Islamic Sukuk securities as financing instruments: An examination of bond pricing in the conventional and Islamic setting and a survey of literature on alternative benchmarks to the interest-based system

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ISLAMIC SUKUK SECURITIES AS FINANCING INSTRUMENTS

An examination of bond pricing in the conventional and Islamic setting and a survey of literature on alternative benchmarks to the interest-based system

By

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CHAPTER 1. INTRODUCTION

Sukuk have become the cornerstone of Islamic financing and in spite of all the challenges, *sukuk* are now the premier investment outlet for Muslims as individuals, corporations and governments alike. Their popularity derives from cultural as well as economic needs; cultural in the sense of enabling Muslim investors to comply with their religious law or Shari'ah and economic because it enables them to invest in *sukuk* certificates which represent ownership rights in real assets with attractive returns. The growth of sukuk has exceeded even the most optimistic expectations. In fact, every issue of sukuk, so far, has been oversubscribed and demand by far exceeds supply. It is thus opportune and timely that a research paper which draws on past and current literature on the subject, and attempts to deal with some of the issues that *sukuk* will face in future, is presented here.

The approach that has been used in the discussions throughout the chapters is to investigate the similarities and differences between conventional and Islamic debt instruments. This link is vital to our understanding of the characteristics of each in relation to whose needs they are meant to address. In the conventional setting, bonds are a means of providing funding for various institutions and yet serve as attractive investment outlets for those who want to park their excess liquidity profitably or diversify their risk portfolio. In the Islamic case, raising finance is certainly a top priority for sovereigns and corporates alike but religious compliance with the edicts of Islam, the ethical screening of the where the money is being invested and what assets constitute the collateral and how they are securitised are equally important. Additionally, the institutions set up to supervise and facilitate the flow of funds from the Islamic Financial Institution (IFI) to the holders of these securities whether in the form of returns, rentals or mark-up and repayment of original sum invested are essential to the workings of an Islamic financial system and should be structured in

accordance with Islamic laws and principles and therefore merit an examination and discussion of the issues they encounter

1.1 AIM AND OBJECTIVES

The aim of this work is to study *sukuk* as viable Islamic financing instruments within the framework of Shari'ah rules and background.

The objectives of this study are as follow:

1. To examine conventional bond structures, types, pricing and returns in order to understand their relevance to sukuk legal structures, adaptability and innovation;

2. To consider the types of risks associated with fixed income securities and compare these to risks attached to their *sukuk* counterparts.

3. To examine and evaluate the most common types of *sukuk* that are used today as financing instruments, their applications and uses, as well as their benefits and drawbacks, and consider their role globally.

4. To compare and contrast *sukuk* with conventional bonds.

5. To consider and explain the important role of securitisation in the development of primary and secondary capital markets for *sukuk*.

6. To explore the criteria used by rating agencies to evaluate bonds and *sukuk*, and highlight their main concerns and the challenges which they pose to *sukuk* in the future.

7. To examine the role of Bahrain and Malaysia in developing the financial institutions and markets necessary to issue, market and trade in *sukuk* and also to provide liquidity.

8. To survey and review the literature on benchmarking the returns on *sukuk* to other than interest-linked benchmarks, and examine the benefits and concerns regarding each of the proposed solutions.

9. To outline a number of different *sukuk* issues, with case studies and brief comments on their structures and versatility.

1.2 RESEARCH QUESTION AND HYPOTHESIS

The starting point was to look at conventional instruments of financing but more specifically to gain an insight into the structure and workings of these instruments so that we can understand how these instruments have been modified to fit into an Islamic context and satisfy an ever increasing demand for interest-free and asset-based instruments of finance. A number of writers on the subject have questioned the validity of Islamic instruments of finance and saw no point in using them as they were extremely similar to their conventional counterparts and remain reliant on inter-bank rates for the determination of their rates of return. The question that inevitably then poses itself is whether these Islamic instruments of finance are merely dressed-up conventional ones or genuine tools that comply with Shari'ah law and serves the needs of the Moslem financial communities and governments.

There are many similarities between Islamic and conventional bonds. Therefore, as a hypothesis, we maintain that despite these similarities, there are distinctive features to Islamic tools of finance or sukuk to justify their existence and use as a viable mean of

financing, but that these are still evolving structures, going through a process of continual enhancements and adaptability.

1.3 THE RATIONALE AND MOTIVATION FOR THE RESEARCH

The fact that almost every issue of sukuk is oversubscribed indicates more than a fleeting interest in their attractive rates of return. The wave of liberalisation, particularly in the economic field that has swept through much of the Middle East leading to the opening up of markets to competition and free trade has necessitated the mobilisation of internal wealth to carry out large scale economic development, each country according to its own niche; a kind of specialisation according to what each country does best and can offer to compensate for the loss of revenues that might occur as a result of competition and free trade. For example, Saudi Arabia is investing heavily in the energy and petrochemical sector, while Dubai has been investing in its tourist industry and real estate. Bahrain meanwhile has been setting itself up as a financial centre with similar developments taking place in Qatar and other Gulf countries. Furthermore, the post-9/11 events have made the wealthy and governments alike, jittery about investing their money in the West. Additionally, there are thousands of Muslims who would prefer to invest their money locally rather than in the West. On a personal level, these developments can be seen as a trend for the future to which hopefully this research would contribute in some way.

1.4 RESEARCH METHODOLOGY

This research follows a qualitative and descriptive approach. A descriptive review of the various types of conventional bonds is undertaken and wherever applicable their relevance to sukuk is explained. Then the sukuk scene is surveyed to ascertain their unique features, effectiveness as financing tools, risk profile and the legal requirements necessary for their compliance with Shari'ah law. Specifically, we first look at those with predetermined return

or mark-up, such as *murabaha* and sukuk *al ijara* and those with an uncertain outcome such as *musharka and mudaraba.* We also look at other short-term sukuk such as *salam.* In this respect, we draw on practical examples of sukuk issued and assess how they measure up to their theoretical models and legal precepts. A number of case studies and sukuk types have been included in the Appendix for this purpose. We also examine alternatives to interest rates as a reference point for determining the rate of return to investors. Finally, the stage is set for drawing conclusions and lessons based on the above-based work. Furthermore, the study will be substantiated by a closer look at the issues that are associated with sukuk such as securitisation and liquidity. The study also looks at the regulatory framework and capital market developments for sukuk, noting that these institutions are still in the early stages of development and evolution to provide the sort of momentum for the sukuk market as the well-developed conventional capital counterparts did for conventional bonds.

It is a fact that no study is complete without a look at the institutional structure that supports the issue of sukuk and will support other Islamic financial instruments in future, namely, the infrastructure comprising the Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI), the Liquidity Management Centre (LMC), the Islamic Rating Agency, the Islamic Financial Services Board (IFSB), the General Council of Islamic Banks and Financial Institutions (GCIBFI) and the Islamic Financial Services Board (IFSB).

1.5 RESEARCH METHOD

A literature survey method has been adopted throughout this study without sacrificing the use of a critical approach in evaluating the data and information provided. The research study helps to highlight not only what the features of different sukuk mean to the borrowers and investors but also what is required in financial engineering for the future innovation in these financial instruments. For this purpose, we point out the availability of eligible assets underlying Islamic financial instruments as a limiting factor in their growth and the absence

of a robust secondary market as a constraint on their tradability. The questions of 'true sale' and 'remoteness' of the special purpose vehicles are also discussed. These research questions and others will allow us to evaluate these Islamic structures and draw qualitative ideas for further investigation and research.

The study has subsumed academic as well as other professional material. This work has also included numerous research papers and journals. The website for Islamic Financial Information Service (IFIS) provided much of the data and details pertaining to *sukuk* issues and a good deal of the academic and research papers. Use was also made of papers commissioned by the IMF, the World Bank and the Islamic Development Bank (IDB), to name just a few.

The lecture notes for the entire course provided by Professor R. Wilson have been extremely useful in providing the historical background to the subject and shedding light on the current thinking and practices of Islamic financial institutions and the extent to which various countries have adapted Islamic economic and financial concepts to their own schools of thought and practices.

Journals such as *The Banker* and *Islamic Finance News* provided useful insight into current thinking on the topic of this research paper through useful articles and forums for opinion by distinguished academics and business individuals on various current and controversial topics in Islamic finance.

Attendance at some of the Islamic finance conferences in Bahrain and the UK have proved very beneficial in terms of interaction with scholars, practitioners and lawyers closely connected with Islamic finance such as partners from the law firms of Taylor Wessing and Noriba, BMA, IDB, to name only a few.

CHAPTER 2. CONVENTIONAL BONDS - LITERATURE REVIEW

2.1 INTRODUCTION

This chapter begins with an overview of conventional bonds and notes. These bonds have been classified according to the following categories: market, benchmark, interest determination, asset-based, redemption clauses and finally equity-based to appreciate the range and depth of debt instruments in conventional finance.

The rise of debt financing in the economy is evidenced by the doubling of global fixed-income issuance from $2,379bn to $4,858bn between 2000 and 2004; but global equity issuance fell from $595bn to $543bn, according to Thomson Financial, the data provider as quoted in the Financial Times (2005). Price stability, cheap debt and balance sheet realignment have all contributed to this phenomenon. Islamic financial trends cannot be immune to the effects of such global shifts. Therefore an examination and review of the types and various structures of bonds in their conventional setting[1] is not only important but relevant to an understanding of the Islamic financial counterparts.

A bond is basically a debt instrument, in other words, a legal obligation of the borrower to pay the bondholder a predetermined rate of interest over the life of the security and to pay the principal at the maturity date. This is in sharp contrast to equities, which are ownership interests and do not represent legal obligations, and whose value appreciation or depreciation depends solely on the success or failure of the business enterprise which they are financing, and unlike coupon or interest payments, dividends are entirely at the discretion

[1] Batten, Dr. Jonathan. ; Rogers, Keith and Windas, Tom (1999). Reuters Financial Training Series: *An Introduction to Bond Markets*: Singapore: John Wiley & Sons (Asia) Pte Ltd

of the management of the company. Equities also rank far below bonds in terms of creditor claims when and if a company goes into liquidation or bankruptcy.[2]

Bonds offer better protection to investors in that some corporate and municipal bonds are structured around certain covenants which oblige the issuer to comply with certain conditions such as maintenance of liquidity, debt or revenue requirements. Finally, bond prices are determined by the market after taking into consideration the issuer's credit ratings, the coupon payment rate, the term to maturity and market yield on other fixed-income securities. Equity prices, on the other hand, are a reflection of the expected or perceived value of the company's current and potential future earnings.

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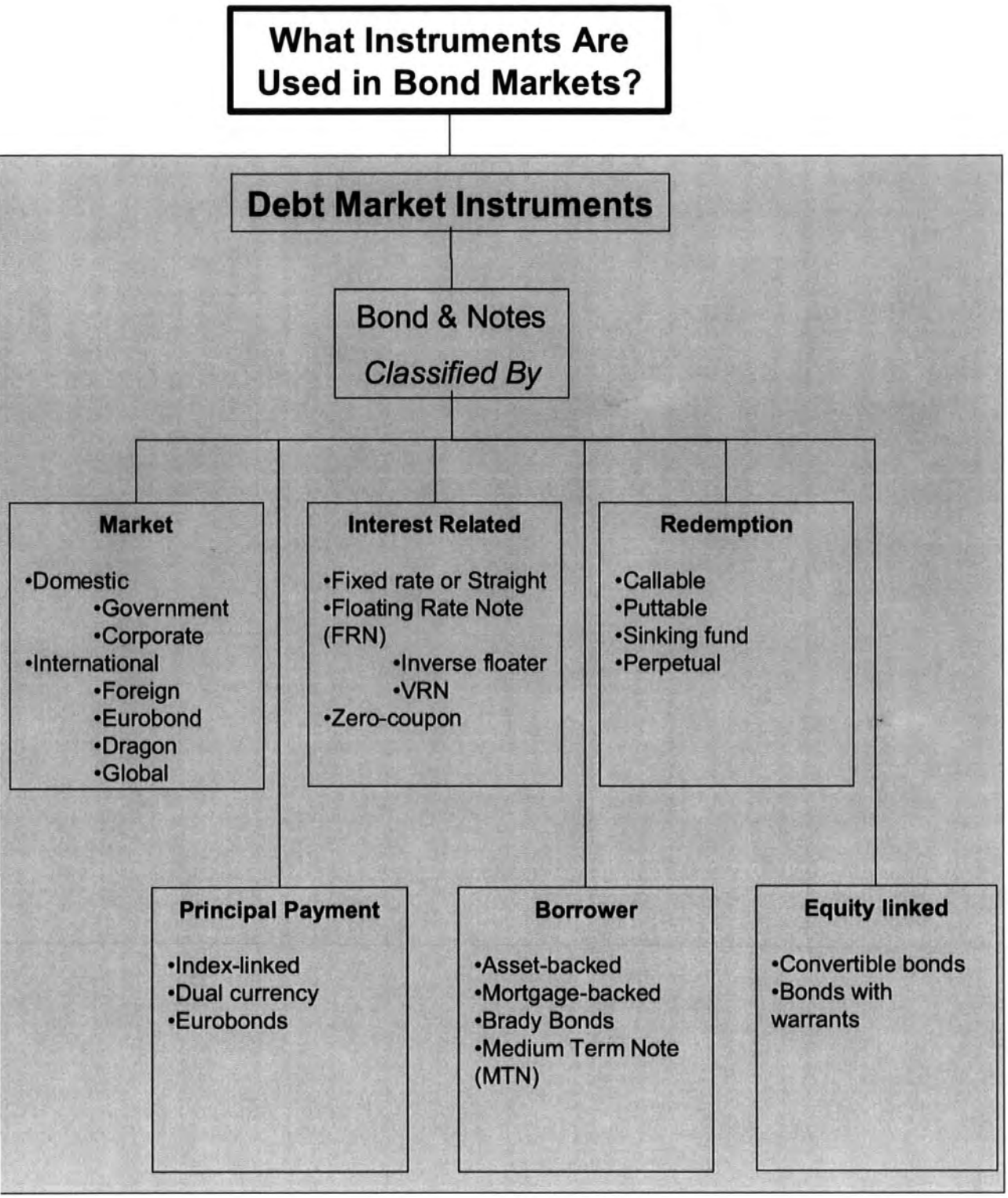
[2] Strumeyer, Gary. (2005). *Investing in Fixed Income Securities*. Hoboken, New Jersey: John Wiley & Sons pp. 1-4



Source: "An Introduction to Bond Markets", Reuters, p. 123, 1999

2.2 MARKET FOR BONDS

There are basically two markets for bonds; the domestic market and the international market.

2.2.1 Domestic

Domestic bonds are issued, underwritten, and traded under the currency and regulations of a country's bond market by a borrower located within that country; the borrower could be either a government/sovereign entity or a corporation.
Domestic bonds are issued in the domestic currency by a domestic corporation using a syndicate of domestic banks. There are many different types of instrument available including bullets, floating-rate notes, convertibles, zero-coupon and so on. Domestic markets are usually overshadowed by trading in government bonds and Eurobonds denominated in domestic currency. These markets are well-regulated, governing trading and tax matters. Corporate bonds are usually listed and traded on the domestic Stock Exchange(s) — but there are also large OTC markets.

Within the domestic markets the creditworthiness of the issuer is usually better understood than in the international markets. However, the domestic markets may not be suitable for large issues. Coupon payment usually uses the same frequency as that for the domestic government securities, the largest single corporate market worldwide being the U.S.A.
Government securities are used to raise money for financing budget deficits and repaying interest on existing and maturing debt. Conventional bonds and notes are issued in domestic currency and are issued using an auction system and involve primary dealers for the issue in the primary market. Government securities are the

highest quality instruments issued in a country and are therefore generally used as benchmarks for other bonds in that country.

The markets in government securities are generally well-regulated and usually very liquid; the securities are often listed and traded on the domestic Stock Exchange(s), though the majority of trading is OTC (over-the-counter). There are well-established conventions for issuing, pricing, coupon payments and repayments at maturity for government securities. The largest single government securities market worldwide is that for US Treasuries.[3]

A corporate bond is essentially an IOU, a debt instrument that sets out the obligations of an issuer to satisfy the terms of the agreement. Failure to meet payment of principal and/or interest when due (and to meet other provisions of the debt) in accordance with the terms of the instrument constitutes legal default and court proceedings may ensue to enforce the contract. Bondholders, as creditors, have prior legal claim over ordinary and preferred shareholders. This does not mean, however, that those bondholders are immune from financial loss.[4]

Corporations issue bonds to raise capital, particularly if they are private entities and wish to remain so. The type of borrowing that a corporation resorts to depends largely on the length of time needed for the funds raised and how much debt it wishes to issue in relation to its equity and capital structure. But corporations also use short-term borrowing by tapping their credit lines with banks and issuing commercial paper.

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[3] Batten, J.; Rogers, K. and Windas, T. (1999). Reuters Financial Training Series: *An Introduction to Bond Markets*: Singapore: John Wiley & Sons (Asia) Pte Ltd., pp. 32-53

[4] Batten, Rogers & Windas, "*Introduction*" op. cit., and "Corporate Bonds" by Fabozzi, F; Wilson R. and Todd R., in *Handbook of Fixed Income Securities.*

The Role of the Corporate Trustee

Corporate trustees are brought in to represent the interests of the bondholders for their expertise in the legal jargon of the bond indenture or contract. The trustee must keep track of all bonds issued or sold and ensure that the principal amount authorised by the indenture is not exceeded and that the issuer complies with the provisions of the indenture.

However, we need to remember that the trustee is paid by the debt issuer and they can only act in accordance with the provisions of the indenture and the duties prescribed therein. Again, the trustee is under no obligation to exercise his powers or rights under the indenture at the request of bondholders, unless he has been offered reasonable indemnity or security.[5]

The terms of bond issues always reflect a compromise between the interests of the bond issuer and those of the investors. The issuer always wants to pay the lowest possible rate of interest and to have the minimum legal covenants, whereas the investor wants to have the highest possible interest rate, the best security and the maximum legal protection in legal covenants.[6] The important part played by the trustee as an intermediary between the manufacturer and the use of equipment is illustrated below under ETCs.

Asset-backed sukuk, on the other hand, are always issued through a special purpose entity or vehicle (SPE/SPV). These SPVs only act on behalf of the *sukuk* holders, are bankruptcy-remote and are usually wound up upon the completion of the transaction. They are frequently set up in an offshore location to minimise tax

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[5] Strumeyer, *"Investing" op. cit.*, pp. 308 & 315
[6] Fabozzi, "*Handbook*", pp. 254-255

liabilities and to protect investors from third party litigation should it occur. Trusts are a favourable legal form under which such entities are established.

Corporate Debt Maturity

Maturity is when the principal is repaid with any premium and any due accrued interest and indenture conditions are satisfied. However, because many issues can be retired prior to maturity, our perceptions of what constitutes long-term and short-term bonds may no longer be valid.

Nowadays, there is greater preference for shorter maturities because of the reduced price risk. However, the shorter maturity structure imposes greater pressure on corporate financial managers because it becomes much harder to match long-life assets with long-term liabilities and requires frequent re-financings to replace a heavier volume of maturing debt. This leads to increased pressure on companies and the corporate bond market: more of a company's cash flow would have to be directed toward paying off these obligations as they become due.

2.2.2 International

These comprise foreign, euro and dragon bonds and what follows is a brief discussion of each.

Foreign Bonds are issued in a domestic market by a foreign issuer and are denominated in the domestic currency. These are often bonds with names that are associated with the country of issue, for example: Bulldogs (UK), Yankees (US), Samurais (Japan) etc. This type of bond is subject to stricter market requirements, conditions and conventions than those of the domestic markets. Coupons are usually

paid at the same frequency as that used in the domestic market. Foreign bonds may be issued as bearer bonds.[7]

Eurobonds are not subject to the same regulations as those that apply to domestic bonds and they are sold internationally. They are issued as bearer bonds — no register of bond holders is kept by the issuer. Coupons are paid annually and no deductions are made for withholding tax. Most Eurobonds are issued as unsecured debt by organisations with high credit ratings and may be listed and traded on a Stock Exchange, though most trading is OTC.

Prices for Eurobonds are quoted as a percentage of the face value to the nearest 0.01% and are denominated in any Eurocurrency; but the largest markets are for bonds issued in U.S. Dollars, Deutschemarks and Yen. Eurobond issues allow organisations greater flexibility to issue debt and allow rapid access to the markets. Eurobonds accrue interest using a 30/360 basis.[8]

Dragon bonds can be issued in any currency but usually this is in US$ and in at least two of the "Dragon Exchanges": Hong Kong, Singapore or Taiwan.

These various issuers have developed their own different ways of raising debt and, accordingly, this was reflected in the attributes of the bonds that they issued — differences in yield, denomination, safety of principal, maturity, tax status and with other important features such as the call privilege, put features and sinking fund. Market prices of issues denominated in US dollars (US-pay) are affected principally by the direction of U.S. interest rates and issues denominated in other currencies will be affected by movement in interest rates in the country of that currency.

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[7] Batten, Rogers & Windas, "*Introduction*" op. cit., p. 55 and "*International Bond Markets and Instruments*" by C B Steward, in Fabozzi's Handbook on Fixed Income Securities, pp., 361-378

[8] Ibid.

Islamic bonds have also become global, with cross-border investors participating in various *sukuk* issues. We increasingly see investors from the Middle East and South East Asia investing in each other's issuances, with smaller participation from European and American investors.[9]

2.3 INTEREST RELATED BONDS

In terms of interest payments, a bond can be classified into *fixed rate, floating-rate note (FRN) and zero-coupon bonds.*[10]

A fixed-rate security pays a fixed rate of interest to investors throughout the life of a bond and at maturity it pays back the final interest and principal amount of the loan. Interest or the coupon is usually paid annually or semi-annually. A straight bond may also be called plain vanilla or vanilla bond. *Sukuk* essentially replicate the above debt structure with predetermined rental payments that can be varied over the life of the lease as with *sukuk al-ijara.* However, *sukuk* are backed by underlying assets, whereas the above conventional instruments depend on the ongoing financial reliability of the entity which issues them.[11]

Floating-rate securities, called floaters, are where the coupon rate is reset at specified dates (typically, more than once a year) with reference to some financial yardstick such as LIBOR plus some basis points. These pay quarterly. Other variable securities are not adjusted more than once a year.

It is important to point out that although floaters are adjusted by way of reference to an interest rate or related index, the adjustment can also be made by reference to another index or rate. Thus, such an adjustment can be indexed to a

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[9] See Appendix on sukuk illustrations.
[10] Batten, Rogers & Windas, "*Introduction*" op. cit, op. cit., pp. 75-87.
[11] Fabozzi, "*Handbook*", *pp. 3-20 &* Strumeyer's "*Investing in Fixed Income Securities*", *pp.4-10, 10-11&34-36.*

movement in foreign exchange rates or the price of a commodity, such as oil. This becomes relevant when we come to discuss benchmarks or indexes for *sukuk* in later chapters.

Resets have a cap (a ceiling on the maximum upward movement) and a floor (a restriction on the minimum downward movement). Movement in response to a reference rate can also move in the opposite direction. Such floaters are called inverse floaters.[12] Similarly, there is no reason why *sukuk al-ijara* cannot have resets in the light of a revaluation of future cash flows should economic conditions change.

High-yield or junk bonds are another type of bonds that are resorted to in recapitalisations and leveraged buy-outs. Because of the high cost of servicing these bonds, firms involved in these issues have devised new structures in the form of deferred-coupons that allow the issuer a grace period from making interest payments anywhere from 3 to 7 years.

There are a couple of relevant points to note about bonds in general. Firstly, they are popular because interest payments are tax deductible. Secondly, the larger the size of the coupon rate the less the volatility (caused by faster recovery of present values of future cash flows), in contrast to maturity where the longer this is the more volatile the bond price. In other words, maturity and size of coupon rate have opposite effects on the bond price.[13]

Corporations in the Islamic world that find it difficult to borrow, either because of size or because of inadequate asset base, may resort to offering a similar

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[12] Fabozzi, *"Handbook" Op. Cit.*, pp. 325-334 & Strumeyer's *"Investing". op. cit.*, pp. 306 and 318-320

[13] Pollack Irving M, et al (1983). Homewood, Illinois: Dow Jones-Irwin, *Handbook of Fixed Income Securities*. p. 381

type of high-yield *sukuk* which can compensate for higher issuer's credit and project risks.

2.3.1 Zero-coupon

Zero-coupon bonds pay no interest and instead are issued at a deep discount to the par value and are redeemed at par or full face value. Effectively, investors are receiving all their interest upfront when they buy the bond.

Issuers of these bonds must have the highest credit rating to justify investors' confidence in that they will get paid at maturity. Issuers are likely to be governments and sovereigns who would want to defer payment of cash to the investors. However, large organisations and supranationals such as the World Bank also issue zero-coupon bonds. One such issue in 1985 had a bond price of $41.250, a yield of 7.332, maturity 15/02/2010 and duration of 11.862.

Typical investors will be pension funds which prefer to receive a lump sum at maturity rather than a series of coupon payments. They use zero-coupon bonds to match investment with future liabilities (payouts). The return is, therefore, capital gain and is exempt from taxation in certain jurisdictions. Zero-coupon bonds can be created from a process called stripping, whereby the coupons of a bond are detached from the principal and from each other and treated as a separate bond matching the cash flows of the original. For example a 10-year bond with annual coupons can be stripped to 11 zero-coupon bonds — one for the par value and 10 for the coupon payments.[14] Malaysia has, in fact, used stripping to create debt instruments based on

[14] Fabozzi, "*Handbook*", *pp. 6, 59-60 & 258,*; Strumeyer's "Investing", pp. 18-19, 214-216 and Pollack's "Handbook", op. cit.

securitising the mark-up on *murabaha* contracts and the lease payments in *ijara* contracts.[15]

Islamic debt instruments such as *murabaha* and *istisna'a* may be traded at a discount in Malaysia, but this is not so in Gulf countries, where in some quarters such discount is viewed as hidden interest. However, *sukuk al-ijara* may be traded at a discount, or premium for that matter, when the holder wishes immediate liquidity rather than full face value at maturity.[16]

2.3.2 Other Types of Bonds

There are a number of other bonds that are worth mentioning here; for example, equipment trust certificates will be discussed in more detail because of their relevance and similarity to Islamic leasing.

a. Equipment Trust Certificates (ETCs)

The desire of borrowers to pay the lowest possible rate of interest on their obligations generally leads them to offer their best security and to grant lenders the strongest claims on it.

Usually backed by large industrial equipment, these bonds have been used to develop a legal arrangement for giving investors a legal claim on it that is different from, and generally better than, a mortgage lien.[17]

The legal arrangement vests legal title to such equipment to a trustee.[18] For example, Boeing may build a fleet of airplanes on an order from, say, BA. The latter may not have the money to purchase the airplanes outright, and so it chooses to lease

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[15] Obaidullah M, (n.d.). *Islamic Financial Services* pp.160-162
[16] *The Banker*. (2005). *A closer look at Sukuk*.
[17] Fabozzi, *op. cit., pp., 262-263*
[18] Barakat, M.and Toan, R. W., "*Islamic Leasing Funds*", in Islamic Asset Management, London, UK: Euromoney Books, pp. 154-158

them from Boeing. HSBC might act as trustee in this case, having full legal control of the assets. The trustee purchases these assets from Boeing and leases them to BA for their use. At the same time, HSBC /trustee sells BA equipment trust certificates to investors to finance the purchase of the airplanes from Boeing. The trustee collects lease rental money periodically from BA and uses it to pay interest and principal on the certificates. These interest payments are known as dividends and the amounts of lease rental payments are worked out carefully so that they are enough to pay ETCs. The airline never owns the airplanes that it operates; yet it uses them as collateral to support their bonds. Since Boeing has been paid in full, the trustee retains control of the airplanes for the term of the lease. At the end of some time, the ETCs are paid off, the trustee sells the equipment to the lessee/Airlines for some nominal price, HSBC get paid a fee for its services and the lease is terminated.

ETCs are usually structured in serial form: a certain amount becomes payable at specified dates until the final instalment. For example, a $60 million ETC might mature at $4 million on each 15th of June from 2000 to 2014. Each of the 15 maturities may be priced separately to reflect the shape of the yield curve, investor preference for specific maturities, and supply-and-demand considerations. The advantage of a serial issue from the investor's point of view is that the repayment schedule matches the decline in the value of the equipment used as collateral. Hence, principal repayment risk is reduced. From the issuer's perspective, serial maturities allow for repayment of the debt over the life of the issue, making less likely a crisis at maturity resulting from a large repayment becoming due at the same time.[19]

This description emphasises the legal nature of the arrangement for securing the certificates. In practice these certificates are regarded as obligations of the airlines

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[19] Fabozzi, "*Handbook*", op. cit., pp., 262-263

company that leased the equipment and are shown as liabilities in its balance sheet. In fact, the name of the airline appears in the title of the certificates and the trustee is just an intermediary who performs the function of holding title, acting as lessor, and collecting the money to pay the certificates.[20]

This structure has been replicated in Shari'ah-compliant *sukuk al-ijara* leases and emphasises the use that could be made of conventional financing arrangements to finance Shari'ah-compliant transactions, so long as it is asset-backed.[21]

b. Speculative-grade bonds

These are rated below investment grade by the rating agencies, i.e., BB+ and lower by S&P, and Ba1 and still less by Moody's. They are also known as "junk" and "high yield" securities. But one should take note of the fact that high yield can also apply to investment grade securities where high-coupon bonds may be subject to early redemption call and where there is a sharp decline in bond prices. But there is no such thing as a "free lunch" in the investment markets and above-average yield should indicate extra risks to investors.

However, not all junk bonds are useless, as some might assume, and not all of them are on the verge of bankruptcy or default — they are certainly not so when profits are to be made from buying them and when they are on the fringe of the investment grade sector.

c. Mortgage Bonds

These are secured against property but carry a lower interest rate than when unsecured.

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[20] Strumeyer, "*Investing*", pp. 314-315

[21] Adam & Thomas, *"Islamic Bonds", op.cit., pp.* 54 -55 and Toan, R.and Barakat, M., *Structuring Islamic Finance Transaction* in Islamic Asset Management. London, UK: Euromoney Books, pp. 154 - 158

Islamic mortgages have become popular, particularly in the UK, and are structured along 'declining *musharaka*' lines, where the share of the lending partner decreases with each monthly payment, though there is added rental payment.

d. Collateral Trust Bonds

This applies to holding companies which do not own property but securities of other companies (their subsidiaries) and pledge these as security for bondholders. It is important to consider the issue of voting shares here if they are included in the collateral. The holding company must be allowed to vote these to maintain control of subsidiaries, but in default the trustees have the upper hand according to the indentures of these bonds.

e. Debenture Bonds

These are unsecured bonds, but because they are sometimes issued by companies with high credit rating and strong financial position; they can be offered at low rates of interest and do not need to offer security as well. However, they do get issued, but companies not so strong financially will be compensated for by higher interest rates.

There are many provisions in the indenture of debentures that are designed to protect investors by restricting debenture issuance in future to the amount of the initial issue in order to prevent weakening the position of debenture holders by running up additional unsecured debt. Debentures may still be secured against the assets of the company if the value of such assets exceeds the amount of the secured debt or if the company has no secured debt.[22]

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[22] Fabozzi's "*Handbook*" op. cit., pp. 263-264

f. Subordinated and Convertible Debentures

These debts rank after secured debt, debenture bonds and, often, after other creditors in its claims on assets and earnings. Because of this, they are offered at a higher rate of interest and with an option to convert into equity of the issuer at their discretion.

g. Guaranteed Bonds

Sometimes a corporation may guarantee the bonds of another corporation. But that does not mean that it would become immune to default, as this would depend on the financial strength of the guarantor as well as the issuer. A guaranteed bond may have more than one guarantor whereby each guarantor would be liable for the entire amount guaranteed by the others.[23]

2.3.3 Corporate Bond Ratings

The larger body of investors and some institutional investors rely on rating agencies for valuation of their securities, on account of their independent and unbiased nature. The famous ones are: S&P, Moody's and Fitch. Rating definitions are released by these firms, but they are not 'buy', 'hold' or 'sell' indicators. They do not purport to indicate market direction, and though they serve only as a guide to the issuer's ability and willingness to meet the terms of the issue, they are taken into account in any investment decision.[24]

2.3.4 Types of Issuers

There are six such categories of issuers: public utilities, transportations, industrials, banks, finance companies and international issuers.

