Since last summer, securitization has come into sharp focus on account of its role in propagating the economic fallout from the U.S. subprime crisis, causing a major reassessment of risk and the price it should command across all asset classes. In principle, securitization is a capital market-based source of refinancing profitable economic activity in lieu of intermediated debt finance. It provides an alternative source of finance that serves to mitigate disparities in the availability and cost of credit in primary lending markets by linking singular credit facilities to the aggregate pricing and valuation discipline of capital markets. Thus, the emergence of securitization helps remedy deficiencies in financial markets arising from incomplete capital allocation.

The collapse of the securitization market and the ensuing market turbulence, however, have cast serious doubt on this economic proposition of unbundling, transforming, and redistributing credit risk via structured finance instruments. In view of sweeping fiscal intervention in the financial sector, a widespread retrenchment of mortgage exposures, and substantial liquidity injections by central banks to support inter-bank money markets, both the scale and persistence of the current credit crisis seem to suggest that pervasive securitization—together with improvident credit origination, inadequate valuation methods, and insufficient regulatory oversight—can perpetuate market disruptions, with potentially adverse consequences for financial stability and economic growth.

This charge begs the question of how securitization could have contributed to excessive complacency in financial markets. In response to cost pressures and regulatory reforms over the years, rising sophistication in credit risk management has facilitated continuous innovation in structured finance products and derivative instruments. An increasing number of financial institutions have adopted an “originate-and-distribute” business strategy of loan origination by using securitization to transfer credit risk from their balance sheets to other banks, insurance companies, hedge funds, and other financial institutions.1

Issuers of securitized debt generally benefit from more cost-efficient terms of high-credit-quality finance without increasing their capital base or compromising the profit-generating capacity of assets. From a financial stability perspective, the transformation and fragmentation of credit risk (into long-term secured claims (see Exhibit 1)) via securitization was supposed to bring greater diversification, diffuse risk concentrations, and enhance the efficient pricing of illiquid exposures. Since credit risk is customized to the preferences and tolerances of agents, the tradability of securitized debt should improve...
the capacity of the financial system to bear risk and
intermediate capital. Sadly, it did not. Instead, secu-
ritization weakened minimum standards of prudent
lending, risk management, and investment at a time
when low returns on conventional debt products, default
rates below the historical experience, and the availability
of cheap hedging tools encouraged more risk-taking for
yield despite early signs of heightened systemic vulner-
abilities in the financial sector.

After having nearly ground to a halt last year, secu-
ritization is now staging a modest comeback after the
renewed turbulence in capital markets worldwide, but
current efforts fall short of fully restoring investor confi-
dence. An elevated premium for uncollateralized lending,
as manifested in the rise of the LIBOR-Overnight Index
Swap (OIS) spread, indicates that liquidity pressures as
well as concerns about counterparty risk persist. Market
ruptures caused by the headlong flight to safety during
the initial phase of the credit crisis seem not to have been
contained, and the market for securitized mortgages
remains tense and pricing depressed as banks dispose of
non-core assets and raise capital to de-lever and bolster
their imploding balance sheets.

That said, Islamic banking and finance remained
on the sidelines, and, so far, have been affected by the
global financial crisis only recently in response to infla-
tionary pressures in the Gulf countries, uncertainty about
commodity prices, and widespread economic downturn.
As policy-makers and regulators hasten to redesign the
financial sector architecture afflicted by the demise of
structured finance, the soul-searching in conventional
finance has directed attention to alternative modes of
securitization, such as Islamic investment certificates or
sukuk, whose market grown into a notable segment of
global structured finance over the last three years.

This article surveys the unique structural features
of the sukuk market (see Exhibit 1) and assesses the
potential of conflicts of interest that became apparent
in the U.S. subprime mortgage crisis to contaminate
the integrity of the securitization process if it were con-
ducted in compliance with shari’ah principles.

INCENTIVE PROBLEMS OF CONVENTIONAL
SECURITIZATION

The main cause of the crisis can be traced to
market failure stemming from conflicts of interests in
the securitization process and ill-designed mechanisms
to mitigate the impact of asymmetric information (see
Exhibits 1 and 2). In securitization, an arranger under-
writes the issuance of asset-backed securities (ABSs) at
different maturities, notional values, and credit quality
to an asset manager, who serves as an agent for capital
market investors. These investors are repaid at a fixed or
floating rate from a trustee account funded by the cash
flows or premium income generated from the reference
portfolio of securitized assets (or future revenues). The
originator services the portfolio, makes the collections,
and passes them on, less servicing fee, to the SPV. Both
investment return (principal and interest repayment)
and losses are allocated among the various tranches
according to their seniority. By substituting interme-
iated lending with capital market finance, securitiza-
tion, however, creates considerable agency costs (which
are ultimately borne by investors) if agents are tempted

| E X H I B I T  1 |
| Modes of Secured and Unsecured Capital Market Funding |

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<th>Short-term funding instruments</th>
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<td>February 2008)</td>
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to pursue their own economic incentives. The most prominent incentive problems involve frictions among the borrowers, originators, issuers, arrangers, and investors as well as additional agents, such as servicers, credit rating agencies, and third-party guarantors, whose functions are the direct result of the fragmentation of risk ownership in securitization (and the incentive problems it creates).

First and foremost, valuation uncertainty about the quality of securitized assets could lead to moral hazard by originators if they have limited liability on downside risk. Since securitization is predicated on the transfer of credit risk from the originator to a bankruptcy-remote issuing agent, such a special purpose vehicle (SPV) or conduit, either via a transfer of title (“true sale securitization”) or the purchase of credit protection (“synthetic securitization”), originators have an incentive to limit their (unobservable but costly) effort of screening borrowers once they are protected from any adverse performance of the “reference portfolio” of securitized assets. This friction is exacerbated by potential collusion between originators and borrowers, which may result in the misrepresentation of creditor quality (see Exhibit 3).

