

PART

One

The Foundation of *Sukuk* Securities

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Introduction to *Sukuk* Markets

On Christmas Eve 2013, Pope Francis, in his first apostolic exhortation, pleaded for “a return of economics and finance to an ethical approach which favors human beings.” Instituting an ethical approach to finance is the purpose of Islamic financial markets, which have created securities that conform to Islamic scripture and traditions. In some countries this form of contracting has been dubbed *participation finance* to emphasize the profit-sharing aspect of this new market practice. Islamic securities are specially tailored financial products that conform to the set of ethical and common law-based financial transaction principles laid out in *Shari’ah*, or Islamic law. *Shari’ah* literally means “the way,” and it takes its body of principles from the Quran and the *Sunnah* (an account of the normative behavior of the Prophet Muhammad). Those principles are strictly applied when designing the financial contracting terms that cover such products. Compliance is assured by a committee of experts working at each financial institution, and the institutions must abide by the rulings of both the national and international committees on compliance standards.

Although sovereign laws enacted by various governments originated with some strong ethical foundations in order to protect people, these were watered down in recent centuries by the power of the moneyed class, which includes modern banks. The result is that some of the high moral edicts that governed the financial behavior of human societies are no longer taken into consideration in the design, marketing, and sale of financial products. There has been a call in recent years to go back to human ethics, since the world has witnessed how new and untested financial innovations could wreck the wealth of societies. It is a call for finance that favors human beings against the interests of the moneyed class.

For example, in the environment of close to zero percent interest rates that has prevailed since 2010, banks are now going back to the old bad habit of offering bets on future events to entice bank depositors to bring their savings to the banks with a “bet.” If the bets are won, the contracted low interest rate will be increased by the banks. Of course, the experience

of depositors in the United States in 1994–2008 was that bets like these made lots of people lose money. Although such bets are just another form of gambling, bank regulators have yet to move aggressively to outlaw these contracts being offered by regular (versus investment) banks that cater to the common person with little savings.

ISLAMIC (PARTICIPATION) DEBT SECURITIES

Islamic financial instruments, constructed with some extra elements of ethical precepts, have helped to form a niche market for financial products in 76 countries today. The total assets of this niche market are no more than a small fraction of the world's conventional securities markets. These Islamic securities may be classified into four major groups: stocks, mutual funds, money markets, and *sukuk* (bonds that comply with *Shari'ah* requirements).

Sukuk certificates are Islamic debt securities held by the lenders. This book is about these new instruments, which are currently issued and traded in 12 markets; the first public issue was in 1998. In October 2013, Britain announced its intention to start a *sukuk* market in 2014–2015. This book describes the foundation of *sukuk* as Islamic securities, sometimes also called *participation debt certificates* or *participation debt securities* to connote the risk-sharing aspect of *sukuk* debt contracting.

The principles to which Islamic securities adhere are quite different from those used in the design of conventional securities, but some modern terms are shared by the two practices, borrowed from conventional financial contracting. The modern financial principles that guide the design of conventional debt securities evolved over two and a half centuries without much reference to the type of ethical principles that have been applied in designing Islamic financial products in historical times as well as today.

The vast majority of the lending for production funding was secured by the invention of fractional reserve banking around 1850 CE. This new form of banking was revolutionary, and it has secured widespread acceptance from regulators. This revolution started about four decades after the papal edict that made lending at interest permissible for the adherents of the Roman Catholic Church.

Production funding that existed before this papal edict was not based on interest, nor did it shirk risk sharing in lending. Loans were based on profit sharing and risk sharing, but this slowly gave way to a one-way contract in which the return and risk of a production loan became divorced from the outcomes of lending. The voyages of Christopher Columbus were designed as risk-sharing and profit-loss-sharing contracts. Queen Isabella

and King Ferdinand of Spain secured 70 percent of Columbus's profits on goods, including slaves, that managed to survive the risk of transatlantic navigation.

Today's mode of funding is based on the entrepreneur taking the *full risk* of a venture; the lender takes no risk of failure but is assured of a prenegotiated reward if the venture succeeds. Fractional banks can therefore offer much cheaper loans than the risk-shared loans of historical times.

