Instituto Superior de Ciências do Trabalho e da Empresa

Religion and Modern Finance

Islamic Banking and the use of Derivatives

Ricardo Lisboa

Dissertation submitted as partial requirement for the conferral of

Master in International Management

Supervisor:

Prof. Szabolcs Sebestyén

(ISCTE Business School)

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Ricardo Miguel Furtado Lisboa

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Abstract

Throughout modern history, the world has faced economic crisis ranging from the great depression in the 1930s in the United States of America to the Dot-com bubble collapse in 2001 and more recently the subprime crisis for which the aftershocks are still felt in several countries. Amidst these cyclical events, Islamic banking has been gaining traction and increased importance in countries where Islamic religion is predominant: in Gulf cooperation council countries, in Asian countries and African countries.

The defining characteristics of Islamic Banking (which follows Shariah law) seem to counterbalance the pitfalls that lead to the above mentioned crisis, though it is not clear if the road ahead of this industry, and the necessary developments it needs to achieve in order to continue its growth, are feasible and complementary to the core of Shariah law. The development of tools for managing risk specially, become increasingly important as the size of the Islamic banking industry increase. In order to prevent a similar path as conventional banking, a kind of symbiosis between the tenets of Shariah and the use of derivative instruments needs to be reached.

It is the analysis of this relationship that is the goal of this thesis. This will be done by reviewing the current situation of Islamic Banking, analyzing a sample of the available products in both systems and analyzing the possibility of implementation and standardization of derivatives in Shariah through the current process of approval of such instruments.

Keywords: Shariah; Islamic Finance; Derivatives; Banking

JEL classification System: N25, G210

Abstracto

Ao longo da história moderna, o mundo tem enfrentado crises económica desde a grande depressão na década de 1930 nos Estados Unidos da América, o colapso da bolha 'Dot-com' em 2001, e mais recentemente, a crise do subprime em que as consequências ainda são sentidas em vários países. Durante estes eventos cíclicos, o sistema bancário Islâmico foi ganhando força e uma crescente importância nos países onde a religião islâmica é predominante: nos países do Conselho de Cooperação do Golfo, nos países asiáticos e países africanos.

As características que definem o sistema bancário islâmico (que segue a lei Shariah) parecem contrabalançar as causas principais que levaram às crises acima indicado, embora não seja claro se o caminho à frente para esta indústria, e os desenvolvimentos necessários para continuar o seu crescimento, são viáveis e complementares com o núcleo da lei Shariah. O desenvolvimento, especialmente de ferramentas de gestão de risco, tornam-se cada vez mais importante tendo em conta o crescimento do setor bancário islâmico. A fim de evitar um caminho semelhante ao da banca tradicional, uma espécie de simbiose entre os princípios de Sharia e da utilização de derivados financeiros precisa ser alcançado.

É a análise dessa relação que é o objetivo desta tese. Isto será feito através da revisão da situação atual do sistema bancário islâmico, analisando uma amostra dos produtos disponíveis em ambos os sistemas e analisar a possibilidade de implementação e padronização de derivados em Shariah através do atual processo de aprovação de tais instrumentos.

Palavras-Chave: Shariah; Islamic Finance; Derivatives

Sistema de classificação JEL: N25, G210

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Introduction

At first glance, Islamic banking and the use of derivatives seem to be in completely opposite spectrums of principles when taking into consideration the portrayal in the media and fallout of misuse of these instruments. However, when stripping away the sensational tabloids and extreme cases of over complexity and criminal usage of derivatives, what is left are tools that are of great use for companies. As companies drive economic growth, if Islamic Banking wants to be a central part of this process, it needs to enter the derivatives market.

To analyze the feasibility of this as well as the steps already taken, this thesis will be divided in several chapters that will assist in deriving an understanding of what lies next for derivatives and Islamic Banking.

In chapter one a review of Shariah Law and its main goals as well as prohibitions is done in order to understand the basic principles guiding Islamic Banking. Chapter two details a comprehensive view on the history of Islamic banking in terms of growth and potential for the future if the industry continues to innovate.

Having established this, chapter three goes through the main types Islamic products/services currently offered, by dividing them into two main groups and comparing them against the intended goals of Shariah. Special note is given to Sukuk, which has become the flagship of Islamic finance in terms of developing new methods of finance within Shariah law.

Chapter 4 describes the derivatives under the scope of this thesis as well as their characteristics that make Shariah scholars skeptical or against their use in Islamic finance. In chapter 5 a comparison and contrast is made between hedging and speculation which are the main uses of such derivatives.

Having established the basic derivative structures and their uses, chapter 6 analyses the main alternatives to derivatives that have so far been developed under Shariah as well as their shortcomings when contrasted with conventional derivatives. An important overview of the factors involving the decisions of compliance and non-compliance with Shariah law is made in Chapter 7. An additional brief analysis is made comparing Islamic Banking and conventional banking in terms of efficiency, leading to the conclusion which sums up the deductive analysis conducted in previous chapters.

Chapter 1: What is islamic banking?

1.1 Islamic Law

Islamic banking functions on the principle of Islamic law, Shariah, which regulates all aspects of life, ranging from the political, to the economical and personal life. This means that besides the regular goals of a corporation to maximize profit, the activity of an Islamic bank is also regulated and defined by the principles and goals of the Islamic religion.

The objectives of Islamic law (maqasid al'sharia) (Mansour, Jedidia, & Majdoub, 2015) are to promote justice and welfare in society while allowing for a pursuit of happiness for all. In order to achieve this, there are main sources from which it draws its guidance:

-The Qur'an: The Islamic holy book which relates the messages sent to the prophet, Muhammad, by Allah. The information contained in the holy book has the highest authority and prevails over all of the other sources.

-Sunna (the prophet Muhammad's practices and habits): The prophet's way of life, translated through his practices and habits, are compiled in the hadiths (narrations of actions during his life) that were turned into writing centuries after the life of the prophet. These are to be used as practical application of the teachings in the Qur'an and serve as role model for Muslims in all their activities.

- Ijma : Consensus of opinion or agreements by Shariah scholars;

- Qiyas: Decisions done through deductive analogy that take as foundation, previous decisions based on similar problems. Similar to jurisprudence in common law.

1.2 Prohibitions in Shariah

From the different sources of guidance, there are dogmas of Islamic law that impact the activities of Islamic banks directly:

1.2.1 Riba

Riba, the term used to define interest, is not permitted according to the readings in the Quran. In a similar format, this restriction has also been present in other religions such Christianity, but over the centuries it has been abolished and became not only permitted, but regular practice as shown in (Iqbal & Molyneux, 2005):

"Mills and Presley (1999) have traced the history of prohibition of interest in Biblical texts and Western literature. Their findings can be summarized as follows:

1 In England, the last Act condemning all interest as contrary to God's law was passed in 1571.

2 It was Jeremy Bentham who argued in favour of interest. His arguments eventually carried the day. In Britain, the 1854 Money Lenders' Act abolished the 5 per cent usury law and allowed lenders to charge any rate. A limit of 48 per cent was reimposed in 1927 in an attempt to protect vulnerable borrowers. However, since the passage of the Consumer Credit Act (1974), no such restriction exists."

In (Iqbal & Molyneux, 2005) Riba is defined as:

"*In its basic meaning, riba can be defined as 'anything (big or small), pecuniary or non-pecuniary, in excess of the principal in a loan that must be paid by the borrower to the lender along with the principal as a condition* (stipulated or by custom) of the loan or for an extension in its maturity'. According to a consensus of fuqaha' (Islamic jurists), it has the same meaning and import as the contemporary concept of interest.*

** Thus any excess given by the debtor out of his own accord, and without the existence of a custom or habit that obliges him to give such excess, is not considered as riba."*

(Schoon, 2008) makes additional subdivisions in the unfairness or Riba:

Table 1. Negative impacts of Riba	
Party impacted	Consequence
Borrower	A disconnection between the profit of the investment and the rate to be paid on capital loaned may lead to a lower profit than the rate of the loan. Consecutive occurrences of this could lead to the bankruptcy of a business where with accurate profit-loss sharing would keep it sustainable
Lender	In scenarios of inflation where return on capital could be lower than inflation rate. When the profits of the investment are unexpectedly higher a reversed effect to the unfairness scenario for the borrower
Economy	In interest based economy, capital is allocated to the borrower with the best credit worthiness in relation to the expected return on investment. In profit-loss sharing perspective, capital allocation is decided with basis on the profit potential of the project*.

* Allocation of capital on this principle alone could also negatively affect economy as only " safe" projects would receive capital, heavily reducing the innovation potential in society.

Source: (Schoon, 2008)

In conventional banking, the most basic of services and products offered have as a basis the value of money and therefore the charge of interest. In Islamic banking, interest is still forbidden and so in order to respect the religious rules and still provide financial services similar to deposits and loans of traditional banking an overhaul of the business model and the way the services are provided had to be developed for Islamic banking.