The information advantage of the originator with regard to the quality of borrowers and the historical performance of individual asset exposures could also give rise to adverse selection. The complex security design of securitized debt suggests superior information of arrangers about the true valuation of securitized debt. Since arrangers underwrite the sale of asset-backed securities (ABS), they might choose a particular composition of the reference portfolio and the design of the transaction structure to optimize their own payoffs (rather than the ones of ultimate investors). Therefore, rational issuers (and investors) would form negative beliefs about the actual quality of reference assets consistent with the lemons–market problem, à la Akerlof [1970]. On the assumption of all (or most) assets (and transactions) to be of poor quality, they would request a reservation utility in the form of a lower selling price and/or higher return (“underpricing”) as compensation for the anticipated investment risk of receiving a disproportionately large exposure to poorly performing assets (compared to any residual claims retained by the originator). Any selective bias (“cherry picking”) associated with the transfer of securitized assets also affects the relationship of arrangers with warehouse lenders and credit rating agencies.
agencies. Warehouse lenders provide interim funding for the acquisition of assets during the “ramp-up phase” until the transaction can be finalized. Since required haircuts on securitized assets imply over-collateralization, forcing the arranger to assume a funded equity position, any change in views about credit quality increases the cost of the securitization transaction. Credit rating agencies face a similar lemons problem due to limited due diligence on arrangers and originators.

In addition, the servicing of securitized assets is afflicted by possible conflicts of interest between originators (or third-party agents) on one hand, and borrowers, asset managers, and investors on the other. Unless loan servicing remains with the originator, the issuer appoints a servicer that collects payments from borrowers, makes advances of unpaid interest, accounts for principal and interest, holds escrow or impounds funds related to the payment of property taxes and hazard insurance, notifies delinquent borrowers, and supervises foreclosures as well as property dispositions (Ashcraft and Schuermann [2008]). Servicers commonly receive a periodic fee as compensation for their monitoring effort, which directly affects the realized level of losses and the distribution of cash flows to the arranger (and ultimately to investors). Almost all reimbursable expenses associated with the administration of deteriorating asset quality, such as the foreclosure cost of mortgages, are back-loaded, while advances of unpaid interest (and possibly principal) occur early on. Since their fee-based income increases over time, servicers have the natural incentive to inflate expenses to offset fixed up-front costs and keep securitized assets on their books as long as possible to assess late fees. For instance, in mortgage securitization, a servicer would prefer to modify the terms of a delinquent loan and/or delay liquidation (rather than foreclose), which stands in conflict with the best interest of both asset managers and investors to foreclose promptly once a loan is deemed uncollectible so as to prevent lost interest and lapses in maintenance from inflating losses.

However, the mode of payment collection and creditor forbearance impede a coherent debt resolution strategy between agents. Any measure to limit debt modification (and other possible restrictions on the collection of delinquent debt) hampers the ability of servicers to resolve their own moral hazard problem with borrowers, whose willingness to pay (and preserve collateral value) declines as their option to walk away becomes more valuable than their equity claim on the underlying collateral. This conflict of interest is compounded by the fact that mortgage loans in the United States do not involve asset recourse, so that borrowers do not have to declare personal bankruptcy upon default, amplifying moral hazard concerns surrounding the administration of reference assets of deteriorating quality. In addition, trustees of ABS structures have the natural tendency to limit any efforts aimed at reducing moral hazard of
the asset originator and arranger. Although they generally undertake contract enforcement and hold the benefit of covenants and collateral for the end-user (and other creditors), the responsibilities of servicers do not involve monitoring activities or the obligation to act unless instructed by a majority of end-users. Thus, the potential of “willful blindness” on part of the trustee imposes a further constraint on the integrity of the securitization process.

Finally, uncertainty about the true quality of securitized assets creates a principal-agent problem between asset managers and investors. Since investors cannot observe the effort of asset managers in screening potential investments and selecting the best trades, over-reliance on credit ratings for complex transactions, such as collateralized debt obligations (CDOs), and insufficient due diligence might encourage managers to engage in asset substitution. In “active” CDO structures, a manager is entrusted with the task of monitoring and, if necessary, trading credits within a dynamic reference portfolio of one or more credit-sensitive asset classes (and possibly different issuers and/or industry sectors) in order to protect the collateral value from impairment due to a deterioration in credit quality. Managers would adjust investment exposures over time to satisfy covenants on the weighted average rating of the portfolio and position limits on low-grade securities and/or meet a certain degree of diversification in response to changes in risk sensitivity, market sentiment, and/or timing preferences.

“Lightly managed” reference portfolios allow for some substitution in the context of a defensive management strategy, while “fully managed” portfolios suggest a more active role of managers, subject to limits and investment guidelines that are determined by the issuers, rating agencies, and different levels of risk tolerance of investors at inception. However, investors in managed CDOs do not know what specific assets the CDO managers will invest in, and understand that those assets will change over time as managers alter the composition of the reference portfolio. Thus, investors face both credit risk and the risk of poor management. While credit rating agencies help resolve the apparent information gap between investors and asset managers by enhancing transparency due to greater disclosure about the quality of the reference portfolio (and the investment mandate of the asset manager), the efficacy (and objectivity) of ratings could be hampered by the dependence of rating agencies on fees paid by the arranger (“issuer-pays model”).

**THE U.S. SUBPRIME CRISIS: ASSET SUBSTITUTION AND MORAL HAZARD**

The U.S. subprime mortgage crisis exposed the severity of fundamental incentive problems in conventional securitization and the lack of ex ante market discipline. The attendant market fallout demonstrated that remaining conflicts of interest between stakeholders entail significant agency costs, which—if left unchecked—escalate the adverse effects of deteriorating credit conditions, valuation difficulties, and higher leverage on financial stability. In particular, securitization facilitated excessive risk-taking to a point where the inability of issuers to gauge actual credit risk and the flexibility of asset managers to subvert investment mandates intensified the potential of systemic vulnerabilities to credit shocks. Before the subprime mortgage crisis erupted, low interest rates fostered mortgage lending and the expansion of housing supply in the hope of persistent real estate appreciation. Mortgage brokers and banks addressed higher money demand by seeking funds from “conduit lenders,” which would use securitization to refinance themselves. The availability of cheap structured credit, however, resulted in a general deterioration of lending standards, as the off-balance-sheet treatment of securitized debt allowed originators to increase money supply by accepting marginal borrowers, displacing concerns about rising credit risk.

