grounds of *gharar* and *maisir* presumes that they are primarily transacted for speculative gains and not genuine hedging–a claim that may not be accurate in most cases.

In summary, insufficient (or absent) asset-linkage and the potential of unilateral gains in many derivatives seem to supplant the concept of equitable risk sharing and contractual certainty that defines the perimeter of religiously acceptable risk management behavior under Islamic law.

Nonetheless, controversial features of derivatives that guard against failure to pay or deliver pursuant to contingent financial obligations, such as cash settlement, may have been more relevant in the past, when simple, unsupervised, and unorganized capital markets implied considerable counterparty and contingency risk. This could make the conditions of mutual gain, value creation, and asset ownership less binding on *shari'ah*-compliant risk management strategies if the underlying intent of Islamic principles is revisited under current market conditions. In today's more developed financial markets, where transactions are easier to document and enforce, a more flexible interpretation of some of these principles—without disregard for the main moral tenets of Islam—might be warranted (Jobst [2008a]).

EXISTING DERIVATIVES IN ISLAMIC FINANCE

Although some established forms of *shari'ah*-compliant lending may involve either future delivery of the contractual good or the delayed payment of an agreed sales price,[26] the general use of derivatives ("explicit derivatives") remains highly controversial and is still in

EXHIBIT 2
Classification Scheme of Derivatives in Islamic Finance

Type of Derivative[1]	Implicit Derivatives	Legacy Derivatives	Explicit Derivatives
Forward[2]	*Ijara thumma al-bay, murabaha*[3], diminishing *equity-musharaka*	*Salam, bay mu'ajal, bay bithaman ajil (BBA), istisna*	Various commodity hedges and "wrappers"
Option	–	*Wa'ad, arbun, al-shart, (kyiyar al-tarwih)*	Foreign exchange option contracts
Swap	–	*Tawarruq, al-muqasah*	*Wa'ad*-based swap, profit rate swap, cross-currency swap

[1]*Examples of Islamic contracts in each cross-classification are listed according to their main economic objective. Some contracts may have additional features that are missing in their conventional finance analog, e.g., arbun versus options.*

[2]*All existing shari'ah-compliant derivatives are bilaterally negotiated and are traded over the counter (OTC) without a formalized, exchange-based clearing and settlement. There are not Islamic futures contracts due to the prohibition of cash settlement without underlying asset transfer and profit-taking from an exchange of the same category of asset.*

[3]*As sale-leaseback transaction.*

a nascent phase. The use of contracts with contingencies is germane to particular assets that are subject to stringent religious interpretation that restricts the extent to which these derivative-like structures can serve as general hedging tools.

Some variations to the standard debt-based contract *(murabaha)* contain contingent provisions that do not fully meet all conditions of shari'ah-compliance. The most prominent examples of such "legacy derivatives" (see Exhibit 2) are contracts with different installment rates as well as delayed repayment and asset delivery schedules, such as *salam*[27] (deferred delivery sale), *bay bithaman ajil* (BBA)[28] (deferred payment sale), and *istisna* (purchase order). Forward asset purchases under *salam* (*BBA*) allow deferred delivery (payment) of agricultural commodities. Similarly, an *istisna* contract provides pre-delivery (project) finance for some *as yet non-existent* manufacturing goods (purchase order) that the borrower promises to deliver over the term of the lending agreement according to contractual specifications. Installment payments are also a possibility in this context. Other lesser known *shari'ah*-compliant alternatives to conventional derivatives are *arbun* and *al-shart* contracts.[29] In *arbun*, the buyer offers a forfeitable down payment as an option on the conclusion of a sales contract, while *al-shart* represents a contractual provision that allows both parties (or one of them) to confirm or cancel the contract within a prespecified time frame.

Amid weak reliance on capital market financing in many Islamic countries and the unresolved debate on risk management among *shari'ah* scholars, other types of derivatives ("explicit derivatives," see Exhibit 2) remain few and far between. Most approved derivatives are either adaptations of standard Islamic contracts or involve new hedging technologies ("wrappers") offered by banks to issuers of, rather than to investors in, Islamic securities. Only a few products have been developed by various banks for managing currency and interest-rate risk. While recent innovation in this area has focused mostly on highly customized option contracts as well as commodity hedges, cross-currency swaps and so-called "profit rate swaps" constitute the most widely accepted forms of newly established *shari'ah*-compliant derivatives.[30]

Given the prohibition of interest income and the exchange of the same assets for profit (which includes the cost-plus sale of debt), for Islamic investors to execute a swap, both parties instead agree to sell assets—usually commodities—to each other for deferred payment. In the case of cross-currency swaps, the contractual parties exchange commodities in the form of a cost-plus sale, and settle their mutual payment obligations in different currencies according to a pre-defined installment schedule (see Exhibit 3, Exhibit 3a). If the parties want to hedge term risk (i.e., the risk of the fair market values of the exchanged assets diverging over the life of the transaction)—either in addition to the cross-currency swap or as a separate transaction—they can enter into a profit-rate swap.