This is not the case with Islamic financial securities. The financial contracts designed under the Islamic (participation) label require strict adherence to some fundamentally different principles for all kinds of securities, be they publicly traded bills, shares, debtlike *sukuk*, stocks and derivatives, or privately traded instruments.

Islamic financial instruments can be classified into four core types of contracts:

1. ***Musharakah* securities.** Ownership and control of a firm's assets through the purchase of shares of stock makes this class very similar to common stock ownership. The shares of stocks are securities that give the owner a claim to the profits only if the profits are earned after the risk of the project has been shared.
2. ***Sukuk* securities.** These are mostly finite-period debt (rarely equity) or funding arrangement contracts, mostly without managerial control of the project funded but with unique fractional ownership of a set of income-producing assets of a borrower. These assets are set aside by the borrower as asset-backed or asset-based contracts held in a special purpose company (SPC) owned by the fund providers, whose payoff is based on profit sharing from the assets of the SPC.
3. ***Takaful* (insurance).** *Takaful* contracts are risk-transfer arrangements that contain the provision that the insurance premiums collected from the insured parties are to be invested only in approved (i.e., permissible by *Shari'ah*) securities. *Takaful* uses mutual insurance principles; hence, the excess profits of the insurance operator are distributed at regular intervals to members based on a prenegotiated profit ratio.
4. **Islamic mutual funds.** These are investment funds managed on behalf of clients for a fee and recovery of the costs incurred in managing the portfolios. Return of profits occurs after the management costs are recovered. These funds are to be invested only in socially beneficial production activities, not antisocial (as defined by *Shari'ah*) projects.

This simple four-category division of Islamic financial products may resemble the conventional security classes of stocks, bonds, insurance, and mutual funds. However, there are significant differences in their structure,

in the mode of pricing them, in collateralization, and in what economic production activities may have access to the funds.

For example, the pricing of Islamic securities is done through profit-sharing and risk-sharing contracts under the ethical principle of giving rewards only after the risks are shared. Conventional securities are priced by interest-based payments to investors, usually prenegotiated, with no risk shared. Some Islamic securities may even have special features, such as a strange form of diminishing principal repayments with profit sharing. Thus, profit payments are reduced as the entrepreneur takes more control of the production. This is called diminishing *musharakah*. There are other exotic contracts, all tied to the specific funding needs in the production process.

These and other characteristics make participatory financial instruments very different from conventional instruments. The appearance of similarity is somewhat exaggerated by critics not knowing that the important structural differences are meant to safeguard both borrowers and lenders and to ensure ethics-based funding arrangements.

Since Islamic securities, once issued as publicly traded instruments, are also traded in financial markets, we have to also include two more categories of Islamic financial instruments: Islamic capital markets, and private equity (or private *sukuk*, private *takaful*, or private mutual funds). The latter category is a separate group of securities when such securities are not traded in public markets, so we may also call them *nontraded* private Islamic securities.

Thus, we have six categories of Islamic financial transaction modes. We have provided these introductory remarks to set the stage for our discussion of only one of these classes, *sukuk*, in the rest of the book. We now proceed with this task by examining *sukuk* securities as a class by itself.

THE ORIGIN OF SUKUK STRUCTURES

Historical research in the Mediterranean region, traditionally known as the cradle of civilization, indicates that lending for production purposes was done through profit-sharing *and* risk-sharing contracts. Further, the loan was given only if the borrower had some assets or was likely to acquire some as a result of the financing. The exception to this rule was borrowing by kings and governments and perhaps also by the moneyed class as well as those in financial difficulty.

Historical records allude to the creation of *sukuk* as a borrowing instrument that Islamic legal scholars in the Turkish empire helped to design for public financing when the emperor needed to borrow large sums of money

for reconstruction after the devastation of the empire after five crusades that ended in 1285 CE. The innovation of fund-raising consistent with Islamic ethics of borrowing differed considerably from Christian practices at that time, which were based on Babylonian and Greco-Roman laws.