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[23] Fabozzi's "*Handbook*", op. cit., p. 265
[24] Ibid. (pp. *271-275)* and Strumeyer's "*Investing*", *op. cit., pp.276-279.*

Several issuers fall under the 'less-than-investment-grade' high yield category, for example, original issuers who include venture capitalists or growth and emerging market companies. A bond rated at the bottom rung of the investment grade category (Baa and BBB), or at the top of the speculative grade category (Ba and BB), is known as a "businessman's risk."

Others such as 'fallen angels' are investment grade companies which have fallen on hard times and investors may be interested in the liquidated value of the debt.

And there are companies which, through restructuring and leveraged buy-outs, deliberately increase their debt-burden in order to maximise shareholder value. Shareholders get paid a special extraordinary dividend with the funds coming from borrowing, leading to a drop of ratings on existing debt. Newly-issued debt gets junk status because of the company's weakened financial position.[25]

2.4 REDEMPTION

2.4.1 Call and Refunding Provisions

Some bonds carry the provision of retiring or paying off the debt before maturity. Corporations resort to this provision when market rates start to fall and they are stuck with high coupon rate bonds. They hope to reissue the debt with lower coupon (called refunding). They also resort to this provision when they have surplus cash to pay off

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[25] Fabozzi, Wilson and Todd, "Corporate Bonds", in "*Handbook*". op. cit., pp.276-277

the debt, which they can then use to retire the debt, or when they wish to restructure their balance sheets.[26]

Investors, of course, lose on two counts. Firstly, they lose out on the high coupon bond when market rates starts to fall; secondly, they lose the price appreciation that occurs when interest rates decline. Other investments with similar rates to the ones which they had lost would be difficult to find in a declining rate situation.

This call provision signifies that investors expect higher yield on those bonds than on those without the call provision. These bonds also carry a call premium which is the difference between the principal and the call price. This premium gets larger the earlier that the debt, represented by the bond issue, is retired.

To circumvent such disadvantages, investors may be offered 'call protection', which represents a number of years during which bonds cannot be called/redeemed, particularly in the early years of the bond issue.

2.4.2 Sinking-Fund Provision

This provision requires the issuer (often an industrial concern) or obligor to retire a certain amount of debt each year. This is done either by the company itself purchasing the amount of bonds in the open market if the price is below par, or through a trustee who will organise and monitor the retirement through the lottery system.

The investor benefits from this provision in that he or she receives an orderly retirement of the debt and, at the same time, the payment is not too large for the obligor. In addition, the investor does not have to wait for the whole term to maturity to receive payment, hence improved liquidity. And finally, there will be better

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[26] Fabozzi's "*Handbook*", op. cit., p.266

stability in bond prices if the issuer retires some of the issue when the price is below par. In light of the above, the yield on bonds under the sinking-fund arrangement tends to be less than on those without them.[27]

However, there are drawbacks, such as when the investor is forced to sell — particularly when holding a high coupon bond and interest rates start to fall. The investor will have to find another attractive investment, which is not always possible.[28]

2.4.3 Put Provisions

This option grants the investor the right to redeem the bond at par value, particularly when interest rates rise in the market, forcing bond prices down. Because of their advantages to investors, issuers quote them at lower rates than straight or callable bonds. Put options in corporate bonds have been used to deter unfriendly takeovers. There are hard and soft puts. Hard puts can only be redeemed in cash, whereas soft ones can be redeemed by a combination of cash, stock and debt.

2.5 PRINCIPAL PAYMENT BONDS

These are classified in accordance with the various ways of making the final principal payment on bullet bonds. Currently, they are mainly either index-linked or dual-currency bonds.[29]

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[27] Strumeyer's "*Investing*", *pp. 325-326* and Pollack's "*Handbook*", op. cit., pp. 24-25
[28] Ibid
[29] Batten, Rogers & Windas, "*Introduction*" op. cit., *op. cit.*, pp. 94-101

2.5.1 Index-linked

An index-linked bond has a fixed principal payment which is tied to a financial index such as the UK Retail Price index (RPI), the US S&P 500 Stock Index, the US consumer Price Index for all Urban Consumers (CPI-U), foreign exchange rates or money market rates, or indeed other indexes.[30]

These inflation-indexed bonds offer investors some protection against inflation to their future purchasing power, and they allow issuers to use a lower rate for their bonds. Because of their lower rates, issuers are able to reduce their cost of borrowing by removing the premium for the risk of inflation embedded in conventional bonds, and thus issue these at lower coupon rates.[31]

Index-linked gilts are an important part of the UK government issuance of bonds. In fact, it is the largest issuer of these index-linked bonds.[32] There are three types of index-linked bonds which have been, or are currently being, used by governments:

1. *Capital-indexed*: most government-issued bonds are of this type, where interest payments are based on inflation-adjusted principal amount. At maturity both the final coupon payment and the principal are adjusted for inflation.
2. *Interest-indexed*: here the fixed coupon rate is paid and the principal is adjusted at every coupon date. Hence, there will be no adjustment for inflation at maturity.

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[30] Strumeyer, op. cit., 333-334
[31] "*An Investor's Guide to Corporate Bonds*" *(n.d.) Available at: <URL: http://* www.bondmarkets.com> and "*Advanced Bond Analysis*" (n.d.). Available at: <URL:http:// www.investopedia.com>
[32] Batten, Rogers & Windas, "*Introduction*", op cit. pp., 94-95

3. *Zero-coupon indexed*: as there are no coupon payments, only the principal is adjusted for inflation at maturity.[33]

There is no reason why the mark-up or rental from Islamic bonds cannot be adjusted for the effects of inflation — and one presumes that they are so adjusted.

2.5.2 Dual Currency Bonds

These bonds pay coupon payments in one currency and principal at maturity in another. For example, an Australian dollar denominated bond repays principal at maturity in Australian dollars and pays coupons in Japanese yen.

Dual currency bonds can be issued with the currency exchange rate for converting the coupon payments into another currency is specified when the bond is issued, or where the currency exchange rate is the spot rate at the date of payment, or the issuers and investors have a choice for payment of the coupon payments at some point during the life of the bond (an option currency bond).

These dual currency bonds are often used to enter into interest rate swaps or currency swaps to lock in favourable exchange rates at the same time as receiving favourable interest rates in the coupon currency.[34]

2.6 BORROWERS

Borrowers can be classified by the type of collateral involved.[35] There are four main types: Asset-backed security (ABS), Mortgage-backed, Brady Bond and Medium Term Note (MTN).

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[33] Ibid.

[34] Ibid. pp. 96-100. Also available at: <URL: http:// www.investopedia.com/articles> and at: <URL: http://www.bondmarkets.com>

[35] Batten, Rogers & Windas, "*Introduction*", op cit., pp. 101-111

2.6.1 Asset-Backed Security (ABS)

This topic is discussed at some length because of its particular relevance to the structure of *sukuk*. ABSs took off in 1985 after the success experienced with the issuance of mortgage-backed securities (MBSs). According to Bloomberg, as of July 31, 2004, almost $3.5 trillion of ABS have been issued and there are currently 1.5 trillion of ABS outstanding, which clearly shows that the ABS is a significant part of the investment market. Asset-backed securities are securities collateralised by assets which are not mortgage loans and whose payments are underpinned by the cash flows generated by the underlying assets.[36]

A financial institution or corporation (the Sponsor/ Seller/ Servicer), transfers or sells a pool of financial assets (collateral) such as car loans or credit card receivables — *substitute tangible assets for Islamic ABSs* — to a bankruptcy remote, special purpose entity (SPE). It is critical that the SPE cannot be exposed to any bankruptcy proceeding to ensure the assets are adequately insulated from bankruptcy or insolvency of the sponsor. To do this efficiently, the assets can be sold to an issuing trust. Legal opinion varies as to whether a genuine or 'true' sale has taken place in this instance and whether the SPE could be consolidated with the sponsor's entity in the event that the sponsor becomes bankrupt or insolvent.[37] Assuming, however, that there is a genuine sale and no consolidation is possible, then ABS investors would be insulated from the credit risk of the sponsor. The SPE can then sell the assets to a trust which issues the asset-backed security and sells it to the investor, usually through an underwriter. Such a bond structure allows the investor to turn his focus away from any

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[36] Strumeyer, *op. cit., pp., 406--436; Aricles & Tutorials on the subject are available at: <URL:http:// www.bondmarkets.com>* and <URL: http://www.investopedia.com>

[37] Fabozzi, "*Handbook*", pp., 19 & 20

credit risk and towards the structure of such a transaction, the quality of the underlying assets and the servicing of the securities.[38]

Such a structure also enables a potentially low-rated entity (BBB) to tap potential investors seeking A- to AAA-rated securities and to lower its borrowing costs.

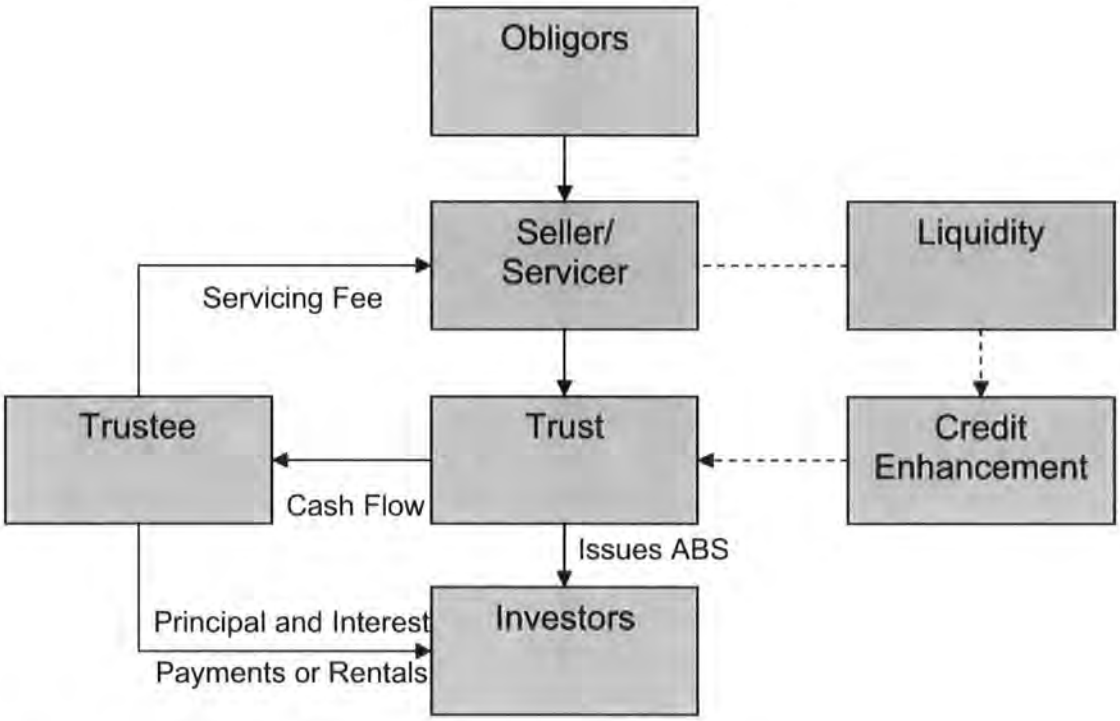

Figure: Basic ABS Structure[39]

The most basic concept of the securitisation process is the isolation of ABS investors and the collateral that supports their investment from the credit risk of the originator of those assets. To issue an ABS with a higher credit rating than the company that owned the asset requires the legal separation of the assets from the company that owned them.[40]

The securitisation process is also a method of raising cash through the sale of those assets. Typically, an SPE or trust is set up with the sole aim of buying the assets

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[38] Batten, Rogers & Windas, "*Introduction*", op cit., pp., 101-102
[39] Castro, D. and Strumeyer, G. "*Asset-backed securities*", in Strumeyer's, "*Investing in Fixed Income Securities*", op. cit., pp.408-409.
[40] Ibid.

and paying for them by issuing ABSs and selling them to investors. The assets in the trust should then generate sufficient cash flow to pay the interest or rental payments to bondholders/*sukuk*-holders and to pay whatever fee is agreed with the sponsor or seller.

To achieve high credit rating, the provision of credit enhancements and structural protection (e.g., excess spread and corporate guarantee) are the essential requirements for protecting investors from credit risk, legal risk, market and interest risks, currency risks and anything else that might interfere with the investors receiving timely payments of interest and return of principal as promised.

The borrowers/obligors are usually either consumers who have taken out loans (cars, credit cards, home equity loans, student loans, etc.) or businesses (car dealers, farmers, doctors) that wish to finance equipment or inventory purchases. In ABS financing, the primary collateral used are either loans or leases, which may be secured or unsecured and may already exist or be generated in future.[41]

The issuing entity for most ABSs is a trust or an SPE whose sole purpose would be to buy the collateral and issue ABS. ABSs can take the form of notes, certificates and equity, to name only a few.

Interest payments for ABS were mostly fixed-rate in the beginning; later on, floating rate securities became more common. Most of these floating-rate ABSs are indexed to 1-month, 3-month or 6-month LIBOR; but other indexes such as Cost of Fund Index, T-bills, commercial paper indexes, and the prime rate are also used. ABS usually pays monthly or quarterly.

Often, in ABS loans, particularly in car loans, a below-market rate (called incentive financing) is included in the package. 'Yield supplement accounts' are often

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[41] Strumeyer's "*Investing*", op. cit., pp. 410-421

used to set aside a pool of cash large enough to make up for the difference between the below-market rates on the car loans and the minimum coupon required by the rating agencies. Interest rate swap is used to bridge the gap in any mismatch between the interest paid to the investor and the interest generated by the underlying assets. Similarly, currency swaps are used if the ABS bonds and the underlying assets or collateral are denominated in different currencies.[42]

Generally, high-rated ABS tends to be very liquid with tight bid-offer spreads of one basis point or so. However, prepayment risk reduces that liquidity and as a result the bid-offer spread is one or two basis points greater. Market liquidity of ABS has also improved as a result of greater transparency through monthly reports on the performance of the ABS and its collateral pool.

Finally, large deals and individual tranches within them allow for a greater number of investors to participate, which makes the security more liquid. The same is true of dealer participation. [43]

Asset-based *sukuk* operate in much the same way, except that the underlying assets are tangible and not debt paper, as in receivables and loans. The cash flow is subject to a lease of the assets to the obligor, who promises to pay a predetermined rental to the *sukuk*-holders for the duration of the lease (this is discussed in some detail in the chapter 'Sukuk').

2.6.2 Brady Bonds

The term Brady bond refers to a series of sovereign bonds issued by several developing countries in exchange for their rescheduled bank loans. Almost all

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[42] Strumeyer, "*Investing*", pp. 410-421
[43] Ibid. Also see "Advanced Tutorials" available at: <URL: http://www.investopedia.com>.

countries with defaulted commercial bank debt have exchanged that debt for Brady bonds or restructured loans.

The Brady market is unique in two respects. Firstly, yields are relatively high: in December 1999, for example, they ranged from 8% to 30%. Secondly, some issues are extremely large and liquid, especially compared to typical sovereign Eurobonds.[44]

The Mexican Brady agreement included three basic options: Pars, Discounts, and New Money bonds. Pars and Discounts have their principal and interest secured by US Treasury zero coupon bonds which were originally funded by the IMF, World Bank loans and the country own reserves. In addition, the interest portion of the Pars and Discounts is partially collateralised by securities rated at least AA in amounts sufficient to cover a specified number of months (usually 12) of interest on the outstanding principle at a notional rate. The interest guarantee is characterised as a rolling interest guarantee (RIG) because the guarantee rolls forward to the next payment period if not utilised.

Later issues of the Brady bonds allowed the sovereign to buy US Treasury strips from the open market. Such market transactions required the maturity of the strips to be no longer than that of the Brady bond issued with the restriction that the face value be equal to the principal amount of the Pars and Discounts.

Bondholders do not have recourse to the principal collateral until maturity, at which time proceeds will be available to pay the full principal amount due. As for the interest collateral, if the issuer does not make an interest payment within the grace period stipulated in the Brady Exchange Agreement, the Collateral agent at the request of the Fiscal agent, acting on the instructions of the bondholders of at least

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[44] Strumeyer's "*Investing*", op. cit., pp. 336-338 and Brauer, J.S. & Chen, D. of Merrill Lynch in Fabozzi's, "*Handbook*", op. cit., pp. 379-397

25% of the aggregate principal, will release interest collateral sufficient to cover the interest payable on the bonds.

Brady bonds have been widely used to reschedule external debts of developing countries on terms which these countries can meet without suffering undue hardship. An interesting aspect of these bonds has been their linkage, in one form or another, to GDP rate of growth. Islamic countries with substantial external debt such as Iraq, Lebanon, Sudan and others, would do well to emulate countries that have rescheduled their debt and linked it to GDP growth.[45]

External debts can also be structured on the basis of asset collateralisation in developing countries, which would include most of the Islamic world. Such securitisation might satisfy both creditors and the borrowing countries alike and provide for better quality of rating by the international agencies. [46]

2.6.3 Medium-term notes

Despite the title, their maturities vary from 9 months to 30 years. They are uncallable senior debt securities issued with fixed coupon rates that have an investment-grade rating. These notes came about as a result of the auto-industry's needs for 2- to 5-year notes to cover the credit period to clients. SEC's rule 415 allowed corporations to register their issues of bonds with the SEC and then sell the securities at any time during the next two years. This reduced the cost of issuance for corporations and provided them with greater flexibility in choosing when to enter the market to raise additional funds.

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[45] *"Brady Bond Primer" (n.d.).* Available at: <URL: http://www.emgmkts.com/research>. Also see chapter 5 on Indexation.
[46] Fabozzi's *"Handbook", op. cit., pp.379-397.*

2.7 EQUITY-LINKED (CONVERTIBLE SECURITIES)

These are bonds that are convertible into equity. The conversion ratio specifies the amount of the ordinary shares to which the bondholder is entitled.

Conversion is called by the issuer but some convertible bonds provide the investor with call protection whereby the issuer is not permitted to call for conversion until the price of the bond has increased by a certain amount above the issue price.

Warrants are issued with bonds and these permit the bondholder to buy a specified number of ordinary shares at a specified price. The latter is normally set about 15% above the market price of the share. Warrants are also known for their longevity in comparison with, for instance, exchange-traded call options that are similar; they are actively traded on the stock exchange when they are detachable.[47]

2.8 RISKS ASSOCIATED WITH INVESTING IN FIXED-INCOME SECURITIES

The return to the investor from holding a fixed-income security, from issue date to redemption, comprises the following elements:

1. The income stream from the interest payments and any additional returns from reinvestment of the above cash flows, and:
2. The market value of the security when it is redeemed or sold.

Several factors outside the control of the investor can affect the above income streams and thus risk is a measure of the impact of these market forces on these expected returns.

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[47] Dialynas, C. Durn, S. & Ritchie, R. Jr. "Convertible Securities and Their Investment Characteristics" in Fabozzi's "*Handbook*", op. cit., pp. 1103-1124

The risks[48] that an investor in fixed-income securities is exposed to might encompass one or more of the following: market/interest rate risk, reinvestment, timing, credit or default risk, maturity risk, inflation risk, liquidity risk, exchange or currency risk, volatility risk, political or legal risk, event risk and sector risk

Here is brief explanation of the more important ones:

Market risk: This risk arises from the fact that when interest rates rise (fall), the price of a bond falls (rise). Such a risk does not exist for an investor who holds his security to maturity because by then it would be payable at its par value. But even then, a risk-averse investor might not want a long-term investment which might have greater risks.[49] The risk arises when an investor wishes to dispose of the security before maturity and when interest rates are rising.

Reinvestment risk: is the risk associated with falling interest rates which reduce the return on reinvestment of the interest payments. Market risk and reinvestment risk work in opposite directions.

Timing Or Call Risk: because of the issuer's ability to retire some or all the bonds before maturity, cash flows of the returns from such an investment tend to be uncertain.[50]

Credit or Default Risk: this risk is associated with rating assigned by such entities as Moody's Investor services, S & P and Fitch. However, a change in the market's perception of the credit risk can have a more immediate impact on the price of a security.

Yield-Curve Or Maturity Risk: it is usually assumed that yields on different maturities move in equal amounts, and so if the yields on different maturities deviate from this

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[48] Strumeyer. op. cit., pp., 81-90 and Fabozzi, op. cit., pp. 21-29, 332-334
[49] Fabozzi, op. cit., pp. 894-895 and 988-989
[50] Strumeyer, op. cit., pp. 84 and 235

pattern, there is this risk. With the issuance of short-term *sukuk*, BMA has made it possible to have an Islamic yield curve which exhibits different maturities and the more it does so, the more indicative it will be of any sizeable or standard deviation — and hence risk — from such curve.

Inflation or Purchasing Power Risk: inflation reduces the purchasing power of the fixed interest returns of a security, except for inflation-indexed securities which are already adjusted for inflation. Again, all countries face the risk of inflation, but especially those countries whose monetary systems are pegged to outside ones and whose main commodity prices are volatile.

Liquidity Risk: This risk is measured by the spread between the bid price (at which a dealer is willing to buy) and the offer price (at which a dealer is willing to sell the security), and the bigger the spread, the greater the liquidity risk.

It is often the case that institutional investors are required to re-evaluate their portfolios in line with current market prices so as to reflect the net asset value for reporting purposes. To do this they ask for bids from different dealers and decide, by some process, what price to adopt in their valuation. Liquidity risk arises when there is a wide variation between dealers' prices.

Event Risk: Management's main responsibility is to increase or optimise shareholders' wealth, whereas a bond issuer's is to meet the terms of the indenture including payment of interest and principal. However, events such as M & A, restructuring, recapitalisation, leveraged buyouts, and share repurchases, often cause substantial changes in the capital structure of a company by increasing leverage and reducing equity. This reduces bondholders' protection by lowering debt quality ratings, sometimes to speculative-grade categories. This in turn increases risk and lowers bond valuations — shareholders are enriched at the expense of bondholders.

As a result of these "events", some companies introduced "poison puts" in their indentures. The poison put provides that the bondholder may require the company to repurchase the debt under certain circumstances which may arise out of specified designated events such as a change in control. In many cases this poison put may not be activated until deterioration to below investment-grade takes place. Some issues provide for a higher interest rate instead of a put as a designated event.

Event risk has caused some companies to include other clauses in their indenture such as the maintenance of net worth in their retirement features. It is not much different from offer to redeem. It may protect bondholders from the redemption of the high-coupon debt at lower interest rates. However, if a company's net worth declines to a level low enough to activate such a call, it would then probably be prudent to have one's bonds redeemed.

To protect the value of debt investments against the added risk caused by corporate management activity, investors should analyse the issuer's fundamentals to determine if the company may be a candidate for restructuring, and pay attention to news and investment reports. The indenture should also be reviewed to see if there are any protective features. However, astute legal minds always find loopholes in these to circumvent them. Debt rating services issue commentary on indenture features of corporate bonds, noting the degree of protection against event risks. Diversification across industry lines can reduce the risk in large portfolios, but price declines do not only affect the issue at risk but may take the innocent down with them, so to speak. When RJR Nabisco Inc. became subject to a leveraged buy-out in 1988, the yield

spreads of the company to a benchmark Treasury widened from 100 to 350 points, which in turn caused yield spreads to widen for other corporations as well.[51]

2.9 CONCLUSION

The variety and diversity of conventional bonds indicate the gap that exists in Islamic financial instruments. Continuous innovation and development in these instruments to satisfy the variety of markets, borrowers, and investors, should narrow that gap and drive the two markets towards convergence, but always keeping in perspective the unique non-interest and asset-linked features of Islamic finance.

[51] Strumeyer, op. cit. pp. 90-91

CHAPTER 3. BOND PRICING AND RETURN MEASURES

3.1 INTRODUCTION

The purpose of this chapter is to survey the issues relating to the calculation of conventional bond prices and yield returns[52] that may be indicative of some of the computational issues which Islamic financing and *sukuk*, in particular, will encounter. Algebraic formulae are used to determine the present or market value from a stream of cash flow returns. This of course applies to any stream of cash flows, whether generated by assets or paper debt. It then discusses the sensitivity of prices to changes in yield and explains the much-used concepts of duration and convexity, proceeding to show the interrelationship between coupon rates, prices and yields. This is followed by a description of the various models of measuring the risk profile of bonds and the relevance of concepts such as options and embedded calls to the risk profile of Shari'ah-compliant *sukuk*.

3.2 BOND PRICING

A bond's price is the present value of future cash flows. The rate of interest or discount rate used to compute the PV is a function of the yield on comparable securities in the market. We shall assume here that the bond in question is a noncallable: that the coupon payments are uninterrupted over the period to maturity

[52] Fabozzi's, "*Handbook*"; pp., 51-83, Strumeyer, "*Investing*"; pp .52-69; Batten, Rogers & Windas, "*Introduction*", op cit., 225-247 and Homer and Leibowitz, *Inside the Yield Book* (2004); also, <URL: http://www.investopaedia.com>.

and are known, and that the payments are made semi-annually. We shall also assume that the next coupon payment is made exactly 6 months from now.

3.3 DETERMINING THE CASH FLOW

The cash flow of an option-free bond consists of the semi-annual payments plus the par value at maturity. For example, a 20-year bond with a 9% (4.5% every 6 months) coupon, a par value on maturity of £1000 will have the following cash flow:

Semi-annual coupon interest = £1000 x 0.045 = £45

Maturity value = £1000

Therefore there are 40 semi-annual cash flows of £45 and a £1000 cash flow at end of 40 interest payments from now.

But it is not always easy to determine the cash flows of a bond when a bond issue or a part thereof is called by the issuer or when the investor puts his bond — in other words, sells it back to the issuer — as in both cases the timing and hence the cash flows become uncertain.

3.4 DETERMINING THE REQUIRED YIELD

This is the interest rate or discount rate which an investor wants from investing in a bond and is called the required yield. It is determined by ascertaining the prices of comparable bonds, that is, option-free bonds of the same credit quality, rating and maturity.

The required yield is quoted annually but when the cash flows or interest payments are made semi-annually, we use 1/2 of the annual rate to discount the cash flows. This periodic interest rate which is half the annual rate will produce an *effective annual yield* that is greater than the annual rate.

Many are of the opinion that each cash flow should be treated as a zero-coupon bond and the cash flow of a bond will consist of a series of zero coupon bonds. However, for present purposes one yield will be used to discount the cash flow for each period.[53]

3.5 DETERMINING THE PRICE

Once we know the cash flows of a bond (as in a fixed-rate option-free bond) and the required yield, it then becomes a matter of adding the present values (PVs) of the cash flows or semi-annual payments and the PV of the par value at maturity. We use the following formula to give us the price of a bond:

$C (\underline{1 - \{1/[1 + i]^n} \})/i + M/[1 + i]^n$

Where

C = Semi-annual payment (£)

n = Number of periods

i = Periodic interest rate or required yield divided by two because it is semi-annual

M = Maturity value

Example: What is the price of a 9% coupon bond with 20 years to maturity and a par value of £1000 if the required yield is 12%?

C = (9% x 1000)/2

n = 20 years representing 40 periods

$= £45(1 - \{1/ [1 + 0.06]^{40} \}/0.06 + £1000/[1 + 0.06]^{40}$

$= £45(1 - 0.097222)/0.06 + £1000/[1 + 0.06]^{40}$

$= £677.0835 + 1000/(1.06)^{40}$

$= £677.0835 + 1000 / (10.28572)$

The price of the bond is then equal to the sum of the two present values:

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[53] Fabozzi, *op. cit.*, pp., 52-53 and Homer and Leibowitz, *"Inside the Yield Curve"*, pp.21-29

= £677.08 (PV of coupon payments) + £97.22 (PV of par or maturity value) = £774.30 is the current price of the bond.[54]

3.5.1 Relationship between Required Yield and Price at any given time

The price of a bond moves in the opposite direction to that of the required yields. That is because as the yield increases the PV of cash flows decreases (and the opposite is true) — hence the price decreases (note the price of a bond is the PV of cash flows). This can be demonstrated if we drop the yield in the above example to 7% where the PV of our bond becomes £1213.55, as compared to £774.30 when the required yield was 12%.

[54] Strumeyer, op.cit., pp.52-80, Fabozzi, op. cit., pp., 53-55

3.5.2 The Relationship between Coupon Rate, Required Yield and Price

Table[55]: Showing the Price/yield relationship for a 20-year, 9% Coupon Bond

Required Yield	Price of Bond (US$)
5%	1502.05
6%	1346.72
7%	1213.55
8%	1098.96
9%	1000.00
10%	914.21
11%	839.54
12%	774.30

The following results are observed:

When the coupon rate equals the required yield, the price equals the par value and when the price equals the par value, the coupon rate equals the required yield.

When the coupon rate is less than the required yield, the price is less than the par value and when the price is less than the par value, the coupon rate is less than the required yield.

[55] Fabozzi, op. cit., Exhibit 4-1, p. 56

When the coupon rate is greater than the required yield, the price is greater than the par value and when the price is greater than the par value, the coupon rate is greater than the required yield.[56]

3.6 TIME-PATH OF A BOND

For a bond selling at par value, the coupon rate is equal to the required yield and as the bond moves towards maturity, it will continue to sell at par. However, for bonds selling at a discount, the bond price will increase towards maturity, whereas for bonds selling at a premium, the price will decrease — assuming in both cases that the required yield does not change.[57]

3.7 REASONS FOR CHANGE IN THE PRICE OF A BOND

The price of a bond will change as a result of a change in the level of interest rates in the economy; discount and premium bond prices change as they move towards maturity; for non-Treasury bonds, a change in the required yield due to changes in the spread to treasuries; a change in the perceived credit quality of the issuer; and finally, price of a bond may change due to changes in the factors affecting the embedded options for bonds with these feature.[58]

3.8 PRICING A ZERO-COUPON BOND

This is simply the PV of its expected cash flows and in this case the only cash flow is the maturity value (in the previous example, the PV of maturity value was £1000 divided by $(1.06)^{40}$ = £97.22).

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[56] Fabozzi, *op. cit.*, pp. 51-83; Also see "*Advanced Bond Analysis*". Available at: <URL:http://www.investopedia.com.

[57] *Ibid*

[58] Fabozzi, op. cit., pp.58-59

3.9 YIELD AND TOTAL RETURN CALCULATIONS

The price of a bond is equal to the PV of expected cash flow. For bonds with embedded options, the cash flow is difficult to estimate. The required yield used to discount the cash flow is determined by the yield offered on comparable securities. The two most popular yield measures cited in the bond market are the yield-to-maturity and the yield-to-call. Both yield measures consider the coupon interest and any capital gain (or loss) at the maturity date, or call date in the case of the yield-to-call. The coupon interest and capital gain (or losses) are only two of the three components of potential dollar return from owning a bond until it matures or until it is called.

The other component is the reinvestment of coupon income, commonly referred to as the interest-on-interest component. This component can be as large as 80% of a bond's total return. The yield-to-maturity assumes that the coupon payments can be reinvested at the calculated yield-to-maturity. The yield-to-call assumes that the coupon payments can be reinvested at the calculated yield-to-call.[59]

A better measure of the potential return from holding a bond over a predetermined investment horizon is the total return (TR) measure. This measure considers all three sources of potential return: income from coupon receipts, reinvestment income (interest on interest) and capital gain/loss. TR takes into account the fact that investors do not always hold the bond to maturity and the fact that the investor must make an assumption about the available reinvestment rates level each time he or she receives a coupon payment. In this way, the TR measure reflects more accurately the return potential of a bond than the YTM.

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[59] *Ibid.*, pp. 64-83 and Strumeyer, op. cit., pp. 74-78

The formula for calculating TR is the same as that for calculating the future value of an annuity but by replacing the latter with C, the coupon payment. So we have:

Coupon Interest + Reinvestment Interest = $C\ [(1+ i)^{N} - 1] /i$ (equation A).

To obtain the reinvestment interest, we merely deduct the total coupon payment from the result of the above formula.