In this Islamic version of an interest-rate swap, the two sides exchange periodic fixed-rate for floating-rate payments (see Exhibit 3, Exhibit 3b). After selling a designated commodity to the protection seller, the protection buyer receives periodic fixed-rate payments in return for floating-rate installments. Both types of swaps are crucial hedging mechanisms for Islamic issuers with business interests in several countries. For instance, if a corporation in the GCC wants to raise funds in Malaysia without incurring the local currency (and interest-rate) risk, it would naturally choose to complete a *shari'ah*-compliant currency (and profit-rate) swap transaction with a Malaysian counterpart.

Attempts to design other *shari'ah*-compliant derivatives, such as total return swaps, have been mired in controversy. One particularly contested structure is based on a dual *wa'ad* contract, which swaps returns of a *shari'ah*-compliant asset portfolio with those of a designated index or reference investment portfolio that can contain conventional assets. This Islamic total-return swap allows investors to access returns from assets that are prohibited under *shari'ah* principles. DeLorenzo (2007) has argued that, in practice, this swap structure does not conform to *shari'ah* norms, because the returns from the alternative portfolio are not derived from religiously acceptable activities.

LEGAL CHALLENGES AND STANDARDIZATION EFFORTS

Governance issues, especially related to the consistent assessment of *shari'ah* compliance and the generation of commonly binding principles and rules, still constitute a major challenge for Islamic finance (Jobst and Solé [2009]). Although *shari'ah* rulings *(fatwas)* (and their underlying reasoning) are disclosed, they are not consolidated. This inhibits the dissemination, adoption, and cross-fertilization of individual interpretations of

EXHIBIT 3

Islamic Swap Transactions—Cross-Currency and Profit Rate Swaps

Shari'ah-compliant swap transactions are traded bilaterally (i.e., non-standardized) and combine opposite, maturity-matched *murabaha* contracts with instantaneous (or periodic) transfer of similar assets, in order to create mutual (and fully collateralized) payment obligations (inclusive of the premium payment for the use of the asset) until the maturity date.[31] The two most prevalent contracts are cross-currency and profit-rate swaps; the latter is a shari'ah-compliant version of interest-rate swaps.

The basic structure of cross-currency swaps (CCS) combines two commodity *murabaha* sale contracts that generate offsetting cash flows in opposite currencies, with maturities desired by the contracting parties (Tredgett et al. [2008]). In July 2006, Standard Chartered arranged the first-ever derivative structure of this kind for Bank Muamalat Malaysia.

The profit-rate swap (PRS), pioneered by Commerce International Merchant Bank (CIMB) of Malaysia in 2005, allows financial institutions to manage their exposures to fixed and floating rates of return. As in the CCS, profit-rate swaps are based on the combination of two commodity murabaha contracts.

Exhibit 3a. *Murabaha*-Based Cross-Currency Swap

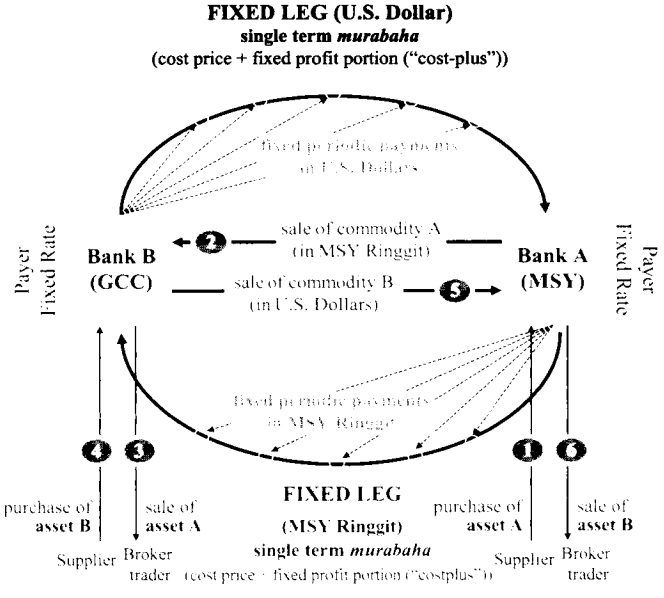
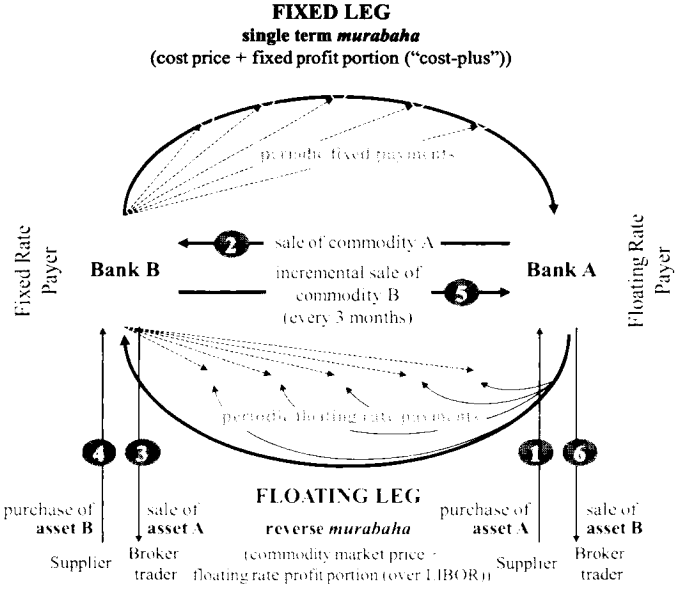