A financial contract must have the following characteristics under the Islamic participatory finance principles of borrowing and funding. Ownership and control contracts must be based on profit sharing by participating in the risk of the project so that the profit accrues to lenders *after* the fund is used for the project. The outcome of such funding is the profit earned, which is shared in proportion by the financier and the business. The important issue is that it is a shared arrangement even though the *sukuk* is a borrowing instrument for a limited period. One brings the capital and the other entrepreneurship to make things useful for the society under a joint arrangement.

The rewards to the financier depend on the outcome of the funds being applied, which includes a small chance of losses. The parties have a mutual interest in securing a good outcome of the business activity; the project risk is not shifted entirely to the entrepreneur. This enhances society's welfare. The interests of the moneyed class engaged in the lending are thus subject to the welfare of the community in which the moneyed class resides.

When no ownership and control is involved with the assets of an enterprise, a *sukuk* instrument is agreed upon as follows: (1) The fund provider has a share of that part of the borrower's assets transferred to a special legal body, the SPC, to be owned by the lenders; (2) the borrower earns rewards from the income of the set-aside assets to service the borrowed money at the end of the contract period; and (3) the earnings of the SPC assets could provide periodic incomes to be paid as rewards if the contracts provided for such payoffs at regular intervals as ordinary annuity.

In a sense, then, to borrow, a producer firm must have part of its assets removed from the producer firm's control so that the lender has income from those set-aside assets to service the fund provider. While the asset transfer makes such debt riskier, it also ensures that the borrower is limited to borrowing only to the extent that the assets have value. The principle is "Have assets, can borrow."

Borrowing for any purpose other than economic usefulness to society is discouraged. The setting aside of assets of a producer firm ensures an income as return to the lender, which is meant to make the borrowing contract more secure—two-sided or asynchronous. That is not the case in current conventional bond markets, although without risk sharing with prenegotiated interest payments, conventional debt contracts may still be less risky.

Borrowing in conventional bond markets is usually based on the good credit reputation of the borrowers. Certainly, the assets are not owned from

day one of the funding, nor are risks shared before payoffs occur. Under the modern laws applying to conventional lending, a lender may still have to take the borrower to court under the provisions of the corporate laws to make a claim for the assets owned by the borrower, the producing firm. This is a costly process.

A *sukuk* contract, in contrast to a conventional bond, was agreed upon by the Turkish emperor to raise money by setting aside some of the treasury assets to be owned by the lending public to rebuild the infrastructure of the empire.

Another characteristic in *sukuk* funding is that the reward that the fund provider gets from investment is from income from the assets set aside by the borrower in order to pay an agreed-upon return (regular payoffs, if such a term is contracted) based on profit share and to repay the borrowed funds at the end of the term of the loan contract.

Although *sukuk* funding as described above is a producer loan, another class of borrowing is individuals borrowing for sustenance, in which case funds are lent without any promised payoff (the so-called increase or *com-menda*) above the sum lent. This form of Islamic lending is based on repayment of the principal lent, nothing more. This is called *qard hassan*, or benevolent loan, which is a form of lending with no interest. Repayment of the principal by the borrower is a must, however. *Qard hassan* is mandated solely to fund household funding needs. This form of borrowing is an insignificant portion of the total market.¹

This form of funding is similar to the papal lending that occurred in Italy during periods of famine and war; the Church lent money generously without any interest and with no expectation of the principal being repaid. Though the principal is to be repaid, forgiving the return of principal is advised in the Quran. Lending for sustenance without an expectation of reward—and even the forgoing of the principal amount—is clearly lauded as an act of piety in the Torah, the Bible, and the Quran. There is a shared Abrahamic moral ethos for consumption lending, but this should not be confused with production lending based on shared risk and profits.

¹ For example, the National Australia Bank (the second-largest Australian bank in 2014) has made available a large sum of money to a Muslim financial cooperative to lend to needy families to buy household durables without any interest payments. Traditionally, this form of lending has been widely practiced in communities in which society, a bank, or a rich individual provides interest-free loans to needy families to obtain productive assets. Some reports indicate that banks do lend about 1/25 of their funds for this purpose in Iran, for example.