At the same time, excess market liquidity lowered risk aversion while the complexity of securitization structures obscured actual loss exposures, perpetuated benign asset valuations, and incubated fallacious investor complacency. Once securitization came into its own, it accommodated a large public stock of leveraged investments, which carried the vestiges of times when high global cash surplus and a limited supply of financial and real sector investments diminished asset returns and lowered risk premia induced more risk-taking—despite first (but overlooked) signs of deteriorating underwriting standards and rising default risk. Pervasive credit risk transfer spurred by a flurry of derivative structures amplified risk appetite and delayed a timely rebound of risk premia. As markets remained stable, greater reliance was placed on the resilience of the financial system, inducing even greater aggregate moral hazard. In addition, liquidity-induced demand from managers for scarce reference assets further tightened spreads of investible...
securities and precluded the knee-jerk adjustment of debt prices to reflect economic conditions adequately.

In an environment of low risk aversion, the fervent search for yield became the undoing of a highly leveraged market as deteriorating credit conditions induced moral hazard by asset managers. When the credit cycle eventually began to turn, doubts surfaced about the quality, security design, and pricing of high-yield structured finance instruments. In response to a general repricing of securitized exposures over fears that ruptures in subprime mortgages would prove ruinous to other credit-sensitive assets, dwindling investor demand increased risk premia and curtailed the capacity of asset managers to meet liability pressures. Synthetic securitization transactions structured to create partially funded and highly leveraged investment on the performance of a dynamic portfolio of designated credit exposures (without actually purchasing the reference assets) were most affected. In such arrangements, managers trade reference assets to realize economic gains from the pricing mismatch between investment returns from reference assets (or credit protection premia on exposures) and lower the financing cost of generally higher-rated liabilities in the form of issued securities. Faced with the prospect of higher funding costs (and less compensation), asset managers, however, opted for riskier positions and greater leverage.

Finally, short-term funding pressures and growing investor distrust conspired to magnify asset price deflation caused by mark-to-market (MTM) valuation under fair value accounting standards (FAS). Without real buyers available, issuers also created structured investment vehicles (SIVs) that borrowed short-term money by issuing asset-backed commercial paper (ABCP) to fund the purchase of long-dated, credit-linked securities (at largely overstated transaction prices), thus creating an ill-fated maturity mismatch. As the ABCP market dried up, the fire sale of structured finance products at distress prices forced SIVs and investors alike to mark-to-market their positions (and holdings of similar illiquid securities), causing huge valuation losses to be booked. The subsequent decrease of asset values and its effect on market liquidity finally led to tightened lending standards, elevated asset price volatility, and funding constraints, causing profound systemic distress.

Agents in the securitization process can attenuate various conflicts of interest arising from asymmetric information (and limit the agency costs associated with the lemons premium) by soliciting greater transparency about the true value of securitized assets through signaling and screening mechanisms.

- Given the significant agency cost from adverse selection and moral hazard, issuers commit additional internal and external resources to a securitization transaction, such as reserve funds, variable proceeds from excess spread, and retain some securitized exposure, such as a “first loss position” (FLP) (see Exhibit 3) which, in substance, provide some degree of added protection to other parties to the transaction and serve as costly signals of asset quality. In order to signal credit quality it is still not uncommon for issuers to retain the most junior claim in a securitization structure as a low-cost risk-sharing and support mechanism. In addition, a subordinated security design encourages incentive-compatible behavior across investors at different points of the capital structure. Tranching has value if markets are incomplete or segmented due either to investment restrictions dictated by investor traditions or mandates and government regulations that render certain assets unattainable, or by the limited supply of certain categories of debt instruments that have risk-return profiles that could be replicated or enhanced by securitization.

- Arrangers, who oversee the transfer of assets to the trust and underwrite securitization transactions (after consultation with one or more rating agencies), conduct (continuous) due diligence on originators, including the review of financial statements, underwriting guidelines, and background checks, while originators make a number of representations and warranties about the borrower and the underwriting process. This requires adequate capitalization of originators to reduce counterparty risk in the event of legal recourse. Downpayments and the modification of loan contracts, in turn, limit the originators’ exposure to moral hazard arising from borrower leverage.

- Arrangers reduce uncertainty about the performance of servicers by balancing the intensity of monitoring efforts (and costly state verification) with the minimization of servicing expenses through forbearance. In addition to limits on loan modifications, servicer quality ratings, and the installation of master servicers, which monitor the
compliance with pooling and servicing agreements and enforce remedies of servicer default, help mitigate management risks.

- Arrangers themselves are subject to market discipline in the form of reputational risk, the provision of credit support, and due diligence by the asset manager aimed at restoring incentive compatibility with investors.
- Investors overcome the principal-agent problem vis-à-vis asset managers by imposing investment mandates and ex post evaluation of asset performance relative to benchmarks, which align investment strategies with their own risk-return expectations. Since investors do not observe the manager’s effort, choice, and trading behavior, restrictions on the composition of the reference portfolio are based on average rating classification and/or type of eligible assets.
- In addition, credit rating agencies assess the credit risk and the suitability of a given securitization transaction based on expectations about the short run and through-the-cycle performance of the reference portfolio, which defines a certain risk-return profile. Since the business model of credit rating agencies depends as much on structuring fees as it does on reputation, any encroachment by arrangers on the objectivity of the rating process seems only a remote possibility. Moreover, rating and downgrade criteria are publicly disclosed and used by sophisticated investors to re-engineer rating assessments, thus disciplining rating agencies.