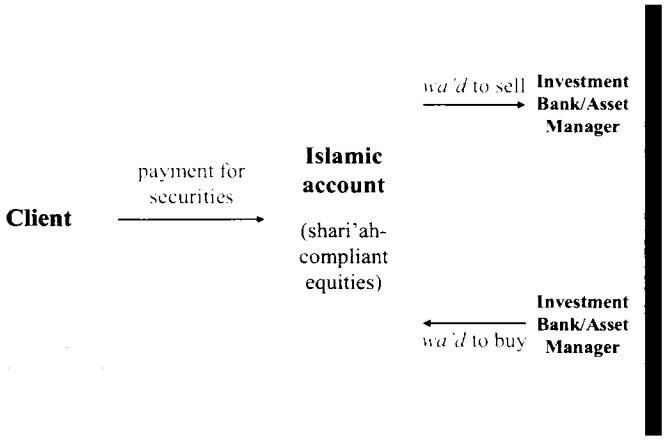
Exhibit 3b. *Murabaha*-Based Profit Rate Swap



Notes: Exhibit 3a illustrates the functioning of a CCS. Consider the case of a Malaysia-based Islamic bank that raises revenue in Malaysian Ringgit but faces payments in U.S. dollars over a certain period of time. To eliminate this foreseeable currency mismatch, the bank could substitute its future outflows in U.S. dollars for outflows in Malaysian Ringgit by entering into a CCS with a U.S. dollar-paying counterparty. Under this contract, the Malaysia-based Islamic bank purchases an amount of commodity A denominated in Malaysian Ringgit and sells it to a GCC-based Islamic bank on a murabaha basis (i.e., against future installments). Simultaneously, the GCC-based bank also completes a murabaha agreement for commodity B, but denominated in U.S. dollars. By combining the two murabaha contracts, each denominated in a different currency, both parties receive cash flows in the desired currency when they sell their respective commodities denominated in their local currency. The fair value of each commodity (A and B) should wash out at the prevailing exchange rate.

Notes: Exhibit 3b illustrates the functioning of a PRS. Consider the example of the risk protection buyer, Islamic bank A ("floating rate payer"), which intends to convert a certain amount of payments from floating to fixed rate. It would acquire and sell via a murabaha contract commodity A in exchange for a stream of pre-determined, periodic payments from the protection seller, Islamic bank B ("fixed rate payer"), over a specified period of time. Islamic bank B, in turn, periodically completes a murabaha sale of a commodity in exchange for future installments at the fair value (market) price plus a floating rate profit portion ("cost-plus") that varies according to changes in some pre-agreed benchmark (e.g., an inter-bank funding rate like the London Interbank Offering Rate (LIBOR)).[32] The floating rate payer purchases commodity B in periodic increments–unlike the fixed rate payer, who receives commodity A in full at inception. The CCS includes full payment and physical settlement each period, with both parties selling their commodities in order to recoup their initial disbursement (and, thus, replicate what would otherwise amount to closing out a transaction in conventional derivatives trading).

EXHIBIT 4
Islamic Total Return Swap *(Wa'ad)* Arrangement



the *shari'ah*, and the establishment of coherent jurisprudence across different countries and religious schools of thought *(madh'hab)* under *Sunni* and *Shia* Islam. Thus, the absence of unified principles (and no precedent) on which *shari'ah* scholars decide regarding the religious compliance of products and activities has spawned a plurality of interpretations of *shari'ah* principles. The fragmented opinions of *shari'ah* boards remain a source of continued divergence of legal opinion.

Concerns about the impact of heterogeneous prudential norms and diverse interpretations of *shari'ah* compliance are amplified by the impact of legal contingencies on business conduct.

The absence of definite guidance on *shari'ah* compliance and universal enforcement based on common standards also affects the legal integrity of transactions in the case of dispute resolution. While the conclusion of financial transactions under different legal regimes can lead to the same outcome (i.e., substance), the legal process (i.e., form), and possibly the associated rights and obligations of the contractual parties, may vary considerably depending on whether Islamic law governs the transaction by substance or form. If the transaction were governed solely by *shari'ah* law as a matter of form, the opinion of *shari'ah* courts could override commercial legal concepts, which might re-qualify the legal nature of a transaction. This is particularly relevant in the context of dispute resolution through courts or arbitration, where the potential of *shari'ah* law challenging the supremacy of a commercial law as a matter of form could undermine conventional market conduct and contract enforceability.