In future chapters it will be discussed if the separation of financial activity from prohibition has been achieved or not in Islamic Banking.

1.2.2 Maysir

- Maysir: According to the passage 5:90 of the Quran:

" *O, you who believe! Intoxicants (all kinds of alcoholic drinks), and gambling, and Al-Ansab (animals that are sacrificed in the name of idols on their altars) and Al-Azlam (arrows thrown for seeking luck or decision) are an abomination of Satan's handiwork. So avoid that (abomination) in* order that you may be successful."

In the above it is clearly stated that gambling or games of chance are prohibited. This is one of the passages that is quoted by Shariah scholars to highlight that activities of speculation, considered equivalent to gambling, performed through the use derivatives must not be pursued,

and as such instruments created with that purpose or in built possibility are not Shariah compliant.

1.2.3 Gharar

Deception or looseness of contract. Clear definitions of Gharar is, seem to be out of the main prohibitions, the hardest and most subjective of all. On most views the prevalent idea is that Gharar is incurred when the contract details or assets being traded are not completely know and/or understood by one or other parties involved leading to deception of one or more parties.

Together with Maysir, the Gharar prohibition is one of the most often mentioned to forbid the trading of derivatives. With derivatives contracts having to possibility of being highly complexm Gharar can be encountered as well as through the fact that they often deal with uknown future values (when used for speculation).

1.2.3 Halal

There are some activities which are considered ilegal in Islamic law, such as: consumption of pork, drugs, alcohol and pronography. Islamic banks when entering into a contract, have to perform their ‘religious due diligence’ in order to screen prospective projects and ensure that there is no connection with these activities.

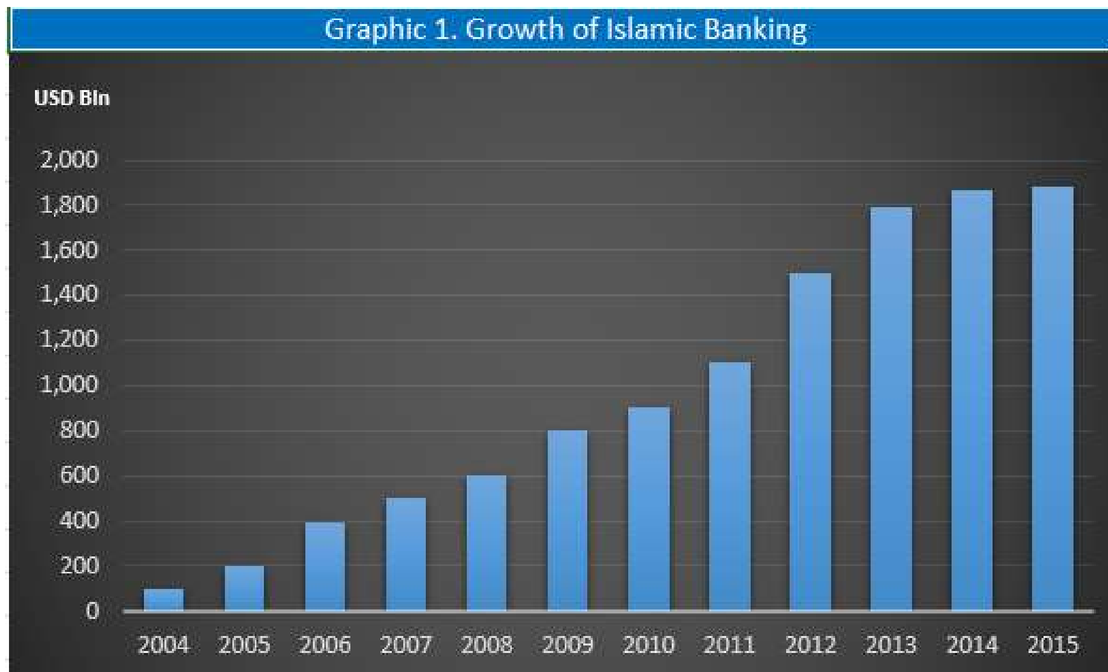
In addition to the strict prohibitions mentioned above, Shariah also dictates that transactions should always have a physical asset as a basis for the contract and that profit and risk should be equitably (in accordance to the investment) shared among participants.

In principle, the guidance of Shariah law should regulate Islamic banking institutions in order to avoid any abuse and unethical activities. All of the above prohibitions and sources of Islamic law, as stated, regulate all aspects of society life. Despite this, it is only in recent decades that the banking sectors has seen the formal implementation of Shariah rulings in modern Islamic banking operations.

Chapter 2: History of Islamic Banking

Islamic banking has its beginnings in the early 1970s when the first Islamic finance institutions were created. The main goal for these initial institutions, following the ethical principles of Islamic law, was to provide basic banking services to population in rural areas. These initial services ranged from providing a means of savings for activities like the pilgrimage to Mecca or the much needed capital for increasing productivity on local businesses. The common thread in the target client was that they were people that regulate their life closely to their religious beliefs and therefore could not rely on traditional banking due to its incompatibility with Shariah. In providing services that catered to this basic religious and economic needs, these institutions were following the principles of maqasid al'Sharia.

Islamic banking, similar to conventional banking was born out of need from the population that could not be served by the available providers. Since the early saving projects in 1975, the Islamic Development bank (IDB) as well as the first privately established Islamic Bank (Dubai Islamic Bank) were founded. Since then Islamic banking business that first accounted to a few hundred thousand dollars, reached by 2004 over 150 billion and a reported close to 2 trillion US dollars presently with over 400 institutions managing such assets.



Source: IFSB

This extraordinary growth rate has been somewhat steady as shown in graphic 1, even in periods of financial crisis. Can this be attributed to an early industry or is Islamic Finance structurally better equipped to handle financial needs of customers? In chapter 8, it is addressed in more detail the available the efficiency of Islamic Banking in contrast with conventional banks.

There would be main causes leading to this current volume, and one of them is no doubt the growth of Muslim population in the world and increased wealth in those countries. The core market for Islamic banking is the segment of investors that want to make use of financial services while respecting the religious rules of the Islamic religion.

While compared to traditional banking, the scope, range and volume of assets is extremely reduced, the potential for growth and acquisition of market share is incredibly high. It is important to note that not only Muslim population would be interested in these services, since for non-Muslim investors, instruments from Islamic banks can still be seen as a viable way of adding diversification to their investments and reducing the overall risk of their portfolio. The fact that the products and services offered by Islamic banking should be subject to stricter restrictions (the moral oversight of Shariah law) could also prove to be an attractive factor.

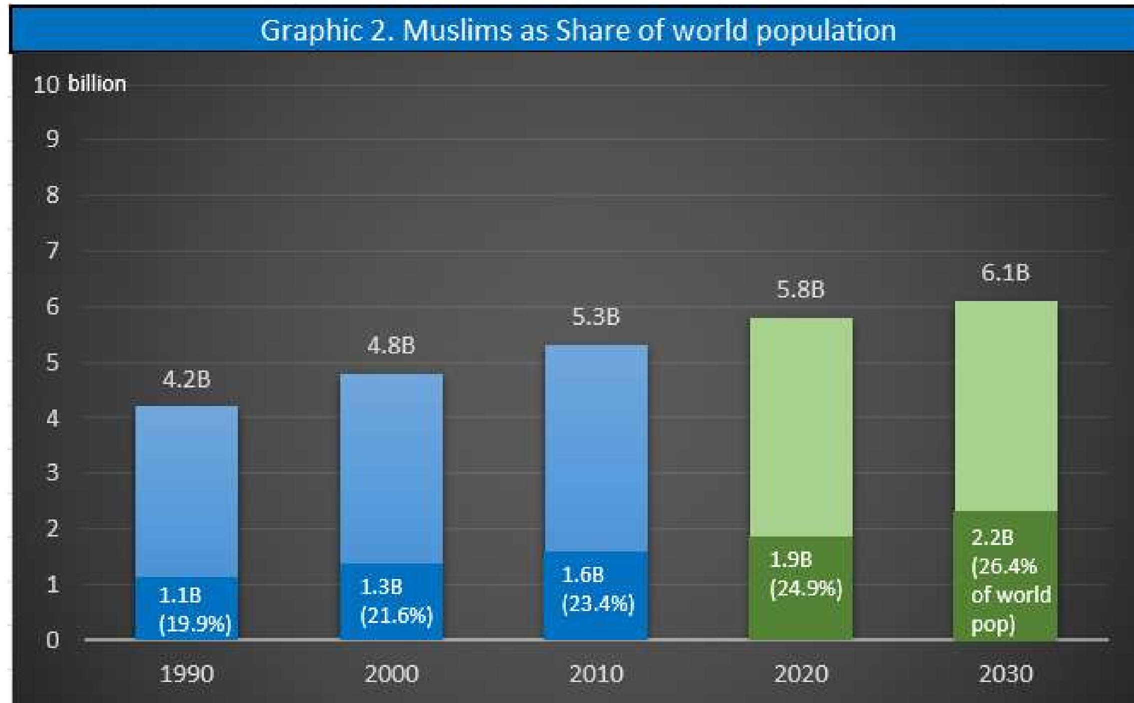
2.1 Market Potential

To better understand the potential of Islamic banking, it's important to look as well at the growth of the world population and the relevance of Muslim population.