The TR is the interest rate that will make the initial investment in the bond grow to the total future dollar amount. First we compute the coupon interest plus the interest on interest as in the above formula. But when we do this the reinvestment rate is set equal to the annual interest which the investor assumes can be earned. This gives the investor the leeway to choose the reinvestment rate that he or she thinks is available in the market, instead of the bond's YTM. Then, we compute the total dollar return from buying and holding such a bond as follows.[60]:

Total Return = [Total Future Amount/Price of bond] $^{1/N}$ - 1 (equation B)

(To account for semi-annual payments, we merely multiply N by 2)

Let us say that an investor is looking to invest in a six-year bond with a 5% coupon paying semi-annually. The bond is selling at 970 and will be held to maturity. Assuming the investor can reinvest the coupons at 4%, the total return of this bond comprises the coupon interest of $25 every 6 months, reinvestment interest of 2% (1/2 x 4%) and the par value at maturity of $1,000. Applying our equation A, we have:

$\$25\ [(1+0.02)^{6x2} - 1] / 0.02 = \$335.25$.

The total future amount is: $335.25 + 1,000 = $1,335.25

The semi-annual return = [Total Future Amount/Price of Bond]$^{1/N}$ - 1

= [$1,335.25/970]$^{1/12}$ - 1

= (1.0269) - 1 = 0.0269

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[60] Fabozzi, op. cit., pp.75-83 and Strumeyer, op. cit., 74-80

Therefore as a percentage = 2.69%. Multiplying this result by 2 gives us an annual value of 5.38%.

The above formula only accounts for total return if we hold the bond to maturity. However, this problem can be easily overcome for the purposes of determining the potential yield to the end of a predetermined holding period or 'horizon period'. For this we first need to compute the coupon interest, the reinvestment interest and the expected price of the bond to the end of the holding period.

The coupon rate is given. The reinvestment rate will be a market rate selected by the investor. It is the determination of the expected price of a bond that poses the greatest difficulty. A sensible way of doing this is by looking at the historical yield spread between a bond and a US treasury bond with similar maturity and extrapolating that trend into the future, taking into account the economy as a whole and the relative values between bonds. But, of course, this is not an exact science and estimates could, and often do, go wrong. Let us assume, nonetheless, that instead of holding a bond to maturity, we decide to hold it for only three years, with the market value at that time, based on the yield spread to Treasury for three years, being 97 (or $970, based on $1,000 par) and assuming interest at 2% every 6 months. So what would be the total return then?

Coupon Interest + Reinvestment Interest

$= C\,[(1 + r)^N - 1]/r$

$= \$25[(1.02)^6 - 1]/0.02 = 157.75$

The estimated future value is therefore $1,127.75 ($157.75 + 970)

The semi-annual Total Return = $[\text{Total Future Amount/Price of Bond}]^{1/N} - 1$

$= [\$1,127.75 / 970]^{1/6} - 1$

= 0.0254 or 2.54%

therefore 2.54x2 = 5.08% (annual value for total return).

The doubling of the semi-annual rate to give us the annual interest is not exactly accurate and to obtain the effective annual interest rate, the future value of investing a bond at, say, 3% every 6 months is not 1.5 %, but 1.015 times 1.015, which gives us 1.0302, in other words, an annualised rate of interest of 3.0225 %, and not our 3%. This is called the bond-effective yield and allows investors and traders to compare, for example, the yield on discount securities to yields on corporate and Treasury bonds.[61]

3.10 MEASURING INTEREST RATE RISK

The value of a bond changes in the opposite direction of the change in interest rates. The value of a long bond position will decline if interest rates rise, resulting in a loss. For a short bond position, a loss will be realised if interest rates fall. However, an investor wants to know more than simply when a position might realise a loss. To control interest rate risk, an investor must be able to quantify what will result.

The key to measuring an interest rate risk is the accuracy of the estimate of the value of a position after an adverse rate change. A valuation model is used to determine the value of the position after an adverse rate move. Consequently, if a reliable valuation model is not used, there is no way to properly measure interest rate risk exposure.

There are two approaches to measuring interest rate risk: the *full valuation approach* and the *duration/convexity approach*.[62]

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[61] Strumeyer, *op. cit., pp.74-80,* and Homer and Leibowitz, *op. cit.*
[62] Buetow, G. Jr, Robertson, R. R. in Fabozzi's, "*Handbook*", pp. 85-129

3.10.1 The full valuation approach

The most obvious way to measure interest rate risk exposure of a bond position of a portfolio is to re-value it when interest rates change.

The characteristics of a bond that affect its price volatility are: (1) maturity, (2) coupon rate, and (3) presence of embedded options.

A fundamental characteristic of option-free bonds is that the price of a bond changes in the opposite direction from a change in the bond's required yield. However this relationship is not a linear one. The shape of the price/yield relationship for any option-free bond is referred to as *convex.* This p/y relationship is for an instantaneous change in the required yield.

Property 1: Although the price changes in the opposite direction from the change in the required yield, the % price change is not the same for all bonds.

Property 2: For small changes in the required yield, the % change in the price of a bond is roughly the same, whether the required yield increases or decreases.

Property 3: For large changes in the required yield, the % price change is not the same for an increase in required yield as it is for a decrease in required yield.

Property 4: For a given large change in basis points in the required yield, the % price increase is greater than the % price decrease.

Although these properties are expressed in % price change, they also hold for dollar price changes.

The implication of *Property* 4 is that if an investor is long a bond, the price appreciation that will be realised if the required yield decreases is greater than the capital loss that will be realised if the required yield increases by the same number of basis points. For an investor who is short a bond, the reverse is true: the potential capital loss is greater than the potential capital gain if the yield changes by a given number of basis points.[63]

3.10.2 Bond Features that Affect Interest Rate Risk

The degree of sensitivity of the price of a bond to changes in market interest rates (sc. a bond's interest rate risk) depends on various features of the issue, such as maturity, coupon rate, and embedded options.

3.10.3 The Impact of Maturity

Assuming all other factors constant, *the longer the bond's maturity, the greater the bond's price sensitivity to changes in interest rates.* For example, for a 6% 20-year bond selling to yield 6%, a rise in the yield required by the investors to 6.5% will cause the bond's price to decline from 100 to 94.4479, a 5.55% price decline.
For a 6% 5-year bond selling to yield 6%, the price is 100. A rise in the yield required by investors from 6% to 6.5% would decrease the price to 97.8944. The decline in the bond's price is only 2.11%.

3.10.4 The Impact of Coupon Rate

A property of a bond, all other factors constant, is that: *the lower the coupon rate, the greater the bond's price sensitivity to changes in interest rates.* For example, consider

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[63] Ibid.

a 9% 20-year bond selling to yield 6%. The price of this bond would be 134.6722. If the yield required by investors were to increase by 50 basis points to 6.5%, the price of this bond would fall by 5.13 to 127.7605. This decline is less than the 5.5% decline for 6% 20-year bond selling to yield 6%.

One implication is that zero-coupon bonds have greater sensitivity to interest rate changes than same-maturity bonds bearing a coupon rate and trading at the same yield.

3.10.5 Interest Rate Risk for Floating-Rate Securities

The change in the price of the fixed-rate coupon bond when market interest rates change is due to the fact that the bond's coupon rate differs from the prevailing market interest rate. For a floating-rate security, the coupon rate is reset periodically based on the prevailing value for the reference rate plus the quoted margin. The quoted margin is set for the life of the security. The price of a floating-rate security will fluctuate depending on three factors.

First: the longer the time to the next coupon reset date, the greater the potential for price fluctuation. For example, consider a floating-rate security whose coupon resets every 6 months and the coupon formula is the 6-month Treasury rate plus 20 basis points. Suppose on the coupon reset date the 6-month Treasury rate is 5.8%. If on the day after the coupon is reset, the 6-month Treasury rate rises to 6.1%, this means that this security is offering a 6-month coupon rate that is lower than the prevailing 6-month rate for the remaining 6 months. The price of the security must decline to reflect this. Suppose instead that the coupon resets every month at the one-month Treasury rate and that this rate rises immediately after the coupon rate is reset. In this case, while the investor would be realising a sub-market one-month coupon

rate, it is only for one month. The price decline will be less than for a security that resets every 6 months.

The second reason why a floating-rate security's price will fluctuate is that the required margin which the investors demand in the market changes. For example, consider, once again, a security whose coupon formula is the 6-month Treasury rate plus 20 basis points. If market conditions change, such that the investors want a margin of 30 basis points rather than the 20 basis points, this security would be offering a coupon rate which is 10 basis points below the market rate. As a result, the security price will decline.

Thirdly, a floating rate security will typically have a cap. Once the coupon rate specified by the coupon formula rises above the cap rate, the coupon rate will be set at the cap rate and the security will then offer a below market coupon rate and its price will decline. In fact, once the cap is reached, the security's price will react in much the same way to changes in market interest rates as that of a fixed-rate security. This risk of a floating-rate security is called 'cap risk'.[64]

This analysis should be applicable to floating-rate *sukuk* in terms of resets and adjusting the spread to the LIBOR to which they are linked.

3.10.6 The Impact of the Yield Level

In reality, the higher the level of interest rates that a bond trades, the lower the price sensitivity. Compare a 6% 20-year bond initially selling at a yield of 6%, and a 6% 20-year bond initially selling at a yield of 10%. The former is initially at a price of 100 and the latter, 65.68. Now if the yield on both bonds increases by 100 basis points, the first bond trades down by 10.68 points (10.68%) to a price of 89.32. After

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[64] Fabozzi, *op. cit. pp., 98-99 and Stumeyer, op. cit., pp., 32-34*

the assumed increase in yield, the second bond will trade at a price of 59.88, for a price decline of only 5.80 points (or 8.83%). Thus, we see that the bond that trades at a lower yield is more volatile in both % price change and absolute price change, so long as the other bond characteristics are the same. An implication is that, for a given change in interest rates, price sensitivity is lower when the level of interest rates in the market is high, and price sensitivity is higher when the level of interest rates is low.[65]

3.10.7 Duration

Frederick Macaulay was working on the historical returns of bonds for the National Bureau of Economic Research in 1930 when he began to think of bonds' interest payments and redemption at maturity as a portfolio of zero-coupon bonds which tends to liquidate or pay itself off from the very first coupon payment.[66]

To illustrate this, assume a 10-year bond with a £1000 par value and annual interest payments of 10% per year. In Macaulay's thinking, this represented a £100 cash flow each year with another £1000 payable at maturity or at year 10. Therefore, the total cash flow over the life of this bond will be £2000. But after the first coupon payment is made, the remaining cash flow will be £1900 and after the second, it will be £1800 and so on until the final payment of £1000 at maturity or the par value becomes payable.

By discounting these cash flows, using the yield as the discount rate and then dividing the total by the bond's price or its present value, we should arrive at 'duration' as a measure of the average time to the receipt of the bond's cash flows, weighted by the present value of the each specific cash flow.

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[65] Fabozzi, *op. cit. pp., 99-111*; Archer, Simon and Rifaat Abdul Karim (eds.), *"Islamic Finance: Innovation and Growth", p. 181:London, UK., (*Euromoney Books and AAOIFI publication).
[66] Strumeyer, *op. cit.pp., 39-43.*

Again, to illustrate this, let us assume that our 10-year, 10 per cent coupon bond, above, pays interest annually and let us also assume that this bond is priced to yield 8% to maturity. Discounting the bond's cash flows by the bond's yield, the present values will be:

$100/(1+.08) + 100/(1+.08)^2 + 100/(1+.08)^3 + \ldots + 100/(1+.08)^{10} + 1000/(1+.08)^{10}$

= £(92.59+85.73+79.38+73.50+68.06+63.02+58.35+54.03+50.03+46.32+463.19)

= £1134.20

Next, we multiply the above present values by their time to maturity and then total them up:

$92.59(1) + 85.73(2) + 79.38(3) + \ldots 46.32(10) + 463.19(10) = 7900.63$

Finally, we divide this total by the bond's price to get Macaulay's duration, which is always measured in years:

7900.63/1134.20 = 6.97 years (a duration of 6.97 years means that the approximate change in price for this bond is 6.97% for a 100 basis point change in rates).[67] Having calculated Macaulay's duration in this way, it becomes much easier to calculate the duration for a zero-coupon bond, as there is only one cash flow, namely, the principal amount to be paid at maturity.

Traders do not find the concept of the average time to the receipt of the present value of the bond's cash flows particularly useful if the bond is not going to be held for very long. An application in which duration is useful is in a bond portfolio management strategy called 'immunisation', where a portfolio is managed in such a way so as to produce a sufficient amount of cash at some predetermined future date to meet a given liability, such as a pension or a provision for education fees. However, interest rates are not going to remain the same in the long run and the risk will be if

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[67] Ibid.

interest rates were to rise causing a decrease in the value of the portfolio and an increase in the return on reinvestment of the coupon receipts and vice versa. These two opposite trends — the market value of the portfolio and the return on reinvestment — must be managed in such a way as to produce the amount of cash to meet the liability, despite changes in interest rates.

While Macaulay's pioneered concept of duration came first, it is the modified version that is more widely-used in the industry. Modified duration measures the percentage change in price for a small change in the market yield — typically 100 basis points. Now, we know that the price of a bond and its market yield move in opposite directions; but the critical question is by how much the price changes in response to a given change in yield? Or, how sensitive is a particular security to changes in market yields?

Using our previous example, we obtain the modified duration by dividing Macaulay's duration by 1 plus the yield in decimals, in other words, (1 + y).

Equation (A)

$$6.97 \text{ years} / (1+.08) = 6.45 \qquad \text{(A)}$$

This only gives us the percentage change in price for 100 basis points change in yield. So if the latter were to rise by a 100 basis points from 8% to 9%, we would say that the price decreased by 6.45% to £1061.04 (from £1134.20). If the yield moved downwards by 100 basis points, then the price would increase by 6.45% to £1207.36.

Interest rates, however, rarely move in incremental 100 basis points and therefore an additional formula is needed to augment our modified duration formula, above, and to account for a bond's expected percentage change in price for any basis point change in yield. Such a formula would be:

Change in price/Original price = Percentage Change in Price

% Change in Price = -(Modified Duration) x (Change in Yield) x 100 (B)

Substituting the values in equation (A) above into equation (B):

% Change in Price = -6.45 x 0.01 x 100 = -6.45%

The formula works for any change basis point change in yield. Let us assume that yields are expected to move by 18 basis points. The resulting percentage change in price will be equal to: -6.45 x 0.0018 x 100 = - 1.161%.[68]

It is important to remember that duration is an expectation of the bond's price sensitivity for any given combination of price and yield. Thus, any change in these parameters will cause duration to be different — indeed, it can change from day to day. That does not, however, make it less useful in measuring interest rate risk. All that it means is that we have to understand its limitations before we use it as a measure of risk.

The next question is: why do different bonds have different durations on any given day? There are three attributes of a bond that could affect duration: the coupon rate, length of time to maturity and the 'pull to par'. The latter simply means that at maturity, the price of a bond will always be par, no matter what the original purchase price was. Hence, no trader will buy a bond at a premium shortly before maturity, simply because he or she would not be able to resell it at a higher price, or sell a bond at a discount when he or she knows that the bond will, shortly thereafter, be redeemed at face value or par at maturity.

Market forces that prompt the 'pull to par' provide us with the following principles governing duration: (1) long-maturity bonds will experience greater price volatility than short-maturity bonds, because the longer the bond's maturity, the higher

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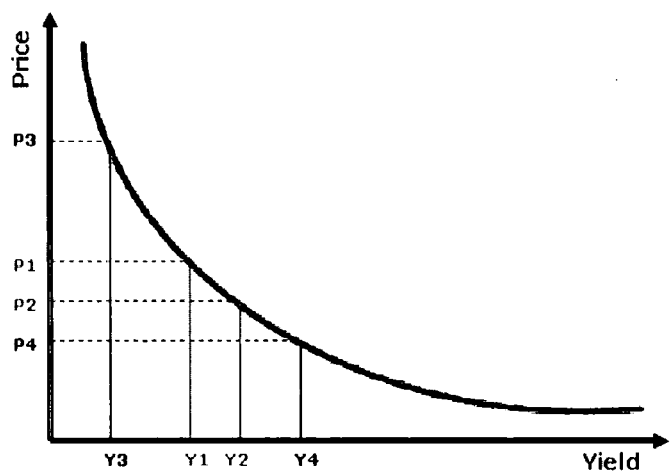
[68] Strumeyer, *op. cit.*pp., 43-51

is its duration and, therefore, the greater its price sensitivity to changes in yield; (2) low-coupon bonds will also experience greater price movements than high-coupon bonds and thus it follows that lower coupon rates will mean higher durations and at the end of the spectrum, where no interest is paid, we find zero-coupon bonds' prices extremely sensitive to changes in yield.[69] With zero-coupon bonds, we find that one single payment at maturity constitutes their entire cash flows and that single payment will fully dictate the bond's price sensitivity to yield changes.

Thus zero-coupons have the highest durations and will be subject to significant change in price as a result of small changes in yield. We can now introduce the concept of convexity and incorporate it within our duration model.[70]

We know that the price and yield of a bond have an inverse relationship and if we plot that relationship on a chart, it will give us a convex curve, as illustrated below:



This chart[71] shows that for small changes in yield from Y1 to Y2, the relative increase /decrease in price, P1 to P2, is similar to that for the yield change. However, larger

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[69] Strumeyer, op. cit., pp. 44-45
[70] Fabozzi et al., *op. cit., pp.99-120*; Strumeyer, *op. cit., pp.43-51*
[71] Batten, Rogers & Windas, "*Introduction*", op cit pp., 266-267

changes in yield from Y3 to Y4 cause disproportionate change in price, namely, from P3 to P4. Convexity explains why modified duration may not give us an exact change in price for 1% change in yield, whereas convexity does. The formula used to calculate the percentage change in price can be stated as follows:

$- [\text{Modified duration} \times \Delta\text{YTM}] + [\text{Convexity} \times (\Delta\text{YTM})^2 /2]$

An example: assume a bond with a modified duration of 2.27% and assume further that the yield rises by 50 basis points and the convexity is calculated as 0.05%. Using our equation, above, this gives us (in %):

$= - [2.27 \times 0.5] + [0.05 \times (0.5)^2 /2]$

$= - 1.13500 + 0.00625 = -1.12875\%$

The convexity adjustment to modified duration tends to be very small; but for a large holding in tens of millions, the loss is significant. It can be seen from the price/yield curves above that. As yields rise, the loss on the bond becomes less and less and as yields fall, the gains become more and more. [72]

As yield changes the price of a bond must change. The rate of change is the bond's duration. Moreover, as the yield changes, the bond's duration is also changing. This rate is represented by the bond's convexity but such change is asymmetrical, in other words, the increase in duration and price as the yield decreases is greater than the decrease in duration and price when the yield starts increasing. From this, we can deduce a third principle of duration: lower yielding bonds will experience greater price movements than higher-yielding bonds. In other words, the bond's price is less sensitive to changes in yield as the yield increases. This is a characteristic of positive convexity — the rate of price appreciation is greater than the rate of price depreciation. This almost tells us that while, theoretically at least, a bond's price has

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[72] *Advanced Bond Analysis Tutorial* (n.d.). Available at: <URL:http://www.investopedia.com>

an unlimited upside potential, it has a limited downside, below which it cannot go, no matter how high yields may rise. This, of course, is mania for investors who would pay a premium for this positive convexity. In economic jargon, at ever-higher yields, a bond's price is almost inelastic and a bond's duration is almost a horizontal line: zero slope and zero duration, meaning that there is zero price sensitivity.[73]

3.11 CONCLUSION

A great deal of conventional bond concepts that were dealt with above were relevant, and some might be applicable, to Islamic financial instruments. However, as M H Kamali states, there is a great need for further research and analysis, particularly in the areas of risk and derivatives where Islamic finance could be treading a fine line between the permissable (*halal*) and the impermissible (*haram*).[74] Moreover, a more robust market for trading in Islamic financial instruments is needed before measurements of sensitivity for prices and yields can be developed for these instruments.

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[73] Fabozzi, op. cit, .pp. 112-120; Strumeyer, op. cit., pp 46-51. Also see "Advanced Bond Analysis Turorial". Available at: <URL: http://www.investopedia.com>.
[74] Thomas, Cox and Kraty, op. cit., "*Structuring Islamic Finance Transactions*". p.190

CHAPTER 4. SUKUK

4.1 INTRODUCTION

After decades of existence in the shadow of their conventional counterparts, Islamic banks and financial institutions have finally come up with viable Shari'ah-compliant financial instruments which governments and private sector alike can use to finance their capital requirements and at the same time satisfy their Muslim citizens, offering them investment instruments that conform to their religious edicts which forbid *riba.* In 2000 there were only three sukuk issues of $336 million issued, buy in 2004 there were 64 issues accounting for almost $7 billion, and in 2005 the figure is expected to exceed $10 billion with 54 issues already either oversubscribed or announced.[75]

This chapter is based on the study of *sukuk* in the context of Shari'ah compliance. For this purpose, we review a number of *sukuk* issues across a fairly representative sample of *sukuk* structures to identify their main features in terms of the legal structure that is required to justify their Shari'ah compliance and the financial applications to which they have been put. Our approach included, wherever possible, a comparative analysis of the material on Islamic *sukuk* with conventional bonds and within *sukuk* between the different types, structures and returns. The drawbacks and weaknesses of the various *sukuk* structures were, wherever relevant, examined and noted. *Sukuk* as a tool for liquidity management and issues dealing with securitisation are also examined and discussed and their importance to the further development of *sukuk* markets emphasised.

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[75] R Wilson, (2005, December) *"Innovation in the structuring of Islamic sukuk securities".* Islamic Finance Information Service, London, December 2005.

Rating by International agencies such as S&P and Fitch, to name but a few, is of paramount importance to borrower and lender alike, particularly, with regard to the marketability and risk profile of an Islamic investor. The criteria and concerns of the two above-mentioned rating agencies are discussed at length, as these raise serious and important issues with respect to compliance with Shari'ah law, choice of law and enforcement of judgements in various jurisdictions, tax matters and securitisation.

4.2 TYPES OF SUKUK

The Accounting and Auditing Organisation of Islamic Financial Institutions (AAOIFI) has issued standards for 14 eligible asset classes in its investment sukuk standard.[76] Those most popular are *sukuk al-ijara* where an existing tangible leased asset may be securitised through a sukuk issuance. The investor owns a share of the asset and the related income. A second class of assets is where a person seeking to acquire a tangible asset and lease it, may raise funding for such asset through *sukuk ijara mawsufa bithima* issuance. In this case the investor owns a divisible share in the asset and income or gain related to it. Thirdly, the owner of a leasehold estate may securitise the beneficial ownership of the underlying assets through *sukuk manfa'at al-ijara*. Fourthly, another type of sukuk called *sukuk manfa'at al ijara mawsufa bithima* may be used to acquire a leasehold estate and lease it through the securitisation of the underlying assets. Fifthly, a business which seeks to render specific services may raise funding by pre-selling such services and the expected benefits from them by issuing *sukuk milkiyat al khadamat*. The sixth assets class which may be securitised is where a business wishes to produce or provide certain goods/commodities at a future date, it may pre-sell such future goods for delivery at a specific future date and

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[76] Adam, N. and Thomas, A. " *Islamic Bonds", op. cit.*, pp. 36-38

securitise the assets for a value through the issuance of *sukuk al-salam.* The seventh standard deals with manufacturing and construction where the funding for the construction, development or manufacturing can be secured through the issuance of *sukuk al istisn'a* for the future delivery of the completed project. The eighth standard enables a business or a trader to acquire goods or commodities or other tangible assets for future sale under a *murabaha* agreement with a financier with funds obtained through the issuance of sukuk al *murabaha.* The sukuk holders shall own the assets or goods and will be entitled to the realised proceeds from the sale of assets just mentioned. The ninth standard deals with raising funds through equity participation in the capital of the company or in a project through *sukuk al-musharaka.* The sukuk holders shall be entitled to any profit (loss) that may arise. The tenth standard deals with funding an entrepreneur (*mudarib*) who has a sound business proposal but requires funding for implementation of his/her business plan. An issuance of *sukuk al-mudaraba* may provide the necessary capital if there are willing financiers or investors to participate. The sukuk holders share in any profit/loss resulting from the business.

Other sukuk types are: *sukuk al-wakala* where the sukuk holders entrust the management of their underlying assets to a *wakil*/agent;; sukuk al-muzra'a are used to finance cultivation of agricultural land; *sukuk al-musaqa* are used for maintaining the orchards and trees which bear fruit, its irrigation and management; and finally, the fourteenth standard deals with financing owners of farmland to maintain the land as well as the trees/crops. In all the sukuk used for funding agricultural assets and their maintenance, the sukuk holders share in the produce of the land and the crops.

Currently the most common in the Middle East (ME) are the *sukuk al-murabaha* and the *sukuk al-ijara*, which is based on leasing, whereas in Malaysia the

most popular are the *sukuk bi-thaman al-ajil*, based on *murabaha* principles. The latter is not considered Shari'ah compliant in the Middle East, where jurists have prohibited trading in debt.

4.3 SUKUK SECURITIES AS A TOOL FOR LIQUIDITY MANAGEMENT

Before the advent of *sukuk*, Islamic banks obtained their return on their liquid assets through the placement of funds on a *murabaha* basis with institutions that would sell and buy commodities on their behalf, often through the London Metal Exchange. The resulting profit or mark-up payment was considered legitimate or Shari'ah-compliant by Islamic scholars, as it was based on a real transaction — as opposed to a monetary one. However, there were only a few of these institutions which caused their charges to be high, which in turn reduced the returns on these transactions. Furthermore, some of the trading houses that Islamic banks and institutions invested with were not immune from bankruptcy or potential losses and therefore there was an added risk to investing in commodities.

The potential for diversification in sukuk investment implies increased improvement in liquidity management but does not create the desired volume of secondary trading, as demand seems, at least in the Gulf, to exceed supply. Islamic banks and other financial institutions find sukuk (*murabaha, salam, short-term ijara and lately tawarruq*) as an outlet in which to invest their excess liquidity and their returns attractive enough to hold them to maturity. Malaysia, on the other hand, does not suffer as much from this liquidity problem as it enjoys a bigger volume of trading,

greater frequency of issuances and no restriction on the issue of securities that are backed by collateralised debt, amongst other factors.[77]

Regulatory framework is important in this regard and the establishment by BMA of the Liquidity Management Centre (public-private partnership) as a trading platform and the Islamic Financial Services Board (multi-state entity) is a step in the right direction towards promoting trading in sukuk and improving liquidity for a robust secondary market.

4.4 SUKUK STRUCTURES

Sukuk are similar to conventional securities in that they are issued for a fixed term rather in perpetuity as in the case of equity.[78] *Sukuk* are now issued for tenors ranging from 3 months (as with T-bills) to five-to-ten years (Term-Notes). Most issues to date are either *murabaha* or *ijara*, with the former offering an agreed-on mark-up or fixed return, whereas the latter offers both a fixed and variable return, much like a floating-rate note. *Sukuk* transactions are Shari'ah-compliant because they are based on trading real assets like land, buildings and plant, and not paper debt.[79]

In *murabaha*, the bank securitises its trading transaction and uses part of its mark-up to provide a return to the investor; and once it receives payment from its trading client, it will pay back the *murabaha sukuk*-holder on termination of the contract.

Sukuk al-ijara are almost always issued through the creation of a special purpose vehicle (SPV) which acts as an intermediary between the client and the *sukuk* investors and manages the cash flow from the leased assets, i.e., the receipt of the

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[77] Wilson R. "Innovation in the structuring of Islamic sukuk securities", December, 2005, pp. 5-6
[78] Jaffer, S. 2004. "Islamic Fixed-Income Securities: Sukuk.", in *Islamic Asset Management,* London: Euromoney Books, pp. 72-75
[79] cif. Wilson, R.

rental payments from the client for the leased asset and the payment to sukuk holders.[80] It is bankruptcy-remote, which helps to protect the investors, and is immediately wound up when the *sukuk* mature. SPVs carry none of the risks associated with banks, nor are they subject to their control or regulation; such advantages justify, in a sense, the relatively high legal costs of setting them up. Risk assessment in *ijara* leases depend on the client's perceived ability to make the lease payments to the SPV, which in the case of a government, is a sovereign risk, as opposed to a corporate risk in the case of companies.

The diagram below [81] illustrates sale of assets to an SPV which leases them back to the issuer in return for rental payments against which the SPV issues certificates of participation to investors who will entitled to an undivided interest in the underlying asset/s. The proceeds from the sale of certificates are then used to acquire the title to the asset/s from the issuer but doubts remain as to the transfer of title to the SPV.[82] The SPV then enters into a leasing agreement with the issuer which governs the terms of the lease in respect of rental payments and whether they are fixed or reset periodically. The issuer also provides a guarantee so that the SPV can meet its obligations to the sukuk holders. The fulfilment of these obligations, in the final analysis, will depend on the issuer maintaining the flow of rental payments agreed to under the lease. The guarantee also provides for the buyback of the asset at end of the period of the lease at the original price at which the asset was sold. This should provide the monies required to repay the sukuk holders the sum originally invested.

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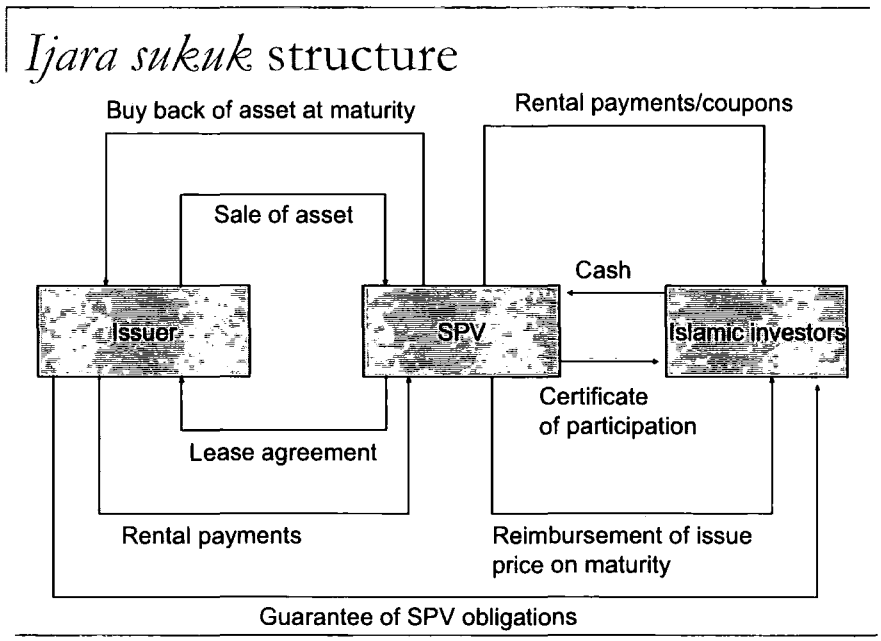
[80] Aseambankers (2005), "*Capitalising on Opportunities in the Sukuk Industry*"; Kuala Lumpur, pp. 1-5
[81] Wilson, R. "*Innovation in the structuring of Islamic sukuk securities*", December, 2005, p. 9
[82] See section 3.5.1 on Sukuk Ratings and securitisation Issues and Challenges.

The risk profile of sukuk al-ijara closely relate to the ratings assigned to the issuer's financial ability of the issuer during the period of the lease.[83]



Murabaha sukuk is probably the most widely used form of sukuk. Here, the bank securitises the trading transaction with part of its fixed mark-up to provide the return to the investor/s and uses the repayment by its client to repay the sukuk holders at end of contract.

However, another form of sukuk has been gaining popularity for short-term financing and is set to replace the commodity *murabaha* transaction as a liquidity management tool and because it deals with future events, banks, particularly, have looked upon it as possibly useful hedging tool for their income and asset risks.

The basic transaction consist of a sale in which payment is made in advance by a buyer against a future delivery of asset/goods at a future date by the seller and the term of the transaction is typically three months.

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[83] Wilson, R. "*Innovation...*", op. cit. pp., 9-10 and Adam & Thomas, Islamic Bonds, pp. 68-77

The BMA has been issuing 3-month *sukuk al-salam* at three-monthly intervals since 2002 as part of its short-term financing for the Government of Bahrain. *Salam sukuk* act much like Treasuries in that they are issued for similar period to maturity and the returns are fixed from the outset.

What distinguishes *salam* from the other sukuk is the advance payment which entitles the investor to a repayment of that sum plus a predetermined or fixed mark-up at the end of the three months upon surrendering his/her certificate of participation. Islamic banks, *takaful* Islamic insurance companies or Islamic investment companies have found *salam* sukuk to be a convenient and useful tool for parking their liquid assets in a Shari'ah compliant way.