Given the general controversy about risk management instruments in Islamic finance, there is considerable heterogeneity of scholastic opinion about the *shari'ah* compliance of derivatives. This heterogeneity testifies to the difficulties of reconciling financial innovation with a principled interpretation of different sources of religious doctrine–via analogous deduction *(qiyas)*, independent analytical reasoning *(ijtihad)*, and scholarly consensus *(ijma)*. General benchmarks for Islamic derivatives are yet to emerge, largely due to divergent market practices, the lack of a consolidated and unified *shari'ah* approval process, and the legal risk associated with the nonbinding character of precedent in Islamic jurisprudence affecting universal enforceability of contracts.

Efforts to develop legal standards and uniform market practices for *shari'ah*-compliant derivatives have started only recently. Regulatory consolidation and supervisory harmonization through standard setting is still at an early stage. Leading organizations in Islamic finance, such as the Accounting and Auditing Organization of Islamic Finance Institutions (AAOIFI), the Islamic Financial Services Board (IFSB), the General Council for Islamic Banking and Finance Institutions (GCIBFI), the Islamic International Rating Agency (IIRA), and, most of all, the Fiqh Academy in Jeddah, have been working on new regulatory norms.[33] However, these efforts have not addressed various risk management techniques that involve derivatives.[34]

In the meantime, some industry initiatives are already showing promising results. In October 2006, the International Swap and Derivatives Association (ISDA) and the International Islamic Financial Market (IIFM), in cooperation with the International Capital Markets Association (ICMA), signed a memorandum of understanding to develop a master agreement protocol for Islamic derivatives. This eventually led to the publication of the multi-product ISDA/IIFM Tahawwut (Hedging) Master Agreement (TMA) on swap transactions (with standardized documentation) in March 2010 (see Exhibit 5). However, as a financial industry framework document, the TMA does not establish universally binding market rules.[35] Although its adoption remains subject to the legal and governance processes

EXHIBIT 5

Key Elements of the ISDA/IIFM *Tahawwut* (Hedging) Master Agreement (TMA)

The launch of the Tahawwut Hedging Master Agreement (TMA) in March 2010 by the International Islamic Financial Market (IIFM) in cooperation with the International Swaps and Derivatives Association (ISDA) has been welcomed as an important step toward the standardization of bilateral hedging arrangements in Islamic finance.[1] The TMA is designed to be used between two principal counterparties that make representations as to the fact that they enter into *shari'ah*-compliant transactions only. The TMA spans all five major schools of *shari'ah* jurisprudence, making pan-*madhab* a first in the Islamic derivatives market.

The TMA is a completely new framework document, but its structure is similar to the conventional 2002 ISDA Master Agreement (MA), a hedging framework agreement governing the contractual relationship between the parties, with transactions documented by way of confirmations. In particular, it incorporates the three pillars of the ISDA technology: the flawed asset concept, the single agreement concept, and the close-out mechanism and netting. However, the key mechanisms and provisioning–such as early termination events, close-out and netting–are developed based on *shari'ah* principles. Thus, the TMA differs in six key areas from the conventional MA: 1) the architecture of the agreement; 2) the close-out mechanism, which includes the net present value of future receipts/payments; 3) the events of default; 4) the forum of dispute resolution; 5) additional representation as to *shari'ah* compliance; and 6) the treatment of contractual payments (which exclude payable interest in the TMA). The current version of the agreement is multi-product, covering *murabaha*, *wa'ad*, *salam*, and *arbun*-based swap agreements, with a clear intention to expand its scope and amend its structure (if necessary) to include other transaction and contract types under *shari'ah* law.[2]

The most salient deviation of the TAM from the conventional ISDA MA is the treatment of early termination. Since the concept of net present value is not recognized in *shari'ah* law, the TAM permits parties to enter into transactions that may be documented immediately, as well as transactions due to occur in the future. This allows the parties to create cash flows similar to those created in conventional derivatives products. The TAM distinguishes between 1) "concluded transactions" (from inception to the end of the first payment period, e.g., the first year of the contract) and 2) "non-concluded transactions" or "designated future transactions" (covering the remaining maturity term), which converts into a "concluded transaction" year by year.[3] In a default scenario (or "credit event" in the conventional context),[4] the early termination of the TMA requires a close-out mechanism that contemplates separate confirmations for current transactions and arrangements relating to future ones. This results in a parallel (rather than consecutive) mark-to-market (MTM) valuation of the concluded and the designated future contracts.[5]

The TMA modifies existing market practices for the concluded transaction and introduces new concepts pertinent to establishing *shari'ah*-compliance of closing out the designated future transaction. While the close-out of the concluded transaction follows provisions for early termination according to the 2002 ISDA MA, for the close-out of the designated future transaction(s), *musawama* contracts are used to crystallize the close-out amount payable.[6]