From graphic 2, two critical points can be taken away that impact the growth of Islamic Banking:

1- Percentage of Muslim population in respect to total population has been growing and is estimated to keep growing;

2- Muslim population is estimated to represent over one fifth of the entire world population by 2030;



Source: Pew Research Center's Forum on Religion and Public Life

Over the last decades the growth of Islamic banking has proven noticeable, albeit with many years/decades before it reaches the level of traditional banking. In terms of potential, one fifth of the world population is Muslim, while Shariah compliant assets account for only around 1% of world financial assets (TheCityUk, 2015) and are mostly gathered in the Gulf Cooperation Council countries, mainly Iran and Malaysia.

While Shariah compliant assets should not be expected to reach 25% of the world financial assets, the potential for continuing growth is there as long as innovation and expansion continue to be a focus of the institutions.

2.2 Investor types

While it is important to recognize that for a vast number of the Muslim population, current conventional financial services are used on a daily basis, the fact that there is an alternative banking offer in line with their religious belief could prove a powerful incentive for prospective clients. Alongside the financial crises that have occurred in cycles and lead to an ever increasing distrust and vilifying of banking by the general population, there is room for Islamic institutions to capitalize on this by focusing on their comparative advantage and differentiation factors.

In the wake of the financial crisis of 2008, the practices of banks have been put into question, not only it's legality but also its ethics. Islamic banking should by definition follow principles of equity, cooperation and social justice and therefore has attracted quite some attention as an alternative, albeit more moderate but theoretically more risk adverse, banking.

As stated by (Mohamad & Tabatabaei, 2008) the prospective clients for Islamic banking could be divided into three categories:

1- Investors that will only invest in Shariah-compliant products independently of performance or revenue level;

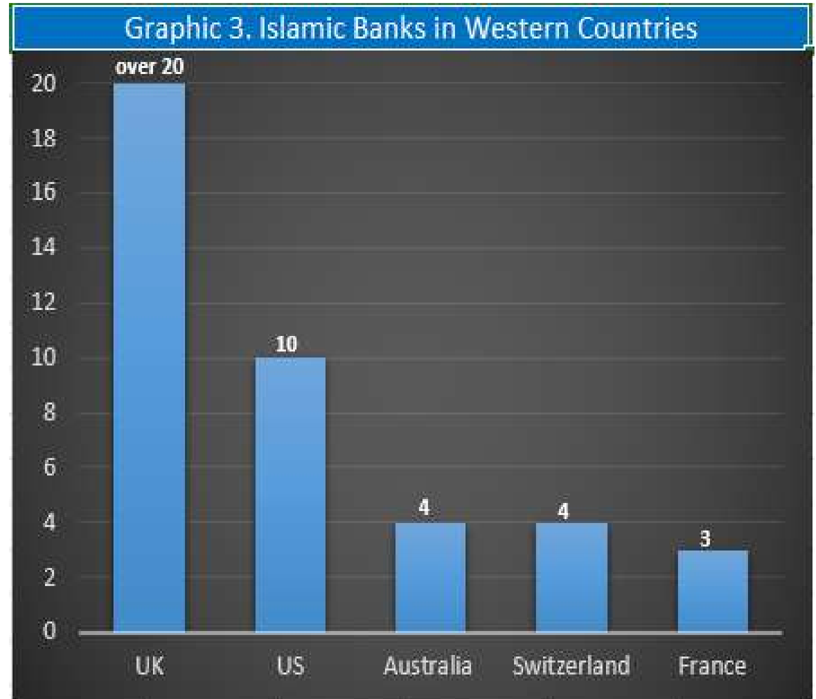
2- Investors that prefer Shariah compliant products if faced with a choice between conventional banking and Islamic Banking;

3- Investors who make their decision solely based on performance and make no distinction between Shariah compliant and non-compliant products.

It is these three groups that Islamic Banking must pursue in order to continue growing in a sustainable way. While the first two could be attracted by the key differentiation factor of Islamic Banking, and will soon reach a level of saturation in terms of market penetration, the third will require further advancements in developing existing products and new ones such as derivative like instruments.

2.3 Presence in Non Islamic countries

Though the main focus since the beginnings of Islamic banking in the 1970s has been almost exclusively Muslim population, In the below Graphic 3 and Table 2, it shows that Islamic banking is no longer only present in Muslim majority countries but has continuously increased its presence in Western countries. This has been achieved through two avenues: By foreign Islamic banks creating a direct presence in these countries and also by conventional banks, sensing this new untapped segment, offering Islamic financial services themselves. It is a clear sign that Islamic Banking has been growing from a mere niche to a more mainstream option.



Source: The CityUK

Table 2. Islamic Banks in the UK
Fully Sharia compliant
Abu Dhabi Islamic Bank
Al Rayan Bank
Bank of London and The Middle East
Gatehouse Bank
QIB UK
Conventional banks that offer Islamic Financial Services
ABC International Bank
Ahli United Bank
Bank of Ireland
Barclays
BNP Paribas
Bristol & West
Citi Group
Deutsche Bank
Europe Arab Bank
IBJ International London
J Aron & Co
Lloyd's Banking Group
Royal Bank of Scotland
Standard Chartered
UBS
United National Bank

Source: The CityUK

2.4 Future of Islamic Banking

For this industry of Islamic finance to continue to grow and expand its customer base, it will have to address the issue of standardization in their risk management products (this hurdle of the industry is discussed in chapter 7). If this is achieved, the goal of attracting customers will no longer be restricted only to Muslim costumers that need their financial activities to be Shariah compliant, instead it will be able to reach out to a wider customer base and compete directly with conventional banking for clients of the third category (Mohamad & Tabatabaei, 2008).

Islamic finance, though with some presence in western countries still has the bulk of the current institutions located

in Muslim majority countries such as the Gulf Cooperation Council countries. With such a lopsided presence it is no surprise that since 2014 (IFSB, Islamic Financial Services Industry Stability report, 2016) market conditions have become more unfavorable and growth rate has been decreasing.

This is mainly due to lower oil prices which impact the main investors in Islamic Banking, Political crisis, volatile financial markets and armed conflicts. Coupled with the above is the fact that growth rates decrease as a market matures and it is at this stage that innovation and developments outside the core of the industry, i.e., risk management tools such as derivatives, are required in order to guarantee continued growth and increasing competitiveness with conventional banking.

Chapter 3: Islamic banking Products

Islamic banking, with the need to be Shariah compliant, follows their business under the principle of Mudarib. This can be expressed as *"The one who mobilizes funds, on a profit-sharing basis, extends these funds to the users on the same basis"* (Iqbal & Molyneux, 2005).

If one is to make a direct comparison with traditional banking structure, on the deposit side, the funds Islamic banks receive are treated as interest free loans from the clients to the bank, and these funds are guaranteed. This does not mean that there is no possibility to obtain return on deposits, instead of the regular interest that is paid on conventional banks, Islamic banks can share their profit level with the depositors or the account can be linked to a specific investment type and derive its remuneration from those (Beck, Demirguc-Kunt, & Merrouche, 2013). Essentially accounts are split into:

- No return current accounts for which principal is guaranteed;

- Profit sharing investment accounts (PSIA).

This difference directly impacts the method of participation by depositors, while in conventional banking they are creditors to the bank, in Islamic banking they turn to residual claimants (similar to shareholders) which creates and incentive for clients to more closely monitor the activity of the bank in which they are clients. On the Lending side, Banks have several types of products in which they provide funding to clients.

3.1 Profi-Loss Sharing (PLS) – Mudarabah and Musharakah

Mudarabah (one capital providing party) and Musharakah (more than one party providing the capital) is the version of a loan from the bank to an entrepreneur in Islamic banking. In traditional banking the repayment of the loan has minimal connection to the investment itself and the instalments amount (interest plus capital repayment) are pre-defined at the start of the contract depending on the credit rating assessment of the entrepreneur done by the bank.

In a regular loan, in case of default by the entrepreneur, legal action may be taken to take possession of other assets to minimize the loss. In Mudarabah contracts however, the loss is borne totally by the capital suppliers and in turn the entrepreneur has an implied loss of the time and expertise supplied as well as any additional capital provided.

The return of the invested amount, plus profit ratios (which substitute the interest portion) occur either at end of contract or when the business has started providing returns. The ratios at which the profits are distributed are also determined at beginning of contract.
It is important to mention that while in traditional banking, in business decisions the banking has no say, through Mudarabah however for major investment decisions, i.e. inclusion of more partners, they have to be approved by the bank.