THE RISE OF ISLAMIC FINANCE

Now that the credit crisis has eroded market confidence and sapped risk appetite in conventional finance, investors—unsettled by excessive risk-taking and asset price volatility—have been flocking to Islamic finance. The Islamic finance industry has grown precipitously in recent years. There are currently more than U.S. $800 billion worth of deposits and investments lodged in Islamic banks, mutual funds, insurance schemes (known as takaful), and Islamic branches of conventional banks. The current growth has been fueled not only by surging demand for shari’ah-compliant products from financiers in the Middle East and other Muslim countries, but also by investors around the world seeking Islamic investment as a means of diversification, thus rendering the expansion of Islamic finance a global phenomenon (Hesse et al. [2008a, b, and c]).

The current financial crisis invites a distinction of conventional and Islamic finance principles in the context of securitization and a comparison of their capacity to sustain efficient capital allocation and financial stability. Islamic finance is driven by the general precept of extending religious doctrine in the shari’ah to financial agreements and transactions. Shari’ah law bans the sale and purchase of debt contracts, profit-taking without real economic purpose, and activities that are not considered halal (i.e., shari’ah-compliant). The central tenet of this form of finance is the prohibition of riba, whose literal meaning, “an excess,” is interpreted as any unjustifiable increase of capital in the form of interest (i.e., usury) whether through loans or sales. Islamic finance is distinct from conventional finance in so far as it substitutes a temporary use of assets by the borrower for a permanent transfer of funds as a source of indebtedness. Whereas money has become a store of value in conventional finance, the asset-based organization of Islamic finance implies that money is not considered a commodity but a measure of value through which there can be an exchange and payment of goods and services. However, adequate compensation for the sale or temporary use of an asset is encouraged.

Besides the prohibition of interest-based forms of income and unethical (or socially detrimental and sinful) activities (haram), Islamic finance is beholden by the objective of maintaining a mutually beneficial balance between borrowers and lenders with a view to serving the public interest (maslaha). Since Islamic law does not recognize the concept of time value of money as in conventional finance, contractual relationships between financiers and borrowers are not governed by capital-based investment gains but shared business risk (and returns) from entrepreneurial investment in lawful activities. The financier receives returns from the direct participation in asset performance in the form of state-contingent payments according to an agreed schedule and amount. Since the religious overlay in Islamic finance denies creditors (debtors) the benefit of unilateral gain, shari’ah-compliant finance contracts limit asset price appreciation to the contractually agreed repayment amount.

A notable feature in modern Islamic finance is that transactions are normally structured as composites
of contingent claims, possibly using a set of underlying contract types that have a longstanding tradition under shari’ah and are commonly accepted in the legal tradition (El-Gamal [2006]). The three basic forms of Islamic finance are: 1) debt-based contracts, e.g., synthetic loans/purchase orders (murabahah) and sale-buybacks (bay al-inaah); 2) asset-based contracts, e.g., leases (ijara) and sale-leasebacks (ijara thumma al-bay); or 3) equity-based contracts, e.g., profit-sharing/partnership (musharakah) and “sweat capital”/seed funding arrangements or trusts (mu’darabah).8

THE CASE OF ISLAMIC SECURITIZATION

Definition of Islamic Securitization and Sukuk

Although the rapid expansion of Islamic finance is taking place across the whole spectrum of financial activities, perhaps the most striking element has been the fast growth of sukuk, the most popular form of securitized credit finance within Islamic finance. Sukuk encompass a broad range of shari’ah-compliant financial instruments, and can be best described as participation certificates that grant investors return based on profitable investment resulting from actual asset ownership. Since asset-backing, entrepreneurial investment, and specific credit participation in identified business risk are fundamental to any Islamic transaction, securitization represents a straightforward capital market-based form of Islamic finance.

Sukuk commoditize the proceeds from asset transfers between providers and users of funds raised from different shari’ah-compliant finance contracts (see above), such as lending transactions (installment sale) or trust-based investments in existing or future assets. While sukuk are structured in a similar way to conventional asset-backed securities (ABS) or covered bonds, they can have significantly different underlying structures and provisions (see Exhibit 4). Most importantly, sukuk—like Islamic financial instruments in general—need to comply with shari’ah, which prohibits the receipt and payment of interest and stipulates that income must be derived from an underlying real business risk rather than as a guaranteed return from interest. Thus, sukuk transform the (intended) capital gains generated from actual transactions, such as profit-sharing, leasing, or cost-plus sales, into marketable securities without explicit investment protection or principal guarantees.9

In their basic concept, sukuk represent the “capital market corollary” to a singular lender in Islamic finance. Originators sell existing or future revenues from lease receivables (asset-based), “sale-back profit” (debt-based), or profit participation from private equity arrangements by transferring legal ownership of a portfolio of Islamically acceptable assets to a special purpose vehicle (SPV),10 which refinances itself by issuing securities to market investors. Investors own the underlying asset(s) via a SPV that funds direct investment in real, religiously sanctioned economic activity (see Exhibit 4). As such, they assume the role of a “collective financier” whose entrepreneurial investment does not involve guaranteed, interest-based earnings. A conventional pass-through payment structure seems to be closest to the strict interpretation of Islamic principles, which requires the transfer of a minimum level of ownership to ensure direct investor participation in the business risk associated with the performance of a dedicated collateral pool of securitized assets.

Adapting Islamic securitization requires compliance with the following conditions (Jobst [2007]):

i. There should be a real purpose behind raising funds via securitization (that encourages a bona fide trader rather than a profitable exchange of the same (or similar items), which ensures commercial value to investor(s), wealth creation, and diversity of trade from underlying asset transfer. Any unilateral deferment of an obligation (payment or delivery) that generates profit is acceptable only if the financial contract involves dissimilar assets (as indicated by tick marks in Exhibit 5). Otherwise, a transaction must occur at spot without profit-taking.

ii. The type of reference assets realizing the securitized revenues are clearly identified (or are capable of identification) and cannot be consumed (or be perishable). Ownership and possession (qabul) rests with creditors (or their agents) throughout the life of the transaction in order to ensure definite performance.

iii. Each transaction participant shares in both the risk and return, and investors should receive positive pay-off from profitable ventures only (and not from non-productive investment).
E X H I B I T  4
Basic Sukuk Structure (with the Purchase of Debtor or Third-Party Assets)