The parallel close-out mechanism generates a net amount from offsetting both the concluded and the designated future contract as much as the conventional MA would. Each party issues an undertaking to enter into a contract in the future for the sale of assets at a pre-agreed price following the designation of an early termination date. A party triggers offsetting payments by selling a good or asset to the counterparty at a pre-agreed price (which is calculable using a specified formula to establish a price payable at which *shari'ah*-compliant assets will be bought and sold). More specifically, the party to whom a payment is due may exercise the *wa'ad* (promise) given in its favor and sell pre-agreed assets in exchange for the cost price of such assets and the difference in asset values plus the mark-to-market value of the designated future transaction(s), expressed as an index level.[7]

The close-out process also defines specific provisions for both concluded and future designated transactions, seeking to reach mark-to-market valuation. On the close-out of the concluded transaction, the full amount (and not the net present value) is payable, and receivables are accelerated and paid out (without discounting). For designated future transaction(s), the non-defaulting party is free to choose the *shari'ah*-compliant assets that are subject of the *musawama* contract on a close-out.[8,9] If one party is insolvent at the time of close-out, or, in breach of the *wa'ad* it has issued, a party fails to purchase the assets at the net cost of the *musawama*-based close-out, liquidated damages on the *musawama* price are determined and payable.

Cross-default provisions and the stipulation of secular governing law are important elements of the new master agreement. Islamic scholars have accepted the concept of cross-default provisions, which states that any default on another swap will be considered a default on the issue.[10]

Moreover, the choice of secular law as the forum of dispute resolution[11] (through courts or arbitration) acknowledges concerns about investor protection as regards the reclassification risk by *shari'ah* courts (Jobst [2007a]). The agreement follows New York or English law[12] as *matter of form*, which maintains commercial interest under conventional principles of bankruptcy and property law irrespective of *shari'ah* compliance as a *matter of substance*.[13] Conversely, the violation of *shari'ah* principles would not preclude legal enforceability of claims under TMA. Disclaimers throughout the TMA, however, assert that there is no guarantee of *shari'ah* compliance for any amendments or additions to the agreement or related underlying transaction documents. This also implies that non-compliance cannot give rise to legal challenges.[14]

EXHIBIT 5 (*Continued*)

Despite the groundbreaking character of the TMA, its applicability as a voluntary industry standard hinges on its permissibility under private law in various jurisdictions. In fact, past evidence suggests that many times the adoption of uniform standards is complicated by national practice that takes precedence over recommendations by less well-established international organizations. Parties wishing to transact under the TMA would still need to develop confirmations to document transactions. Moreover, for binding parties to enter into, and to give a value to, designated future transactions, separate documents (each a designated future transactions terms agreement) would be required.

There are also other areas of concern. Although the TMA clearly states that no interest shall be payable or receivable, and no settlement based on valuation or without tangible assets is allowed, it is not clear how the time value of money is assessed in cases when payments may be deferred. Moreover, the election of secular governing law removes *shari'ah* principles from legal enforcement under the terms of the TMA, because parties are required to ascertain *shari'ah* compliance outside the contract. This renders *shari'ah* compliance immaterial to potential dispute resolution (in absence of *shari'ah* board approval for transactions).

Finally, there also remains some ambiguity arising from several legal contingencies. First, the netting of future designated transactions is not covered (except in a footnote that contemplates that parties may provide for similar netting in those agreements). Second, the replacement of the term "transfer" in the conventional MA with "redesignation" of rights and obligations in the TMA introduces uncertainty about the ability of the affected party to change substantive rights in connection with changing the obligor office. And third, the removal of creditworthiness in determining price quotations could distort the economics of a transaction where there is early termination or otherwise.

ENDNOTES

[1]In fact, the TMA also represents the first standard documentation for *shari'ah*-compliant global cross-border transactions.

[2]Thus, the current master agreement is designated as "Version 1."

[3]The difference between a "concluded transaction" and a "non-concluded transaction" is analogous to the difference between an "agreement" and an "agreement to agree" under English law. For instance, in the case of a *murabaha*-based swap agreement, the transaction would be considered "concluded" if the commodity has been delivered yet no deferred purchase price has been paid, and "non-concluded" if neither the commodity nor the purchase price has been delivered.

[4]In this context, the definition of events of default or termination, such as failure to pay or deliver, breach of agreement, credit support default, and breach of contract (e.g., misconduct), also includes misrepresentation of *shari'ah* compliance.

[5]According to an early assessment of Islamic scholars, it is not permissible under *shari'ah* to consolidate the early termination amount and the net cost of the *musawama* contracts into a unified transaction.

[6]In a typical *musawama* contract, a bank purchases assets and holds them until they are sold at a mark-up to the client, subject to repayment in installments. As opposed to a *murabaha* contract, a bank using a *musawama* contract does not disclose to the client either the profit margin or the actual cost of acquiring the assets.

[7]The index level is calculated using a similar basis to that used in the conventional 1992 ISDA Master Agreement.

[8]However, the type of assets to be used in the derivatives transactions can be specifically agreed upon by both counterparties.

[9]Since the valuation and pricing of designated future transactions(s) are agreed at the outset, *musawama* arrangements cannot create an objectionable "transaction at an undervalue."