Mudarabah can function in two tiers where the first tier is where the depositors put their money into the bank accounts and agree to share in the profit of the investments of the bank (essentially a Musharakah arrangement via the deposit side). The second tier is where the bank provides these gathered funds to entrepreneurs and agrees to share the profits generated by the enterprises invested in.

3.2 PLS - Takaful (Insurance)

In the Islamic banking corresponding product for insurance, the policyholders when subscribing to a Takaful, are also actively participating in the fund created by the insurance company to invest those proceeds and therefore are also entitled to a share in profits of said investments and liable in their losses. The fund must make reserves yearly to pay out to claimants but the remaining portion invested and rewarded is then distributed among all contributors and shareholders. With this arrangement it manages to avoid the Riba, Gharar and Maysar prohibitions in conventional insurances while introducing a profit loss sharing mechanism in accordance with the principles of Shariah.

3.3 PLS vs Non PLS

The above are the main profit loss sharing (PLS) tools available to clients of Islamic Banking. The fact that both risk and profits are shared between entrepreneur and financing institutions, forces the banks to be much more thorough in their project analysis as well as follow up after capital is provided.

It becomes in the interest of the bank to ensure the project is well managed and structured. These types of transactions exemplify the intent of Shariah law, as all parties involved, from depositors to the entrepreneur have a real stake and risk associated with the projects seeking

finance. Through this mutual accountability mechanism, the heightened scrutiny involved leads to a reduction of the risk potential of the investment failing due to illegal or unethical. The main goal for all parties becomes the maximum success of the underlying project, which by consequence has an improvement in the welfare of society as a whole.

Despite these optimistic ideals, in reality, most Islamic banks have a very low percentage of PLS financing and prefer to direct their investment to other Non-PLS financing which minimizes their only their own risk:

Table 3. Financing/ Investment Breakdown for Islamic Banks

	2006			2005		
	%PLS	%Non PLS	%Other	%PLS	%Non PLS	%Other
Large Islamic Banks						
Al Rajhi Bank	0.0	99.5	0.5	0.0	99.7	0.3
Kuwait Finance House	20.1	78.4	1.5	22.7	75.1	2.2
Dubai Islamic Bank	14.4	85.6	0.0	25.3	74.7	0.0
Bank Islam Malaysia	0.7	99.0	0.3	0.8	98.8	0.4
Pakistani Islamic Banks						
Meezan Bank	5.0	95.0	0.0	7.0	93.0	0.0
Al Baraka Islamic Bank	7.0	93.0	0.0	10.0	99.0	0.0
Faysal Bank	10.0	90.0	0.0	11.0	89.0	0.0

Source: (Mansour, Jedidia, & Majdoub, 2015)

This highly imbalanced ratio in PLS investments and investment/financing in Non PLS products is due to the inherent information asymmetry between the parties (Warde, 2000). As there is no perfect information available for all parties about all the others and also about the project itself there is an open possibility to exploit such discrepancy of information for additional gains in the contract at the expense of others. At its extremes the advantages could be unethical or even illegal.

In order to avoid this, there are many due diligence steps that are required on both parts, both in terms of investigation of the investment and the participants. Due to high volume of regulation required and inherent risk shared in these projects, the above ratio in table 3 between PLS and non PLS is expected.

This illustrated case of theory versus reality in Islamic banking is a key point to reference because it leads to better understanding on what scholars and product developers perceive as optimal and what in reality becomes common practice. These additional methods of financing which are non PLS and make up the bulk of investment ratio are:

3.3.1Non PLS – Murabaha (Defferred credit sales)

A basic Murabaha sale is when the Bank acquires an asset without already having a prospective buyer. In this case, after such purchase the bank will display this asset for sale at a price and profit to be agreed.

A more complex version of the Murabaha sale, and the equivalent to traditional home loans/mortgage, is one exemplified by Figure 1.

In this case, the Bank acquires an asset but with a prospective buyer already in place. In the scenario that the client does not fulfill its promise to buy the asset (with payments to be done in tranches identical to a loan), the bank would have a contractual condition with Seller S that the purchase of the asset is only valid if the buyer B goes through with its promise.

In reality this added asset ownership risk can even become irrelevant as the period of ownership by the bank could be reduced to a symbolic second. Theoretically, the fact that the bank owns the asset and not just provides the loan to the borrower makes it legally accepted in Shariah with the unintended effect that the mark up applied on the transaction would be higher than a standard loan in order accommodate this extra risk.

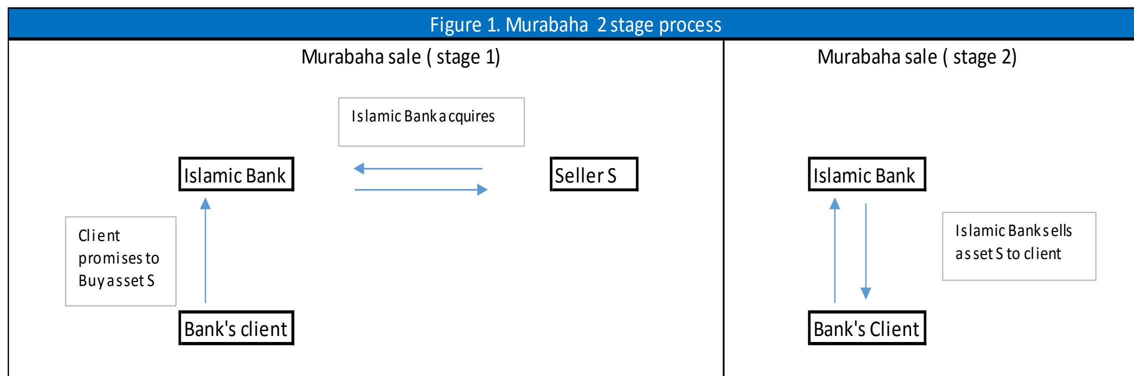


Figure 1. Murabaha 2 stage process

Source: Author

3.3 Non PLS - Ijara (Leasing)

In Islamic banking, leasing is permitted in the same shape as traditional banking. The lessee makes periodical payments to the lessor in order to make use of the asset. The fact that this instrument is identical to what conventional banks offer explain why it has experienced high growth, which is due to its already established infrastructure and standardization.

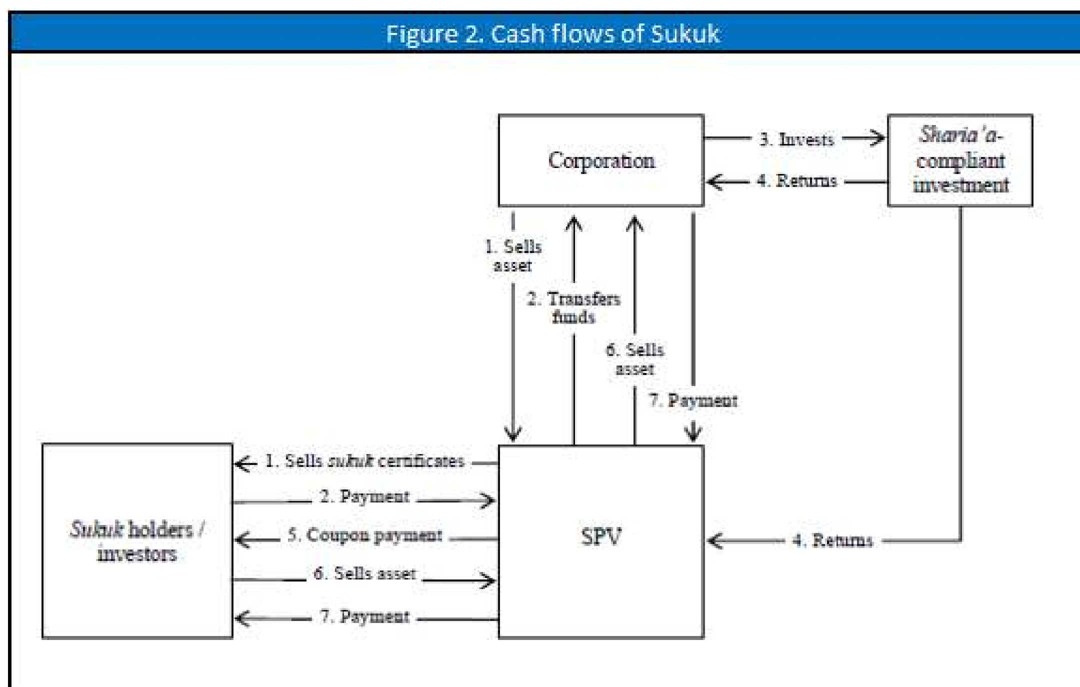
3.4 Investment Certificate: Sukuk

Similar to bond in structure of payments, but with the added ownership of the underlying asset to the investor, the most common and widely traded of these investment certificates is the “Sukuk”. While mostly defined as a PLS type instrument, it also draws on characteristics of Non PLS such as Ijara.