E X H I B I T  5
Permissible Trading Assets Under Islamic Law

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iv. Reference assets must not be debt, cash, or prohibited as *harām* (sinful activity), be employed for speculative purposes, or associated in any way with unethical or exploitative operations or with speculation and avoidable uncertainty (*gharār*) in the form of zero-sum payoffs at inception.

v. The structure should provide investor (unconditional) compensation for business risk from direct participation in the performance of securitized assets (based on actual ownership) and should not imply an exchange of debt for (guaranteed) interest-generating investment return (unless those securitized assets are interest-free and sold at net or fair market value unless repurchase price is pre-agreed).

vi. The contribution from investors in the form of proceeds from issued notes (and any returns generated by the issuing agent from managing collateral assets) cannot be reinvested in short-term cash instruments or interest-bearing debt*¹²* (and turnover in managed portfolios should be kept low).

vii. Since conventional insurance violates shari’ah provisions, *takaful* (Islamic insurance, based on cooperation and mutual help) should be employed instead.

viii. Any form of credit enhancement and/or liquidity support (and limitations of prepayment risk) must be in a permissible form, and guarantees can be employed only to cover cases of negligence, misconduct, or breach of contract (representations and warranties).

**Current Market Situation**

*Sukuk* issuance has soared over the last three years in response to growing demand for alternative investments (Jobst et al. [2008]). At the end of 2007, the outstanding volume of *sukuk* globally exceeded U.S. $90 billion (Moody’s [2007 and 2008]). Gross issuance has quadrupled over the past two years, rising from U.S. $7.2 billion in 2004 to close to U.S. $39 billion by the end of 2007, owing in large part to enabling capital market regulations, a favorable macroeconomic environment, large infrastructure development plans in some Middle Eastern economies, and financial innovation aimed at establishing shari’ah compliance (IOSCO [2008]).

The *sukuk* market has not escaped unscathed from the credit crisis that erupted last year, with investment banks and finance houses worldwide still reeling from the collapse of the U.S. subprime mortgage market and the breakdown of the wholesale money markets. Although the issuance of *sukuk* in the first half of 2008 has diminished and still remains somewhat below the 2007 record, volumes have held up, while the number of deals brought to market has steadily increased, chipping away at a significant backlog of shelved *sukuk* issues in 2007. The *sukuk* volume dropped to U.S. $15.2 billion (down by about 35% on an annualized basis) in 2008 so far, while the issuance of conventional structured finance instruments collapsed to just under U.S. $387 billion (down by about 80%) over the same time (see Exhibit 6). On the assumption of a stable rate of growth, the volume of *sukuk* issued by governments and corporations will surpass the U.S. $150 billion mark by 2010, spurred by demand especially from banks, insurance companies, and pension funds in both Islamic and non-Islamic countries.

**Sukuk: The Good Side of Securitization?**

Recent excesses in conventional financial markets have shed light on Islamic finance as an alternative framework for securitization. Predatory lending, deteriorating underwriting standards, and a series of incentive problems between originators, arrangers, and sponsors, all of which have infested the conventional securitization process, belie fundamental Islamic principles.

Any financial transaction under shari’ah law implies direct participation in underlying asset performance and assigns to financiers clearly identifiable rights and obligations for which they are entitled to receive commensurate return in the form of state-contingent payments subject to contractual certainty and the supremacy of public interest in social justice. Profits are earned in line with shari’ah prescriptions and cannot be guaranteed *ex ante* but accrue only if the investment itself yields income. Thus, investment is not guaranteed but secured on the basis of profitable ventures based on real assets, which mitigates adverse selection and moral hazard of both lenders and borrowers.

*Sukuk* might be a viable source of funds that could help stabilize the securitization market, as they already contain many contractual features that are now being considered instrumental to a resolution of inherent conflicts of interest between agents in the conventional securitization model. While *sukuk* are structured similar to ABS, risk-sharing and the full participation of both
 issuers and investors in the underlying asset performance (and how it affects the capital structure of the transaction) offer an alternative mechanism to conventional securitization in establishing incentive compatible behavior.

There are several Islamic principles of sukuk, which could potentially redress many conflicts of interest and valuation problems that infested the conventional securitization process (see Exhibit 2):

• **Between asset manager and investor** (“principal-agent dilemma”):
  - The religious prohibition of both gambling (*maisir*) and speculation (*gharar*) prevents excessive risk-taking (in the form of asset substitution) and commands clear object characteristics and/or delivery results as part of contractual certainty.
  - The trading activity of asset managers is restricted to *bona fide* merchant transactions on *real* debt while investor return must be derived from defined asset value associated with effective (or intended) ownership interest.
  - Since there is definite performance underpinned by actual and direct transfer of asset as an object of unconditional sale in Islamic contracts, i.e., no mutual deferral of contractual obligations, any contingency risk from unfunded claims is limited to pre-defined timing mismatch of delivery or payment in accepted contracts (*salam/istisna* vs. *bay al’ajal/bay bithaman ajil*) (see Appendix).
  - Asset managers cannot create leverage on the underlying asset portfolio, as unilateral gains (i.e., benefit from moral hazard in response to redistribution of risk/no consequence of bad outcomes) are limited to the nominal value of the reference portfolio in asset-based contracts or the scope of profit-sharing in equity-based contracts respectively.
  - Trust-based contracts in Islamic law, such as *mudaraba*, limit the liability of the asset manager (*mudarib*) to cases of negligence, misconduct, or breach of contract (representations and warranties). That being said, partnership structures with fixed contribution ratios (*musharaka*)—and the possibility of additional participation of profits depending on verified effort choice—or principal-agent contracts (*wakala*) with fixed management fees (including performance

**EXHIBIT 6**

Global *Sukuk* Issuance (2005–08, in USD billion)

![Chart](chart.png)

*Source: IFIS, Bloomberg, Dealogic, Datastream.*
remuneration), keep incentive problems from compromising pre-agreed investment strategies while maintaining positive-sum payoffs of both agents and investors.