4.5 THE FOUR MAIN METHODS OF SUKUK

In the following paragraphs, the four *sukuk*s — *murabaha*, *ijara*, *musharaka* and *mudaraba* — will be examined in more detail. The first two are the most widely-used methods of financing, whereas the last two are what scholars and those involved in Islamic finance would like to see become more widespread in practice and eventually prevail, as they represent the core of Islamic financing.

4.5.1 Murabaha

Murabaha is not a mode of financing, in terms of its origin.[84] It is a simple sale on a cost-plus basis with the price deferred. Both price and date of payment must be specified in the contract. The application of *murabaha* is limited to where a client

[84] Usmani, M.T. 2002. "*An Introduction to Islamic Finance*" . The Hague, Netherlands: Kluwer Law International, pp. 41-42

wishes to buy a commodity; it was conceived as a temporary method, until later, *musharaka* and *mudaraba* took off and became widely-used.

To be Shari'ah-compliant a *murabaha* transaction must be a genuine transaction, at the core of which there is a physical or real commodity. *Murabaha* cannot be used to finance the cost of overheads in a client/business, or to pay off a debt or for a mere exchange of currencies.

Murabaha can best be put to use by having the financier/bank purchase the commodity direct from a supplier and, having taken delivery of it, sell it to the client on a *murabaha* or cost-plus basis. Though not favourably looked upon by Shari'ah boards, the financier might appoint the client to act as its agent and purchase the commodity in question, which reduces the likelihood of subsequent rejection by the client. In his or her capacity as agent, the client acts as a trustee and will not be liable for any loss or damage to the property, which is now in his or her possession, unless it was due to negligence or fraud on his or her part. After taking delivery of the commodity, he or she, as agent, should inform the financier of this act and offer to buy the commodity from him. The financier will then inform the client of his acceptance and the sale will be deemed to be complete and the risk transferred to the client as buyer. The relationship will then assume the form of a debtor and creditor.[85]

Murabaha does not allow for uncertainty and the client is obliged to select one of two options: cash, or deferred payment — though it is mostly done on a deferred-payment basis. Once the price is fixed, the financier cannot subsequently increase the price for late payment nor can the client ask for a discount on an earlier settlement, unless the financier voluntarily offers such a discount — it cannot be made a condition in the agreement of prepayment. And to ensure that the purchaser pays on

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[85] Obaidullah, M. (n.d.) "*Islamic Financial Services*". pp. 68-72.

maturity, the financier or bank might ask the client to sign an undertaking that in case of a late payment or default, the client/debtor will pay a sum of money to a charitable fund set up by the bank, calculated on a percent per annum of the debt. The fund monies cannot form part of the bank's/financier's income.

a. Applications

Murabaha is used as short-term financing to buy commodities, goods or assets, usually with the intermediation of a financial institution or bank. Use of a letter of credit in *murabaha* transactions is allowed, either as a means of guarantee or of ensuring that parties will fulfil their obligations under the documents defining them in long-term credit transactions. The jurists, however, do not approve of a payment of a guarantee by the same beneficiary, as one is deemed to be paying money for money. A letter of credit is an accepted method of payment in international trade which ensures that the two parties to a trade or sale contract conduct their transaction in accordance with the terms of documents which they have agreed to, so that the mutually-confirmed intermediary bank can then allow payment. Muslim scholars allow such a process between two unfamiliar parties in international trade.[86]

b. Drawbacks of Murabaha

Murabaha financing has been criticised on many grounds. It is said to be inflexible from the point of view of the Shari'ah. As mentioned above, late payment cannot be penalised and the price cannot be changed in the event of a late payment. It also cannot be used to finance overheads or to pay off the debts of a business.

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[86] Thomas, Cox and Kraty, *"Structuring Islamic Finance Transactions"*, op. cit., pp. 172-173

It is also said to be restricted to people well-known to that financing institution, in other words, their familiar customers (thereby excluding entrepreneurial newcomers) who wish to buy a commodity or asset. In this respect, it is alleged that some financial institutions have used *murabaha* financing to provide unsecured lending to large corporate customers. In such transactions the bank would sell a commodity such as copper or aluminium to the customer for a credit price of say $10 million-worth of the commodity payable at a later date. The customer would then turn around and sell the commodity on the spot market for £9 million cash, thus gaining liquidity and simulating an unsecured loan. This could extend to retail finance as well.[87]

There is no rollover of *murabaha* in trade financing and this duplicates the process and costs of financing when used as a letter of credit. However, there is a view amongst scholars that the extension of a *murabaha* transaction is permissable provided that the price is not increased.

Other problems persist. *Murabaha*, which was devised to help funding in the short-term and liquidity for the secondary market, has not, according to some scholars, been taken to its logical conclusion and allowed to be traded as a debt instrument, as in Malaysia. There, they have separated the principal from the profit and have issued separate zero-coupon notes, primary in the case of the principal, and secondary for the profit portions.

The justification for the practice in Malaysia was that when the bank sells such an instrument at a discount, the bank is parting with a share of its profit on the original transaction. Similarly, the buyer is receiving a share of profit too and not interest. In

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[87] El-Gamal, M. (2005, April). "Mutuality as an Antidote to Rent-seeking Shari'a-Arbitrage in Islamic Finance". P.4

other words, the sale and purchase of the *murabaha*-based debt is about the mark-up on the spot price and not interest.

The other view of the Shari'ah scholars, particularly in the Middle East, is that what was profit on a *murabaha* basis for the seller of goods and services on the original contract may not necessarily remain the same when the same seller, in turn, sells the debt arising from that transaction. The fear is that once trading in asset-based debt is permitted, it becomes difficult to stop it from spreading to other forms of debt trading, which, in the opinion of those scholars, will inevitably involve *riba*.

Therefore, *murabaha sukuk* are not tradable in the secondary market of the Middle East and are illiquid. But such a position has also been criticised for the opportunity lost in terms of accelerating the development of an efficient market for Islamic financial instruments and wealth creation for many investors. [88]

4.5.2 Sukuk al-Ijara

Sukuk al-ijara in terms of leasing has rules that are very similar to those of sale.[89] In both cases something is transferred to another party for a valuable consideration. The only difference is that in the case of *ijara*, ownership of the property remains with the transferor, and only its usufruct or right of use is transferred to the lessee.

Sukuk al-ijara almost always involve the creation of a special purpose vehicle, a legal entity that acts as an intermediary between the investors and the client, and when it is set up as a trust, the trustees act on behalf of the beneficiaries/*sukuk*-holders. The SPV manages the receipt of rent from the client and its disbursement to the *sukuk*-holders. The SPV carries no risks apart from those that are associated with

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[88] Obaidullah, M. ,*"Islamic Financing Products"*(n.d.). pp., 160-162. See also the example of Auto Leasing in the Appendix.

[89] Usmani, M. T. *"Introduction to Islamic Finance"* p. 70 and Adam and Thomas, *"Islamic Bonds"*, op. cit. pp., 112-115

the *sukuk* which it issued, and once these mature, the SPV is usually wound up, unlike banks which are subject to continuing obligations and risks. This, in the opinion of some, justifies the high legal costs of setting up the SPV. The risks attached to *sukuk* are a function of the client's ability to make the lease payments. The client may be the State, in which case the risk is called a sovereign risk and in the case of a corporation, it is a corporate risk.[90]

a. Sukuk Pricing and risk assessment

Objections to pricing on the basis of LIBOR and similar benchmarks are more fully discussed in chapter 6 and only a brief note of some of the more important alternatives will be made here.

The present model of relating *sukuk* returns to LIBOR and similar benchmarks is all too familiar to both financiers and investors. One important alternative suggested is to link *sukuk* returns to GDP-linked growth so that when the economy is on an upward trend of growth, governments can, through increased tax revenue, afford to pay higher returns to their sovereign *sukuk*-holders. Conversely, in a downward growth situation, the government has reduced capacity to service the debt and therefore part of the risk of default is shared with the *sukuk*-holders. This might give the GDP-linked *sukuk* better rating than the present form of *sukuk*.

Professor R. Wilson proposes benchmarking corporate *sukuk* to indicators relating to the performance of the companies being financed, which could lead to a new type of *sukuk* based on a *musharaka* structure.[91] But this approach is fraught with difficulties as past performance of companies is not a good indicator of a future one and unless the private sector is well-developed and robust, it would be extremely

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[90] Wilson, R. "Innovation..." op. cit. pp. 9-10
[91] *Ibid.*

difficult to extrapolate a future measure from past experience. In addition, Professor Wilson argues that illiquidity of *musharaka sukuk* and uncertainty about the exit route has rendered *musharaka* contracts unattractive. In fact even if there was the possibility of early exit, why would anyone buy such *sukuk* if the outcome was uncertain? Moreover, an investor would also need to reassess the prospects of the company whose *sukuk* he or she is buying, which in itself could be time-consuming and costly.

Another possibility discussed by Professor Wilson is *mudaraba*-based corporate *sukuk* with investors sharing in the profits, but not the losses. However, as with *mudaraba* investment deposits in Islamic banks, there could be no guarantee of recovering the original capital invested. This coupled with the higher risks involved means that investor expectation would be for higher returns, to compensate for the higher risks. As stated before, expected returns from *mudaraba* contracts can be maintained at an acceptable level if a provision is made out of the profits of the good years for less profitable, or loss, years.

b. The Rules of Ijara

The rules of *ijara* require the transfer of a property or asset use to another party for an agreed period at a valuable consideration. The transferred asset must possess a useful feature and must have a productive life, which excludes all assets that are of a consumable or perishable nature. The lessor, by virtue of retaining ownership of the asset, must bear all the risks and liabilities that go with it unless there is material misuse or negligence by the lessee, in which case the lessee must indemnify the lessor. It is commonly accepted that repairs and running costs incurred in the normal course of business shall be borne by the lessee.

Ownership does not transfer with *ijara* as it does with a sale. This has an important consequence in that all the liabilities of ownership remain with the lessor,

who has a duty to repair and maintain the property or asset to be leased. Professor R. Wilson is of the opinion that if it were not so, the leasing transaction would introduce an element of uncertainty in respect of the costs to the lessee, as maintenance payments could be considered an extra rental element.[92]

Operating expenses and consumables may include items such as fuel, in the case of a leased aircraft or vehicle, or fertiliser and seeds, in the case of leased land. However, lessees are responsible for any misuse or negligence towards their leased assets and would have to compensate the lessor for any such damage or diminution in the value of the asset.

If, for any reason, rental payments are not paid on time or delayed, the lessor cannot impose a penalty on the lessee, as this would be considered in the nature of *riba*, but the lessee may have to make a contribution to some charity in recognition of this fact. Otherwise, the leased property will revert to the lessor and the lessee will still be liable for the outstanding rental payments. Jurists, however, accept the principle of liquidated damages, but only to the extent that they relate to the cost of collection.

The period of the lease must be clearly stated in the lease agreement. In some financial leases, a condition may be found that could terminate the lease before the end of such period at a lessor's option and the lessee held responsible to pay the rental for the remaining lease period. This, of course, would be against the principles of equity and justice in Shari'ah, which stipulates that the mutual consent of both parties is necessary for the termination, for otherwise, such a situation could be construed as an interest-bearing loan under the guise of a lease. The lessee can only be asked to pay

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[92] Wilson., R. 2004. "An Overview of the Sukuk Market", in Adam and Thomas (eds), *Islamic Bonds*. pp., 7-8

the rent up to the termination date and to return the asset under lease to the lessor. Other Islamic covenants to the lease agreement are the permissibility of insurance under the Islamic mode of *takaful.*

c. Ijara wa-Iqtina'

Islamic leases usually contain the provision that the leased assets are sold back to the lessee against a nominal or negotiated payment: this is termed *ijara wa-iqtina'*. The logic behind this is that the leased assets are not part of the lessor's activity or business and the lessor has already recovered his cost plus profit on those assets. Moreover, the whole transaction was undertaken so that the lessee could have the use of that asset through an SPV which is terminated once the transaction has served its purpose. However, scholars like M. T. Usmani take exception to this, maintaining that, "it is a well-established rule in Islamic jurisprudence that one transaction cannot be tied up with another so as to make the former a precondition for the other". Once the lease expires, the lessor can gift it or sell it to the lessee. Alternatively, other scholars advocate the use of a 'separate' and 'unilateral' promise by the lessor to sell the leased asset at an agreed price or to gift it after the expiry of the lease period. The lessee is not bound by such an agreement if he or she does not want to acquire such an asset.

d. Assignment

Assignment of the lease without transfer of ownership is only allowed where no monetary consideration is charged by the assignee and the entitlement to the cash flow of the rental payments is made in the form of a gift to a friend or son, or to settle a debt with any of his or her creditors.[93]

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[93] Usmani, *op. cit., pp. 80*

Assignment of the lease is possible so long as ownership and the rental payments are both transferred. Otherwise, selling the right to rentals for a fixed price alone would be strictly a monetary transaction and in the nature of *riba*, and hence prohibited. The lease period must be specified clearly in the lease agreement, as must the use to which the asset(s) will be put; the leased assets must also be fully identified. And where there is more than one owner, rental income will be distributed according to their respective share in the property or assets. However, a joint-owner can only transfer his proportionate share of the leased asset to his or her co-sharer and not to any other person.

To be Shari'ah-compliant, the lease must start from the date of the delivery of the asset and not from the date of the payment of the price for the leased asset. In addition, the lessee would not be liable for any late delivery.

Ijara involves two sets of relationships. One is that of a principal and agent, when the financier appoints the client as his or her agent to purchase the leased asset — and here there is no lessor and lessee relationship yet. The other relationship comes into play when the lessee takes delivery of the asset from the supplier. The two sets of relationships involve two separate and distinct legal relationships between the parties.

In *murabaha*, actual sale takes place after the client has taken delivery of the asset, has kept it in his or her possession and has notified the financier or bank of this fact and has simultaneously made an offer to buy the asset. The sale is only concluded when the bank or financier accepts the offer. In leasing there would be no need to have two contracts and once the financier or bank has agreed to lease the asset from

the date of taking delivery of the asset, the lease will automatically start on that date, without further delay or act.[94]

e. Fixed and Variable Rentals

The lease rental or stream of rentals can be fixed for the whole period of the lease or determined separately for each phase of the lease so long as the amount of rent for each phase is specifically agreed upon at the time of the commencement of the lease. The lease period shall start from the date of delivery of the leased asset to the lessee, notwithstanding that the lessee may have already started using it.[95]

In the long run, it might not be in the interest of the lessor to have one fixed rental for the whole lease period. This is because economic conditions change due to inflation, growth and business cycles etc. To circumvent this, the lessor may stipulate in the lease contract that such rental will increase by a certain percentage each year or have a series of short-term leases at the expiry of which the lessor can readjust the rent in accordance with market values by mutual consent with the lessee.

Now, some scholars have agreed with the principle of periodically adjusting the rental amounts to compensate for the effects of such factors as inflation and, probably, government taxes; but they have expressed concerns with regard to determining the rentals by reference to interest rates such as LIBOR. Scholars who are critical of this approach claim that such an approach renders the returns akin to receiving interest and therefore makes the transaction a *ribawi* one.

Scholars on the other side of the divide argue that the lease should be looked at in terms of the totality of the transaction and not just in terms of the return aspect of it, and that if all the requirements comply with Shari'ah principles, particularly in the

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[95] Usmani, op. cit., pp., 75-76

mode of transacting the lease, the legal structure and the relationship between the parties, then there should not be a judgement to ban it.[96] However, there is an essential difference between a conventionally-financed and an Islamically-structured lease — it is about who bears the risks in each lease. In a Shari'ah-compliant lease, the lessor assumes all the risks of ownership, so that if the asset is destroyed or the lessee loses the benefit or usufruct of the assets under the lease, the lessor cannot claim rent from the lessee unless the latter was responsible as a result of misuse or negligence on his part. In a conventional lease, the lessee is liable for payment of rental whether he or she has received any benefit or not.[97]

Another objection to the use of a 'future' interest rate benchmark relates to the volatility of this measure which makes the amount of rent unknown when entering into such a transaction, for this would imply *jahala* ('lack of appropriate information or knowledge') and *gharar* ('uncertainty'), both of which are not permissable under the Shari'ah.[98] But these objections may be redressed by setting an upper and lower limit for the movement of the benchmark, so that any probable loss resulting from an adverse movement in interest rates is at least minimised. In addition, there is no question of *jahala* when the lessor and lessee have clearly agreed upon the use of a specific benchmark and thus no dispute can arise from this aspect of the lease.[99]

Late payment of a debt due poses a problem in Islamic finance, for under Shari'ah law, a penalty cannot be imposed on the lessee. Instead, it is now widely-accepted that in order to avoid the use of such prohibition, a charity may be set up by the lessor for this purpose, so that all monies received would be disbursed for charitable purposes. The amount of such a charitable contribution may be calculated on the basis of

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[96] See chapter 5 for a fuller discussion of pricing.
[97] See IDB's floating-rate issue in the Appendix.
[98] See chapter 5 for a fuller discussion of benchmarks.
[99] Usmani, *op. cit.* p. 48-49

percent per annum. Another punishment suggested for defaulting clients is denying them future facilities by Islamic banks; others, however, consider such punishment inadequate in a hybrid banking environment where they could access conventional banks for such facilities, unless an arrangement is worked out between Islamic and conventional banks to share information on defaulting customers.[100]

Sub-leasing is allowed, but only with the express permission of the lessor. And most scholars/jurists have no problem with this unless the rent received from the sub-lease is greater than the rent which the lessor receives from his lessee. Here the Shafi'i and the Hanbali schools concur in the permissibility of the lessee enjoying the excess of the rental from the sub-lease over the amount that he or she pays to the lessor. The exception is the Hanafi school, which maintains that it should be returned to the lessor or to charity, unless the lessee has added some sort of value to it or the rent was in a different currency to that of the main lease. However, the Shafi'i view prevails in practice as there is nothing explicit on this in either the Qur'an or the Sunna.[101]

Termination of the lease is not normally possible without the mutual consent of both parties. However, in circumstances of misuse or negligence, the lessor has the right to terminate the lease agreement, to recover the asset, to ask for compensation as well as being entitled to the rental payments until termination. Some financial leases include the right of unilateral termination by the lessor, but this is construed as a disguised mechanism for recovering a loan made under the guise of a lease agreement, and could be due to the lessee's declining credit rating or other financial factors.

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[100] *Ibid.*, p. 77; Vogel, F. V. & Hayes, S. Islamic Law & Finance, pp., 114-115 and Siddiqi, M. N., (2004, May). "Social Dynamics of the Debate in Payment and Sale of Debt", A paper presented at the 6th Harvard University Forum on Islamic Finance: Current Legal And Regulatory Issues.

[101] Usmani, op. cit., pp. 79-82 and

f. Residual value of the leased asset

An important issue in leasing is the residual value of the leased asset. It is generally accepted that upon expiry of the lease, the title of the leased asset is transferred to the lessee (*ijara wa-iqtina'*). This is not, strictly speaking, the case under Shari'ah, where such an arrangement cannot be made a condition in the lease agreement, although it is widely-accepted that the lessor may enter into a unilateral promise to sell the leased asset or indeed to gift it to the lessee upon expiry of the lease, which would be binding on him but not on the lessee. This unilateral undertaking should be made the subject of a separate document and not part of the lease agreement as pointed out above.[102]

4.5.3 Differences between Murabaha and Ijara

The main difference between *murabaha* and leasing is that in *murabaha*, a valid sale must be contracted instantly and not by reference to some future date. In *murabaha*, taking possession of and delivery of the asset(s) is only one aspect of the performance of the contract, whereas the offer and acceptance between the client and the financier constitutes another and a completely separate step. The reason for this is that unless the financier or banker owns the asset, even if for the shortest possible interval, with the risks inherent in such ownership, the financier cannot claim profit or fee.[103] Moreover, one cannot sell something which one does not own.

In *ijara*, the leasing contract is simultaneously validated with taking delivery and possession of the asset. The asset's ownership and related risks remain with the lessor for the duration of the lease period and only the usufruct is transferred. Thus, the start of the lease period can begin from the time that the client has taken delivery.

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[102] Usmani, op. cit., pp. 78-79

[103] Chapra, Umer, (1998, September). *"The Major Modes of Islamic Finance."* A paper presented at the Islamic Foundation, Leicester, UK.

Another important difference between *ijara* and *murabaha* is the difficulty of securitising the latter, leading in the view of some jurists to the creation of an instrument evidencing a debt and so exchanging this instrument for cash would mean exchanging money for money in the same currency, something which would not be Shari'ah-compliant. Even if such an exchange were to take place, it would only be at face value. However, if *murabaha* was only one part of a wider portfolio that included *ijara*, *musharaka* and others, then negotiable instruments could be issued.

Sukuk al-ijara, on the other hand, are relatively easy to securitise, because their securitisation results in the issue of certificates of participation/*sukuk* that represent equal, undivided and proportionate share in the ownership of the underlying assets, whereas the *sukuk al-murabaha* evidence a debt. And since the lessor in *ijara* owns these assets, s/he can sell these or any part of them, to a third party with all the rights and obligations of the lessor with regard to the purchased assets.

One must remember that these certificates owe tradability to their ownership rights and not to their debt feature, which materialises when the rental becomes due. Therefore, *sukuk al-ijara* that purport to confer a right to a stream of cash flows without ownership right to the underlying assets would not be regarded as Shari'ah-compliant.

4.5.4 Mudaraba and Musharaka

Under this heading two other important modes of financing will be examined. These two involve risk-taking and reward-sharing, which are much favoured by Islamic jurists. *Mudaraba* and *musharaka* are based on profit/loss-sharing contracts.[104]

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[104] Adam and Thomas, *Islamic Bonds*, op. cit. "Overview of the Sukuk Market" by Wilson, R., pp., 9-10

a. Mudaraba

Mudaraba is a contract between two parties where one party, *rabb al-mal* (the investor) entrusts money to a *mudarib* (the working partner or trustee) and has a right to information about the business activity which he or she is financing as well as the right to monitor its performance. The degree to which he or she can do this without unduly interfering in the smooth running of the business is subject to negotiation and mutual agreement. The *mudarib*/entrepreneur, who must possess the necessary business skills, uses the money in an agreed-on business activity and upon completion of the project agrees to pay back the principal and pre-agreed profit share and retains the balance of the profits.

The *mudarib* may sometimes indicate a limit to the profits which they can realise and in a continuing *mudaraba*, he or she may retain part of the profits to smooth out the return to investors across accounting periods; but losses must always be deducted before any profits become available for distribution.[105]

There are two types of *mudaraba*: *mudaraba muqayyada* is a 'restricted' *mudaraba* in that it is formed for a specific business and place and is limited by time; *mudaraba mutlaqa* is 'unrestricted' by time, place or permissable trade or counterparty.[106] Iran has codified this form of contract in its civil law — a development expected to be emulated by other jurisdictions. Traditionally, *mudaraba* has been an unlimited liability entity. Today, almost all *mudaraba*s are structured with limited liability.

The ratio of profit distribution is proportional to pre-agreed shares but is negotiable and flexible. Partners are allowed to allocate their share of profits on the

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[105] See the example of Meezan Bank in the Appendix.
[106] Tyser, C R , p. 233 as quoted by Thomas, Cox & Kraty in "Structuring...", p. 9

basis of either the net operating profit/loss or gross profit. The latter basis can reduce moral hazard by avoiding arguments over depreciation, cost of goods sold, valuations and other matters subject to management discretion and audit directives.

However, the investor is not liable to losses beyond his capital contribution, which must be the case in a limited liability *mudaraba*; and the *mudarib* does not share in losses unless he has wilfully, or through negligence or fraud or some similar act, caused such losses.[107]

Mudaraba is widely used for retail funds aggregation. Private Islamic funds invested in real estate, private equity and a large number of portfolios use the *mudaraba* concept to finance these investments and acquisitions. In fact, most equity funds, for example, such as the highly successful NCB funds offered with Wellington Investment Management as well as other funds and unit trusts, all adapt *mudaraba* to their own situations and requirements.

b. Musharaka

There are generally two forms of *musharaka* in Shari'ah: *shirkat al-milk* and *shirkat al-'aqd*;[108] there is also the declining-balance *musharaka* which is a credit-driven derivative of the *musharaka* concept, the discussion of which, however, falls outside the scope of this paper. *Musharaka* today takes the form of limited partnership, although traditionally the concept was, as with *mudaraba*, that of an unlimited liability.

Shirkat al-milk is a partnership between two or more owners of common property which is equivalent to inherited property and does not have to be the subject of a specific contract. The problem with this form of property is that it is neither

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[107] See the example of the Meezan Bank of Pakistan in the Appendix.
[108] Thomas, Cox and Kraty (eds), "*Structuring Islamic Finance Transactions*". p. 53

divisible nor can it be unitised, and this causes problems when the intention is to use it or when a specific division of the property is needed.

Shirkat al-'aqd is a mutual partnership by contract. Capital contributions may be in kind or for services rendered, although typically they are cash at an agreed par value. A sub-division of this partnership is a partnership in goodwill (*wujuh*), in which there may not be any form of cash contribution towards capital but a contribution in terms of a known name in the trade, similar to a brand or the credit history with such a value. In both forms of partnership, the capital is quantified and specific.[109]

c. Basic rules of musharaka

As with *mudaraba*, the rule is that profits must be shared on the basis of capital, active participation and responsibility in the *musharaka* business.[110] Profits should be distributed in proportions to be settled by them in advance, precluding any allocation of a fixed amount to any partner. All jurists agree that losses must be shared in the same proportion as profit.

This is similar to a partnership which may be for a limited period or for a specific objective such as participation in a particular project, be it new or existing. Profits/losses will be determined in accordance with the capital contribution of each partner. Partners may share in the equity of the partnership as well as the management of the company in accordance with the terms of the partnership agreement.

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[109] Ibid. pp. 53-54
[110] *Ibid.*

4.5.5 Obstacles to Mudaraba and Musharaka financing

Lack of transparency in accounting, reporting and monitoring of performance may inhibit financiers/banks from participation in public and private companies, and may impede the rating of prospective issuers. In addition, lack of control over a *mudarib*'s activities poses a real problem to the financier who, even if he were able to exercise control, may consider such control costly to implement and futile.

Generally, the legal and specialised expertise in emerging markets may not be sufficiently developed to attract cross-border investors who might be keen to invest were it not for lack of proper monitoring of project performance and the high cost for such an activity.

Potential *sukuk*-investors in emerging countries are mostly traders and may be averse to investment risks. They are more accustomed to short-term business activities from which they can make quick profits, albeit at some risk. Generally speaking, they are also not used to entrusting their money to investment managers for long-term investment with all the accompanying risks that this would involve. Furthermore, investors in these slow developing capital markets lack the necessary information and knowledge to make an informed judgment.

Property rights and a clear legal system as understood in the West may not be the norm in those countries, particularly with regard to foreigners who may not own private property, making equity sharing and PLS unattractive even for Muslim investors from other countries. However, these laws are evolving and economies are opening up for international banks and investors to invest in them, particularly where these countries have either joined, or are in the process of joining the World Trade Organisation (WTO).

Sometimes, as in the case of Pakistan, *mudaraba* companies with PLS contracts, were tax-exempt until 1992, yet interest was allowed as a tax deductible item. Legislation is, therefore, seen here as a hindrance to further growth of these Islamic modes of financing.

Putting laws and regulations in place to support capital markets and the necessary infrastructure for *sukuk* issuances will take time to filter through and be adopted by the relevant financial institutions and Islamic banks. Yet without this infrastructure, it becomes difficult to mobilise savings on any significant scale.

Other obstacles might include lack of trust, risk of disclosure of trade secrets and high profits, the demand for guarantees and additional securities by the banks and financial institutions, and the costs of documentation and other fees which the receiver of funds has to bear.

These obstacles to *mudaraba* and *musharaka*, have for the most part forced Islamic banks and investment institutions to offer less risky modes of finance so as to remain competitive with their conventional banks. Additionally, Islamic banks have limited capacity to provide long-term financing in terms of *mudaraba* and *musharaka* when most of their funds are locked in short-term deposits; and if they do, they will only exacerbate the mismatch in maturity between their assets and liabilities.[111]

[111] Adam and Thomas, op. cit, pp.123-127

Example of Musharaka finance for the manufacturing industry [112]

	Bank	*Partner*	*Total*
1. Capital contributions	900	600	1,500
Contribution (%)	(60)	(40)	(100)
2. Expected net profit (after deduction of all costs of production)			525
3. Profit distribution			
a) 40% for managing transaction			210
– 35% for partner's role in managing transaction		183.75	
– 5% for bank's role in managing transaction	26.25		
b) 60% as shared profit			315
– 24% partner's % in the profit		126.00	
– 36% bank's % in the profit	189.00		
Total profit (a + b)	215.25	309.75	525
4. Rate of return on investment			
Partner's rate of return/monthly (%)		52	
Partner's rate of return/annually (%)		624	
Bank's rate of return/monthly (%)	24		
Bank's rate of return/annually (%)	288		

a. Comments on the musharaka model

In the above example, the purpose of the transaction is to finance the purchase of materials or input from the local market in order to manufacture the final products for an order which the manufacturer has received. The production run is not expected to take more than one month.

The example above purports to offer a risk-taking model for all types of businesses. The entrepreneur is allocated the greater part of the profit, assuming that the profit realised is at a satisfactory level and is a reward for his entrepreneurship and managerial skills. However, his share of the management fee seems to be excessive as both the bank and the entrepreneur are co-managers in this case, unless their agreement stipulates otherwise. Therefore, the extent of each partner's role in the

[112] Adam and Thomas, "*Islamic Bonds*"., p. 126

management of the business must be clearly defined. However, if the business incurs a loss, then the entrepreneur loses his capital contribution together with any time or effort which he has invested in the business.

In their book, *Islamic Bonds*, as referred to previously, the authors maintain: "The transaction is particularly satisfying to Muslim and Third World countries where inflation is usually high and automatically adjusts to inflation as the return of each partner is based on the profit earned and not fixed". But in the real world, unless materials' prices are locked in from the very start and the unions are happy with their wages remaining as they are, profits might not turn out to be as planned and in an inflationary situation, the purchasing value of these profits will be devalued by inflation so that the adjustment may only be in nominal terms.

Musharaka, as a mode of financing, is particularly suited to the Islamic funding of businesses. Positive results can be expected from it if banks exercise due diligence in screening the venture to be financed and regularly monitor its performance. Nevertheless, businesses do fail. But if the risks in any particular business are properly analysed and mitigated, then losses incurred on some will be more than compensated for by future successes.[113]

However, the Profit/Loss sharing (PLS) model has been much criticised for the burden that it places on those who have to verify the viability of projects financed in this way. The process of verification involves time-consuming detailed assessment procedures, negotiations, sector-expertise and experience. Often, there are no generally-accepted criteria for assessing medium to long-term projects. Each project would have to be evaluated on its own merits. It is said that the PLS model ties up capital for long periods, until it is repaid from the ultimate profits, whereas

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[113] Ibid. p. 127

conventional finance recovers it in instalments over the life of the project, thereby reducing risk and uncertainty. Some have advanced the idea of periodical distribution of profits, based on proper valuation of work-in-process to overcome the long repayment period.

A further example of *sukuk al-musharaka* is the Emirates *sukuk* which marked an innovative shift from the commonly-used *sukuk al-ijara* structure. Under this structure, Wings FZCO ("Wings", an SPV incorporated in the Dubai Airport Free Zone) issued floating-rate *sukuk* to investors and used the proceeds of the *sukuk* issue to contribute to the *musharaka* between Wings and Emirates (each as partners to the *musharaka*). The purpose of the *musharaka* joint-venture is to develop and to lease to the Emirates a new engineering centre and a new HQ building in Dubai. The rental payments from the *musharaka* will be used to make the periodic payments on the *sukuk* certificates, which are listed on the Luxembourg Stock Exchange. It is anticipated that this model of *sukuk* structure will become popular in future.

b. Musharaka and the small business

It is further argued that since most businesses in Islamic countries are small in size, the PLS model, with the costs of the resources that need to be mobilised compared to the facility required, makes financing these small businesses difficult and uneconomic.[114] And it is further argued that what businesses need in their start-up phase is short-term financing in the form of working capital so that they can sustain their survivability in the first few years.