Sukuk, is the most widely known Islamic finance product, and the one that has pioneered with the most success the Islamic finance activity within securitization. Sukuks are issued mainly to finance public sector investments which require extremely high sums of capital that cannot be handled by a reduced number of financing institution. These Sukuks are generally held to maturity.

To be Shariah compliant, the Sukuk needs to be designed in a way that ensures that there is an underlying asset which is owned by the investors, the principal must not be guaranteed and the return for investors is connected with the performance of the underlying asset. It takes to its structure the profit-loss sharing that is considered vital in Shariah. Once issued, Sukuks can be traded on secondary market, but so far most of the initial backers hold the securities to maturity (holding to the Shariah principles).

Figure 2. Cash flows of Sukuk



Source: (Schoon, 2008)

In practice the lifetime of a Sukuk would be processed as by figure 2. The Special purposes vehicle (SPV) is an entity formed in order to be able to gather the necessary funds. This is done because the investments themselves are in a magnitude that cannot be handled by a single entity and therefore the SPV is formed by a pool of Islamic banks and government entities. This SPV will in itself be acquiring the underlying asset and holding it in trust. It acts as a barrier (bankrupt remote) between the investors and the corporation/government.

An important and often overlooked factor, is how are these 'coupon' payments that the SPV performs to the investors determined? As per Shariah principle it should be a share of the returns, but how are these measured in government investments in public services? An example of such an unclear case was in 2003 when the government of Qatar to finance the construction of Hamad Medical city issued Sukuk for that purpose. The returns that the government had to pay in regular intervals was Based on the LIBOR plus a mark-up. While it could be argued that it is not an interest rate that is charged but a rent, the fact remains that the valuation model to derive the rent was based on a prohibition of Shariah (Iqbal & Molyneux, 2005).

Despite this lack of clarify on the compliance, Sukuks have seen extraordinary growth (IMF, 2015):

- Estimated growth of 18 % between 2009 and 2013

- As of 2006 the Sukuk market reached 26 billion dollars and peaked in 2013 at 131 billion dollars;

- First Euro denominated Sukuk issued in fall 2015;

- Sukuk being issued by non-Muslim countries like UK, Hong Kong, SA and Luxembourg showing that there is clear interest by non-Muslim investors (both for profitability prospects and diversifying ones);

- Sukuks are traded OTC, not listed (majorly) on stock exchange. Only 3 at the moment are listed in Luxembourg: Luxembourg Sukuk, Pakistani, South African.

Despite the great progress in the Sukuk market, the lack of regulation, lack of liquidity in these instruments due to mainly OTC trading, and the fact that the issuances are only by governments prevent Sukuks to take the next step and have the takeover from private companies in the development of this market segment.

3.4.1 UK issuance of soveregin Sukuk

In 2014, UK became the first country outside of the Islamic world to issue its first sovereign Sukuk. This issuance received very strong demand, with orders totaling around £2.3 billion, and allocations were made to a wide range of investors including sovereign wealth funds, central banks, domestic and international financial institutions. Under this Sukuk, the underlying assets were defined as (Treasury, 2014):

"*The Premises to be leased by the Trustee pursuant to the Head Lease on the Issue Date will consist of certain plots of land and buildings used for governmental purposes*."

The assets are acquired with the funds raised by the Sukuk issuance, following that, the Sukuk subscribers are entitled to a profit rate that is also defined as 2.036 percent per annum. The profit rate was set up at a rate similar to the bonds issued by the British Government and essentially derived the same way.

The documentation of this issuance is in its structure and wording extremely similar to the issuance of regular notes by corporations and governments that are not compliant with Shariah law. This similarity helps investors more easily make the transition to investing in these new products, since the analysis required to go through the documentation is already in use in conventional banking. However, in (Treasury, 2014) there is also a particular section regarding Shariah rules that is quite specific to Islamic finance instruments:

"*Sharia rules*
(…) Bank Shariah Supervisory Committee have confirmed that the Transaction Documents are, in their view, Sharia compliant. However, there can be no assurance that the Transaction Documents or the issue and trading of the Certificates will be deemed to be Sharia compliant by any other Sharia board or Sharia scholars. None of the Trustee, DCLG, HMT or the Joint Lead Managers makes any representation as to the Sharia compliance of the Certificates and potential investors are reminded that, as with any Sharia views, differences in opinion are possible. Potential investors should obtain their own independent Sharia advice as to the compliance of the Transaction Documents and the issue and trading of the Certificates with Sharia principles.

In addition, prospective investors are reminded that the enforcement of any obligations of any of the parties under the Transaction Documents or the Certificates may, if in dispute, be the subject of court proceedings under the laws of England and Wales. In such circumstances, the courts will interpret the respective terms of the Transaction Documents or the Certificates (as the case may be) under English law (by which they are expressed to be governed) in determining the obligation of the parties thereunder.

In essence, the above addresses the fact that Shariah compliance is subjective and that for full compliance confirmation, an outside advisory should be requested by the beneficial owner. It also underlines that Shariah law is only relevant in the issuance of the instrument, and any legal issues are subject to the laws of England and Wales which enforce a separation of religion and state.

The key factor of Shariah approval by scholars and its overall impact on the industry will be reviewed in chapter 7.

Chapter 4: Conventional derivatives

In addition to the conventional products and services offered by banking, derivative products have been developed in order to allow clients to minimize risk in their business ventures. Nowadays derivatives, and exotic versions of the basic concepts, are quite often present in the media and are often described as one of the catalysts for the latest financial crisis.

What is important to note, however, is that while the intended use of these instruments was the reduction of risk (or hedging) the possibility to enhance the risk and proportionately the potential profit is also inbuilt in these products.

The possibility of managing risk with these instruments is an asset that companies worldwide find extremely valuable and that Islamic Banking in order to continue its growth and accommodate the needs of its market must find a way to service. In order to compare and contrast with the products developed (or lack thereof) in Islamic banking, it is important to first list the main ones in conventional banking:

4.1 Forwards/Futures

The most basic structure of derivatives, both these instruments are quite similar in nature, with the differentiating factor being that forwards are Over the counter(OTC) agreements where both parties are in direct contact and Futures are mostly traded via an exchange platform mediating several opposing parties and matching them automatically.

In the first case the price is pre-agreed by both parties while in the latter it is generated through supply and demand. Typically, OTC agreements are for considerably higher and non-standardized amounts, where the freedom to determine specific price is more highly valued. By definition, a forward/future is the agreement to conduct an exchange of an underlying asset at a future date for a pre-determined price. With this contract in place both parties are able to reduce or totally eliminate the possible risk in-between the transaction occurs.

A good example of the application of a Forward/Future contract would be the selling of a future harvest for farmers. With such a contract a farmer that would only have his harvest to sell in September, could arguably make an agreement in January, promising the delivery of said harvest at a pre-defined price (price agreed at start of the contract). In this scenario the farmer locks in the future revenues and removing completely the risk of price changes that occurs from January until September.

4.1.1 Shariah view on Forwards/Futures

The non Shariah compliance of Forwards and futures has a firm basis on the following hadith:

"*Narrated by Hakim ibn Hizam: Hakim asked (the Prophet): Apostle of Allah, a man comes to me and wants me to sell him something which is not in my possession. Should I buy it for him from the market? He replied: Do not sell what you do not possess*"

As most Forwards and futures do not, upon creation of contract, have the exchange of the underlying asset or even in many cases, the asset is not yet in existence, these instruments are not compliant with Shariah.

For Futures specifically, there are additional characteristics that make it non-compliant such as the possibility of speculation and the fact they can be traded in the secondary market and not held to maturity (transaction would be pure cash for cash).

4.2 Options

Options are split into two main types, Calls and Puts. The Call option grants the investor the right to buy the underlying asset at a later date for a pre-defined price. The Put option grants the investor the right to sell the underlying asset at a pre-defined price and future date.

In both scenarios this right to buy or to sell is paid upfront, the premium, but the exercise of that right is solely up to the investors decision as there is no obligation to do so. Options are both traded OTC and on exchanges, with OTC having gained fast popularity of the years (Hull, 2002) and now exceeds the volumes in exchange.

While futures and forwards are more commonly used to mitigate both sides of the risk, both positive and negative variations, options by having the upfront fee allow the investor to negate the negative risk while still being able to benefit from the positive ones, minus the premium paid.

4.2.1 Shariah view on Options

All the aspects of Forwards and Futures that are used to consider them non compliant with Shariah are applicable for options as well. In addition to those, Options (more exotic versions) have a considerabe probability of having Gharar due to their complexity. The charging of premium to obtain a right to acquire or sell an underlying asset is not permissible under Shariah. In essence, the initial contract is purely a charge for a right and has no connection to the asset.