[10]The purpose is to protect a creditor or counterparty from actions favoring another creditor.

[11]The master agreement includes a governing law clause that refers exclusively to the relevant secular law, which does not cross-refer to, or seek to incorporate, *shari'ah* principles. This provision assumes that the satisfaction with *shari'ah* principles was a material precondition for entering into the relevant transaction, and, thus, does not impact on the construction of the contractual terms.

[12]In addition, parties have the ability to elect arbitration as a means to resolve disputes.

[13]The condition for *shari'ah* compliance is assumed to precede the agreement. The contractual parties are required to expressly record their intention to enter only into a *shari'ah*-compliant transaction and represent their satisfaction as to the *shari'ah* compliance by certifying their own due diligence (e.g., based on a copy of the relevant *fatwa* or documentation of their own internal consideration) or, at least, by confirming their independent assessment with regard to the *shari'ah* compliance (without reliance on assurances by the other party).

[14]However, the TMA also cautions that any amendment or addition should be contemplated only after the parties satisfy themselves as to the *shari'ah* compliance of such amendment or addition and of the TMA incorporating such amendment or addition.

determined by national practice as a matter of private law, its innovative character as a pan-*madhab* agreement that spans all five major schools of Islamic jurisprudence is a first for *shari'ah*-compliant derivatives. This initiative was preceded by the successful introduction of currency and profit rate swaps by Bank Islam and Bank Muamalat in Malaysia,[36] which had already executed a pro-forma derivative master agreement for the documentation of Islamic derivatives as early as 2006.

CONCLUSION

As Islamic finance comes into its own, and more investors consider *shari'ah*-compliant products, derivatives will become ever more essential to efficient risk management. However, derivatives in Islamic finance are still very much contested. The fundamental features of derivatives—including the uncertainty of payoffs, the absence of risk-sharing, and the potential of speculative use—are not accepted in the tradition of Islamic finance. The financial crisis has demonstrated that derivatives are complex and frequently opaque instruments that might be used by market players to take on excessive risk, avoid prudential safeguards, and manipulate accounting rules. While the problem of misuse is perceived to be more acute where risk management practices are not fully developed, the opinion of *shari'ah* scholars is an additional consideration that investors need to take into account.

In this article, I have argued that Islamic finance already includes a considerable number of contracts and instruments with derivative-like features that can help agents reduce risks, or that can form the basis for designing *shari'ah*-compatible derivatives. It is in fact the absence of clearly articulated operative principles for *shari'ah*-compliant derivatives transactions that has left the Islamic capital market incomplete. The standardization of the few customized hedging tools now in use into universally comprehensible and accepted terms would establish clarity about the rationale of their restrictive use, ensure consistent application, and, thus, attract a wider range of participants (including conventional participants seeking to expand their presence in Islamic finance) and help establish congruence of derivatives in both conventional and Islamic finance. The release of the ISDA/IIFM Tahawwut (Hedging) Master Agreement (TMA) represents a first step in the right direction. Still, it remains to be seen how widely this transaction standard will be used, as other risk-management techniques are being devised to better take *shari'ah* principles into account.

ENDNOTES

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[1]*Shari'ah* is not a codified body of law but a principles-based legal system that is subject to interpretation in the way it governs social, economic, and political relationships and institutions (Tredgett et al. [2008]).

[2]Kamali [1999] defines *gharar* as "risk, uncertainty, and hazard [in transactions]. In a [sales contract *(bay)*], *gharar* often refers to uncertainty and ignorance of one or both of the parties over the substance, characteristics, or attributes of the object of sale, or of doubts over its existence [or possession/ownership by the seller] at the time of contract." However, the term *gharar* defines a broad concept, whose interpretation varies by the type of contracts. In the most generic sense, it refers to contracts with a zero-sum proposition, i.e., where the parties enter into a transaction they would rationally reject if they had perfect knowledge about the future payoffs.

[3]It should be noted that, although there seems to be general agreement among scholars for rejecting conventional derivatives as such, the reasons vary substantially.

[4]The latter refers to the record of the sayings and deeds of the prophet Mohammed, which are clarified in the *hadith*, a collection of reports of statements and actions of the prophet (and the approval of something said or done in his presence) as an essential supplement to the *qu'ran*. *Sunni* and *Shia* Muslims rely on six and three major *hadith* collections, respectively.

[5]In practical terms, the principle of permissibility *(ibaha)* under established religious principles is generally taken to mean that all commercial transactions are *shari'ah*-compliant in the absence of a clear and specific prohibition by way of religious censure *(taqlid)* (Uberoi [2010]).

[6]*Riba* is generally understood as the realization or prospect of an economic advantage by way of excessive com-

pensation *(riba al-fadl)* or deferment of asset delivery and/or payment *(riba al-nasi'a)*. It applies to any transaction that involves profitable exchange of two or more species *(anwa)* that belong to the same genus *(jins)* and are governed by the same efficient cause *(illah)*. The prohibition of *riba* is upheld if deferred settlement is disallowed, even if the rate of exchange between two objects involves no gain to either party.