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[114] McDowall, B. (2005). *"The Business Challenges of Islamic Banking"*.

Thus, one cannot escape the conclusion that the contradiction between the need for a full appraisal of a business and the necessity for immediate working capital is a major inhibitor for successful operation of PLS schemes.[115]

Still, others have pointed out that Islamic banks should change their culture to match their rhetoric by recruiting and training, or retraining, their existing loan-officers to carry out such assessments, in order to overcome the information asymmetry and the adverse risk which individual investors would have been burdened with had they had to carry out such tasks.[116]

4.6 COMPARISON AND CONTRAST OF SUKUK WITH CONVENTIONAL BONDS

In terms of ownership, *sukuk* represent an undivided ownership stake in well-defined and existing assets, whereas a conventional bond is merely a debt obligation that may or not have first claim on the assets of an entity in case of bankruptcy or liquidation. In addition, the use of the assets must be Islamic; it must conform to certain ethical criteria. Financing a casino or a distillery or a factory which uses pork in its components is prohibited. In the case of claims, *sukuk*-holders have an ownership claim on specific assets/project/service and so on, whereas the bondholder has a general claim on the borrowing entity and in some cases liens on assets.[117]

Unlike bond obligations, asset-related expenses comprising all the expenses that the seller may have incurred in acquiring the asset such as freight and customs may be added to the cost price of the asset before adding on the mark-up.[118]

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[115] *Ibid.*
[116] Gafoor, A.L.M. (1995). Problems in Implementing the PLS Scheme, in *"Islamic Banking"*.
[117] Adam and Thomas, Islamic Bonds, pp.52-56
[118] M T Usmani,, An Introduction to Islamic Finance, p. 41

It is stated that *sukuk* prices are market-driven and depend on the movement in market value of the underlying assets, whereas bond prices depend largely on the credit worthiness of the issuer and not directly on specific assets. However, the capital market for conventional bonds is well-developed, sophisticated and active, whereas the *sukuk* market is still in its infancy and *sukuk*-holders usually hold *sukuk* to maturity.

The sale of *sukuk* is a sale of a share of an asset, whereas the sale of a bond is a sale of a debt. However, bonds are not necessarily a mere packaging of a debt for sale. Asset-backed securities and mortgage-backed securities in their conventional debt setting are also linked to secure bonds, that is, related to well-defined assets — hence the similarity with *sukuk.*

Sukuk are secured by ownership rights in the underlying assets or projects, in addition to other collateral enhancements that may be structured to support it. Bonds, on the other hand, are generally unsecured debentures with few exceptions, such as equipment trust certificates. However, both principal and return are guaranteed by the issuer in the case of conventional bonds, whereas they are not in the case of *sukuk.*

S*ukuk* are securitised assets that can be easily traded and transferred in financial markets — though this is not so in reality, as investors hold on to their *sukuk* certificates until maturity. Moreover, the demand for *sukuk* has thus far exceeded supply and there cannot be active trading unless the market for *sukuk* achieves critical mass where investors start trading rather than holding on to their investments. There must also be diversity in the *sukuk* issues: bills, notes and bonds with various tenors as in conventional bonds, in order to offer wider choices to investors and satisfy their different needs and improve liquidity.

Although *sukuk* are analysed and rated by international rating agencies such as S&P, Moody's and Fitch, further enhancing their marketability, there are still legal and jurisdiction problems which complicate matters and make it difficult, on occasions, to assign to *sukuk* the same high ratings that some conventional bonds achieve.[119]

Different *sukuk* structures may allow for credit enhancements that broaden their appeal to risk-averse Islamic investors as well as to the conventional investor in these Islamic bonds; for example, an obligor may guarantee the underwriting where an investor accepts a lower yield. In 2003, IDB did just that by agreeing to guarantee the performance of the underlying assets and buy back the assets pool at the maturity of the *sukuk*.[120]

The variety of *sukuk* structures described by AAOIFI in its 14 standards[121] allow for *sukuk* to be structured to meet financing needs across different legal and tax jurisdictions. It also offers variable and fixed-income streams and may obtain cross-border listing compatible with global bond regulations.

The risks embedded in conventional bond investing can be mitigated by a variety of derivative instruments. Greenspan, the Fed Chairman[122], notes that derivatives have significantly removed or reduced individual risks but that their prospective increase of systemic risks does appear to be an issue which requires further understanding. This is not so for *sukuk*, which are asset-based and are primary instruments — not derived instruments — and are more likely to fit into existing legal and regulatory regimes. *Sukuk* may therefore be used to disperse risk by selling them

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[119] See the section 'Sukuk Ratings and Securitisation'.
[120] See Appendix, case study 10
[121] See the section on 'Types of Sukuk'.
[122] Greenspan, Alan, (1999, March 19) "Financial Derivatives at the Futures Industry Association", Florida, USA.

with an asset linkage to new investors, but not to enhance wealth by deriving new instruments that are independently traded and completely unattached to the underlying assets.

Sukuk are investment instruments and not a debt owed by the issuer to the holder of the certificate and as such may not be issued for a pool of receivables. Finally, *sukuk* must be Shari'ah-compliant which implies a *non-ribawi* return on investment, conformity with ethical standards and are the result of a genuine sale and the whole transaction must be approved by a recognised panel of Islamic jurists.

Sukuk al-ijara yield predetermined returns in relation to a benchmark, whereas others, namely *sukuk al-musharaka* and *sukuk al-mudaraba* are based on profit/loss sharing.[123]

And with respect to leasing underlying *sukuk al-ijara* transactions, there is an important difference between Islamic and conventional leases. First, Islamic jurisprudence does not of course prohibit the use of bankruptcy-remote offshore SPV lessor. However, the relationship between SPV lessor and the investors/financiers is a little different. The fact that there could be many investors/ financiers in Islamic leasing transactions requires the appointment of an agent (*mudarib*) to represent and co-ordinate their combined interest in the beneficial ownership of those assets. The *mudarib* acts much like the standard agent bank and security trustee in a lending transaction, collecting and distributing funds on their behalf and protecting their interest. Moreover, in the event of termination or total loss with regard to conventional leases, the lease agreement may stipulate the payment of a termination sum or an agreed value in the event of default or loss by the lessee to the lessor whereas to be Shari'ah compliant, investors might have to waive separately such

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[123] Adam and Thomas, "*Islamic Bonds*", *op.cit.*,. pp. 54-60

claims on the lessee. In the event of total loss, however, Islamic investors my have to rely exclusively on their *takaful* receipts to recoup their investment, whereas in the case of a loss resulting from negligence on the part of the lessee, all parties may claim for the full loss on the lessee.

4.7 SECURITISATION

Securitisation is typically defined as the process of transforming dormant, illiquid assets into tradable, negotiable and liquid assets. It is a process of intermediation which pools assets of similar characteristics and allows risks to be diversified and distributed amongst a large number of investors who are able to choose the type of risk profile that suits their investment needs. Securitisation in Islamic finance is made possible because it is predicated on the performance of a well-defined set of assets. For example, payments to certificate holders are based on rents received from parcels of land or leases for the use of certain equipment such as aircraft or cars. Furthermore, the relationship of the parties within the securitisation process is governed by Islamic law. For example the lease should be an *ijara* contract.[124]

The securitisation process has come to encompasses asset classes from commercial and residential mortgages to car loans, leases, credit card receivables, computer leases and equipment notes. It is often employed by companies to move their assets outside their balance sheets to free up financial resources for further investment. Companies also seek to lower their costs of funding through this process and to pay off their more expensive lines of credit.

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[124] Sajjad Chowhdry, (2005, September). "An Overview of the basics of Securitisation and its emergence on the Islamic Finance scene", in *Dinar Standard*, 1-5

The growth in the market for Shari'ah compliant securitisation can be traced to the strong demand by investors for Shari'ah compliant financial instruments and the need to raise finance in a cost-effective manner without affecting shareholders' equity. This is particularly true of financial institutions where the imposition of capital adequacy ratios and reserve requirements by the regulatory agencies have made them a safer place to invest and allowed them, in turn, to serve a wider base of customers without resorting to raise new equity or deposits. And as the barriers on the movement of capital are removed and capital markets converge to become one and larger, competition between various segments of the economy for the same capital becomes more intense and necessitates the search for cost-effective funding.[125]

Another factor which has spurred the growth of securitisation is the rapidly growing field of computer technology which has made it possible to obtain credit and liquidity information on millions of financial assets, enabling those in the market greater leeway to isolate certain types of assets and make them self-financing. The availability of this type of information has enabled institutions to remove these assets from their balance sheets as previously mentioned and obtain better credit rating for them than what the originators could and thereby lower the cost of funding.

In the nine months to end-September 2005, the global total of rated securitisation deals rose 35 per cent, to about US$ 1,240bn, according to S&P. In Europe, the total volume of rated securitisation deals rose 50 per cent to US$ 250bn.[126]

"There is still the perception of securitisation as a new science," says Kurt Sampson, European head of structured finance ratings at S&P. "It is not an exotic

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[125] Sulaiman Abdi Dualeh. (1998, July). *"Islamic Securitisation: Practical Aspects"*, Geneva. Paper presented at the Noga Hilton for the World Conference on Islamic Banking, Geneva, Switzerland.
[126] Charles Batchelor. (2004, Nov., 4). "Joining Europe's Mainstream". *Financial Times*.

technique. Increasingly, people regard it as a fundamental part of their investment strategy."

Islamic financiers cannot but focus their attention this phenomenon for securitisation has some specific benefits for Islamic institutions. Asset-backed securitisation is of course the right course of action for Islamic institutions to take as long as these assets are structured in accordance with Islamic principles. Islamic transactions are based on collateralised assets. For example, we use murabaha to purchase certain goods on behalf of clients and sell them back to the same client rather that advance an interest bearing loan to enable them to purchase the goods. Similarly, we use an ijara contract to buy specified equipment and lease it to the project operator instead of advancing him liquid capital against payment of interest. Thus, securitisation can free up resources that are tied up in illiquid project and trade financing activities and bring in much needed liquidity to the institutions and the capital market.

There are three main structures commonly used in securitisation. They are: pass-throughs, asset-backed securities and pay-throughs. These structures have been developed in the secondary mortgage and non-mortgage market. Only one such structure will be considered here - the pass-throughs - as they most closely adhere to Islamic principles. "Pass-throughs represent direct ownership in a portfolio of assets that are usually similar in quality, maturity and yield. The originator services the portfolio of assets, makes collections, and passes them on, less servicing fee, to the investors. Ownership of the assets in the portfolio lies with the investors; thus pass-throughs are not debt obligations of the originator and do not appear on the originator's balance sheet. Pass-throughs may also be designed to represent a portion of ownership, rights and obligations, but not a conveyance of title. Sometimes

complex tax or investor issues and in many Islamic countries, rules restricting foreign ownership of locally domiciled assets require the partial assignment or sale without recordation".[127]

The process of securitisation works in the following manner: first the originator collects the assets on its balance sheet and as the level of assets reaches a critical mass, they are sold or assigned to the SPV set up by the originator and whose sole purpose is to raise finance for the assets. Next, the originator is retained to service the assets by the SPV which then issues tradable securities and uses the proceeds from the sale of these securities to purchase the original asset portfolio from the originator. Investors then make the decision to purchase these securities on the basis of the quality of the assets pool and their confidence that the assets are of sufficient value to repay the securities on maturity.

There is no reason why Shari'ah-compliant securitisation cannot, for example, utilise the assets that are in the UK or Europe, particularly in the property market which Islamic investors have traditionally been investing in. With the Islamic Bank of Britain and other Islamic financial institutions and funds having established themselves in the UK and elsewhere, this market should witness increased activity in future. And considering their popularity, as evidenced by their oversubscription in various jurisdictions, *sukuk* can be more cost-effective in funding real estate or property developments.[128]

Sukuk al-ijara can drive the process of creating an active secondary market for trading in these securities. By providing payment of income on a monthly, quarterly

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[127] Sulaiman Abdi Dualeh; *"Islamic Securitisation: Practical Aspects"*, 1998, Geneva, a paper for the World Conference on Islamic Banking, pp.5-6; Adam & Thomas, *"Islamic Bonds"*, pp. 71-73 and

[128] Thomas, Cox & Kraty, in *"Structuring Islamic Finance Transactions"*, op. cit., pp., 157-169

or annual basis, they are well-suited for securitisation, which can have many of the features of conventional bonds. *Sukuk al-ijara* represent ownership of well-defined assets under a leasing contract and can be traded in the secondary market at prices determined by market forces. *Sukuk* can be issued by different types of issuers, from government authorities, public and private companies, to religious ministries/endowments (*awqaf*). The maturity of such securities can extend from 3 to 6 months and 5 to 20 years, though there are very few issues which extend beyond 10 years.

Although there is great potential for securitisation for Islamic banks as SPV or originator of its own assets, the process has not gone far enough and the volume so far is insignificant compared to the world market.

The limiting factors have been dearth of assets of the right quality; absence of a viable secondary market; the predominance of *murabaha* form of financing by Islamic banks the risks involved in securitisation are higher because they are typically off balance sheet and stand-alone without the protection of the overall standing of the corporate or institutional entity; and, finally corporate sukuk complicate the picture by being less well regulated than institutional issues. Cross-border taxation can also be a complicating factor in securitisation.

It is important to note that as capital markets become globalised, rating begins to assume more importance as a safety valve for investors and financiers. However, this issue has so far not worked in favour of Islamic securitised products and only rarely have these products been awarded triple A ratings, so there some way to go before Islamic securitisation can really take off in the world market.[129]

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[129] Manjoo, F. A. (2005). "Securitisation: An Important Recipe for Islamic Banks - A Survey". Review of Islamic Economics, Vol. 9, No. 1.

4.7.1 Sukuk Ratings and Securitisation Issues and Challenges

Fitch Ratings and Shari'ah Law

Before we deal with the concerns and issues of rating *sukuk* in the Muslim world, it would perhaps be useful to start with a brief note on conventional ratings agencies.

"The larger body of investors and some institutional investors rely on rating agencies for valuation of their securities on account of their independent and unbiased nature. The famous ones are: S&P, Moody's and Fitch. Rating definitions are released by these firms but they are not 'buy', 'hold' or 'sell' indicators. Although they do not purport to indicate market direction, serving only as a guide to the issuer's ability and willingness to meet the terms of the issue, they are still taken into account in any investment decision."[130]

Fitch maintains that many Islamic jurisdictions, such as Saudi Arabia and others in the Middle East, have significant potential to securitise domestically-originated assets. However, securitisation ratings often prove difficult to achieve in jurisdictions with legal systems based on the precepts of Islamic Shari'ah. For Fitch, the legal opinions which it has so far received do not indicate that a true sale has taken place. By this is meant that it has yet to see a fully-perfected transfer of the legal interest in the collateral from the originator to the SPV/SPE. In effect, Fitch expects legal opinion to address the vulnerability of the sale transaction to be looked upon as an unsecured loan by a bankruptcy court or an insolvency official of the originator, or overturned by the same over preference or fraudulent transfer, generally.

Fitch would also like to see that where a jurisdiction permits the consolidation of the assets and liabilities of related companies, the creditors of the parent

[130] Richard, K. and Penrose, J. (2006). "*Two Aspects Of Rating Sukuk: Sharia Compliance And Transaction*". Available at:,URL:http://www.standardandpoors.com>. Access date: [8th Feb., 2006]

company or the issuer/originator cannot lay claim to the assets of the SPV. This is in line with the main purpose of using a bankruptcy-remote SPV, which is to avoid bankruptcy or insolvency events. This minimises the risk that the assets of the SPV will be distributed other than in accordance with the contractual obligations contained in the transaction documents. In this respect, certain rules must apply: first, the SPV's purpose must be limited to transaction-limited activities only. It may not engage in activities that may cause it to have creditors. Secondly, all transaction documents should contain non-competition clauses from any party engaged directly or indirectly in the transaction. Thirdly, all transaction documents should include limited-recourse clauses whereby all transaction creditors should agree that the liability of the SPV to pay any interest and principal claims will be made from the proceeds of the securitised assets and enhancements available and once these are fully paid, the SPV's obligation to all remaining creditors will be fully realised and finally, the constitutional documents of the SPV should contain restrictions on the shareholders' ability (where a parent company's structure is used) to initiate bankruptcy or insolvency proceedings and that the SPV will not be a party to such proceedings.[131]

Fitch claims that it has, to date (24/03/05), not seen any legal opinion confirming that non-petition or limited-recourse clauses are enforceable in a Shari'ah jurisdiction and emphasises that in any securitisation structure, it is crucial for investors to have the benefit of first-priority security over the collateral (after creditors, as the law stipulates). The concept of security under Shari'ah is *not* always consistent with the Western understanding of it. As a result, Fitch would expect legal

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[131] Dommisse, A. and Kazi, W. (2005). *"Securitisation and Shari'ah Law"*: NY: Fitch Ratings Ltd. Available at: <URL:http:www.fitchratings.com>

opinion to address the nature of the security interests created under the transaction document and its enforceability against third parties (including the originator, his insolvency official or the creditors) and the perfection of documents such as registration and recording mechanisms. Again, according to Fitch, there is no legal opinion with regard to Shari'ah law jurisdictions, which shows that there is at least some legal certainty that the transaction documents are valid, binding and enforceable in a Shari'ah jurisdiction. The opinions expressed with regard to the latter, in Fitch's opinion, are qualified in the sense that: (1) Shari'ah law, by its very nature, is a statement of general principles which leaves the courts great latitude with regard to the interpretation of a particular Shari'ah precept and the manner in which it should be applied in respect of a particular transaction; (2) there are four schools of Islamic jurisprudence, each of whom adopt different criteria for interpreting Shari'ah precepts. Interpretation would then differ not only among different Islamic countries or jurisdictions but also within one country itself. This is further complicated by the fact that court decisions are often not recorded and even when they are recorded are binding on later decisions. Some opinions have gone as far as saying that courts operating under Shari'ah law might refuse to enforce a contract or might interpret it in accordance with their own terms if they judge it to be inequitable. Even with the latitude exercised by Shari'ah courts in their interpretation of equitable principles, securitisation could still be possible. However, it does mean that investors might not be sufficiently certain that the collateral underlying a securitisation will be available to them in distress situations; (3) since interest is expressly forbidden, legal opinion is needed to confirm that any payments structured as profits, rents, service charges, etc., are Shari'ah-compliant. Fitch is of the opinion that collateral-based triggers, such as those used to prevent asset deterioration and allow for accelerated repayment of

investors, should be included in any definition of default; (4) choice of Law and Enforcement of judgments: legal opinion should confirm that the law chosen to govern each aspect of the transaction would be upheld by the courts and adjudicative authorities of the chosen jurisdiction, the jurisdiction of incorporation of the parties to the transaction and the jurisdiction in which the collateral is held. In other words, would a judgment issued in a Shari'ah jurisdiction be recognised and enforced in the relevant foreign jurisdiction? What is needed is a securitisation structure that will address Shari'ah law risks where the collateral is in a Shari'ah jurisdiction and enforcement against the collateral and its proceeds rely on the Shari'ah law recognising and enforcing a foreign law judgement [132]; and (5) all tax obligations should be predictable and the SPV is not subject to any withholding tax or any other taxes. But this is uncertain in the light of the SPVs' newness. Therefore, where an SPV is established, a tax directive from an appropriate authority, or an opinion from a reputable tax consultant, should provide the necessary comfort for such a transaction;

In conclusion, Fitch believes that Shari'ah law opinion may not support securitisation ratings that rely on Shari'ah law interpretation or enforcement of investors' rights by a Shari'ah court. This applies where the chosen law is Shari'ah law as well as where another law is chosen but where a court order must be executed against collateral assets located in a Shari'ah jurisdiction.

Despite these problems, securitisation may be possible through the use of a guarantor, even one in the Shari'ah jurisdiction. In this case, Fitch would refocus on such matters as the guarantor's reputation and creditworthiness, the importance of the transaction to the economy, the financial system and the Islamic banking community. This was the case in the Fitch-rated Solidarity Trust Services Ltd. transaction which

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[132] cif. Richard and Penrose.

securitised loan-type assets through Shari'ah-compliant financing techniques such as *ijara*, *murabaha* and *istisna'*. IDB provided an unconditional and irrevocable financial guarantee for the full maturity value of the notes, whose terms were governed by English law and whose jurisdiction was England. Fitch gave it a rating of AA, the same as its rating of IDB.[133] The latter also provided a liquidity facility to cover any mismatches between the underlying assets and the note obligations. However, because of the guarantee, the rating did not rely on a Shari'ah jurisdiction upholding an order by an English court or the validity of a 'true sale' of the assets to the SPV and other relevant legal issues. The guarantee would also cover any cash shortfalls generated by the assets.[134]

4.8 ISLAMIC EMBEDDED OPTIONS

Trading in debts is not allowed under Shari'ah law; but the exchange of debt for real assets and usufructs is allowed. This provides for the opportunity to exchange debt for real assets and usufructs that can be added as embedded options for the settlement of debt.[135]

This can work particularly well in project financing where, for example, in a construction project, financing is provided to the tune of £100 million divided into a million zero-coupon *sukuk* at £100 each. Now if the *istisna'* certificate is based on a 10% mark up, then the issued price of a zero-coupon *sukuk* is 90% of the principal amount or £90. Suppose, then, that these *sukuk* are issued for 10 years. *Istisna' sukuk* are not tradable under Shari'ah law and, as a result, there will be no secondary market

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[133] See the details of the IDB issue in the Appendix.
[134] Dommisse, A., and Kazi, W. (2005). *"Securitisation and Shari'ah Law"*: NY: Fitch Ratings Ltd. Available at: <URL:http:www.fitchratings.com>
[135] Archer, S. and Abdel Karim, R. op. cit., p.181

for them. The investor is therefore locked in for 10 years before s/he can convert them into cash. At the same time, the investor is exposed to the following risks[136]:

1. Liquidity risk as he or she is locked in for ten years.
2. Re-investment risk because he or she cannot reinvest the 10% profit which he or she has been promised, until the certificates reach their maturity date in 10-years time.
3. Credit risk. This is always greater with longer maturities than with shorter ones. It relates to the issuer's/borrower's credit worthiness, which is relatively easier to predict in the short-term.
4. Interest rate risk. Again, this is greater in the longer run, particularly in a volatile market. Interest rates are brought in here because *sukuk* returns are benchmarked to LIBOR+.
5. Foreign exchange risk. This risk arises from the difficulty of predicting or forecasting in the longer run.

An embedded option could transform the risk profile of these zero-coupon *sukuk* certificates in the following way:

Let us assume that the real estate project involves the construction of an apartment building and that the construction company writes an option in the certificate that upon completion of the project in one year, the certificate holders are allowed to purchase or acquire an apartment on lease, utilising their zero-coupons. Assume that the rent for an apartment is £7000 a year, then a person holding, say, £7000 worth of zero coupons will be able to lease an apartment for one year, starting from year 2, instead of having to wait 10 years in order to cash the zero coupons. Similarly, the investor can buy the apartment if he or she holds

[136] Tariq Ali, op. cit., pp., 43-47

sufficient zero coupons to pay for their full price. In this way, a financial asset is converted into a real asset with different risk characteristics.[137]

The embedded feature in this case is a call option on the new assets of the construction company. This call option cannot be detached or traded as in conventional ones, thus, there is no 'danger' of creating derivatives.[138]

The risk profile of the certificates also changes as mentioned above. The downside to the investments is by default protected by the mark up of 10%. The certificates would become more attractive as holders of the zero-coupon certificates would benefit from the call option and at the end of the day will be able to redeem their certificates at maturity at face value or par, which is permissable under Shari'ah. And once the call option is exercised, all the above-mentioned risks are isolated and their impact reduced — hence, the transformation of a financial asset into a real asset with different risk features.[139]

Embedded options can be added to most Islamic financial contracts such as leasing, instalment sale and *salam* contracts. Moreover, the options themselves can be varied to suit the particularities of the transaction:

- The zero-coupon holders may be given the option to exchange their certificates for an equivalent or suitable amount of the goods or output that a company produces; the certificates could also be given the option of converting into the common stock or equity of a company, and/or its subsidiaries, if listed on a recognised stock exchange.

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[137] Ibid., pp., 73-76
[138] Bacha, O. I. (n.d.) "Derivative Instruments and Islamic Finance: Some thoughts For a Reconsideration", *International Journal of Islamic Financial Services* Vol. 1 No. 1
[139] cif., Ali Arsalan Tariq, op. cit., pp., 74-76

- The certificates can be 'put' or sold back to the issuer during a specified time before maturity or the company/issuer can 'call' back the securities during a specified time period before maturity.[140]

4.8.1 Relevance of Options to Islamic Instruments

"From a Shari'ah perspective, there is a distinction between an option and the trading of an option, while the former is permissable, the latter is not, in the current view of Islamic scholars. Options represent rights (*huquq*), but do they represent benefits (*manfa'a*) and not wealth or *mal*? The general view is that rights are not tradable at a price, but *manfa'a* is. When options result in physical delivery, they best fit into established Islamic norms. However, cash settled options involve the exchange of two money assets or the netting of two payment obligations."[141]

The role of options and derivatives in the development of capital markets is important, particularly in enhancing the competitiveness of Islamic financial instruments with regard to conventional bonds. *Bay' al-'urbun* is the closest thing to an options contract. A would-be buyer would pay a deposit to purchase a specific product in future but if he or she does not do so, they would then forego the *'urbun*, the deposit.[142] Scholars differ on the use of future contracts and consider it akin to *gharar*. Others disagree and argue that the contract is predicated on the specificity of the commodity in the contract. Such conditionality makes it difficult for such contracts to replicate the functions of the conventional options contract that may be exercisable on unspecified underlying assets. The OIC Academy considers such contracts untradable because, first, such contracts involve investing in intangible

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[140] Ibid.
[141] Thomas, Cox and Kraty, "*Structuring Islamic Finance Instruments*", pp. 190-192
[142] Tariq, Ali Arsalan, "*Managing Financial Risks of Sukuk Structures*", Msc Dissertation, Loughborough Universty, September 2004 and cif. Thomas, Cox & Kraty, p.192

assets and secondly, the uncertainty in these contracts amounts to *gharar*, which renders them invalid under Shari'ah law.

4.8.2 The Impact of Embedded Options

These options are not detachable from the bond and cannot be traded separately like equity options. They must be evaluated with the fixed income portion of the bond when determining the proper market price, yield and risk of the bond. Embedded options work to the advantage of the issuer; when an investor buys a callable bond, one is effectively buying a noncallable bond (also called a bullet bond) and simultaneously selling a call option back to the issuer.

The value of a bond with embedded options will change depending on how the value of the embedded options changes when interest rates change. For example, as interest rates decline, the price of a callable bond may not increase as much as an otherwise option-free bond (that is, a bond with no embedded options).[143]

To understand why this is so, we decompose the price of a callable bond into two parts, as shown below:

Price of a callable bond = Price of an option-free bond – Price of embedded call options. The reason for subtracting the price of embedded call options from an option-free bond is that the call option is a benefit to the issuer and a disadvantage to the bondholder. This reduces the price of a callable bond relative to an option-free bond.

Now, when interest rates decline, the price of an option-free bond increases. The price of the embedded call option also increases when interest rates decline,

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[143] Archer, S. and Abdel Karim, R. 2002 (Eds). "*Islamic Finance-Innovation and Growth*". London, UK: Euromoney Books, p.182

because it becomes more valuable to the issuer. So when interest rates decline both components increase, but the price of the callable bond depends on the relative change of the two components. Typically, a decline in interest rates will result in an increase in the price of the callable bond, although not by as much as the price change of an otherwise comparable option-free bond.

Similarly, when interest rates rise, the price of a callable bond will not fall by as much as an otherwise option-free bond. The reason is that the price of the embedded call option declines. When interest rates rise, the price of the option-free bond declines but is partially offset by the decrease in the price of the embedded call option.[144]

4.9 ISLAMIC RISK PROFILE

Most Islamic finance instruments are illiquid because they are either held to maturity or cannot be traded except at face value and because of the underdeveloped state of the secondary market; so liquidity risk is of particular concern as far as Islamic financial products are concerned. Furthermore, this risk arises out of a number of other factors, amongst them are: small number of participants in the secondary market, slow development of Islamic financial products, absence of Islamically acceptable inter-bank market, absence of a lender of last resort facilities and the potential for different Shari'ah interpretations.

Sovereign *sukuk* risk is usually defined as a probability of default and pricing volatility which arises as a consequence of an action by a foreign government. Sovereign issues may have a higher credit rating than others but governments have been known to default (Argentine, Mexico, etc.), while others (KSA, UAE and the

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[144] Strumeyer, *op. cit. pp. 37-38 and Fabozzi, Handbook, pp. 328-329*

smaller Gulf countries whose currency is pegged to the US dollar), makes them susceptible to US economic cycles and policy changes. It is the relative, and not the absolute, creditworthiness of a country to others that is at issue when sovereign risk is assessed; hence the need to establish a system of relative values or indicators by which we can compare and assess these countries in terms of sovereign risk. These values must include quantitative indicators such as foreign exchange reserves, exports and balance of payments.

The risk profile of the corporate *sukuk* issues is different and is a function of the type of *sukuk* under consideration and their underlying assets. With *sukuk al-ijara*, the liability is limited to the value of the assets securitised. The SPV, as the owner of the leased assets, will be bankruptcy-remote, which makes it doubly difficult to lay claim to anything more than the related cash flows. However, *musharaka sukuk* and *mudaraba sukuk* are risky, as they rely on the outcome of a business venture that is difficult to predict, much like equity participation in companies. Third party guarantee against investors' losses can be secured; but this must be entirely outside the contract for these two forms of *sukuk*. Additionally, a guarantee is a problematic issue in Islamic finance, whereas risk is a prerequisite in Islamic transactions, needed to ensure compliance with Shari'ah law.[145]

[145] Adam, N. & Thomas, A. "*Islamic Bonds*", op. cit., pp., 57-60 and Archer, S. & Abdel Karim, R. in Islamic Finance, Innovation and Growth, pp., 176-180

4.10 CAPITAL MARKETS, LIQUIDITY AND THE ROLE OF BAHRAIN AND MALAYSIS

Chapter Introduction

In this chapter, the leading role of Bahrain and Malaysia is considered and examined in the context of liquidity and development of capital markets.[146]

There is of course extensive literature on *sukuk*, but not much in the way of critical examination of that literature. Perhaps overwhelming pressures to come up with new products to satisfy the ever-growing demand for Islamic financial instruments and investment outlets has, for the time being at least, deferred such an examination and discussion. However, a critical discussion and examination of the *sukuk* structures will be crucial if they are to meet the challenges facing them, and crucial also to the furthering of their development. Consequently, there are large areas of Islamic finance where further analysis and research is required.

What is taken for granted in the conventional financial markets, in terms of the ability to access liquidity and invest flexibly, is not so in their Islamic counterparts.

Furthermore, much of the product innovation in the Islamic financial sector in the past has been engineered to meet specific investment risk and return criteria for Islamic commercial banks. Increasingly, Islamic financial institutions have applied *murabaha*, *salam*, *tawarruq* and *sukuk* to manage their liquidity. The absence of a money market, outside Malaysia, to serve Islamic banks remains a challenge.

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[146] Cox, S. (2005). "Developing the Islamic Capital Market and Creating Liquidity", *Review of Islamic Economics*, Vol. 1, No. 1, pp., 75-86 and Thomas, Cox, and Kraty, "*Structuring...* " op. cit., pp., 171-182.

4.11 THE GLOBAL SUKUK MARKET IN PERSPECTIVE

4.11.1 Sovereign and Corporate Sukuk Market

Sovereign *sukuk* are those issued by countries such Bahrain, Malaysia, Pakistan and others, while corporate *sukuk* are those issued by companies such as Tabreed [147] and HANCO.[148] They both serve as financing tools for both issuer/borrower and lender.