The length of the period provided by the acquisition of the option is heavily contested by scholars (Abumustafa & Al-Abduljader, 2011) as it provides more benefits to the option holder than to the seller. This is especially evident when the pricing of the right is not taken into account as it is not permissible in Shariah. The argument to contest compliance is that there is clear imbalance in contract conditions towards the buyer of the option.

4.3 Swap

This last instrument is more complex in its nature and to better understand the Islamic counterpart only two types of swaps will be described: interest rate swaps and fixed for fixed currency swaps.

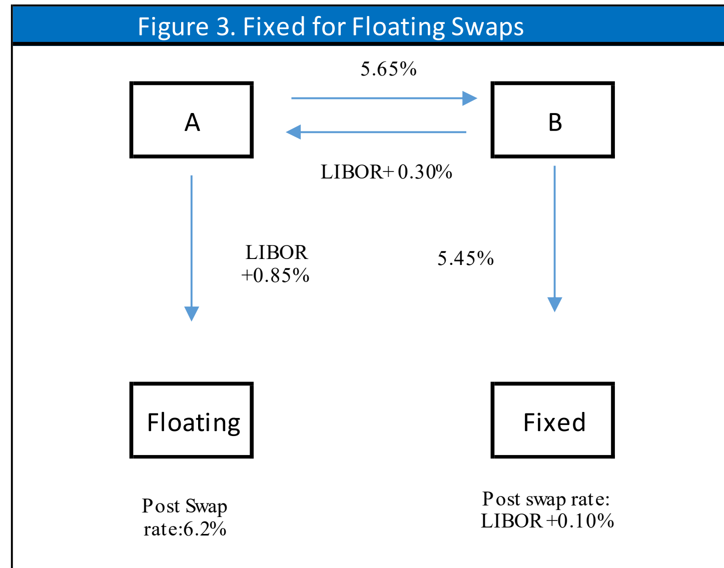
4.3.1 Interest rate swap

In interest rate swaps, there is the possibility of two entities exchanging loan conditions between themselves to suit their present needs.

In Figure 3, a simple version of a swap contract where party A has contracted a floating rate loan but wants to pay a fixed rate and B has contracted a fixed loan but wants to pay floating loan. By entering into this swap agreement, both parties can change their liabilities into the

structure of their preference. In certain scenarios, when each party has a competitive advantage in one form of payment, the swap agreement can net out a better rate for both parties than what they could have achieved on their own. The same process can be applied for inflows instead of liabilities.

Figure 3. Fixed for Floating Swaps



Source: Author

4.3.2 Fixed for fixed currency swaps

In currency swaps, according to (Hull, 2002) it involves the exchange of principal and interest payments in one currency in one currency for the same package in another currency. The principals should be approximately the same in value by using the exchange rate at initiation of contract. When the interests are both with a fixed rate, this is known as the fixed to fixed currency swap.

A company by entering into a swap agreement can change the nature of an asset or liability from one currency to another or from a fixed to a floating rate. Where there is no comparative advantage on each parties (in which case, both stand to gain by entering the swap agreement) the hedging element is still there (i.e., to reduce the inherent risks of a currency or the volatility of a floating rate) but the speculative aspect of it becomes quite apparent, as depending on future assumptions of a party, for example the prospect of a strengthening currency one could enter a swap agreement for gains at the expense of the other element in the contract.

While the above examples are the vanilla type of these instruments, over the years with increased standardization and development of this instruments, there has been also an increase

of new and more exotic versions of derivatives. These are developed for OTC trades, where they can be created to suit a specific parties' interest.

4.3.3 Shariah view on Swaps

In regards to Swaps, under conventional banking there are no real assets connected to the transaction and therefore are in direct violation of one of the main prohibitions outlined in chapter 1. On most Swap contracts the flows transacted are also fully prohibited by Shariah such as swaps on interest rates (Riba) or the swap of cash flows in businesses that are not considered Halal.

Chapter 5: Hedging vs speculation

Before discussing the products developed in Islamic Banking to service the risk management need in businesses, it is important to make the distinction between Hedging and speculation to understand why Islamic Banking needs to innovate to develop instruments that enable hedging and also why such instruments could also have a damaging effect according to Shariah.

5.1 Hedging

The initial purpose of derivatives is primarily for reducing risk in a business activity, this is known as hedging. By bringing together two parties with opposing exposures to risk, both are able to minimize the risk and uncertainty in their future prospects. In theory this should align with Shariah requirements since it brings benefits to both parties entering the agreement. The use of either Forwards, Futures, Options or Swaps depends on the method the company would prefer to minimize the risk and the intended outcome.

5.1.1 Hedging using Forwards/Futures

If Forwards or Futures are used for Hedging, the intent would be to lock in a certain price to be paid or received in the future, reducing or eliminating completely the time risk associated with the transaction. Table 4 exemplified that with a simple commodity forward:

Table.4 Hedging with the usage of Forward

Price at T0	100		
Forward contract	Deliver of 100 tons at T-1 at a price of 110		

	T-1		
	Higher price	Lower price	Forward price
Potato price (per ton)	135	70	110
Farmer	Profit	Loss	= estimated
Distributor	Loss	Profit	= estimated

Source: Author

By entering into commodity forward, both the potato farmer and potato distributor are able to hedge out their business risk in regards with price volatility. The farmer initiated into the contract to guard against the possible unforeseen drops in the commodity price, and the distributer the opposite. While on T+1 once the future price is reached, there could in hindsight exist a loss for entering the contract for one of the parties, the key point is that at T both are able to remove this uncertainty from their business calculations and investments.

5.1.2 Hedging using Options

If an Option contract is used for Hedging, it is the equivalent of taking an insurance against a certain outcome. As illustrated in the table below, if an investor of a company is fearing that new industry regulations might negatively affect the value of the shares held, it is possible to enter into a Put option contract in which the investor gains the right to sell the securities at a predefined price in the future:

Table 5. Hedging using Options

		value (t-0)	value (t -1)
No Hedging	Number of shares	5000	5000
	Price (per share)	100	30
	Value	500,000.00	150,000.00
	Value evolution	-	350,000.00

Options contract	
Option	50 puts contracts
Strike price(at t-0)	75
Premium	2
Cost of hedging	10,000.00

		value (t-0)	value (t -1)
Hedging	Number of shares	5000	5000
	Price (per share)	100	30
	Options (exercised in t-1)	50	50
	Value	490,000.00	375,000.00
	Value evolution	-	115,000.00

Source: Author

To note that in the hedging scenario in table 5 there is still a loss, because the strike price of the put does not allow for a full hedge of a decrease in price. In this scenario the investor ensures that the value of their investment will not decrease below 75 per share, only unable to hedge 23% of its value (25% not hedged minus the cost of hedging).

Hedging through derivatives, as stated in (Ismath Bacha, 2013), has the same consequences as hedging through risk sharing activities Mudarabah and Musharakah:

"*If the entrepreneur's risk reduces in RSF because a partner shares the risk, the same can be said to occur in hedging. Risk reduces in hedging because a counter party agrees to take on the risk. Viewed in this light, hedging using derivatives are simply another form of risk sharing, consonant with the requirements of the shariah.*"

Where the use of derivatives for hedging and the PLS available in Islamic Finance differ, is in the duration and costs associated with such hedging. Mudarabah and Musharakah do not need to be acquired like an option, and derivatives are usually for a much shorter term than a PLS partnership for an entrepreneurship between the bank and the other participants.

5.2 Speculation

When analyzing derivatives under a speculation lens, the underlying asset is, to a certain extent irrelevant to the investor, as the physical delivery of such asset never occurs, and transactions are purely cash settlements. The mindset of the speculator is to bet on the rise or fall of the price of the underlying asset according to their own assumptions and acquire the corresponding instrument that will allow such 'bet' to occur.

Another critical part of derivatives that makes the act of speculation through them so attractive is the in-built leverage in these instruments:

<table>
<tr><th colspan="6">Table 6. Speculation through Options</th></tr>
<tr><td rowspan="8">T</td><td colspan="2">Call Option</td><td rowspan="8">T-1</td><td colspan="2">Call Option</td></tr>
<tr><td>Premium Price (EUR)</td><td>4</td><td>Price (EUR)</td><td>90</td></tr>
<tr><td>Investment (EUR)</td><td>10,000</td><td>Strike price (EUR)</td><td>55</td></tr>
<tr><td>Number of options</td><td>2500</td><td>Profit per call (EUR)</td><td>35</td></tr>
<tr><td colspan="2">Direct investment</td><td>Profit (EUR)</td><td>77,500</td></tr>
<tr><td>Price (EUR)</td><td>50</td><td colspan="2">Direct investment</td></tr>
<tr><td>Investment (EUR)</td><td>10,000</td><td>Price (EUR)</td><td>90</td></tr>
<tr><td>Number of shares</td><td>200</td><td>Profit (EUR)</td><td>8000</td></tr>
</table>

Source: Author

As seen in the above table. 6, with the same initial investment of 10,000, If an investor decides to buy 200 shares at T and waits for increase in price, at T-1 they would realize a profit of 8,000. By choosing to invest in Call options of the same security, with the same initial investment, the investor would be able to have a stake on the variation in price of 2,500 shares. The profit taken at T-1 is significantly higher at 77,500. To achieve that same level of profit through direct investment, the initial capital required would be 125,000.