CONTEMPORARY SUKUK SECURITIES

The current Islamic *sukuk* funding market in Malaysia was rediscovered about in 1990 when a private-sector firm, Shell Malaysia, issued a *sukuk* borrowing instrument to raise RM125 million (US\$40 million) through a private issue in the Kuala Lumpur capital market (now Bursa Malaysia). Since then, and especially since 2000, this market has grown, with private-sector firms as well as government agencies raising money by issuing *sukuk* securities in Kuala Lumpur and 11 other countries. The Bank for International Settlements, which deals with both publicly traded and private issues, reports that the *sukuk* bond market around the world is worth about US\$1,200 billion (about 1.2 percent of conventional bond issues).

Private issues dominate this market because the government issues amount to less than US\$100 billion in open markets in the same 12 locations. The most active markets are found in just 6 of these locations: Malaysia, Kuwait, the United Arab Emirates (UAE), Oman, Qatar, and Saudi Arabia (in that order). *Sukuk* issues have grown in 23 years, and there is room for the further growth of this market.

Scholars have different opinions on the character of the assets transferred and jointly owned by the lenders in the form of SPCs. One school of thought is that as long as the assets transferred are not real assets, a *sukuk* contract is not likely to be secure. The majority opinion is that real assets must back funding contracts.² In the last two decades, this provision has been watered down so much that some institutions have gotten the approval of the *Shari'ah* regulators to consider any assets permissible as long as they are income producing. In practice, usufructs and incomes of financial assets are used as substitutes for real assets.

One school of thought is that the assets must be owned, and the other school is that the assets need not be owned, so that the contract could provide for asset-based contracting. In extreme cases, the assets transferred are recontracted to be owned by the borrower. This issue is addressed separately in Chapters 3 and 9.

The *sukuk* market has grown very fast in the six countries mentioned above, which offer new sources of funds for investors to fund both private and public projects. All these countries follow the profit-sharing formula and the SPC having ownership of income-producing assets held by the lenders, at least at the start of the lending process. The World Bank has endorsed this form of borrowing for large funds urgently needed to finance infrastructure

² U. M. Chapra, "The Major Modes of Islamic Finance," course in Islamic Economics, Banking, and Finance series, Islamic Foundation, Leicester, UK, 1998.

projects in developing countries. The self-liquidating nature of this form of long-term loan issued mostly in local currencies makes this form of financing cheaper than the megaloads denominated in major currencies structured in the six international bond markets: London, New York, Tokyo, Sydney, and several Swiss cities.

HOW SUKUK SECURITIES ARE PRICED

Thousands of years of financial history have provided human beings with new mechanisms to facilitate their lives through using some form of money. Among the very old practices is the concept of trade; this evolved from the simple mechanism of barter, which developed into the current means of paper currencies and coinage when China invented paper money 1,000 years ago. Paper currencies such as dollar are used to measure the value of virtually every tangible and intangible asset. However, the fundamental, hotly debated issue over time has been how to determine the true value or price of a particular asset.

Sukuk securities, as a relatively new class of financial instrument, are no exception to this concern. Over time, various methods were developed for pricing, which is the valuation of financial instruments leading to price discovery. Four methods are applicable in the case of *sukuk* securities. These methods are based on the foundation principles of commerce, which suggest that fair pricing should be used. Since there is no conflict between the concepts, general procedures, and rationality of these methods, on the one hand, and the ethical and religious requirements of Islam, on the other, one may apply these mechanisms. However, some adjustments might be required in the way that valuation is done for *sukuk*. Such adjustments are thoroughly discussed in Chapter 13.

The first method of valuation is the *public auction* pricing process. This method is based on the economic concepts of supply and demand. It suggests that the price would be a market clearing value in which the supply and demand for an item meets the funds available. We like to call this the cucumber theory: overproduction of cucumbers lowers their price, whereas shortages of cucumbers increase their price.

This method is widely used by practitioners for valuation of publicly traded *sukuk* securities, which is also similar for conventional bonds. In this process, the issuer, with the intermediation of an investment bank, structures a proposal for an issuance of *sukuk*. Through the public auction held by the investment bank, the price is discovered by the investors in the bidding, similar to how houses are auctioned to eager buyers. Investors bid for the highest price if they assume that there is value in it for them. Therefore, the *sukuk* would be sold to the investors with the highest bids.