Sovereign sukuk are issued by various governments in the Middle East such as Bahrain, Malaysia, Qatar, Iran, Pakistan, Sudan and Turkey.[149] These have become quite popular as a means of financing infrastructure developments, government debt and credit expansion through the banking sector. These *sukuk* also help in cross-border convergence of standards and opportunities by virtue of having investors from one market or geographical area such as the Middle East investing in, say, Malaysian issues or *sukuk* and vice versa. Indeed, a number of US and European investors have also participated in some of these issues, though they remain a minority. Such cross-border participation necessitates that the characteristics of these *sukuk* issues be attractive enough in terms of returns, tenor and compliance with Shari'ah. The latter, in particular, poses a problem because, for instance, the majority of Middle Eastern jurists do not sanction the trading of receivables-based debt and other forms of debt, whereas Malaysian jurists do and actively trade in it.[150]

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[147] Adam, N. and Thomas A. (2004). *"Islamic Bonds"* pp., 119-121; see also the example in the Appendix.
[148] Thomas, A., Cox, S., & Kraty, B.,(2005). "Structuring Islamic Finance Transactions", pp., 83-84 Also see example in the Appendix.
[149] Adam, Nathif and Thomas, Abdulkader (2004). *Islamic Bonds: Your Guide to Issuing, Structuring and Investing in Sukuk*: London, UK: Euromoney Books.
[150] The Qatar Global Sukuk and the Anhalt-Saxony are two examples of sovereign *sukuk* that are included in the Appendix.

Sovereign *sukuk* are nowadays widely used to finance public expenditure programs, to develop infrastructure projects such as medical complexes, motorways, ports, airports and substantial tourist developments. Corporate *sukuk*, on the other hand, are mainly used by companies to finance expansion, by merger and acquisition, for instance, or by opening new markets and establishing overseas operations.

The Qatar Global *sukuk* has been hailed as an important landmark issue, because it demonstrated that a *sukuk* issue, if structured properly, would not be precluded under a civil legal system with parallel legal systems (Shari'ah and conventional).[151] The issue arose as to how the issuer (QGS) would be able to enforce the rights of the *sukuk*-holders in its capacity as their trustee in a Qatari court when Qatari law does not recognise trusts? The issue was resolved by Qatari agency law which gives the issuer a recognised legal relationship vis-à-vis the *sukuk*-holders in any local enforcement proceedings against the government. The Qatari Government also undertook to pay a late payment amount to the charity of an issuer's choice if it delayed payment of a rental.[152]

Sovereign *sukuk* have, generally, been criticised on the grounds that in most cases the head lease does not transfer ownership rights or obligations of the leased assets, and does not provide for a possible liability for new government land taxes; in effect, there is nothing amounting to ownership. In the same vein, the Bahrain *sukuk* issue of US$250,000,000 Trust Certificates due 2009 was criticised because of the clause that indemnified the issuer of *sukuk* (the "owner" of the parcels of land) against any possible losses, transferring risk to the lessee. Although this was not considered to be wholly acceptable under Shari'ah, the Citi Islamic Investment Bank Shari'ah Board

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[151] see details in the Appendix.
[152] Rahail Ali, (n.d.) "Qatar US$ 700,000,000 Global Sukuk - A Civil Jurisdiction First". *Amarican Journal of Islamic Finance (ajif), pp., 1-2*

approved it, for reasons, it seems, that had more to do with expediting the development of Islamic financial institutions and product innovation than Islamic law.

Corporate *sukuk* [153] should take off on the back of the market for sovereign *sukuk*, now that the latter is reasonably well-developed. There have already been a number of corporate issues such the one for Hanco, the Saudi car rental company, Tabreed, the UAE cooling company.[154]

There are companies in the Middle East with large pools of assets that can be securitised and issued to the public — companies like SABIC in Saudi Arabia which has already started this process and most telecommunications companies that are still owned, to varying degrees, by the State in such countries. Privatisation is now creeping in and has affected most of these semi-monopolies. Some, and SABIC is one of them, have already followed the route of pooling their assets, securitising them and issuing them as *sukuk* certificates. There are also substantial infrastructure projects that can be developed by a combination of *istisna'*, when a project is under construction, and *sukuk al-ijara*, when the project is completed and a stream of cash flows is expected.

Middle Eastern economies, particularly those of the oil-rich countries of the Gulf, have always been characterised by an active construction sector. This is especially so when the economy is on an upward turn. A large number of these companies use heavy plant and equipment which could form the basis of issuing *sukuk* to finance the projects which they have been awarded and/or capacity expansion.

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[153] Adam, N. and Thomas, A. *Islamic Bonds*, op. cit., pp. 119-121

[154] See Appendix where a case study is presented on Hanco's 'Caravan Sukuk'.

Similarly, the private sector is now increasingly engaged in industrial production, producing consumables as well as household appliances. Many of these private sector companies can be readily financed by Islamic banks on the basis of their assets; hence, the potential for *sukuk* issuance.

The following table provides information on the Sukuk market in terms of type of issuer, originating country, type of sukuk (if any), value of issue, share of each issuer and sector and number of issues for each issuer.

Islamic Bonds Issuers League Table 2005					
No. Issuer/Borrower	Country	Type of Sukuk Issued	Amount US$ Million	Share %	Issues
Announced					
1 IDB	Saudi Arabia	Sukuk	500.00	15.87	1
2 Syabas	Malaysia	Sukuk	473.68	15.04	1
3 Brunei Co.	Brunei	Sukuk	300.00	9.52	1
4 SABIC	KSA	Sukuk	267.00	8.48	1
5 Sdn Bhd	Malaysia	Sukuk	263.25	8.36	1
6 DRB-Hycom	Malaysia	Sukuk	263.08	5.35	1
7 Arcapita Bank	Bahrain	Murabaha	200.00	6.35	1
7 National Leasing	Qatar	Sukuk	200.00	6.35	1
8 Boustead Holding Bhd	Malaysia	Sukuk al ijara	199.00	6.32	1
9 Sapuracrest Petroleum Bhd	Malaysia	Sukuk	131.61	4.18	1
10 Arab Media Corp.	Jordan	Sukuk	100.00	3.17	1
10 Dubai	Emirates	Sukuk	100.00	3.17	1
11 A'Ayan Leasing & Investment Co.	Kuwait	Sukuk	60.00	1.90	1
12 The Investment Dar Co. (KSC)	Emirates	PLS	60.00	1.90	1
13 Volaw Trust Co.	Qatar	Sukuk	26.00	0.83	1
14 Apexindo Pratama Duta Tbk	Indonesia	Sukuk al ijara	16.43	0.52	1
		Total	**3150.05**	**100.00**	**16**
SOVEREIGN (Issued)					
1 Govt. of Pakistan	Pakistan	Ijara-(Leasing)	600.00	88.30	1
2. Govt. of Bahrain	Bahrain	Ijara (Leasing)	79.50	11.70	1
		Total	**679.50**	**100.00**	**2**
CORPORATE (Issued)					
1 Jimah Energy Ventures	Malaysia	Istisna'a (Purchase	1275.76	23.24	1

		Order)			
2 Time Engineering	Malaysia	PLS	658.02	11.99	1
3 Plus Expressway Bhd	Malaysia	Deferred Payment Sale (BBA)	634.20	11.55	1
4 Emirates Airlines	UAE	Sukuk	550.00	10.02	1
5 IDB	KSA	Sukuk	500.00	9.11	1
6 Amlak Finance	UAE	Sukuk	200.00	3.64	1
6 Dubai Metals & Commodity Centre	UAE	Sukuk	200.00	3.64	1
6 World Bank	Malaysia	BBA	200.00	3.64	1
7 Durrat Sukuk Co. BSC	Bahrain	Istisna'a + Ijara sukuk	152.50	2.78	1
8 Ranhill Powertron Sdn Bhd	Malaysia	BBA	142.14	2.59	1
9 Ranhill Utilities Bhd	Malaysia	BBA	142.10	2.59	1
10 Al Marfa'a Al Mali Sukuk Co. B.S.C.	Bahrain	Istisna'a + Ijara sukuk	134.00	2.44	1
11 Commercial Real Estate Company	Kuwait	Ijara sukuk	100.00	1.82	1
12 Lembaga Kemajuan P. P. Pertanian Ng.	Malaysia	BBA	78.92	1.44	1
13 Jimah Energy (SPV)	Malaysia	Bai' Inah (Sale with immediate purchase)	56.65	1.03	1
14 Premba Jaya Holdings Dsn Bhd	Malaysia	Murabaha Sukuk	52.63	0.96	1
14 Cagamas Berhad	Malaysia	BBA	52.63	0.96	1
15 Ample Zone Berhard	Malaysia	Ijara sukuk	39.50	0.72	1
16 Malaysian Merchant Marine Bhd's	Malaysia	BBA	31.63	0.58	1
17 Intelbest Sdn Bhd	Malaysia	BBA	28.95	0.53	1
18 Oxbridge Height	Malaysia	Sukuk	27.37	0.50	1
19 Tracoma Holdings Bhd	Malaysia	BBA	26.32	0.48	1
20 Al Safeena I Ltd	UK	Sukuk	26.00	0.48	1
21 Apexindo Prtama Duta Tbk	Indonesia	Ijara sukuk	25.28	0.46	1
22 Midas Plantation	Malaysia	Ijara sukuk	24.47	0.45	1
23 Indosat	Indonesia	Ijara sukuk	21.10	0.38	1
24 PG Muni Assets	Malaysia	Mudharaba (Profit-Sharing)	21.05	0.38	1
25 Mulpha International Bhd	Malaysia	Murabaha	15.80	0.29	1
26 M - Trex	Malaysia	Murabaha	15.80	0.29	1
27 Intelbest Sdn Bhd	Malaysia	Murabaha	13.16	0.24	1
27 Oxbridge Height	Malaysia	Murabaha	13.16	0.24	1

27 Midas Plantation	Malaysia	Ijara sukuk	13.16	0.24	1
28 Ricky Putra	Indonesia	Sukuk	13.00	0.24	1
		Total	**5489.2**	**100.00**	**33**
Grand Total (issued Corporate + Sovereign)			**6168.7**	**100.00**	**35**
Source: IFIS-IS Emerging Markets, www.securities.com/ifis					

4.11.2 Sukuk Applications in Project Finance

Project financing has proved to be a fertile ground for the application of *sukuk al-ijara*. This is usually a combination of construction finance (*istisna'*) during the construction phase, followed by a redeemable lease (*ijara wa iqtina'*) that buys out the completed project either in tranches or whole on completion.[155]

In parallel with *istisna'*, the Islamic banker or financier agrees with an end-buyer on a price with profit as a return on the capital used in the construction. This transaction can take the form of an outright purchase, deferred sale or re-financing. The latter would be done through lease financing. In project finance, the common approach is to structure sequential contracts of *istisna'a* and *ijara*. These are combined for the purpose of financing the construction of new capital equipment or plants such as a refinery or power plant when the construction takes more than three years.

The profit calculation is fixed in tranches, based on stages of completion and or payment certificates and may be fixed or variable when the lease starts.

Another form of leasing which is permitted by *Shari'ah* scholars is ijara *mawsufa bil thimma* which is a form of future pre-paid lease. In this case, rentals are prepaid by the lessee on the understanding that if the plant is not constructed or acquired in accordance with the specifications in the lease agreement by a certain

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[155] Thomas, Cox and Kraty. "*Structuring...*", op. cit., pp., 82-88. See also the example of Tabreed in the Appendix.

date, such prepaid rentals will be payable by the financiers. This structure is used to provide working capital for construction against an undertaking to lease such plant or equipment.[156]

4.12 MURABAHA AS A LIQUIDITY MANAGEMENT TOOL

One way for banks to have recourse to liquidity and to satisfy their regulators was the use of *murabaha* in commodity trading through a recognised commodity exchange such as the London Metal Exchange (LME). Basically, it would instruct a broker on the LME to buy a recognised commodity at spot value and resell it to a third party on deferred terms and at the same time engage in a parallel transaction through a broker to buy the commodity on its behalf on deferred terms and sell it spot to another. These transactions can have a duration ranging from one week to a year and have yields similar to money market rates and are said to resemble breaking a time deposit although more costly, as more steps are involved and therefore more charges.[157] Some scholars have questioned the validity of such a transaction as true sale while others have accepted it as such on the basis that the sale is between different and independent parties.

Commonly, wholesale *murabaha* transactions are credit-enhanced and the beneficiary is asked to support its payment obligation by asking its bank to issue an L/C in favour of the financing institution.

More than 70% of the funds of Islamic banks are still invested in *murabaha* structures. Malaysia has been able to securitise its *murabaha* or *bay'bi-thaman ajil*,

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[156] Adam, N., Thomas, A., (2005). "*Structuring Islamic Finance Transactions*", op.cit., p. 82
[157] Abdul Majid, Abdul Rais. (2003, October). *Development of Liquidity Management Instruments: Challenges and Opportunities*. Paper presented at the International Conference on Islamic Banking and Supervision organised by the International Islamic Financial Market. Jakarta, Indonesia.

but the resulting *bay'al-dayn* has proved unacceptable amongst jurists in the Arab World which considered such securitisation as one of debt rather than assets.

4.13 MURABAHA: ASSET OR LIABILITY?

Murabaha has been much criticised for its limited application and for that overdependence on it, as some believe, has impeded the research and development of other Shari'ah-compliant instruments that would have been better placed to support the development of the Islamic capital market. It would be unimaginable to envisage the consequences of inaccessibility to money markets for any period of time without the existence of *murabaha.* A case in point was when some international banks refused to roll over their *murabaha* placements into new transactions during the first Gulf War . Islamic banks were at a loss as to where to place their funds in the absence of local inter-bank markets.[158]

It would be difficult to ignore the role that *murabaha* has played throughout the three decades that Islamic banks have managed to exist and throughout which have been obliged to maintain high liquidity, but also during which they managed to grow their customer base and satisfy their central banks.

4.14 IJARA SUKUK AND FUNDS

With the advent of *lease financing* through *sukuk al-ijara*, it has become possible to satisfy investor demand for an instrument that has a combination of enhanced performance plus asset and risk diversification. An *ijara* contract incorporates a fixed-term, or a periodically re-fixed, income stream or rental from the economic use of a physical underlying asset. Lease income can be readily securitised without any

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[158] Thomas, A., Cox, S., & Kraty, B., Structuring Islamic Finance Transactions, p., 173

infringement of the Shari'ah, because the investor retains title to the leased asset throughout the investment period.

Ijara funds have been incorporated to capitalise on a wide spectrum of international investment opportunities. Lease funds tend to invest in pools of suitable leased assets which may be sold to an SPV owned by the fund. The fund manager may issue certificates that represent their ownership of or title to a percentage of the asset pool and thereby a pro rata share of the income stream — subsequent sale of the certificates releases liquidity.[159]

Most Islamic funds now incorporate periodical redemption facilities as a feature. Historically, it has been the sponsor who would undertake to buy back the asset holding from the investors on a 'best-effort' or matched basis.

It has proved difficult to move speedily without regulatory approval and an established market infrastructure. But there has been some movement in this respect, with recent initiatives to include liquidity provision by third party facilitators with their own investment grade ratings.

The first Islamic Investment Bank had come up with its own Islamic *'Ijara Liquidity Programme'* with the aim of preserving capital, providing a consistent income and offering investors returns comparable to those of the conventional money markets. The investor is granted a put option to sell the *sukuk* at 'face value' to a third party; such 'put' can take place on any redemption date after a minimum of one month holding. A profit return is attached to the *sukuk* and re-fixed on a monthly basis. This is an interesting *sukuk* launch because Malaysia was the first to do this and as the option was underwritten by a third party bank with an investment grade rating.

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[159] Cox, S. (2005). "Developing the Islamic Capital Market and Creating Liquidity". *Review of Islamic Economics*, Vol. 9, No. 1, pp., 75-86

Islamic capital markets require sufficient volume of assets that are both eligible for securitisation and Shari'ah-compliant. The global market has offered the asset supply but also presented problems of taxation and structures that proved challenging. Nevertheless ongoing demand has spurred the growth of Islamic fund management sector towards greater activity and the international capital markets have served to deliver the allocation opportunity.

Historically, the international equity markets have been the focus of Islamic asset management with equity funds representing more than 65% of the total Islamic fund universe. Some Islamic equity funds have been listed on both international and regional stock exchanges.

4.15 DISCLOSURE, REGULATION AND RATING

4.15.1 Introduction

The legal and regulatory practice governing Islamic Financial Institutions (IFIs) varies across the Muslim countries. For example, the Malaysian Islamic Banking Act (1993) refers to banking as a "lending business" and investment accounts are considered to be liabilities. In Iran, Islamic banks accept customer investments on the basis of *wikala* contract, an agency contract and not the mudaraba contract as is the case in other countries.[160] In other countries, such as Saudi Arabia, no laws have been passed to regulate Islamic banks; they operate under laws governing conventional banks. Kuwait has one IFI which operates as a finance house, not a bank, and is supervised by the Ministry of Commerce rather than the Central Bank.

[160] Wikala operates on the basis of the agent receiving a fixed fee, not a share of the profits as in Mudaraba.

Since the early 1990s, increasing attention has been paid to the regulatory and supervisory frameworks governing IFIs. Differences in balance sheet structures between Islamic and conventional banks and the special features of Islamic financial contracts have been recognised to have important implications for accounting and financial reporting.

AAOIFI is one of the main contributors to the BMA guidelines issued under the 'Prudential Information & Regulatory Framework for Islamic Banks' (PIRI). Professor Abd al-Karim is of the opinion that Bahrain's Islamic banks will have to comply with AAOIFI's standards on capital adequacy and follow AAOIFI's Shari'ah and governance standards. The change will enhance transparency and should narrow the disparities between the previously different rulings of in-house committees of different banks. He further expects AAOIFI standards to be adopted outside Bahrain and that such standards are necessary for cross-border listing.[161]

At the same time, a group of central bankers from Islamic countries founded in Kuala Lumpur the Islamic Financial services Board (IFSB). The aim is to develop international standards relevant to the IFI including corporate governance, transparency and disclosure. With the IFSB, AAOIFI and the Islamic rating agency, as well as the various national efforts at building a framework governing Islamic financial intermediation, a public policy for co-ordinating and consolidating these efforts is emerging.

But what is the rationale for regulation? It is important to clarify the rationale to avoid over-regulating and stifling business initiatives and activities, or under-regulate, allowing greater risk-taking in the pursuit of profits.

Theoretically, there been three arguments for regulation:

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[161] Middle East Economic Survey (200), Vol. XLV No. 5

1. The Public Good;
2. Protection of Public Resources; and,
3. Integrity of Fiduciary Contracts

In respect of the public good, it is argued that the market alone cannot protect the stakeholders such as depositors and therefore regulation is needed to mitigate the risks taken by them. While some might be able, given the appropriate transparency and disclosure requirements, to undertake the necessary due diligence to assess the risks of their investments or deposits, in practice the majority would not.

It is also argued that another objective of prudential regulation is to mitigate systemic risks which could disrupt normal business performed by the financial system payments or provision of liquidity. Such systemic risk could arise from the failure of one institution to meet its obligations, thereby undermining the confidence in the system or failure in some of its parts as in the payments system itself and the mechanisms and instruments to exchange liquidity.

As a result, prudential regulation from this point of view would require a clear sense of the type, quality, and quantity of the public good to be delivered as well the nature of risks and risk exposure or values at risk involved.[162]

Protection of Public Resources implies that the existence of deposit insurance for the protection of depositors is itself a commitment of public resources and thus requires regulation to protect the resource.

With regard to the Integrity of Fiduciary Contracts, the role of regulation here is seen as the provision of adequate checks and balances to mitigate the risks of the intermediary failing the trust of its stakeholders. The latter may include small

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[162] El-Hawary, D., Grais, W., Iqbal, Z., (2004, March). "Regulating Islamic Financial Institutions: The Nature of the Regulated", World Bank Policy Research Working Paper 3227

shareholders, in addition to depositors, raising the importance of corporate governance.

4.15.2 The Reasons for the Regulation of IFIs:

A number of reasons have been advanced for the regulation of IFIs by Chapra and Khan (2000)[163] and Professor R Wilson.[164]

One reason is to maintain an orderly system of payments so that the IFI can meet its commitments and ensure the integrity and soundness of the IFI. Another reason relates to the protection of depositors through deposit insurance in conventional banks. This might not be required in an IFI, as both the financial intermediary and the depositor share symmetrical risk and PLS; introducing a guarantee on the downside would seem to run counter to the core objective of PLS and risk sharing. However, investment depositors should be informed of the contracts they enter into and have recourse when it is breached. But it is doubtful if depositors, in practice, are fully aware of the risks with their deposits and may require sufficient assurance as regards both security and returns.

The third reason for requiring regulation is to ensure compliance with Shari'ah. In a jurisdiction where there is less defined separation between civil and religious law, it is necessary to ensure that banking activity complies with Shari'ah. And as IFIs begin to integrate into the international financial community, the latter would like to see a commitment of IFIs to fulfilling contracts they enter into and participation in international payments.

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[163] Ibid.
[164] Wilson, R (n.d.)., "Regulatory Challenges Posed by Islamic Capital Market Products and Services "

4.15.3 Regulatory Options

Various options have been put forward. The ones which have gained acceptability are dynamic interaction between the regulated and the regulator, described as "regulatory dialectic"[165] and market discipline. In the first instance, Islamic financiers are encouraged to anticipate the demands of the regulators and incorporate these in their future design of Islamic products and services and as trust develops, it should lead to a softer approach by regulators. The market discipline approach is embedded in the PLS intermediation and should indicate to the IFI the extent of its capital requirement that is required to protect the reputation of the institution and provide legitimacy to the partnership with its stakeholders. At the same time, there should be more emphasis on transparency and disclosure in IFIs than in conventional banks. Competition will cause the IFI to focus more on providing sufficient safety and return to depositors on unrestricted investment accounts than on providing the returns that its shareholders expect. As a result, the latter may be facing similar intermediation risk to conventional banks, thus requiring similar capital and supervision requirements. Furthermore, the pooling of demand deposits, unrestricted investment deposits and capital in financing their assets raises transparency issues for the distribution of returns or losses; hence, the need for more emphasis on disclosure and transparency.[166]

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[165] Wislon, R., op. cit., p.3

[166] El-Hawary, D., Grais, W., Iqbal, Z., (2004, March). "Regulating Islamic Financial Institutions: The Nature of the Regulated", World Bank Policy Research Working Paper 3227, pp., 33-36

4.15.4 Requisites for Effective Regulation

Effective regulation requires that the IFI has systems in place to properly receive feedback on the risks that result from its actions but also the ability to process such feedback. For institutions to function properly the institutional infrastructure must provide for a proper system of property rights and the ability to enforce them, a sound contract law and the ability remedy any breaches. In addition, judicial recourse procedures must be available to resolve disputes speedily and efficiently.

Transparency and soundness of accounting and auditing systems play a crucial role in the credibility of financial institutions.. In this respect, The Islamic Capital Market Fact Finding Report mentions three major issues with regard to accounting and auditing standards:[167]

- Comparability and reliability of information
- Internationally acceptable standards; and
- Quality of accounting and auditing standards.

While the survey did not find uniformity in the application of accounting standards and practices across Islamic jurisdictions, the current approach of Islamic financial institutions is to benchmark standards for Islamic transactions to International Accounting Standards (IASs) to ensure consistency with globally accepted standards, modifying them where necessary, to ensure financial statements present fairly the financial position, financial performance and cash flows of the Islamic financial position.[168]

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[167] OICU-IOSCO, (2004, July). Islamic Capital Market, pp., 56-60
[168] OICU-IOSCO (2004, July). "Report of the Islamic Capital Market Task Force of the International Organisation of Securities Commissions".

Measurement and comparison of risk exposure should be the basis of regulation and despite the notable efforts at establishing accounting and auditing standards for IFIs, accounting remains more concerned with value than risk assessment and allocation. These efforts can be augmented with other financially relevant information and credit rating.

With increasing demand for Islamic financial instruments which requires a great deal of innovation, regulators need new skills to face the challenge of adapting to this dynamic environment.

4.16 RISING TO THE CHALLENGE

The issues that were discussed in the preceding sections point to the fact that the Islamic capital market is a part of the wider global securities market and that a sound regulatory framework with an appropriate supporting infrastructure are necessary for the development of a such a market.

Although regulations applicable to conventional securities have been applied to Islamic financial securities, there may be instances where the special features of Islamic capital market products require specific guidelines. And as IOSCO report shows, there are no global best practices for regulating such areas as *Shari'ah* certification or the qualification of *Shari'ah* advisors and enhanced disclosure to Islamic capital market products. The report also noted the need for uniformity in regulation and practices to provide necessary clarity and confidence for market participants. Furthermore, information on investment products across borders and as well as credibility of and quality of information should be available and disseminated widely for the protection of investors.

Different *Shari'ah* interpretations among scholars, committees and Islamic countries are seen to retard the development of Islamic financial products and innovation and growth in the Islamic financial services industry. Therefore, convergence in *Shari'ah* interpretations is seen as beneficial long-term objective but there is consensus that that it is up to the *Shari'ah* scholars to accomplish such convergence.

Another challenge is the gap in the skills of market practitioners for a sustainable growth in the Islamic capital market.

There are now many international organisations established to facilitate and regulate the workings of the Islamic capital market such as the AAOIFI, IFSB and IIFM, yet there is no international body that can direct and focus debate on the important issues that affect the Islamic capital market and it is early days to assess the impact of the General Council for Islamic Banking on progress in respect of these issues. Several of these institutions have begun to consider regulatory and accounting issues relevant to the development of the Islamic financial services industry, by issuing guidelines and standards in governance and accounting matters to ensure investor protection and uniformity in standards as well as expertise in market regulation.

It is only with co-operation and co-ordination among those concerned with Islamic finance at the global level, that a great deal of the issues and problems can be adequately addressed.

4.17 FORMATION OF ISLAMIC CAPITAL MARKET INFRASTRUCTURE

4.17.1 Malaysia (IPDS)

Malaysia spearheaded the developments necessary for such an infrastructure in the 1990s by implementing a dual banking system, in which Islamic banks were allowed to operate in parallel to the conventional sector. This made possible the creation and the evolution of an Islamic inter-bank money market. In the summer of 2002, Malaysia issued a US$600mn Islamic sovereign *sukuk al-ijara* lead managed by HSBC, with a five-year maturity tenor. This was heavily oversubscribed and the *sukuk* were awarded a BAA_2 rating by Moody's and a BBB rating by S&P — 51% of investors were from the Middle East.[169]

In an effort to level the playing field for non *murabaha*-backed securities, Malaysia introduced tax concessions against the cost of structuring, documenting and issuing Islamic asset-backed securities based on the more acceptable contracts of *ijara*, *musharaka* and *mudaraba*, rather than the debt securities resulting from *murabaha* and 'albai bithaman ajil'.

4.17.2 The Middle East

The BMA[170] has recently issued BD10 million worth of 6-month asset-backed *sukuk al-ijara* based on the prevailing 6-month LIBOR rate, and these will be issued monthly once the first issue matures in Feb. 2006. These *sukuk* will be tradable and will act as collateral against short-term credit. Previously short-term *sukuk al-salam*

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[169] IRTI: Chapter 2: "Islamic Capital Market Products, Development & Challenges". IDB. Jeddah, Saudi Arabia

[170] BMA website; Sukuk-Net on Google; IFIS on <URL.http://www.securities.com>

were issued. These short-term *sukuk* should provide the much-awaited development towards facilitating supply of liquidity in the markets and should complement a host of other medium to long-term securities by both Bahrain's US$250mn and Qatar's US$700mn in the markets.[171]

The Bahrain Monetary agency (BMA) was also the first in the Middle East to issue Shari'ah-compliant government 3-month bills, referred to as *salam* securities, of which its weekly issuance has recently increased from US$25 million to US$40 million. The government of Bahrain would undertake to sell aluminium on a deferred basis for an advance payment. Price has to be prepaid in a *salam* contract because the objective in such contracts is to provide businesses with working capital financing. Since there is full repayment, *salam* sale is beneficial to the seller. The future price is usually lower than the spot price, unlike conventional futures contracts where the future price is typically higher than the spot price by the time-value of money.[172]

Aluminium in this case is the underlying asset for the *salam* contract. The Bahrain Government sells aluminium to the buyer. As consideration for this advance payment, the Government undertakes to supply a specified amount of aluminium at a future date. The BMA, on behalf of the Bahraini government, securitises the sale by issuing *sukuk al-salam*. These are purchased by Islamic financial institutions as a means of investing their excess liquidity. The purchasers then appoint the government as their agent to take delivery of the aluminium and sell it through their distribution channels at a price that will yield a rate of return to the holders of *sukuk al-salam* equivalent to the yield on similar short-term instruments in the conventional money market. The risks attached to *sukuk al-salam* are those that relate to government

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[171] See the appendix.
[172] McNemara, P. (2005, September). "The BMA and the Sukuk Al Salam series". *The Banker*, pp., 1-3

inability to take delivery and to the fact that, when it does take delivery, it may not be able to sell it or sell it at a price lower than cost. These risks constitute sovereign risk and may be mitigated by the structure of the deal.[173]

The benefits of *sukuk al-salam*, it is claimed, is that the cost price may never be declared (a transparency issue, which is questionable under Shari'ah) and the credit risk lower because of the Sovereign counterparty. However, they are not tradable, but this should not pose a problem as they are only for 91 days' duration.

4.18 THE INTERNATIONAL ISLAMIC FINANCIAL MARKET

The diversity of the Islamic world and the emergence of the Islamic capital markets have been dependent not only on Shari'ah stipulations as understood by a particular school of thought, but also on conforming to various regulatory and financial accounting standards. A few years ago, the Labuan Offshore Financial Services Authority signed a memorandum of understanding with BMA and IDB to support the establishment of an Islamic capital market. The resultant IIFM is now headquartered in Bahrain with membership including Sudan, Indonesia and Brunei. Its primary purpose is to provide a co-operative framework for the market infrastructure.

4.19 ISLAMIC CAPITAL MARKET: MULTINATIONAL INSTITUTIONS [174]

The LMC in parallel with the IIFM has taken a proactive role in the *sukuk* issuance programme. Ultimately, LMC will be well-placed to act as liquidity manager for the Islamic financial sector. This is very important because the initiatives, presently

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[173] Ibid.
[174] Thomas, Cox and Kraty. op. cit. P. 181-182

underway, tend to address investment of liquidity rather than access to funding (which is what is required). Bahrain is also the HQ for the International Rating Agency, established to bring consistency to rating Islamic financial instruments. To gain international credibility, the procedures need to be extremely transparent and there are suggestions that they will work with international agencies to achieve comparability. Finally, the Islamic Financial Services Board in Kuala Lumpur has been established to centralise the setting of prudential standards for the regulation and supervision of Islamic banking.[175]

4.20 ONGOING DEVELOPMENT

Individual banks can also have an important role in capital market initiatives. In April 2003, FIIB (now Arcapita Bank) launched its debut *sukuk* to finance the expansion of its European operations. The US$75mn medium-term loan was managed by the Securities House of Kuwait.

International banks have also played their part in the development of Islamic financial services and it is hoped that this would not be limited to their own products. There is now greater competition amongst investment banks to manage new Islamic *sukuk* issues and it is anticipated that their substantial financial positions and long-term market experience will positively impact the trading volumes needed to achieve the critical mass.

Arab governments, banks and large corporations are now engaged in financing through *sukuk* though some 60% of all bonds issued in Malaysia are yet to achieve the volumes expected in the Gulf. IDB's debut international *sukuk* issue of US$400mn

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[175] IRTI (2005, Aug.), "Islamic Capital Market products: Developments and Challenges". IDB, Jeddah Saudi Arabia.

was awarded AAA by S&P and was meant to familiarise the capital markets with the structure.

In preparation for secondary trading, provision is being made to list and cross-list *sukuk* issue. By way of example, in September 2003 the Malaysian Global *sukuk* was cross-listed on the Bahrain S/E. *Sukuk* are still being held to maturity and not traded as was envisaged. This is justified by the lack of quality sovereign paper in the past. Aggregate international issues currently total less than US$3bn and it is suggested that unless the market expands and achieves the necessary critical mass at some point beyond the US$10bn, there will be little appetite to trade.[176]

In a major development that reflects the way in which banks are attempting to maintain and control their liquidity, there has been a shift away from *murabaha* and parallel *murabaha* towards *tawarruq*[177], which is basically the purchase of a commodity on a deferred basis and the reselling of it at less than the immediate payment using brokers and bona fide third parties. It is a complex transaction involving many contracts and intermediaries. Spot value purchases and sales of assets are supporting the facilitation of wholesale, Shari'ah-compliant inter-bank transactions. Further structuring developments have enabled *tawarruq*-based financing products to be offered at retail level by a growing number of Islamic and Arab banks. Such has been the growth and demand for the structure that scholars have been called to review merits on a number of occasions. It is likely that the principles of the contract will require further definition and some are pushing for establishing parameters for ongoing development with full Shari'ah endorsement. Although new to the market, there have been unprecedented levels of standardisation in the operational

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[176] "Capital Market Review"
[177] Thomas, Cox and Kraty, op. cit., p. 174.

and administrative procedures that support delivery of this product. It has served to deliver liquidity when required.