• **Between originator and issuer:**
  - The shari‘ah approval and certification process, as well as ongoing monitoring, promote adequate disclosures underpinned by a solid foundation of religious standards.

• **Between issuer and investor:**
  - Investor return derived from effective (or intended) ownership of real asset(s) underlying the securitization structure (after actual and direct transfer as object of an unconditional sale) generates indebtedness and amounts subject to direct recourse.

• **Between servicer and investor/asset manager:**
  - Contract certainty rules out potential of inflated, back-loaded (and variable) servicer expenses (and cannot be prioritized due to prohibition of provisions aimed at creating unilateral gains from interim changes in asset characteristics and valuation). Servicer fees are fixed and defined ex ante.

• **Between borrower and originator:**
  - The Islamic principle of social benefit as public interest (*maslaha*) and the precept of supporting a system of distributive justice would preclude any moral hazard of originators (“predatory lending” or borrowers (“walking away’’)). Moreover, the shari‘ah prohibits debt modification and unilateral gains (which are considered exploitation).

• **Between arranger and guarantor:**
  - Guarantees must not establish the possibility of mutual deferment of contractual obligations without actual transfer of asset. Thus, only funded agency contracts with pre-specified terms would be deemed sufficient to rule out contingency risk of payment and actual delivery.

As one measure to revitalize the secondary mortgage market, policy-makers in the United States (and other countries) have drawn up plans to encourage the issuance of covered mortgage bonds, popular in some other countries, such as Germany, to redress the misaligned incentives of asset managers that undermined *ex ante* market discipline and led to the eventual demise of the structured finance market. Covered bonds are unsecured (on-balance-sheet) debt obligations collateralized by a dedicated reference portfolio of assets that are fully retained by the issuer. The interest payments are guaranteed and do not depend on the performance of the underlying cover assets. Similarly, most *sukuk* are still unsecured, based on a pool of underlying assets (like covered bonds) with principal guarantee provided by the issuer via a repurchase agreement (see Exhibit 5) while coupons (“periodic distribution amounts”) are protected by a liquidity provision. Pay-through bonds collateralized by on-balance-sheet assets, whose asset proceeds are dedicated but conveyed through interest-bearing debt, would not qualify as suitable securities under Islamic law.

After recommendations by the Accounting and Auditing Organization of Islamic Finance Institutions (AAOIFI) in February 2008, however, *sukuk* have become more akin to pass-through, off-balance-sheet structures without institutional guarantee on asset performance. But unlike ABS, *sukuk* imply direct recourse to a defined portfolio of underlying real assets, which fund secured repayment from profitable investment in religiously sanctioned, real economic activity. If securitized assets are removed from the originator’s balance sheet, ownership conveyance through true sale ensures 1) the exclusive dedication of cash flows from the underlying asset to establish the linkage of ownership interest to identifiable economic activity, and 2) secured but unconditional repayment from underlying assets. The ownership of *sukuk* investors in real assets generating commoditized indebtedness is tantamount to the institutional guarantee afforded to covered bonds.

Nonetheless, many pitfalls of financial innovation that contributed to the U.S. subprime crisis also apply to Islamic finance by an even larger measure, such as sound risk assessment, adequate rating processes, and the use of integrated risk mitigants. For instance, inflated asset prices of difficult-to-value collateral could obfuscate lower-than-expected asset performance, increase residual equity, and help maintain artificial arbitrage gains of asset managers. Also, high execution costs, heightened administration, and collection risks can amplify the potential for principal-agent problems in the absence of long default histories, robust recovery rate estimates due to untested collateral enforcement procedures, and sufficient asset diversity.
Economic Challenges of Islamic Securitization

Despite considerable, and growing, demand for shari’ah-compliant assets, the further development of sukuk depends on essential economic, regulatory, and infrastructural conditions.

Amid weak reliance on capital market financing in many Islamic countries, issuers of sukuk are first and foremost faced with several critical economic impediments that pertain to their ability to 1) identify reference assets that meet shari’ah requirements and offer attractive returns, and 2) substitute standard structural features in conventional securitization structures, such as credit enhancement and liquidity support, which are not permissible in an Islamic context. Given the limited sourcing and structuring of eligible asset portfolios, Islamic issuers have begun to originate their own Islamically acceptable assets rather than buy asset pools in the market.

However, the sukuk market is still plagued by illiquidity in the secondary market, with the combination of high originator concentration and regional fragmentation clouding the overall positive outlook. Although the concept of asset backing is inherent to Islamic finance, structured credit transactions are few and far between where financial transactions have to follow the precepts of the shari’ah. The current level of sukuk issuance by corporations and public-sector entities still remains a fraction of the global fixed income markets. Since only a handful of large banks and managers are behind the bulk of transactions completed by a small number of repeat issuers, origination and servicer risk from narrow asset supply poses challenges to investor diversification. In addition, the lack of information from private sources about securitized assets in many sukuk and the prevalence of “buy-and-hold” investments inhibit efficient price discovery and information dissemination.

An even bigger diversification issue arises from poor asset diversity, given the narrow range of deal types and maturity tenors in the existing market. Sukuk are available at maturities of 3, 5, and 10 years, but not for short-term maturities, which significantly limits their application for money markets. Although Islamic banks are currently among the largest buyers of shari’ah-compliant products (at long maturities), they would benefit most from issues at shorter tenors. There is some hope that the launch of different sukuk funds in the near future might potentially unlock liquidity constraints, but this might only create new demand without sufficiently alleviating supply constraints. It is currently also difficult to set up sukuk funds with sufficient diversification.

Legal Challenges of Islamic Securitization—Regulatory Consolidation and Supervisory Harmonization

Despite the phenomenal growth of sukuk over the last three years, future development of sukuk could be arrested by insufficient supervisory and legal harmonization across national boundaries and the ongoing controversy about the financial innovation in Islamic finance.