Private negotiation is the second method of pricing *sukuk* securities. This method is used in private placements offered to a limited number of private investors. This process can be conducted as an over-the-counter solution offered by investment bankers (as middlemen) to cut a deal between the originator and the investors, or it can be conducted as a direct bilateral negotiated contract between the two parties (in the way a Masai herdsman buys his cattle).

This method is also similar to the bilateral negotiation of a lender and a borrower in a bank loan, but in the case of *sukuk* with Islamic contracting terms, these bilateral agreements are enforceable legal documents governing the prenegotiated terms of contract between the issuer and the investors. Such a method is suitable mostly for private *sukuk* placement, in the same way that private debt placement takes place in 125 conventional fixed-income markets around the world.

The third method of pricing is *convertible* pricing. Some of the *sukuk* securities have a convertible option feature embedded in their structure (e.g., Telekom Malaysia). Such structures provide their investors with the option to trade in their *sukuk* certificates with a certain amount of equity shares of the underlying firm (mostly the originator) after a predetermined time. Some of the *sukuk* placements in markets like London, Zurich, and Luxembourg are originated by firms listed in their local markets.

Hence, there are two special elements visible in such structures. First, their value is tied to the value of an underlying equity share, as a consequence of the convertible options featured in them; and second, the underlying equity share value represents a cross-market firm. Such placements therefore resemble the depository receipts of a foreign firm's stock in the market where the *sukuk* securities are traded. Thus, the existing mechanisms of pricing depository receipts become handy. Such forms of *sukuk* securities are, currently, a small fraction of the market; however, there is a growth potential for this form of fund-raising structure.

The first three pricing methods are mainly based on the outcomes of market-driven initiatives such as supply and demand and are therefore called the market value of the security. However, the actual pricing of conventional fixed-income securities are not limited to market price.

Theoretical modeling is the fourth method of pricing conventional debt securities. The absence of a theoretical pricing model has led to a focus on the market forces, and the underlying value of the security is thus partly overlooked. The lack of correct measures causes the mispricing commonly observed in the *sukuk* security market.

These two categories of methods—market based and theory based—when applied together will result in a more accurate price discovery for *sukuk* securities. The theoretical valuation modeling of *sukuk* securities is thoroughly discussed in Part III.

The principles of Islamic finance affect the pricing of Islamic instruments, and then all possible cash-flow patterns of different structures are generated based on their definitions. With the cash-flow patterns in hand, valuation models are developed. In order to develop correct valuation models and to make them more familiar for practitioners, a conventional pricing approach is first selected for experimentation to arrive at theoretical prices.

Sukuk securities that have identical cash-flow patterns as conventional bonds are priced with the same existing models. For instance, one form of *ijarah sukuk* (a lease contract) is identical to coupon-bearing collateralized bonds, so its price should be computed the same way. On the other hand, *musharakah sukuk* (profit sharing) is like no other bond security because its payoff is tied to the performance of the underlying firm (or the SPC). Thus, the cash flows are not predetermined, and modeling the security would be much more challenging in ways similar to the modeling of equity shares. These models are developed in the last part of the book.

THE STRUCTURE OF THIS BOOK

Introductory materials to define, describe, classify, and provide the structures of the various debt contracts are presented in Part I. Our aim in this part is to provide both the layperson and the specialist with an understanding of how this new security is designed and to show the structural differences among the six most commonly issued instruments. The theoretical grounds of *sukuk* markets are described in this part.

In Part II, our aim is to present evidence that the new debt market has a number of features that make it different from the conventional bond market, to which market players refer in trading *sukuk* securities. We show that *sukuk* securities yield significantly higher yields than their identical conventional counterparts. The yield differences are, in fact, quite substantial. We explain that this is a result of the higher risk inherent in risk-sharing and profit-sharing contracts, although this connection has yet been empirically verified.

Part III is concerned with the issue of how to map the payoffs in each of the instruments to identify the cash-flow patterns. This part describes a number of core types of payoff structures. These patterns can then be used to identify mathematical solutions as objective valuation models. Another feature of this part is the contribution of a chapter by a specialist in regulation on the issues confronting continued growth from regulatory shortcomings. The book ends with a discussion of the challenges for the continued growth of this form of debt structuring, which is only about 28 years old.