In Futures the mechanic is similar, where instead of a premium that is charged to acquire an option, the brokers through which investment in Futures is made require the opening of a margin account.

5.2.1 Short-selling

In the above speculation scenario the bet of the investor is on a price rise of the asset, but specualtion could also be applied on a bet on the decrease in price. This is defined as Short-Selling, where the investor can do the above but through a put option without the need to acquire any of the underlying securities.

Another variation of short selling is by borrowing the necessary shares to 'short' and sell them. When closing out the position, the investor will buy at the spot price and deliver the security back to the lender realizing a profit.

This practice is often considered morally wrong and when done in high volumes also considered illegal as it artificially creates a decrease in the price of the underlying asset. Despite it's potential use for hedging, the sale of something that is not possessed by the seller is not in line with Shariah.

5.3 Complementarity

While Hedging and speculation seem complete opposites and incompatible, with hedging aiming to reduce risk and not focus on profit in its transactions, and speculation aiming instead to expose the investor to higher risks and equally higher potential profits, the fact could be argued that speculators complement hedgers (Mohamad & Tabatabaei, 2008):

- Speculators trade quite frequently allowing the creation of counterparties willing to take on the risk of hedgers;

- Speculators increase liquidity and due to higher volume of trades, reduce transaction costs in these markets, making hedging more accessible.

Despite the above benefits and apparent need of the existence of speculators to enable hedging, when merely focusing on the principles of speculating through derivatives, it is clear what makes Shariah scholars completely against these instruments, as these instruments possibly incur on the prohibitions of Riba, Gharar, Maysir, possible relation with non Halal industries and the lack of any real asset in the transactions.

Chapter 6: Derivatives in Islamic Finance

When Shariah scholars analyze the compliance of derivatives within Shariah law, they do not object to the promise to buy or sell an asset in the future (in the case of forwards) but the trading of that promise and charging for it, through an option or future, which is not permitted as it is not an asset in itself (Mohamad & Tabatabaei, 2008).

The presence of Gharar on more complex contracts is also one of the main worries by Shariah scholars since there is an asymmetry of information and understanding of the transaction between the parties, there is a high probability of accumulation of wealth by one party at the expense of another.

The potential use of derivatives for speculation draw a direct link with the Maysar prohibition which forbids gambling, even if the intent of such instruments is for the opposite effect. The development of these instruments to keep up with demand in risk management in Islamic Banking has been slow and controversial, as Shariah scholars do not agree with which instruments would be permissible even among conventional ones. Despite that, there has been some progress made, and alternatives to derivatives have been timidly created:

6.1 Bai Salam

An agreement to sell/buy an underlying asset at an agreed future date (usually 1 to 3 months) but the payment is settled at beginning of the period. This is most similar to a traditional forwards contract and historically has been used for the trading of agricultural products. The differing characteristic with a forward is the mandatory pre-payment, which comes from the need of farmers and small businesses to guarantee liquidity. It is this pre-payment condition that makes it Shariah compliant, as derived from the Sunna, where the Prophet Muhammad observed trades conducted for goods to be delivered at a later date (Translation of Sahid Bukhari, Book 35, n.d.):

"Allah's Apostle came to Medina and the people used to pay in advance the price of fruits to be delivered within one or two years. (The sub-narrator is in doubt whether it was one to two years or two to three years.) The Prophet said, "Whoever pays money in

advance for dates (to be delivered later) should pay it for known specified weight and measure (of the dates)."

To compensate this pre-payment, the price is lower than the spot price.

An additional difference to the use of this kind of derivative in Islamic finance is that the settling of the contract without delivery, due to fluctuations of spot price in the future there could be a potential unrealized profit or loss (depending on the impacted party), is not permitted as the contract would become a pure trade of money for money (no underlying asset present in the transaction and so a direct violation of Shariah).

While Bai Salam does indeed lock in a future value that is subject to fluctuations, to the buyer that has to settle the cash part immediately, the benefits for hedging are more limited than a regular forward, as it reduces liquidity of the party without a corresponding compensation at the exact same time period.

In order to address very high price fluctuations that could wipe out the benefit of early payment with a discount, future markets emerged, which allowed the trading of the contracts when an initially agreed transaction was without benefit. As futures do not align with Shariah law, since they involve transaction of promises and have in built leverage (margin account), an altered version of Bai- Salam was developed.

6.2 Value based Salam

In contrast with Bai Salam, a value based Salam contract agrees on the value to be delivered at the future. In this way, the quantity delivery at the end of the contract will vary to match the price/value fluctuations.

However, while the change to lock in the value instead of the price reduces the potential loss to the party conducting the down payment, the real result is merely a shift of that potential to the party that is delivering the asset at maturity of the transaction. If the value of the asset reduces considerably it could be that supplier is unable to deliver enough quantity of the underlying asset or do so at a considerable loss to the business.

6.3 Bai Al-Urbun

This instrument closely resembles an option from traditional banking. It is contentious among

Shariah scholars and not widely accepted. In a Bai al-urbun contract a down payment is made, similar to the premium in a typical option, which on exercise date is deducted from the full payment. If there is no exercise of the 'option' then the down payment is considered as a gift to the seller.

It is in this aspect that the contention between scholars occurs. As the deposit is only considered a gift if the full transaction does not go through, it is then conditional upon the status of that sale and violates the shariah principle of gift. Others consider Bai Al-Urbun valid as per the Hadith (Hisham & Jaffar, 2014):

"Based on the hadith, they cite a story from the time of the Caliph Umar where he purchased from Safwan bin Umayya a prison house for 4000 dirhams on the condition that if the Caliph approved of it, the deal would be final, otherwise Safwan would be given 400 dirhams that describes a transaction with the principles of this Islamic derivative occurs"

Other scholars, use the lack period of exercising this 'option' as reason to not consider it compliant with Shariah.

6.4 Al-Khiyar

A more accepted version of options where in contrast to bai al-urbun there is a period where both parties can cancel the contract. The principle of Al-Khiyar is that more than the obligations and rights of each party established in the contract, it is the reasonable expectation that both parties can fulfill them and the fairness of the transaction itself that has the higer prevalence. This reduces the aspect of Gharar that could be present in the instrument and therefore make it more acceptable by Shariah scholars.

In contrast to options, where the possibility to not exercise the right is available throught the entire period, in Al-Khiyar this is for a much smaller timeframe, termed 'reflection period' as defined in the following Hadith of the prophet:

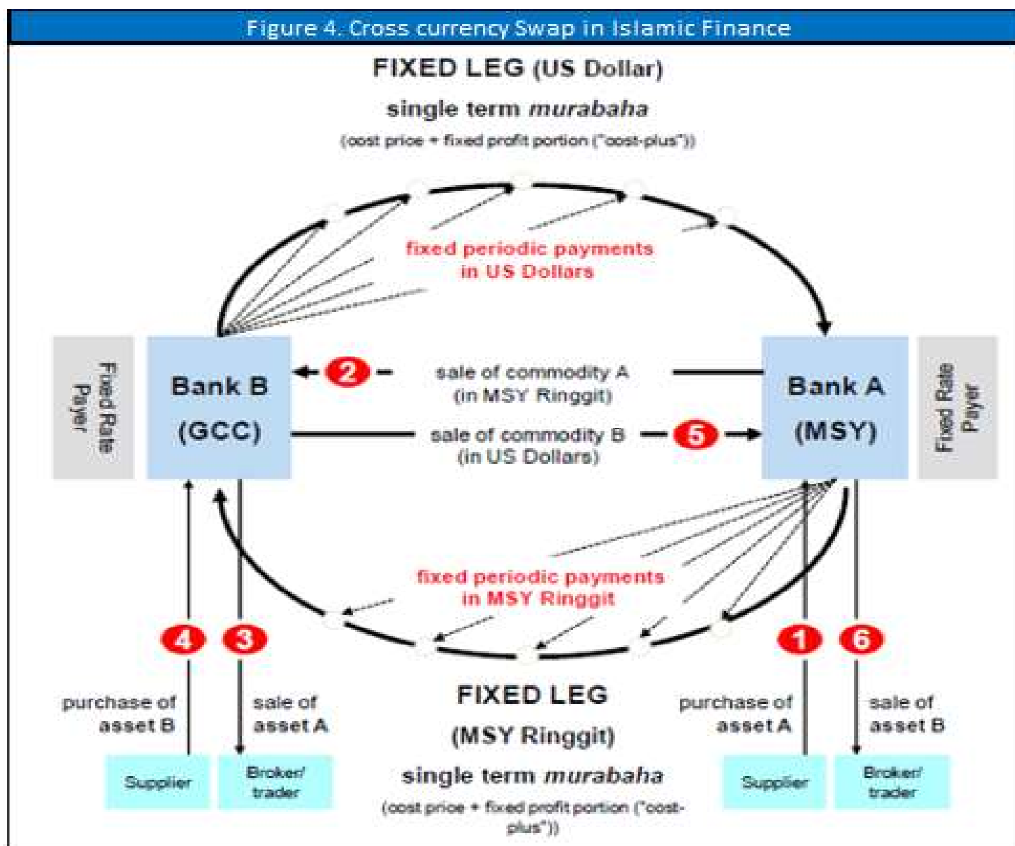
"*When Habban Ibn Munqidh complained to the holy prophet that he was the victim of frequent fraud, the holy prophet is reported to have said: 'When you conclude a sale you may say that there must be no fraud and you reserve for yourself an option lasting three days.*"

There are several variations of Al-Khiyar and on most of them due to the length of reflection

period and high subjectivity of the basis for avoidance of gharar, Scholars disagree in the compliance of that instrument.