4.21 CONCLUSION

With the improvement in the asset base of the *sukuk* and the ongoing structure innovation and the establishment of its four multinational institutions (LMC, IIFM, IIRA and IFSB), the scene has been set for a robust market to develop in these instruments with the necessary infrastructure. Cooperation and coordination between the major Islamic institutions will lead to more standardisation of new products and further innovation.

In the final analysis, supervision by regulatory authorities and central banks in the countries of Bahrain and Malaysia can only bring substance and security to the market. Independent rating allows objective assessment and enhances customer confidence. This in turn will create market confidence in trading in these instruments, providing the liquidity and, eventually, the critical mass which financial markets need to sustain their development.

The debt explosion in the West, amounting to some US$44 trillion, is not all linked to assets or specific productive projects or to the capital base of the economy. The Islamic position is that there should be a strong linkage between the financial and the real economy. Shari'ah law requires the community to strike a balance between the claims of production, assets and business requirements. The means used are the asset-based *sukuk* which attempt to channel funds into productive activities with expectations of higher profits and lower risk. This is in sharp contrast to conventional debts, which are not necessarily directed towards economic pursuits that add value. In

fact, we have seen the collapse of giants of industry in the West because of excessive leveraging: GM is only one recent example.

In the eyes of many, *sukuk* would be seen as structurally more viable for controlling the global debt proliferation and facilitating sounder economic fundamentals in the long run. Muslims, however, should avoid the temptation of 'dressing up' conventional products to make them look like Islamic products (a practice called 'resorting to *hiyal*'). Shari'ah jurists in Islamic jurisdictions should not sacrifice Islamic principles for the sake of expediency in approving what is put forward as" innovative" Islamic products.

Finally, *sukuk* have helped the convergence between Islamic and conventional markets in the West, with all that this would entail in terms of sharing experiences and expertise. Malaysia and the GCC countries with their sovereign *sukuk* issuances have made their impact in achieving global appeal and acceptability and have provided the conventional global investor with a sound diversification of financial resources. Such interaction between these markets can only have positive cultural and political effects in both the Middle East and the West.

CHAPTER 5. INDEXATION

5.1 INTRODUCTION

This chapter deals with alternatives to interest or LIBOR-linked rate of return. Growth-linked rates of return on Islamic financial instruments are examined at some length because of the available literature on the subject and the substantial body of opinion supporting such linkage. The crucial role of government and the private sector in bringing about this change is explored and the concerns and obstacles facing the introduction and adoption of such a model is investigated and, hopefully, addressed. The benefits of adopting growth-linked returns are also outlined and examined.

The prohibition of *riba* has been at the core of Islamic finance, whereas the interest-based system is central to Western monetary systems. It seems, however, that despite all the unease with using conventional interest as a benchmark, there is a dearth of research literature on deriving a benchmark that will do away with interest and satisfy Islamic scholars and investors alike.

The issue of benchmarking to an interest rate index such as LIBOR and EURIBOR or the equivalent local rate in the case of issues in the Malaysian ringgit, raises certain doubts in the minds of some Islamic investors as to the genuineness of the 'Islamic-ness' of such an investment. Certain scholars justify this by drawing on the example of two brothers, one brother selling liquor and the other selling soft drinks. They see no problem if the latter should use the same, presumably profitable, pricing formula as that used by the former, and although not ideal, they do consider it acceptable. But all of this totally ignores the forces of supply and demand and the impact of taxation and a host of other factors which go into price determination.

Moreover, they all admit that further economic research and analysis are greatly needed in this respect.

What follows, therefore, is an attempt to examine the economic literature on alternatives to the prevailing system of benchmarking Islamic financial instruments to the interest system.

5.2 SUKUK PRICING AND RISK ASSESSMENT

Professor R. Wilson[178] and others involved in Islamic finance regard the innovation in *sukuk* structures thus far as being purely legal. In his opinion, this stems from the attempt of financiers to regard *sukuk* as being identical to, rather than distinct from, their conventional asset classes from a financial perspective, as this simplifies for them the risk assessment. But one cannot deny the importance of devising Shari'ah-compliant legal structures on Islamic financial innovation. The Prophet (pbuh) himself always urged his followers to put their *mu'amalat/trading transactions* in writing.

Present-day scholars have also been focused on the Islamic legality and Shari'ah-compliance of a transaction structure because they consider the financial side as only one aspect of a multi-component transaction and that there are many other precepts that have to be complied with to make it Islamic. Such precepts concern not only the ethical and productive aspects of a financial transaction but also the *halal* and *haram* codes that permit or prohibit a transaction. Financial innovation with *sukuk* would require financial engineering to bring about new types of Islamic products.

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[178] R Wilson, (2005, December) *"Innovation in the structuring of Islamic sukuk securities"*. Islamic Finance Information Service, London, December 2005.

In fact, most of the legal structures put in place for Shari'ah-compliant financial transactions are done by Western legal firms who seem intent on finding a legal structure in which conventional and Islamic modes of financing may be made to co-exist by separating the two, by means of layers of SPVs and trusts. This was the case with the Caravan (HANCO) transaction which, as far as one can tell, was not rated by any International rating organisation.

Financial engineering to bring out new Islamic financial instruments is sometimes stunted by the high costs of product development and the inadequate research funds directed towards developing new products; this stands in contrast to their Western counterparts where the allocation of funds into research and development sometimes approaches a third of the revenues.

5.3 PRICING SOVEREIGN SUKUK

As we shall see later in this section, linking repayment of their obligations to ability to pay, governments would have less difficulty in avoiding default, renegotiating and restructuring of their debts or the use of fiscal policies which could have a high economic and social cost. Various proposals have been put forward and these will be discussed in the following paragraphs.

Whatever the approaches used to arrive at an acceptable rate of return for growth-indexed debt, a growth-based index is therefore seen as a sensible way of providing insurance for countries in times of economic slowdowns and as a tool for internationalising risk-sharing. Baxter and Jehrman (1997), in evaluating the likely gains from risk-sharing among countries, have noted that individual portfolios implement very little international diversification. Dreze (2000) notes that globalisation of risk is far from being adequately realised and securitisation through

innovative financing instruments can offer prospects for improvement. In this respect bonds indexed to national income can offer "unquestionable prospect for improved risk-sharing."[179]

It is widely accepted that a country's sovereign debt is largely dependent on the state of its economy in terms of its GDP growth. In fact, slow growth has underlined many of developing countries debt crises of the 1980s.

For sovereign sukuk, pricing could be based on real macroeconomic variables such as GDP growth rather than interest benchmarks. When GDP growth is high, government tax revenues will increase more rapidly, for countries with income and sales tax and higher returns to investors in their sovereign *sukuk* [180], assuming of course that there is an efficient tax collection system and proper accounting for tax by various economic entities. And when GDP growth is lower, the government will have less to service the debt and pay the *sukuk* holders; in other words, the sukuk holders will be taking on some of the sovereign risk.[181] By doing so, they will be lifting some of the burden of financing obligations off their government, thereby reducing the latter's risk of default and improving the rating for sovereign sukuk.

In figures (see table below), based on interest rates and GDP growth for KSA and Malaysia,[182] and with non-oil GDP growth taken as more a stable indicator for KSA given the volatility of international oil markets and hence the kingdom's oil sector and overall GDP growth, Professor Wilson is attempting to show that investors in *ijara sukuk* are not only concerned with average returns but also with the volatility of the returns as a lower volatility will generally be preferred to a higher volatility by

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[179] Tabova, Alexandra. (2005). "On the Feasibility and Desirability of GDP-Indexed Concessional Lending". A discussion paper No. 5 (University of Athens), pp., 2-4

[180] Wilson, R., (2005). "Innovation in the Structuring of Islamic Sukuk Securities", pp., 13-14

[181] Tariq, Ali, S., (2004, September), "Managing Financial Risks of Sukuk Structures", Msc Dissertation, Loughborough University, pp., 43-54

[182] Wilson, R., (2005). "Innovation in the Structuring of Islamic Sukuk Securities", Table 4, p. 15

the risk adverse. The standard deviations from the means are shown in table 4, with significantly lower volatility for returns based on non-oil GDP growth than for returns based on inter-bank rates in Saudi Arabia. Typically, ijara sukuk pay 200 basis points above SIBOR but with lower volatility investors may be willing to purchase riyal denominated *sukuk* without any premium on non-oil GDP returns. In Malaysia the reverse is the case, as with the much higher volatility of GDP growth, a return based on this that is only marginally greater than the ringgit inter-bank rate would be unlikely to attract investors motivated only by financial returns.[183] In this case a premium would have to be paid by the *sukuk* issuer above GDP growth rates to ensure that the offer was fully subscribed.

The data also shows that the average return on Saudi Riyal denominated sukuk (plus 200 basis points) for the period between 1999 and 2005 would have been lower than what might have been obtained on sukuk whose yield was based KSA's non-oil GDP growth without any premium. The result for Malaysia shows the return on sukuk based on GDP growth would have been marginally higher than that on ringgit inter-bank rates with the premium added.

Professor Wilson also maintains that since the non-oil GDP growth shows less volatility of returns and because investors are more concerned with risk exposure, they would prefer the less volatile returns. With this lower volatility, investors might be willing to purchase the riyal denominated sukuk without any premium on non-oil GDP returns even if there the return is 200 basis points above SIBOR. In Malaysia, the reverse is the case, the return based on GDP growth is marginally greater than the ringgit denominated inter-bank rate but is much more volatile and therefore a

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[183] Empirical evidence from Malaysia indicates that financial factors are more important than religious factors in determining the choices between Islamic and conventional securities, even for Muslim dealers. See Kamisan Gadar, *An Empirical Analysis of Islamic Bond Selection by Individual Dealers on the Kuala Lumpur Stock Market*, PhD thesis, Durham University, 2004.

premium would have to be added to the GDP growth rate to attract the sukuk investor and ensure that the issue was fully subscribed.[184]

Saudi Arabia and Malaysian Interest Rates and GDP growth

	SR interest rates	Saudi non-oil GDP growth	RM interest rates	Malaysian GDP growth
1999	6.14	4.20	5.00	5.00
2000	6.67	4.30	2.50	8.60
2001	3.92	3.50	2.80	0.30
2002	2.23	4.20	2.70	4.20
2003	1.63	3.40	2.75	5.20
2004	1.73	5.70	2.70	7.10
2005	3.53	7.40	2.70	5.20
Mean	*3.69*	*4.67*	*3.02*	*5.08*
SD	*1.90*	*1.31*	*0.81*	*2.39*

Sources: Saudi Arabian Monetary Agency and Bank Negara, Malaysia

However, the introduction of GDP growth-linked securities brings with it the probability of capital gains or losses in the short-to-medium term; the extent of these gains/losses will depend on the term to maturity. If the GDP growth rises relative to inter-bank rates, then investors will be induced to buy sukuk and this would push up demand and price. If, on the other hand, GDP growth rates fell below the inter-bank rates, people will sell and that would lead to capital losses as the only way to induce someone to buy a security with returns lower than the inter-bank rate would be to offer it at a discount. With fixed rate securities, prices would depend on interest rate

[184] Wilson, R., (2005). "Innovation in the Structuring of Islamic Sukuk Securities", pp., 14-15

expectations but in the case of growth-linked securities, expectations about growth would also influence pricing.[185]

However, a number of points must be noted about the use the use of data above. The Saudi economy is largely dependent on oil and it is difficult to imagine sustainable growth in the non-oil sector without the oil-fuelled government expenditure on huge infrastructure programmes and construction. Statistical correlation between oil prices, government expenditure and private sector growth should produce interesting results in this respect. In a paper by Makiyan (2001), the author shows that the supply of loans between 1984 and 1994 was largely influenced by government intervention and not rates of return.[186] Furthermore, Ul Haque and Mirakhor recommend "filtering out from the private sector rate of return expectations of future earnings which is an important element of stock market prices; speculative elements that may at times grip the private sector; and seasonal variation." before using it as a basis for an overall rate of return for government paper.

Additionally, there are many distortions in the market for private sector activity, let alone its relatively small size compared to the government sector in many Islamic countries for it to produce a rate of return that can be used to price Islamic securities. It is certainly an important element in arriving at a rate of return to replace the interest-based return but doubtful if exclusively adopted to obtain such a return, particularly in the light of the crucial role that government revenues play in stimulating economic activity in Islamic countries.

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[185] Wilson, R. op. cit., pp., 12-16

[186] Makiyan, Seyed Nezamaddin. (2001). "The Role of Rate of Return on Loans in the Islamic Banking System of Iran", pp., 1-5, *International Journal of Islamic Financial Services*, Vol. 3, No. 3, pp. 1-7

5.4 THE CASE FOR GROWTH-INDEXED BONDS

In the following paragraphs, the arguments for issuing growth-indexed bonds (GIBs) will be presented and explained.

GIBs could, in the eyes of its advocates, stabilise rates of economic growth, reduce vulnerability of the economy to external shocks and improve long-term economic prospects. GIBs would link payments on sovereign debt and rate of return on new issues of debt in the form of *sukuk* to the issuing country's rate of economic growth, thereby reducing the need for drastic spending cuts when there is a recession and moderating spending when the economy is on an upturn. It should also reduce volatility, which in the long run would surely improve long-term growth rates and, by corollary, the standards of living — thereby also reducing poverty. However, the linkage with growth could never be a substitute for sound macroeconomic policies; yet by stabilising debt ratios, they might help to reduce debt defaults and financial crises.

Let us see how this linkage to GDP might work in practice. Consider a country whose GDP has been growing at 3% and is expected to continue doing so. Now, assume the country can issue a straight bond at 10% interest (or rate of return in the Islamic case). This country could consider issuing GIBs whose annual payment or coupon will be reduced by 2% for every 1% drop in the rate of growth below its 3% trend. If growth turns out to be 1%, the annual payment will be 6% (plus a small insurance premium). If, at some future date, the growth rate turns out to be 5%, the annual payment or return will be 14% (plus the insurance premium). The conclusion from this simple model is obvious: when GDP growth turns out to be lower than expected, debt payments due will also be lower under indexation and vice versa. This

helps to maintain the debt/GDP ratio at sustainable levels. The insurance premium to be paid for the scheme keeps the debt/GDP ratio within narrower limits.[187]

The risk premium required for growth-indexed bonds should initially reflect lack of liquidity, novelty of these instruments and pricing difficulties. It should be minimal, reflecting the low volatility of returns/payments, which in turn is due to very low correlation, if any, between growth in emerging markets, global equity markets and growth in advanced countries.[188] For example, IMF researchers estimated Mexico's risk premium at 0.36 per year on its GIBs over its standard interest rate on fixed rate debt.

An assumption that we could make here is that all the risks have been taken account of and incorporated into the GDP risk. This is not to dismiss those risks that can have a direct impact on the national economy and incomes in particular. Significant changes in the price of a key commodity, such as oil in the Middle East, tea in Kenya, or copper in Chile, will adversely affect the term of trade and impair the capacity to service foreign debt and, of course, this effect will be worse for poorer countries. An adverse change in the currency in relation to foreign ones will have a similar negative impact on the exchange rate and on incomes.

5.5 BENEFITS

Borensztein and Mauro, in their IMF paper (see footnote below), show that the main advantage of GIBs is that they restrict the range of variation of the debt/GDP ratio, thereby reducing the likelihood of a debt crisis. They also indicate that it is important

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[187] Borensztein, M., and Mauro, P. (2002), "Reviving the Case for GDP-Indexed Bonds". *An IMF Policy Discussion Paper*, pp., 2-3

[188] Council of Economic Advisors (2004, July). "Growth-Indexed Bonds: A Primer": UN, pp., 8-9

to consider the impact of this advantage on fiscal policy[189]. Gavin and Perotti (1997) find that during deep recessions the fiscal surplus increases on average by about 2% of GDP in Latin American countries but falls by 4% of GDP in OECD countries. Therefore, by limiting the range of volatility in the debt/GDP ratio and stabilising growth rates, there is less need to use procyclical fiscal policy to raise taxes during economic slowdowns. This is especially true of emerging markets, where the government may, for reasons of liquidity or the need to maintain credibility and access to international markets, find it necessary to maintain debt at a sustainable level. In simulations carried out by them, the benefits from indexation were found to be considerable.

These positive effects of growth-indexed bonds could also generate additional benefits that improve the overall performance of the economy. By stabilising the growth rates and reducing macroeconomic volatility, GIBs can improve the investment and business climate and encourage individuals to start new businesses and undertake long-term projects in countries with lower aggregate risk and it is such activities that drive the growth of an economy. There is also a social dimension to the issuance of GIBs which may substantially benefit the poor. In periods of economic downturn, when governments feel the need to cut spending, most of these cuts fall on social programmes that benefit the poor. GIBs reduce the need to cut social spending and thereby avoid the harmful effects of these economic cycles on the poor.

During 1994 and 1995, Mexico devalued its peso and had a deep recession, resulting in peak unemployment, huge cuts in its healthcare spending and a big drop in its tax revenues. IMF research by Borensztein and Mauro (2004) shows that if

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[189] Borensztein, E. and Mauro, P. (2002). Reviving the Case for GDP-Indexed Bonds, IMF Policy Discussion Paper, pp., 5-8

Mexico had indexed only half of its public external debt to growth, it would have saved about 1.6% of its GDP in interest payments in 1995. The Mexican government could have used these savings to avoid making those drastic cuts and/or alleviated some of the social costs of the crisis.[190]

Another way of looking at the benefits from GIBs is to consider them as a new financial instrument that allows investors to hold a stake or equity in the country as an insurance against growth risks. This debt structure resembles shareholders in companies which allow them to share in the country's prosperity when growth is good and forego some of the benefits when the country's economy is in a slowdown mode. However, it has been found that there is little correlation between equity returns and growth rates. For example, in 2003, Brazil's stock market index rose by about 100%, while its real GDP declined by 0.2%.[191]

5.6 DIVERSITY OF GROWTH ACROSS COUNTRIES

Here again, several studies show that there are substantial unrealised gains from international risk sharing. The potential gain arises from the fact that income growth rates are not highly correlated across countries at a variety of timeframes. Athanasoulis and van Wincoop (2000) and Shiller (1999) estimate that the probability that per capita GDP will rise by 50% in the best-performing country relative to that of the worst performing country is 20% at the 15-year timeframe, 40% at the 20-year timeframe, 80% at the 25-year timeframe, and 100% at the 35-year timeframe.

They also maintain that under the capital asset pricing model (CAPM), which they used to price the GIBs, the insurance premium on these GIBs would be small

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[190] Council of Economic advisers (2004), op.cit. P. 4
[191] Ibid.

compared with the spreads that are observed in emerging markets. The premium would be in excess of the rate that a country would pay on straight bonds, i.e., in addition to the premium paid for default risk. It is to be expected that the default risk would be substantially reduced if a country were to convert a large portion of its debt into indexed bonds.

5.7 POTENTIAL CONCERNS AND SOLUTIONS

It is only by discussing the problems that might be encountered by investors and borrowers alike in the issuance of GIBs that we can arrive at sound solutions which pave the way for the acceptability of growth-indexed bonds on an international scale. The following are some of the important concerns or problems:

Accuracy of growth data: Investors may have doubts with regard to the reliability of data used in estimating GDP, as countries may be tempted to understate growth rates in order to reduce their payments on GIBs. However, governments get re-elected on the basis of their economic performance and it would not be in their interest to distort economic date pertaining to GDP. Furthermore, once investment in GIBs takes off in a country, there will be a powerful lobby to reckon with if any attempt at underreporting is ever contemplated. Moreover, countries have faced similar problems with measurement when inflation-indexed bonds were initially introduced, and so there is no reason why one cannot have similar improvements with the way we measure GDP; we would certainly not be starting from scratch. Indeed, there are a whole lot of international financial institutions and independent agencies that can be contracted to verify the accuracy of GDP data, and to ensure reliability and transparency of statistics generation. More importantly, a GIB contract could be drafted to include the specific GDP measure used to calculate the bond payments.

Another problem that could be encountered relates to revisions and methodological changes to the way in which GDP data is compiled. One way to overcome such a problem would be to relate bond payments to a cumulative growth index, thereby incorporating any later revisions into subsequent bond payments. This solution could also limit the government's ability to understate growth, with a view to reducing the bond payments. Alternatively, an outside agency could be required to ensure that any methodological changes would not materially affect bond payments.[192]

Cost/ Risk Premium: International investors already invest in stocks of emerging market countries, which are more volatile than growth rates of the same countries. Additionally, international investors are also exposed to GDP risk under the standard debt contracts, albeit implicitly. It is surely better for investors to receive lower repayments through GIBs from the very beginning rather than be involved in uncertain recovery of their investment in case of default.[193]

GIBs are hard to price: It is probably true that GIBs are more difficult to price than straight bonds; but they cannot be harder to price than other emerging market securities such as inflation-indexed bonds and equities. GIBs are similar to floating rate bonds but are related to the rate of growth of the borrowing country instead of LIBOR or other interest rate. There is, however, a problem with this. Floating-rate or inflation-indexed bonds are priced using market-based indicators. Growth rates have no such market benchmarks; nonetheless, there are many public as well as private forecasts that can be used for this purpose. Furthermore, the emergence of a growth-

[192] Council of Economic Advisors (2004), op. cit., P. 7
[193] Ibid. P., 8-9

indexed market for GIBs would undoubtedly lead to an even greater availability of growth forecasts.[194]

Market illiquidity: It is important to establish sufficient liquidity initially so that the instruments can be traded actively and a large premium avoided.

Multilateral institutions and the official sector should consider buying a portion of the new GIBs to provide for a minimum-size market and encourage countries to issue GIBs around the same time in order to kick-start a larger market.[195]

GIBs and compatibility with growth: It is claimed that increasing debt payments when growth is higher than usual might reduce a country's incentive to grow. But economic growth in capitalist countries, or where the private sector plays a key role, is determined by decisions taken by a multitude of individual businessmen and entities who would not be greatly affected by how much of a government's debt is tied up in GIBs; and it is up to governments to decide the extent to which GIBs should affect its growth-orientation.[196]

Models of optimal incentive-compatible contracts in sovereign debt show that, even assuming the presence of a moral hazard, the optimal contract is of a contingent type (Obstfeld and Rogoff, 1996). The point is not whether there is a moral hazard associated with GIBs or not, but whether such a moral hazard is higher than that with straight bonds on which, after all, default is possible.[197]

So, if the GIBs are so popular, why have they not then taken off in the way one would have expected? This question can be addressed by looking at it from the point of view of both the investor and the borrower.

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[194] Ibid. P.8, and Borensztein, E. and Mauro, P. (2002), op. cit., P. 15
[195] cif. Council of Economic Advisors (2004), op. cit P.8
[196] Borensztein, E. and Mauro, P. (2002), op.cit. PP.15-18
[197] Ibid., pp., 16-17 and Council of Economic advisers, op. cit., p. 7

From the investor's point of view, these instruments tend to be illiquid and will remain so until a "critical mass" is achieved which is essential to their liquidity. Pricing them is also a costly exercise. Critical mass will help spread the computational costs over a larger base of capital values. It is to be noted as well that these instruments do not provide a hedge against inflation or interest rate volatility (as floating-rate and inflation-indexed bonds respectively do) but offer an equity-like exposure to a country. Pension funds and insurance companies have shown interest in these bonds. To the former, holding GIBs would better align the value of their assets with future liabilities. And since growth rates across many emerging markets are uncorrelated, a portfolio including GIBs would be well-hedged, and this might be attractive to insurance companies as well.[198]

On the other hand, for borrowers/issuers, the proposed indexation system might take years to make a significant difference and issuers might not want to pay too large a premium over the cost of a standard debt for the insurance provided by GIBs. Neither politicians nor would-be first issuers would accept to bear the brunt of this premium for the sake of a successor government or future issuers. To overcome this problem, a number of countries would need to simultaneously issue the GIBs, preferably under the auspices of a multilateral institution such as the World Bank.

But what are the alternatives to linking bonds, Islamic or otherwise, to a real return rather than to an interest rate benchmark?

Indexing to exports might be a good alternative. In fact, this measure might be more reliable than the GDP measure for many of the developing countries. Exports can be verified externally and many multilateral organisations such as WTO and others emphasise transparency and proper accounting. Furthermore, for the external

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[198] (c) Ibid., p. 20 and Council of Economic advisers (2004). P. 9

debt of a country, the ratio of debt to exports is a closely-monitored measure, as it is critical to a country's ability to repay its debts. Yet another alternative might be industrial production, which is more correlated to a country's GDP in some developing countries.

Someone who has persistently argued for the adoption of growth-linked bonds is Professor Robert Shiller of Yale University. He views GDP as the most comprehensive measure that we have of an economy's success and maintains that GDP's rise in nominal value would automatically move up with any inflation, thus providing an "automatic" adjustment to inflation. He is also of the opinion that emerging countries need to work harder on ensuring the accuracy of their GDP data and advances the idea that advanced countries should issue the GIBs first. This, according to him, will have an immediate demonstration effect and will establish the concept of GIBs, making it easier for other countries to join in.

However, Shiller's concept of GIBs has not taken off for a variety of reasons. One explanation is that his type of securities represented perpetual claims on a country's GDP, whilst other opinions expounded in this paper have argued for a limited timeframe, matching maturities in the bond market — presumably, 5 to 10 years' maturities or longer. This limited timeframe would enhance the marketability of the bonds. Another difficulty with Shiller's proposition is that the market which he envisages for his type of growth-linked bonds would involve not inconsiderable institutional set-up costs; the GIBs advanced in this paper would only require the addition of a related clause to standard sovereign debt contracts and would use existing markets for sovereign debts to support the market for GIBs.[199]

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[199] Borensztein, E. and Mauro, P., op.cit., pp., 20-21

There is, however, a large body of opinion in favour of indexing to commodity prices, over which, it is maintained, an individual country has no control. Indexing debt to commodity prices reduces uncertainty regarding debt/GDP ratio to the extent that commodity prices determine a country's revenues and GDP developments. However, enhanced liberalisation of trade has rendered commodity price volatility high. Generally speaking, commodity price indexing would be more applicable to countries such as Mexico, Venezuela, and Saudi Arabia (oil) or Chile (copper) than, for example, Argentina or Brazil, where the economy is more diversified.

Professor C. Gilbert of Trento University, and advisor to the World Bank, has argued that debt service capacity of low-income countries relies heavily on commodity prices which show strong variation over time, whereas repayments to debts are scheduled in a rather fixed way. He suggested a scheme for introducing flexibility into debt service and proposed that a country-specific index should comprise a variety of commodities with each commodity given its proper weight in the country's trade. He provided evidence that the direct link between commodity prices and growth is strong — though not linear.

Investors and sovereigns might feel that there are sufficient opportunities for insurance against fluctuations in commodity prices in the futures and options market. By contrast, GIBs provide new opportunity to take a view on a country's economic growth prospects, particularly where the stock market is not well-diversified and where stock market fluctuations may have little to do with the country's fundamental growth prospects.

5.8 PREVIOUS EXPERIENCES WITH GDP-LINKED BONDS

5.8.1 External Debt

Brady bonds have been used to reschedule developing (poor) countries in ways which they can afford and after some debt forgiveness. In the case of Bulgaria, for example, the discount bonds contained an element of indexation to GDP, in that there was a supplemental interest payment for each year that Bulgaria's GDP exceeded 123% of its 1993 level. The bonds were callable and as a result of its rapid economic growth, Bulgaria started to redeem its external debt and in July 2004 had repaid all its discount bonds 20 years before maturity. The buyback resulted in an improved external debt-to-growth ratio which increased creditworthiness and resulted in higher rating by Fitch and S & P. However, there was a problem with the way GDP was defined and calculated and this obviously impacted the additional interest payable as a result of GDP growth exceeding the target.[200]

Bosnia and Herzegovina had similar debt rescheduling. After some 73% debt forgiveness by the London Club, of the remaining rescheduled US$400 million, $252 million would fall due when the country's *per capita* reached US$2,800 for 2 consecutive years before maturity in 2018. Here, both principal and interest payments were indexed to the growth in GDP.

It is interesting to note that in 'per capita', a new measure of GDP growth was introduced, one to which the population variable was added — necessary for calculating the per capita figure.

Argentina was almost "bankrupt" in 2001 and had suspended the payments of both principal and interest on its external debt. In 2004, it announced that it would

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[200] Tabova, A., op.cit., pp., 34-37

henceforth include a GDP indexation element. Three types of debt securities were issued together with a detachable GDP-linked unit. Both principal and interest were indexed to GDP. In order to define the time and amount of payment, a base scenario was envisaged with annual growth of 3% at end of 2004. Should GDP in a given year exceed 3% annually, the payment of an additional coupon would be triggered and calculated as 5% of the difference between current GDP and the GDP of the base scenario in current prices.

The GDP-linked unit is detachable from the main straight bond, unlike the warrants in the countries of Bulgaria and Bosnia Herzegovina. This will be traded if a market develops for stripped coupons.

5.8.2 Domestic Debt

Singapore has issued two types of GDP-indexed shares; one to tide over the lower income group during economic downturns, and the other to help its citizens to adapt to structural changes in its economy as with increases in tax on goods and services. Both types of shares offer bonus shares in lieu of dividends and are calculated at a rate of 3% plus the rate of GDP growth in the previous year with a guarantee of at least 3%.[201]

5.8.3 Corporate Debt

Michelin embarked on a unique experiment to link GDP with corporate debt, which made for new thinking on risk management. CFM, the financial and holding arm of the Michelin tyre group, was granted combined bank and insurance capital facility by two banks and was granted the option to draw, under certain conditions, on that

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[201] Ibid., p.38

facility. The conditions that would trigger use of the facility is a fall in the average annual GDP growth rate in Michelin main markets — the US and Euro zone — below a certain level. This level was set at 1.5% in the first three years and 2% in the last two years of the five-year option plan. The fact that Michelin's revenues were highly correlated to GDP growth in those markets necessitated an insurance trigger that would release resources to weather any crisis that Michelin might encounter as well as to finance any acquisitions without increasing equity.[202]

5.9 CONCEPTUAL ISSUES

In an IMF paper published in 1998,[203] Professors UlHaque and Mirakhor advanced the idea of a non-interest-based method of mobilising economic resources to finance infrastructural and development projects, through the issuance of a national participating paper (NPP) that could also serve as an instrument of monetary policy.

The authors maintained that there was now a consensus that in the absence of an interest-based economy, physical capital would have to be valued in the equities market. Public expenditure of a government's budget on infrastructure and development projects, which is asset-creating, could be financed through equity participation, providing there was a market for trading shares.

The question then became one of determining a rate of return that would compensate the shareholders of assets created by the government, in the absence of a benchmark such as interest in a conventional financial system.

Such a rate of return would have to be found in the real sector of the economy, assuming there was a reasonably well-developed private sector, but after filtering out

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[202] Ibid.
[203] Ul Haque N. and Mirakhor, A., "The Design of Instruments for Government Finance in an Islamic Economy", *Islamic Economic Studies* XI (1999), pp. 27-34.

any speculative elements and windfall gains. Moreover, such a rate of return was made to replicate closely past movement of the nominal GDP, given that such movement closely proxies the expected growth of private sector output.

5.10 DIFFICULTIES IN EMERGING FINANCIAL MARKETS

The authors admit that financial markets in Islamic countries are in a limited state of development and rather small. Because of this and given the distortions and speculative behaviour in these markets, it would be difficult, if not impossible, to determine an average rate of return in the private sector.

As an alternative, they suggest an international index which would be independent of local conditions, yet reflective of the scarcity price of capital worldwide, particularly under conditions of convergence and globalisation in international capital markets. Such an index, in their view should be monitorable and easily available, relatively stable and broadly reflective of local conditions. Dow Jones publishes various indexes, regional, local and international, and by sector. One or more could now be included in the calculation of a rate of return on NPPs.

They dismiss the use of both the earnings per share and the price-earnings ratio and dividend yields for their volatility and limits. They propose the use of return on shareholders equity (ROE) as a premier measure of a company's financial performance that relates to company's earnings after tax and interest and consider it as, "fungible and suitable for intertemporal, inter-company, and inter-sectoral comparisons".