[7]The general consensus among Islamic scholars is that *riba* covers not only usury but also the charging of interest and any positive, predetermined rate of return that is guaranteed regardless of the performance of an investment or granted benefit (Iqbal and Tsubota, [2006]; Iqbal and Mirakhor, [2006]). While the elimination of interest is fundamental to Islamic finance, *shari'ah*-compliant investment behavior also aims to eliminate exploitation, pursuant to Islamic law.

[8]There is no standard definition of *gharar*, which may also result from ignorance, inadequate information, or lack of transparency.

[9]Hedging defines the process of reducing risk in return for the payment of a fair price for such risk transfer. It contrasts with speculation, which aims at risk-seeking without full protection against any loss event.

[10]Note, however, that financial and/or economic leverage can arise from one (or more) contracts with unilateral deferment of payment, delivery, or both. For instance, a long (short) position in a *bay bithaman ajil* (*istisna*) contract implies the right to buy (sell) an asset for a pre-agreed price at a specified maturity date for spot delivery (payment) but delayed payment (delivery), which generates leveraged returns compared to spot settlement. In the case of unilateral promises *(wa'ad)*, the contract terms are fixed, while both payment and delivery are delayed to some future date subject to the willingness of the promisee to exercise the option to buy or sell.

[11]Also covered short-selling (without prior endowment) can occur if short and long positions in *salam* and *murabaha* contracts, respectively, are combined to replicate profit from borrowing an asset that is assumed to decline in value in the future. In this case, the acquisition of an existing asset in a cost-plus sale from a third-party *(murabaha)* contract would need to be funded by a short position of a *salam* contract, which implies the obligation to sell the asset at a specified future date. The seller realizes a profit from a decline in value of the asset over a pre-determined maturity term if the spot price received for the forward sale of the deliverable asset via the *salam* contract exceeds the spot price paid for purchase of the asset via the *murabaha* contract (or the discounted fair value of the asset at maturity). While this transaction does not satisfy the strict definition of short selling, which involves the sale of an asset that is not owned by the seller, its economic result is the same. Alternatively, for uncovered short-selling, the *murabaha* contract could be replaced with a long position in a *bay bithaman ajil* contract to delay payment for the asset until the maturity date of the *salam* contract, which would leverage the transaction (with the short seller holding both the asset and the proceeds from sale until the final settlement of both contracts). Similarly, a short position in a leaseback-repurchase agreement *(ijara thumma al-bay)* implies profits (to the seller) from a decline in the value of the reference asset if the repurchase price is higher than the future value of the spot price at the time of repurchase (after controlling for interim lease payments). See also Mohamad and Tabatabaei [2008].

[12]See also ISRA [2011].

[13]Khan [1995] substantiates the permissibility of futures contracts on the grounds of the accepted forward trade *(salaf)* for a specific quantity, specific weight, and specific period of time—much like modern-day futures contracts. However, this line of argument ignores the fact that unless the price to be paid at a future date is pre-specified, the payment event is not considered to occur with certainty. See Bacha [1999] for a more detailed summary of some inconsistencies in arguments among scholars in this regard.

[14]In his discussion of different types of transactions in currency markets, Khan [1991] concludes that conventional contracts in forward, futures, and swaps markets do not accord with Islamic principles.

[15]MTM defines the process of constantly matching the valuation of an asset to the current market price, which involves monitoring the effect of variations to contingencies (e.g., market conditions, micro- and macroeconomic indicators, price volatility, quality considerations, political risk, and so on) on the forecasted spot price (i.e., expected future price) of an asset on a specified delivery date in order to price a derivatives contract. For instance, if the asset price falls below (increases above) the contracted strike price, a call option would be "out of the money" ("in the money").

[16]Thus, these derivatives almost never involve delivery by *both* parties to the contract and "... in most [...] transactions [,] delivery of the commodities or their possession is not intended" (Usmani [1996]).

[17]In a similar manner, the issue of close-out netting in derivatives contracts long delayed the draft guidelines of the ISDA-IIFM master agreement (Khasawneh [2008]). It appears, however, that the valuation of certain positions in derivatives contracts, rather than settlement concerns, was the root cause of much of the debate prior to the current proposal.

[18]A *shari'ah*-compliant solution to this problem could be the periodic adjustment of total (re-)payment commensurate with any deviation of the underlying asset value from a pre-agreed sales price at pre-agreed points in time.

[19]However, in contrast to the majority of scholars, the Sharia Advisory Council of the Securities Commission of Malaysia has certified the permissibility of futures trading of commodities as long as the underlying asset meets *shari'ah* requirements.

[20]However, it is worth noting that under the rules of *sarf*, the concept of *al-muqasah* allows the settlement of debts in different currencies between two parties.

[21]See Jobst [2007b].