Governance issues, especially the shari’ah compliance of products and activities, constitute a major challenge for the Islamic finance industry. Although shari’ah rulings (fatwas) by legal scholars are disclosed, there are currently no unified principles (and no precedent) on which shari’ah scholars decide on the shari’ah compliance of new products. Fatwas are not consolidated, which inhibits the dissemination, adoption, and cross-fertilization of jurisprudence across different countries and schools of thought. Moreover, there is still considerable heterogeneity of scholastic opinion about shari’ah compliance, which undermines the creation of a consistent regulatory framework and governance principles. Therefore, the fragmented opinions of shari’ah boards, which act as quasi-regulatory bodies, remain a source of continued divergence of legal opinion.

The absence of uniform and definitive guidance on shari’ah compliance affects the legal integrity of the restitution interest of investors in sukuk. Islamic investors are concerned not only with the compliance of both cover assets and the transaction structure with the shari’ah, but also with legal enforceability of asset claims under contract law. In this context, the question arises whether Islamic law governs sukuk by substance or form. 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, might vary considerably. If shari’ah compliance is treated (only) as a matter of substance and upholds in spirit what was created in form, such as perfected security interest defined by commercial law, the violation of the shari’ah would temper investor confidence.
interest but not preclude legal enforceability of investor claims. However, 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 and re-qualify the legal nature of a securitization transaction. For instance, insolvency officials in Islamic jurisdictions could invalidate the substantive non-consolidation and “re-characterize” a true sale securitization as an unsecured loan.

Recent efforts to achieve regulatory consolidation and standard setting have addressed legal contingencies imposed by Islamic jurisprudence and poorly developed uniformity of market practices. Leading regulatory organizations in Islamic finance, such as AAOIFI, the General Council for Islamic Banking and Finance Institutions (GCIBFI), the Islamic International Rating Agency (IIRA), the Islamic Financial Services Board (IFSB), and the Fiqh Academy in Jeddah, have been working on aligning shari’ah principles on a consistent basis.

However, current regulatory changes concerning the structure of sukuk warrant careful consideration and might mute some of the recent enthusiasm for Islamic capital market products. These proposed rules attracted significant attention prior to their release, following a statement by the chairman of the shari’ah committee in November 2007 indicating that 85% of sukuk issues in the GCC do not concur with shari’ah principles. Shari’ah scholars raised objections to principal guarantees via repurchase agreements, asset retentions by originators adept at minimizing withholding tax obligations of issuing conduits, and the concurrent transfer of certain proportions of debt associated with underlying assets, such as interest-bearing liens. Most sukuk have been sold with a borrower/creditor guarantee to repay the full notional amount at maturity, or, in the event of default or early redemption, mirror the structure and payout of a conventional bond. Such a promise (and not the option) to repay capital violates the principle of risk-and-profit-sharing under Islamic law. The debate about the general applicability of these recommendations with regard to the approval process of sukuk (and the screening of both their structure and characteristics of underlying assets) has raised concerns about the economies of Islamic securitization and the shari’ah governance of Islamic capital markets at large.

Outlook

As Islamic finance comes into its own, and companies turn to capital market-based sources of finance, sukuk will become essential to the competitiveness of corporations and banks alike. Since conventional securitization is virtually absent in Islamic countries, considerable demand for shari’ah-compliant investment assets, such as sukuk, provides an untapped market for structured finance as a means to advance capital market development. Islamic securitization also complements the battered ABS market as an alternative and more diversified funding option that broadens the pricing spectrum and asset supply.

With more than U.S. $2 trillion of credit demand projected to be unmet in the next three years as the conventional securitization market remains dysfunctional, the current market situation provides a window of opportunity for sukuk. Seemingly, the religious overlay of sukuk has helped temper unfettered financial innovation and structural complexity, which have become the undoing of conventional securitization in the current financial crisis. In spite of having been hemmed in by the credit crisis, the widespread economic downturn, and the slump in the real estate sector of the GCC, the sukuk market is expected to soon gain momentum again, largely due to past windfall from high commodity prices, especially oil revenues in the GCC.

Nonetheless, for sukuk to fill some of the void left behind by conventional structured finance, much will depend on the resurgence of financial innovation geared towards exploring options for (and greater flexibility in) the interpretation of different modes of secondary sources of Islamic faith supporting religious doctrine (analogous deduction (qiyas), independent analytical reasoning (ijtihad), and scholarly consensus (ijma) based on first principles).
### APPENDIX