The authors suggest that the terms-to-maturity should be one year or less, as shorter-dated instruments provide a smaller potential for realised capital loss. At the same time, focus on a limited set of securities increases market depth and,

correspondingly, liquidity. This can be achieved by limiting issues to a relatively few terms-to-maturity and by re-opening issues on a frequent basis and recommend that the government issues such paper first and bear the cost of such issuance.

If an *ex ante* rate of return on NPPs can be worked out, then, in the opinion of the authors, there is substantial experience, techniques and practices that can be drawn upon in seeking to develop the necessary financial markets. But this cannot be done in isolation and must be adapted to an Islamic environment. Similarly, the central bank and other financial institutions must be ready to adjust their practices and techniques as required, and new financial instruments must be designed to fit in with the existing institutional, market and instrument structures in each country or region. In summary, while the new government security must satisfy basic economic and financial criteria, Islamic countries have a lot of leeway to exercise their preferences.

5.11 CONCLUSION

Various alternatives have been suggested and proposed to replace interest rates as a benchmark for debt securities; none has been adopted so far. There have been compelling arguments in favour of growth-linked and commodity-linked rates of return, but there is no consensus on how to jump-start such a market, although most agree on the necessity that the government, or some international institution of substance, underwrite the initial issue.

Islamic countries can conceivably form such an initial market if they can agree on what benchmark to use and how to launch securities based on such a benchmark. Others, principally Professor R. Wilson, have argued for the use of *musharaka* and *mudaraba*-returns as a benchmark for debt instruments or asset-based *sukuk*. There is certainly much to be said for using profit-based benchmarks to determine the rate of

return on various securities; but there has not been a timeframe long enough to extrapolate from and the market for such financial instruments has been limited and too risky for major financial institutions to seriously undertake. Furthermore, as Professor Wilson makes clears in his paper,[204] the illiquidity of *musharaka* contracts and uncertainty regarding the exit route have not made them popular, and this applies to *sukuk al-mudaraba* — though to a lesser degree.

[204] Wilson, R., (2005). "Innovation in the structuring of Islamic Sukuk securities". University of Durham, Institute for Middle Eastern and Islamic Studies, p. 3

CHAPTER 6. CONCLUSION

With regard to objective # 1, this research study started out by examining the various types of bonds, their pricing and returns. The aim has been to show the variety, diversity and adaptability of conventional financial instruments which the West has been able to develop over the years.

Islamic financial instruments evolved in response to the needs of Muslims in their own communities and in the Diaspora, by replicating, on occasions, the already-existing conventional financial structures but without the interest element or *ribawi* features. This they did by attaching assets to the financial instrument and authenticating or validating the transaction by a Shari'ah board or Islamic jurists to ensure compliance with and conformity to Islamic principles.

If this reasoning is accepted, then Islamic finance can develop in parallel with its conventional counterpart and extensively benefit from the existing but modified conventional financial models and future innovations. Others see *hiyal* in all of this: but the onus is on them to come up with more pure "Islamic solutions".

Concepts like time value of money, present value and risk value are equally important to the understanding of *sukuk*. Once trading in *sukuk* develops to the level of critical mass, formulae for duration and convexity will be equally applicable and become useful measures of sensitivity of price to changes in yield. *Sukuk*-holders should be interested in knowing the average time to the receipt of the present value of their *sukuk* cash flows, especially if they were going to hold their *sukuk* until maturity. Duration calculations are also very useful in today's declining value of pensions, where a portfolio must be managed in such a way as to produce a sufficient amount of

cash at a predetermined future date to meet a specific liability such as tuition fees for children or a pension. In the same vein, convexity tells us that large changes in yield cause disproportionate changes in price. This again must be helpful to those who set the yield for various *sukuk* issues. These concepts must be of interest to the Muslim as well as the non-Muslim investor or institution.

The risk profile for conventional bonds and Islamic *sukuk* has also been considered here, and we have shown how, under *sukuk*, liquidity risk assumes more importance, because of the underdeveloped secondary market in *sukuk* and the fact that *sukuk*-holders held them to maturity. The credit risk of government bonds and sovereign *sukuk* has been examined with reference to the vulnerability of nations to each other's economic policies and their own economic fundamentals; hence, it is the relative, and not the absolute, creditworthiness of a government that determines its credit risk profile. In other words, it is the vulnerability of a government to changes in its trading partners' policies and cyclical fluctuations that makes it susceptible to more, or less, credit risk.

With regard to objective # 2, we examined and evaluated the main *sukuk* securities as main modes of Islamic financing. In particular, we have discussed the role of *murabaha* and *ijara*/leasing in short-term and long-term financing, i.e., from financing the purchase of a car to large-scale and longer-term infrastructure projects, providing examples of these various applications and uses in the main body of the chapter as well as in the appendix.

We have also discussed *mudaraba* and *musharaka* as the Islamically-preferred modes of financing in terms of the underlying risks and their profit/loss sharing

arrangements which avoid the prohibited and controversial use of interest as a benchmark for determining the rate of return on Islamic financial instruments. For these four main methods of Islamic financing, an analysis was made of their drawbacks and limitations as well as of their advantages and benefits.

The role of *sukuk* in the global market has been discussed with reference to both the sovereign and corporate *sukuk*. And in the chapter on *sukuk*, we considered the important role of *sukuk* as an essential step in the long road to an active secondary market and how securitisation (objective # 4) can open up new opportunities for the use of *sukuk al-ijara* in the West, where the real estate market may provide the necessary assets to securitise and provide real innovations through corporate and bank issuances of *sukuk*. Islamic financing tools have also been used to structure real estate deals which have traditionally relied on conventional debt instruments — Zam Zam Towers' time-share structure is just one example (see Appendix) — while the use of real estate investment trust (REIT) has been another interesting innovation.

Yet the need for more alternatives and enhanced infrastructure persists. More funding for research in new market instruments is needed to satisfy the varied and complex financing needs. *Istisna'*, Build-to-Operate (BOT) and time-sharing are all relatively-new tools of Islamic financing, but they have all been long in use in conventional financing, albeit interest-based.

Under objective # 3, we compared and contrasted bonds and *sukuk* and noted in detail their differences and similarities. But perhaps we should note two further points. For example, *murabaha* is a credit sale with deferred price but with the Islamic bank acting on behalf of the client to buy the commodity from a supplier and resell it to the customer. And instead of the interest, there is a fixed or pre-agreed mark-up,

representing the profit of the bank which in all probability also includes the time value of money. It should be noted that under Islamic principles, one cannot sell something that one does not own: the purchase and the sale must be subject to separate contracts. Thus, the outcome is the same but the legal packaging is different, albeit with higher costs for the Muslim consumer/investor.

Similarly, leasing in Islamic finance is actually not much different from the conventional lease, as both involve the transfer of a usufruct and the generation of an income stream for the lessor or the *sukuk*-holder. However, there appears to be a controversy in Islamic circles among those who claim that some of the leases in *sukuk* issues represent more of finance than an operating lease, and is therefore in the nature of a loan. For example, Dr Zarka claims that the condition that the lessor cannot oblige the lessee to re-purchase the asset at cost or at a predetermined price has been compromised in most *sukuk*, including those issued by IDB, Bahrain and Qatar.[205]

By and large conventional and Islamic leases are similar where in the latter the leasing of the usufructs is always done through an SPV. The latter leases the assets back to the originator, and then issues the *sukuk* certificates based on the income stream from the leased assets. This, however, is what the trustee does in the example cited for equipment trust certificates, and there is an increasing trend among issuers and financiers to use the concept of trust as an SPV.

As an innovation, tradable *sukuk* have been able to address the needs of a variety of issuer and investor goals while imparting specific asset-linked rights and

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[205] Zarqa, Prof. Anas, (2005, May). IRTI. *Shari'ah Guidelines for Issuing Sukuk.* Paper presented at the International Islamic Financial Markets Conference, organised by the General Council for Islamic Banks and Financial Institutions and the International Islamic Financial Markets (IIFM) and the Islamic Training Institute (IRTI), Manama, Bahrain.

obligations in a Shari'ah-compliant alternative to fixed-income securities such as CDs, ABSs, bonds and FRNs. AAOIFI, in particular, has been instrumental in developing investment *sukuk* standards to meet Islamic transactional rules relating to asset possession, measurement and transfer while remaining consistent with Western securities rules.

Sukuk do not permit the derivation of new instruments that break the asset linkage — though they may be used to structure the equivalent of certain derivatives. *Sukuk* and their underlying Islamic instruments adapt well to modern Western capital techniques and this convergence helps attract Western investors to high-profile issuances such as sovereign *sukuk*. We have also seen how *sukuk* can fill in a gap for corporate finance, as in the case of Hanco's innovative securitisation and cross-border listing (see Appendix),

To realise objective # 5, we briefly explored the criteria of agency ratings of S&P and Fitch with respect to conventional bonds; but since these are well-known and implemented, we focused on the problems with rating securitised assets under Shari'ah law and under various jurisdictions. This was considered necessary because of the relative newness of *sukuk* issues and their unique features. Fitch's report on rating securitisation in Islamic jurisdictions covers most of those issues and concerns regarding *sukuk* that are also shared by other agencies. In particular, important issues relating to the "true sale" of assets to the SPV, the bankruptcy remoteness of the SPV and the documentation necessary to protect investors or *sukuk*-holders in an Islamic transaction were discussed; we also noted the necessary clauses to be incorporated in such documentation for the protection of the *sukuk*-holders from, for example, shareholders' claims to the assets of the SPV should consolidation of the accounts of

the SPV with that a parent or holding company of the shareholders prove possible in the event of liquidation or bankruptcy proceedings. Further protection measures such as restricting the SPV to one activity and winding it up once the *sukuk*-holders or investors are fully paid, have also been mentioned.

Also noted was that the nature of the collateral under Shari'ah law might not be compatible with the Western understanding of it and that problems could arise as to the nature of security interests and enforceability against third parties.

Another potential problem with regard to Islamic transactions is where the assets or collateral are physically in one place while the SPV is in another jurisdiction, as is the case with many leased assets in an Islamically-structured transaction.

Finally, we cited the example of IDB's guarantee for the full maturity value of the notes as a possible way out of some of the problems posed by the Fitch's report.

There is now a Islamic rating agency called the 'International Islamic Rating Agency' (IIRA), two of its shareholders being already-existing rating agencies, namely, 'Capital Intelligence' from Cyprus and 'GCRVIS Credit Rating Company' from Pakistan. The IIRA will be independent of the international rating agencies such S&P, Fitch and Moody's. It will be made up of a technical committee and a Shari'ah committee and will advise on rating for the banks and their products and funds. However, it is still too early to tell to what extent the ratings of IIRA will be accepted by investors and institutions and how they will interact with the criteria of the international rating agencies.

In realisation of objective # 6, we discussed the role of Bahrain and Malaysia in developing the Islamic financial institutions and markets necessary for the issuance and trading of *sukuk* and their liquidity. We also discussed the various ways in which

liquidity has been addressed, more specifically, in terms of short-term issuances of *sukuk al-salam* and *sukuk al-ijara*, in addition to mechanisms such as put options and periodical redemption in *ijara* funds. These developments constitute a move away from *murabaha* and the underlying commodity trading.

The consistent sovereign issuance by Bahrain has given the Islamic, as well as the global investor, a pool of listed and tradable assets which will give BMA a viable tool for open market operations and set the stage for a much-needed secondary market. Other sovereign issuances by Malaysia, Bahrain and Qatar help to attract global investors and, with their Islamic feature, help in establishing the capital markets as well as building confidence in the concept itself, in turn encouraging corporate issuers. And as the universe of investors becomes more diverse, so too will their appetite, leading to expectation going beyond the prevailing *murabaha* and *ijara* models towards a probable shift to more profit and loss-sharing contracts.

We have also discussed the requirements for building the infrastructure necessary to sustain a viable capital market and the steps taken towards this objective in Malaysia and the Middle East. And in the conclusion, we referred to what needs to be done in future in order to solidify the gains already made by *sukuk* in directing investment towards value-added, productive use of resources, and against proliferation of debt for the sake of cosmetic changes in the balance sheets of corporations and sometimes ill-considered acquisitions.

Closer international cooperation between Islamic financial institutions, like AAOIFI and the International Financial Standard Board (IFSB) and their Western counterparts — the International Monetary Fund (IMF), International Bank for Settlements and International Accounting Standards Board (IASB) — should lead to greater convergence between the two and should improve transparency and open up

the global market for *sukuk*. In this sector, Bahrain and Malaysia have taken significant steps, providing the foundations of the infrastructure necessary for the development of the *sukuk* market.

While Bahrain has encouraged the development and issuance of sovereign *sukuk*, Malaysia has managed to build the appropriate infrastructure for an Islamic capital market. Today an impressive array of Islamic debt securities, Islamic unit trusts, indices, warrants and futures can be seen and one can also see some element of international participation in that market. Nevertheless, *sukuk al-ijara* remain the predominant form, despite some reservations with regard to the basis of valuation of the assets under lease.

Expectations remain high with regard to further progress in innovative *sukuk* issuances that would meet the varied demands of the market. There is now an increasing demand from the both the consumer and the corporate sector to satisfy a new universe of market participants which includes non-Muslims investors as well, partly because of their new ethical dimension and value to the market.

However, danger persists in rushing to innovate by "dressing up" or mimicking conventional products by succumbing to pressure from markets for new products and structuring products which look 'Islamic' and Shari'ah-compliant but in substance are not. Malaysia's innovations in stripping the profit mark-up and turning it into separate and tradable securities in *murabaha* or securitising the income stream in *ijara* leasing have not been, to put it mildly, well-received in the Middle East, especially, in the GCC countries, where they are considered trading debt with debt and to be prohibited.

In today's world, the contribution of Islamic financial instrument may not influence conventional markets, but they can redress the imbalances in emerging

markets, particularly in the Muslim world. *Sukuk* have also, to some extent, brought the conventional and Islamic market closer. One can witness today an increasing number of Western institutions investing in *sukuk*, especially sovereign *sukuk*, in an effort to diversify their portfolio. Western banks have opened Islamic 'windows' to tap the wealth of oil-producing countries and high net-worth Muslims. Such convergence should be welcomed, as it also exposes the West to Islamic thinking and Islamic approaches and will, hopefully, bring about a better understanding and increasing trade between the two, and make for a world based on mutual respect for each other's cultures.

Regarding objective # 7, we dealt with the largely neglected area of Islamic finance of finding alternatives to an interest-based system of benchmarking, as currently used in pricing Islamic financial products.

Many scholars, academics and practitioners in the field of Islamic finance have expressed scepticism towards the 'Islamic-ness' and genuineness of a system that still uses a *ribawi* point of reference to determine the rate of return on its products; and yet there is not much in the way of literature or research on this topic from such quarters. In fact, most of the writing on this topic has come from Western sources.

With regard to objective # 8, in the chapter on "Indexation", we argue for the use of Growth-Linked rate of return on debt securities and *sukuk* and explain the benefits and advantages of such a system while attempting to address the concerns and doubts relating to it.

The whole chapter is equally applicable to Islamic financial securities; we have only used the term 'bond' for the sake of convenience. The benchmarking to LIBOR in Islamic financial instruments can be replaced by benchmarking to GDP growth in a variety of ways. We could extrapolate a rate of growth historically and/or use a minimum acceptable rate as a basis for future indexing and leave the rate of return to fluctuate with this growth rate in accordance with the examples we have given. We could also use the key commodity in the economy of a country such as oil for the producing countries and link the fluctuation in the rate of return on Islamic financial instruments to the changing commodity prices. To narrow the fluctuation, we could set a cap and a floor to it. Alternatively, we could use a combination of weighted commodity prices and GDP rates of growth to set the rate of return. But whatever method is used, there would inevitably be an initial period of trial and error to test the various assumptions and responses to such a major shift in determining the rate of return on debt instruments. And as we emphasised, one cannot imagine a launch of such a major innovation without the aid of both governments and international financial institutions. Such a step would be a landmark, comparable only to the first issue of *sukuk,* if not greater: who could have imagined that *sukuk* would have had such growth and acceptability as they do now?

Finally, with regard to objective # 9, we include in the Appendix various sukuk illustrations and case studies that outline various examples of sukuk issues.

APPENDIX: SUKUK ILLUSTRATIONS AND CASE STUDIES

Case Study 1 (CS1): Sovereign sukuk - Qatar Global Sukuk[206]

Summary of Issue Information:

Registered Issuer:	Qatar Global Sukuk
Arranger/Advisor:	QIIB/HSBC/Amanah & HSBC-M. East
Issue Amount:	US$ 700 million, floating rate notes (Trust Certificates)
Maturity date:	October 09 2010
Margin/Tenor:	6 month LIBOR + 0.4%
Rating/Listing:	S&P: A+ /Lubuan and Luxemburg Stock Exchanges
Minimum Denomination:	US$10,000
Increments thereafter:	US$1,000
enhancers:	Obligor: State of Qatar

72% Middle East, 14% Asian, 13% Europe, and 1% US offshore.

The certificates issued are redeemable in 2010, which makes the period of the issue 7 years. The co-managers to HSBC and Qatar International Islamic Bank were Abu Dhabi Islamic Bank, Gulf International Bank, KFH, CIMB of Malaysia, IDB and the Qatar Islamic Bank.

[206] Adam, N., and Thomas, A., *Islamic Bonds*, and other sources such as IFS, and various articles in *The Banker* and *Islamic Finance News*.

Structure:

The issuer, Qatar Global Sukuk, was incorporated in Qatar as a joint stock company, jointly owned by the government of the State of Qatar and HSBC Bank Middle East Limited, solely established to issue *sukuk* certificates and to act as trustee for the *sukuk*-holders. The proceeds from the rated *sukuk* certificates were to be used for funding such projects as Hamad Medical Centre, gas-based projects and export credits by the government of the State of Qatar.

Qatar Global Sukuk (QGS) purchased land from the state of Qatar (Qatar) which QGS leased back to the state of Qatar for 7 years (equal to the tenure of the *sukuk* certificates) under a Master Lease Agreement (MLA). All acquisition costs relating to purchase of land and costs of any construction on the land were paid by Qatar. The purchased land and rental income from the lease were held on trust for the *sukuk* certificate holders. The lease rental payments from Qatar were in accordance with the MLA between Qatar and QGS and exactly matched the periodic distribution payments (semi-annual) payable under *sukuk* certificates on 9 April and October, commencing April 2004 . The lease rental payments were calculated on the basis of LIBOR on dollar funds plus 0.4% per annum, which makes the certificate comparable to the returns of a conventional floating-rate note (for a detailed discussion of alternative benchmarks, see the first section of this chapter).

Qatar, as Lessee, agreed that the lease payments would not fall below a minimum amount, and that should a dissolution event occur, the MLA would be terminated and Qatar would be obliged to buy back the land from QGS at an agreed price, reflecting the scheduled unamortised rental. Dissolution events include, but are not limited to, default by QGS to the *sukuk*-holders and default by Qatar under the MLA.

Case Study 2: A Mudaraba example: Meezan Bank, Pakistan. In Pakistan, Meezan operates its deposit scheme so that the bank and its shareholders are deemed to be *mudarib* and the depositing consumers are *rabb al-mal*, and where the depositor is not allowed a share beyond a certain low amount as defined in the *mudaraba* agreement. The shareholders' share of profit, on the other hand, cannot be less than their investment. The depositor's loss is restricted to the amount of the invested funds. The Shari'ah board of the bank allows daily calculation of the applicable net asset value and consumers are free to add or withdraw funds at any time. Although this not strictly *mudaraba* in its original form, it does follow the basic principle of profit/loss sharing.

Case Study 3: Sukuk al-intifa' [207]

The most recent development in leasehold estate investment is the leasing of *intifa'*, or right to benefit. This tool allowed for the separation of property from occupancy rights, much like the concept of time-share vacation facilities and part-ownership in the West, within a 24 year reversionary ground lease which the builder — Munshaat — entered into with King Abdul Aziz Waqf to build a multiplex of high-rise towers in Mecca for visitors and pilgrims to Mecca.

These *sukuk al-intifa'* were used in the construction of the Zam Zam Towers in the holy city of Mecca, Saudi Arabia. The *sukuk* which represented benefit of space for up to 24 years, were sold prior to construction, thereby funding the construction. Among the novel features of the project is that the holder of a *sakk* is offered a number of options from which to benefit: he or she can occupy it at the reserved time or exchange time of occupancy with others, or sub-lease the contracted time, or sell the *sakk* to a willing buyer for a profit/ loss.

This innovative *sukuk al-intifa'* issuance has established an Islamic financial model that is based on flexibility of approach to the sale and utilisation of property facilities and can be replicated globally.

[207] Thomas, Cox and Kraty (2005), op.cit. 84

Case Study 4: Equipment leasing [208]

Another financing opportunity for *sukuk* is in equipment-leasing in the West, particularly when the economy is in a slow-down cycle and financial institutions are reluctant to lend because of perceived and, sometimes, real concern about the corporate ability to make the necessary principal and interest repayments. This is where Islamic finance comes in to utilise the large pool of assets in those corporations wishing to finance their re-tooling or improve capacity. The Master Lease representing the large-scale purchase is treated as a debt, with the master rental payments treated as interest for tax purposes. This should satisfy those who would like to minimise their tax liability. The Master Lease to a US leasing company is structured to a specialist leasing company as an Islamic lease; but sub-leasing is sometimes structured without regard to Shari'ah laws, though efforts have been made to rectify this situation.

[208] *Ibid.* 83-84

Case Study 5: Ijara/Istisna' (Tabreed)[209]

The *sukuk* were issued by Tabreed Financing Corporation, an SPV incorporated in the Cayman Islands. The proceeds from the *sukuk* issue were used to finance future cooling plants in the UAE. Tabreed transferred its existing plants as assets to the SPV and these were leased by the SPV to Tabreed on the basis of an *ijara* lease agreement. The periodical rentals from this lease agreement are paid to the SPV and are then distributed to the *sukuk*-holders. In this arrangement, the SPV holds the assets on trust for the *sukuk* certificate holders. Additionally, the *sukuk* proceeds were invested in the manufacture of other central cooling plants, on the basis of an *istisna'* contract, and to remain Shari'ah-compliant the underlying assets could not fall below 51% of the Tabreed assets at any one time. Tabreed and the SPV entered into future leases in respect of future cooling plants to be constructed. The pre-rentals are payable by Tabreed pursuant to an undertaking to lease the future plants on the basis that if the future plants are not manufactured or required according to the specifications in the 'agreement to lease' by a specific future date, these pre-rentals shall be repayable by the SPV.

Upon maturity of the *sukuk* (or earlier in the event of a dissolution), Tabreed is required to purchase the existing plant from the SPV and in order to provide additional comfort to the investors, Tabreed guaranteed the SPV payment obligations under the *sukuk* and further agreed to make up any shortfall in the amount received in respect of the underlying assets and the amount by which the holders of *sukuk* expected to be paid under the terms of the *sukuk* documentation.

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[209] Thomas, Cox and Kraty. op. cit., pp. 113-117

A key Shari'ah issue in this case concerned the composition of the pool of underlying assets to be purchased by the SPV. The pool comprised the main plant, the plants which have not yet been manufactured or acquired, investments in specific sites and other miscellaneous assets.

The Shari'ah scholars in this transaction stipulated that at any one time the underlying assets shall comprise not less than 51% of the underlying assets of the SPV's underlying assets, and in the event that it does fall below that, Tabreed is required to purchase the cooling plants from the SPV.

Case Study 6: Auto leasing [210]/ (HANCO)[211]

This is one of the strongest growth markets for Islamic financing (IAF) in the major Islamic countries because of strong demand for new car imports due to population growth, high replacement rates and sub-standard maintenance and service standards for cars as well as the inadequate public transport system in those countries. The market for IAF consists of major segments: consumer auto acquisition, fleet acquisition for companies or businesses and import-export finance.

Faced with growing pools of Islamic auto finance assets on their balance sheets, Islamic financial institutions find it essential to develop asset-backed structures to expand their capacity in order to service this growing market. But corporations such as Hanco faced a similar situation before the securitisation and subsequent sale of its assets to *sukuk*-holders.

The purpose behind Bemo Securitisation of the fleet owned by Hanco, a major Saudi Arabian fleet lessor, was to settle bank loans in order to free existing assets and acquire new ones, thus allowing Hanco to reposition itself financially and concentrate on what it does best, namely, providing a fleet management service, instead of buying autos and leasing them. A "unique" structure was put in place with two SPVs. The Jersey SPV acted for the *sukuk*-holders and funded the purchase of the fleet of cars; but it held their money in Jersey bank accounts through a security trust set up there. The *sukuk*-holders had control over the assets in the Saudi SPC through an agent. The Saudi SPC, through a funding agreement with the Jersey SPV, purchased the assets which were physically located in KSA .

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[210] *Cox, Thomas & Kraty. op. cit., 83-84*

[211] Norman, T. (2005). "How a Caravan came to the Marketplace". *The Banker*, pp., 1-2

The latter SPC in KSA then entered into a service agreement with Hanco to service the fleet. The whole *sukuk* issue was underwritten by Shamil Bank, which did so without rating.

The *sukuk* were offered at 6% return with three years to maturity to May 2007. The cars were diversified by age, type and usage. The new company was therefore able to offer a pool of cars under lease to a customer-base with diverse credit risks and assume the operational risks of operating leases of cars.

The *sukuk* securitisation was possible because of the acceptability to Shari'ah of the unitisation of each car. Thus each *sakk* or certificate holder owned a pro rata share of the fleet and the risks of that ownership and the benefits of the lease that go with it. Hanco, meanwhile, continued to earn servicing and maintenance fees for managing the fleet and looking after the customers, thus enabling it to expand its market share, having shed off the encumbrance of servicing the assets on its balance sheet. The investors, on the other hand, would continue to receive a stable return from the leasing of their assets.

Case Study 7: Sovereign Sukuk-Anhalt-Saxony, Germany[212]

An example of *sukuk al-ijara* is the *sukuk* issue by the German federal state of Anhalt-Saxony for $100 million. As a result of having their debts guaranteed by the Federal Government, they received excellent rating from both Fitch (AAA) and S&P (AA-). The *sukuk* were priced one basis point above the European inter-bank offered rate (EURIBOR). Citigroup and KFH were appointed as lead manager and co-lead manager respectively. The issue was given the go-ahead by Citigroup's Shari'ah Board.

The assets underlying the transaction were specific buildings owned by the Ministry of Finance. The Master Lease was sold to an SPV, which in turn leased it back to the Ministry for 5 years. The SPV itself was registered in the Netherlands for certain legal and tax considerations. The certificate holders would receive a stream of rental payments benchmarked to the EURIBOR over 5 years and these securities are listed on the Luxemburg Stock Exchange.

[212] Gassner, M. S. (2005, Feb.). "Reasons t issue Sukuk and the Structures behind them". *The Banker*, pp., 1-2

Case Study 8: Sukuk bai bithamin Ajil

On the other side of the divide, in Malaysia, a controversial *sukuk* issuance by the IFC, an arm of the International Monetary Fund, of RM 500 million based on the Bai Bithamin Ajil (sc. deferred payment) was taking place. The basic feature of the underlying transaction was a sales contract resulting in debt and not a lease. The joint lead managers first bought the assets from the issuer for RM 500 million and then sold the assets back at a deferred price plus a profit. This of course results in a debt which cannot be traded except at face value and such a transaction is considered by a majority of Middle East (ME) scholars akin to *riba*. Consequently, the issue was not listed on any stock exchange in the world and there was, therefore, no secondary market for trading in this issue. This would make future issues in Malaysia more likely to follow the *sukuk al-ijara* model, as is the custom in the ME, to enable secondary market trading in these *sukuk* and foster wider acceptance for Malaysian *sukuk*; for otherwise, Malaysian issuers would have to deal with higher pricing expectations and non-tradable *sukuk* would carry an increasing premium.

The Wawasan Ringgit Sukuk by the IFC carried an AAA rating by S&P and Aaa by Fitch. The profit rate was fixed at 2.88% for a 3-year maturity. The joint lead managers were HSBC of Malaysia and Commerce International Merchant Bankers Berhard (CIMB), Malaysia. The Shari'ah certification was done by the CIMB Fiqh Council and Dr M. Bakar.

Case Study 9: Sukuk in Real Estate Development

A case in point is the major real estate development in Bahrain, called Durrat Al Bahrain. The $120 million issue is a first phase funding for the massive leisure and tourist attraction whose cost has been estimated at $1.2 billion. The joint company, Durrat Al Khaleej Al Bahrain BSC, is jointly owned by the Government of Bahrain and Kuwait Finance House (Bahrain).

The issue, as commonly seems to be the case with other *sukuk* issues, was oversubscribed by $32.5 million. The *sukuk* were priced at 125 basis points above 3-month LIBOR, maturing in 5 years and making periodic payments in lieu of the return on a quarterly basis. The arranger and placement agent was the Bahrain-based Liquidity Management Centre (LMC). LMC holds an Islamic investment banking license which was established in 2002 to manage the secondary market and the short-term needs of Islamic financial institutions. The issue was underwritten by Dubai Islamic Bank, Bahrain Islamic Bank, IDB, Emirates Islamic Bank, Bank of Bahrain and Kuwait, General Organisation for Social Insurance Bahrain, National Bank of Sharjah and LMC. The Shari'ah certification was undertaken by the Islamic Financial Market (MC-Bahrain). The *sukuk* will be listed on the Bahrain stock exchange so that it may be traded in the secondary market over there. *Istisna'*, which forms part of the portfolio of funding, will not be a tradable security, as, according to Shari'ah law, there are no assets yet to back them up; however, they may form part of a tradable portfolio if 51% of that portfolio's market is backed by underlying assets.

The proceeds of the issue will be used by the issuer to finance the reclamation of land and the development of the Base infrastructure through multiple project finance (*istisna'*) agreements. As each phase of the work is completed under an *istisna'*

agreement, and the contractor delivers that completed phase to the issuer, the latter will give notice to the project company under the Master Ijara Agreement and will lease such Base infrastructure on the basis of lease-to-own transaction.

Case Study 10: IDB's Floating Rate Sukuk

Another 'structure' is the IDB's issuance of $500 million floating-rate *sukuk* under its $1 billion medium-term notes (MTNs) programme. The issuance was completed on May 23, 2005 and the first drawdown of $500 million took place two days later. The issue was rated AAA and was oversubscribed by the closing date of June 15, 2005. What distinguishes this *sukuk* issuance is the geographic diversity of its subscribers. In fact, for the first time, the Far East investors outstripped their ME's investors and accounted for 35% of the subscription compared to 32% for ME investors and 26% for Europeans and the remainder of 7% taken up by the Supranationals.

The 5-year issue which is registered in Luxemburg and listed on the Local Exchange will be used to finance the corporate requirements of the multilateral development bank in Malaysia. The issue is priced at 6 months LIBOR plus 12 basis points, and matures in June 2010. The coupon payment is semi-annual. This issue has also seen the emergence of lead managers from the IDB area: the CIMB from Malaysia and Dubai Islamic Bank, Dubai, in addition to two international managers in Deutche Bank and HSBC.

The *sukuk* assets are ring-fenced in the portfolio of IDB's assets portfolio to separate them from other assets. The portfolio consists of not less than 30% of its assets leased to clients of IDB under *ijara* contracts for a rental consisting of the unamortised portion of the acquisition cost of the leased assets (the principal) and a variable or fixed portion (the profit), in addition to the instalment payments under *murabaha* and *istisna'* contracts into which IDB has entered with some of its clients.

IDB Trust services Limited will fund the purchase of *sukuk* assets through the sale of trust certificates. As assets under the Trust mature, IDB will sell to the trust, or

assist the trust in replacing, maturing assets with new *sukuk* assets. However, under Islamic principles, IDB must retain the risk of default on the *sukuk* assets sold to the trust. In this way, IDB is the liquidity provider to cover the costs and expenses and periodic distribution payments to *sukuk* holders and the unconditional and irrevocable guarantor of the *sukuk* issuance. These undertakings commit the IDB to provide the trustee with sufficient funds for all periodic payments and principal, due to the investors on time and in full. Accordingly, the Islamic Development Bank's (IDB) Medium-Term Notes' (MTNs) programme was assigned the same AAA ratings by S&P as the institutional rating assigned to IDB itself.

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