[22]However, evidence in conventional finance demonstrates that the challenges involved in designing prudential measures aimed at setting incentives for using derivatives only for hedging purposes are formidable–and by extension in Islamic financial systems on the merits of prohibited excessive risk-taking *(gharar)*. Some countries have introduced documentation standards for genuine accounting hedges based on the identification of the primary position subject, the type of instrument, the nature of risk, the risk strategy, and a measure of the effectiveness of a hedge (e.g., the hedge ratio).

[23]For instance, the issuance of stock options to employees would be an ideal candidate for a *shari'ah*-compliant derivative. While granting such contingent claims involves a transfer of wealth from firm owners to employees, it carries the potential of creating incentives for higher productivity, resulting in larger corporate profits. That, in turn, would offset the marginal cost of greater employee participation in stock price performance.

[24]Even if options were considered permissible under Islamic law, there are further aspects to be considered. An interim value change of the reference asset during the maturity term of an option contract implies unilateral gains from shared business risk. This would be *shari'ah*-compliant only if the option had no intrinsic value at inception for a pre-specified strike price in the future. The realization of these gains, however, is conditional on eventual asset ownership (after execution of the option) rather than the sale of the option.

[25]Kamali [2001] finds that "there is nothing inherently objectionable in granting an option, exercising it over a period of time, or charging a fee for it, and that options trading like other varieties of trade is permissible *mubah*, and as such, it is simply an extension of the basic liberty that the Qur'an has granted."

[26]The so-called commodity *murabaha* is a frequently used form of wholesale debt-based Islamic finance between a bank and its client that replicates short-term money market deposits and medium-term syndicated loans. Such a contract involves the sale on a deferred-payment basis of a commodity, usually metals, at the market price, plus an agreed-upon profit margin. The borrower raises the required funds by immediately selling the asset to a broker or financial institution.

[27]*Salam* contracts are used mostly in agricultural finance. They closely resemble conventional futures contracts and are sometimes considered an independent asset class outside the asset spectrum of *murabaha*. *Salam* are exempt from the requirement that the seller of the goods be in possession of the goods at the time of signing the contract. On the other hand, *salam* contracts are applicable only to commodity-like goods. See Batchvarov and Gakwaya [2006] for a more detailed discussion of *salam* from a market perspective.

[28]A *bay bithaman ajil* (BBA) contract is primarily used for long-term financing and does not require the lender to disclose the profit margin.

[29]The concept of *arbun* (down payment) could be invoked to justify the design of option-like securities. While Ayub [2002] cites a resolution by the *Fiqh Academy* (May 9-14, 1992) stating that "option contracts as currently applied in the world financial markets...are not permissible in Shari'ah," in 1993, the Fiqh Academy ruled in favor of down-payment sales (El-Gamal [2006]). As in conventional options, *arbun* provides an element of contingent insurance in that the buyer of a commodity can lock in a specific price by signing a call option. However, the difference between a call option and arbun is that for the latter, the payment is part of the price of the traded asset, whereas in the former, the strike price does not include the option price.

[30]In conventional finance, one can generally distinguish between two main types of swap contracts: 1) "interest rate swaps," wherein interest payments are made in the same currency, and 2) "currency swaps," which involve different currencies. The swapped interest rate payments can be floating, fixed, or a combination of the two.

[31]In a *murabaha*-based swap transaction, both contract parties hold mutually offsetting payment obligations against each other, mitigating the contingency risk of periodic payments (but not precluding economic risk from changes in the value of the underlying asset). In general, the degree of collateralization of a standard *murabaha* (cost-plus sale) contract itself depends on the original ownership of the underlying asset, which defines the level of creditor indebtedness. The creditor has either 1) full recourse (i.e., involving both the underlying asset and the periodic payments) if the borrower was the original owner of the asset (sale-repurchase agreement), or 2) limited recourse (i.e., to periodic payments only) if the seller acquired the asset from a third party (back-to-back sale).

[32]Note that while some pre-agreed interest rate benchmark is permissible under *shari'ah* law, it should be distinguished from the use of non-*shari'ah*-compliant assets as a determinant for returns (DeLorenzo [2007]).

[33]One example is the recently issued Master Agreement for Treasury Placement (MATP), which will contribute to the standardization of documentation rules for the *shari'ah*-compliant commodities market with a view to enhancing the cost, time, and operational efficiencies of deposit arrangements for liquidity management.

[34]The voluntary adoption of standards issued by various relevant international bodies such as IIFM, AAOIFI, and the IFSB is very underdeveloped, with national practice taking precedence over the less well-established international organizations.

[35]Almost all standards issued by various relevant international bodies, such as the International Islamic Financial Market (IIFM), the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), and the Islamic Financial Services Board (IFSB), are voluntary unless they have been incorporated in national law.

[36]In November 2006, the Malaysian banks, Bank Islam Berhad and Bank Muamalat Malaysia Berhad, broke new ground by agreeing to execute a master agreement for the documentation of Islamic derivatives transactions (Jobst, 2008a). This standardization initiative was sponsored by the Malaysian Financial Market Association *(Persatuan Kewangan Malaysia)* with the participation of both Islamic and conventional Malaysian banks.

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