**Islamic Finance Contracts—Basic Terminology**

<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
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<tbody>
<tr>
<td><strong>Amana</strong></td>
<td>Deposits held at the bank for safekeeping purpose. They are guaranteed in capital value, and earn no return.</td>
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<tr>
<td><strong>(Demand deposits)</strong></td>
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<tr>
<td><strong>Bay mu’ajal or bay bithaman ajil</strong></td>
<td>The seller can sell a product on the basis of a deferred payment, in installments or in a lump sum. The price of the product is agreed upon between the buyer and the seller at the time of the sale, and cannot include any charges for deferring payment. In a BBA contract, the lender is not compelled to disclose the profit margin.</td>
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<tr>
<td><strong>(BBA)</strong></td>
<td></td>
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<tr>
<td><strong>(Pre-delivery, deferred payment)</strong></td>
<td></td>
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<tr>
<td><strong>Salam</strong></td>
<td>The buyer pays the seller the full negotiated price of a product that the seller promises to deliver at a future date.</td>
</tr>
<tr>
<td><strong>(Pre-payment, deferred delivery)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Ijara</strong></td>
<td>A party leases a particular product for a specific sum and a specific time period. In the case of a lease purchase, each payment includes a portion that goes toward the final purchase and transfer of ownership of the product.</td>
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<tr>
<td><strong>(Lease, lease purchase)</strong></td>
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<tr>
<td><strong>Istisna</strong></td>
<td>A manufacturer (contractor) agrees to produce (build) and deliver a certain good (or premise) at a given price on a given date in the future. The price does not have to be paid in advance (in contrast to bay salam). It may be paid in installments or part may be paid in advance with the balance to be paid later on, based on the preferences of the parties.</td>
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<tr>
<td><strong>(Deferred payment and delivery)</strong></td>
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<tr>
<td><strong>Ju’ala</strong></td>
<td>A party pays another a specified amount of money as a fee for rendering a specific service in accordance with the terms of the contract stipulated between the two parties. This mode usually applies to transactions such as consultations and professional services, fund placements, and trust services.</td>
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<tr>
<td><strong>(Service charge)</strong></td>
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<tr>
<td><strong>Kifala</strong></td>
<td>It is a pledge given to a creditor that the debtor will pay the debt, fine, or liability. A third party becomes surety for the payment of the debt if unpaid by the person originally liable.</td>
</tr>
<tr>
<td><strong>Mudaraba</strong></td>
<td><strong>Rabb -ul- mal</strong> (capital’s owner) provides the entire capital needed to finance a project while the entrepreneur offers his labor and expertise. Profits are shared between them at a certain fixed ratio, whereas financial losses are exclusively borne by <strong>rabb -ul- mal</strong>. The liability of the entrepreneur is limited only to his time and effort.</td>
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<tr>
<td><strong>(Trust-based contract)</strong></td>
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<tr>
<td><strong>Murabaha</strong></td>
<td>The seller informs the buyer of his cost of acquiring or producing a specified product. The profit margin is then negotiated between them. The total cost is usually paid in installments.</td>
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<tr>
<td><strong>(Mark-up financing)</strong></td>
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<tr>
<td><strong>Musharaka</strong></td>
<td>The bank enters into an equity partnership agreement with one or more partners to jointly finance an investment project. Profits (and losses) are shared strictly in relation to the respective capital contributions.</td>
</tr>
<tr>
<td><strong>(Equity participation or “sweat capital finance”)</strong></td>
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<tr>
<td><strong>Qard Hassana</strong></td>
<td>These are zero-return loans that the Qur’an encourages Muslims to make to the needy. Banks are allowed to charge borrowers a service fee to cover the administrative expenses of handling the loan. The fee should not be related to the loan amount or maturity.</td>
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</tbody>
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ENDNOTES

The views expressed in this article are those of the author and should not be attributed to the IMF, its Executive Board, or its management. Any errors and omissions are the sole responsibility of the author.

1Asset securitization involves converting a pool of designated financial assets into tradable liability and equity obligations as contingent claims backed by identifiable cash flows from the credit and payment performance of these asset exposures. From an issuer perspective, securitization registers as an alternative, market-based source of refinancing profitable economic activity in lieu of intermediated debt finance.

2In February 2008, the shari’ah committee of the Accounting and Auditing Organization of Islamic Financial Institutions (AAOIFI) issued recommendations regarding the role of asset ownership, investment guarantees, and the shari’ah advisory and approval process in sukuk origination and trading. These recommendations led to a critical reassessment of outstanding sukuk issues and lengthened the approval process of new issues in 2008.

3More than two years before the mortgage crisis, market practitioners voiced considerable skepticism about the plethora of new issues and deal structures, as well as the entry of new managers in the market for collateralized debt obligations (CDOs), which compounded concerns that credit quality had been on a monotonously low trajectory with little promise of imminent recovery.

4In efficient markets, risk-neutral managers do not benefit from dynamic asset allocation (ignoring transaction costs) by substituting badly performing assets, because the ability to weed out certain reference assets comes at a premium. Under worsening credit conditions, better asset performance is generally harder to come by, making managers no better off than before once they divert funds to safer but highly coveted and more costly territory (or accept higher hedging costs).

5This definition refers to any positive and predetermined return that is tied to the maturity and amount of principal, resulting in wealth creation regardless of the outcome of asset performance (or the success of the business operations of the borrower).

6Stripped of its religious elements, this concept parallels the free-money theory of interest (“Freiwirtschaft”), which postulates an economic system where the most talented people would have the highest income, without forgery by interest and rent charge (Gesell [1958]).

7Besides interest earnings, Islamic law also prohibits 1) the direct or indirect association of contracts with (and investment in) lines of business involving alcohol, pork products, firearms, tobacco, and adult entertainment, 2) betting and gambling (maysir), including the speculative trade, rescheduling, interest discounting, or exchange of money for debt without an underlying asset transfer, 3) the trading of the same object between buyer and seller (bayʿ al-inah) if it creates indebtedness, and 4) preventable uncertainty and risk with delusion (gharar).

8See also Errico and Farrahbaksh [1998] and El-Hawary et al. [2004] as well as the Appendix to this article. Note that in many cases, returns from investment in unacceptable sources if they occur together with shari’ah-compliant investment may be regarded acceptable if these proceeds are donated to charity.

9According to the latest recommendations by the Accounting and Auditing Organization of Islamic Finance Institutions (AAIOFI), sukuk are equivalent in form to asset-backed securities (ABS), which would also hold out the possibility of investor subordination through co-participation schemes (see Exhibit 4).

10In conventional securitization, a SPV is set up solely for the purpose of the securitization and might be a trust, limited-liability company, partnership, or corporation. In Islamic securitization, the objectives set out in the constitutional documents of the SPV also must not infringe on the prohibition of riba and haram under Islamic law.

11Exhibit 5 illustrates the possible pairing of traditional commodities (money: gold and silver; staple foods: wheat, barley, dates, salt) for shari’ah-compliant trade according to the qu’ran. These categories are to be viewed as “proxies” for similar commodities that are more prevalent today. The symbols signify that trade is either unrestricted (as indicated by the checked box) or legitimate only if it occurs 1) spot (as indicated by the clock symbol) without profit, and/or 2) for the consideration of the same quality and quantity (as indicated by the equality sign).

12Instead, commodities could serve as religiously acceptable, short-term investments.

13Wakala defines a principal-agent relationship in which a fund manager acts as the agent of investors in accordance with pre-agreed investment parameters. The primary fee is fixed, for instance, as a percentage of assets under management. There may also be a performance-based fee but not a simple sharing of profits.

REFERENCES


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