6.5 Cross currency swap

The cross currency swap in Islamic banking is done purely OTC and was first developed by Standard Chartered for Bank Muamalat Malaysia in 2006.



Source: (Jobst & Sole, Operative principles of Islamic Derivatives - Towards a Coherent Theory, 2012)

The critical difference with conventional swaps is that the Islamic swaps has the added component of a complementary commodity trade that is bought and sold via murabaha contracts by both parties.

By acquiring the underlying asset, each party would then sell it to it's counterparty in different currencies, in effect exchanging the cash flows to a separate currency. The end result is the same as a vanilla cross currency Swap as illustrated in figure 4.

The commodity trade aspect of this transaction seems to only serve the purpose of complying to the letter of Shariah law as both Banks sell the commodity they acquire through the Cross Currency Swap. Standardization in such a complex instrument seems highly unlikely in the current stage of market development.

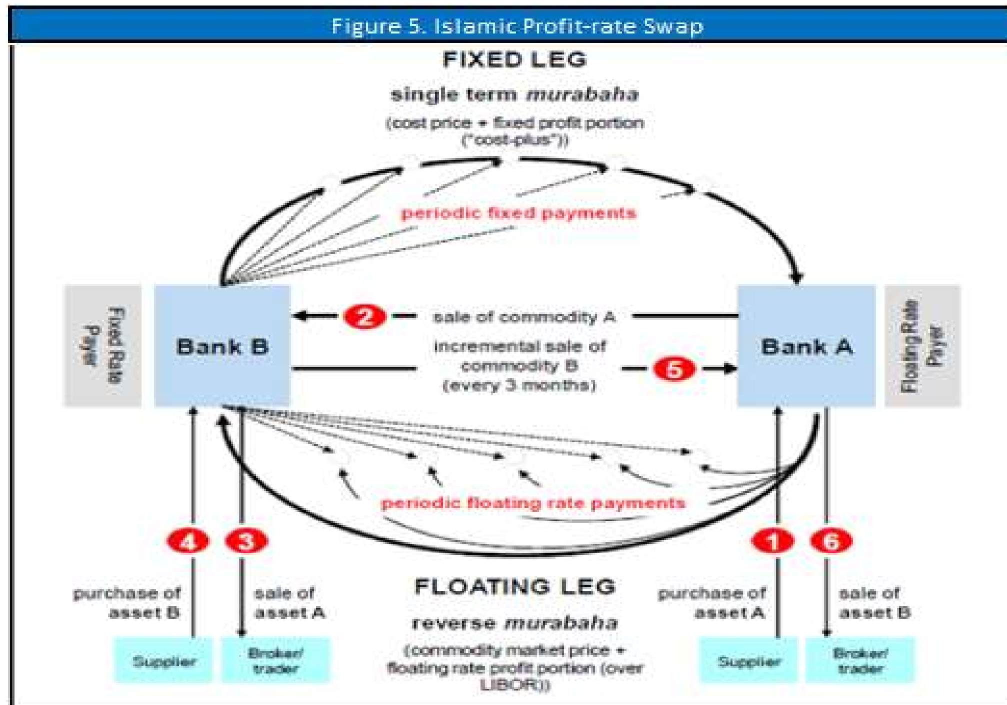
6.6 Islamic Profit rate Swap (IPRS)

As Islamic banks move to attempt to attract clients of conventional banking on the basis of value, there are added risks in sharing the same market. An example is that when interest rates rise, banks reflect this by increasing the remuneration on deposits as well as the rate at which loans are offered (if not fixed rates). In such situations the attractiveness of depositing in conventional banks increase in when comparing with Islamic banks that do not have floating rates, profit sharing rates and Murabaha have fixed percentages at contract creation.

In order to prevent outflow of funds to conventional banking, a Islamic banks would be forced to increase the remuneration on deposits but would not be able to affect the investing side accordingly. To manage this potential risk, Islamic profit rate swap was developed.

This instrument which is traded OTC was pioneered by Commerce International Merchant Bank in 2005.

Figure 5 illustrates how the profit rate swap, that is the equivalent of the interest rate swap instrument, works in Islamic banking.



Source: (Jobst & Sole, Operative principles of Islamic Derivatives - Towards a Coherent Theory, 2012)

In this IPRS, Bank A will conduct a Murabaha sale of the commodity for agreed fixed payments for the entire contract period. Bank B, as there is no availability of floating rate in Islamic banking, conducts periodic murabaha contracts, where the cost plus portion of the payment is determined through an available floating interest rate benchmark such as Libor.

(DeLorenzo, 2007) states that though Shariah does not approve of deriving returns from non permissible assets or activities, the derivation of benchmarks for the cost plus is permissible and that using Libor is not the same as applying interest. In this assession I disagree, as the mark up applied on the murabaha should be conditional on the transaction itself and the rate a by product of the risk sharing premise, where the use of the Libor arbitrarly implies a disconnection of the rate with the transaction.

The end result is the same as a conventional swap where both parties exchange fixed cash flows for floating flows (or vice versa) with the underlying commodity being traded to enable compliance.

Chapter 7: Instrument Approval and standardization

Progress has been made in addressing the gap in Islamic services regarding risk management and attempting to develop products to cover this gap. However, the above instruments have not seen significant growth due to the lack of standardization and acceptance between countries and even between banks in the same country.

The entities that control the approval of such instruments are Shariah Scholars. These individuals have expertise in Shariah law, commercial law and finance (Y-Sing, 2014). This unlikely combination translates into a scarce pool of individuals that can provide such services. As per (Torchia, 2012) there were in 2012, 400 Shariah scholars worldwide. In an Islamic Bank, the main official position a Shariah Scholar would occupy would be in the supervisory board.

7.1 Shariah Supervisory board

The decision on the compliance or noncompliance of instruments and services provided by Islamic banks is ultimately determined by Shariah Boards which is comprised of Shariah scholars. Its structure follows the below example:

Figure 6. Shariah Board within corporate structure

Source: (Nogueira, 2011)

These boards serve a dual purpose of both being regulatory supervisors, but also the role of religious supervision of the activity of the bank. They ensure that strategic decisions and the overall activity of the bank is compliant with maqasid al'sharia.

7.2 Shariah Scholars

The controversial and subjective aspects of the instruments detailed in chapter 6, is one reason that make their approval across scholars very far from unanimous. The lack of common standards for approval leads to a lack of standardization in the issue of these instruments, and consequentially transaction costs remain high and these risk management instruments have low accessibility towards participants in this market, basically neutralizing the possibility of continuing growth of these segments (IMF, 2015).

To better comprehend this lack of common understanding on what is compliant and what is not one should know that Shariah law, while supposed to evolve with society, still has its core foundation in the Quran and way of life of the prophet that occurred centuries and centuries ago where the complexities of modern society and finance were not considered or even envisioned. This incompatibility of times and subjectivity of the source material makes the conciliatory effort done by Shariah scholars much more difficult and at the same time unlikely to be unanimous.

In order for a product such as the examples of Islamic derivatives to be available to investors of a bank, a pre-approval of the Shariah compliance of such instrument must be certified by Shariah scholars. Presently, Shariah Scholars have a series of overlapping roles in an Islamic Bank, partly because Shariah itself is supposed to regulate all aspects of life, and partly because the availability of professionals that are both experts in Shariah and finance is quite limited.

An example of the roles taken by Scholars in this field are: Product developers; Auditing; legal adviser; Shariah advisor. This overlapping of roles leads to possible conflict of interests as a scholar that approves of an instrument for a bank could simultaneous sit on the board of the same bank and on the boards of industry 's standard-setting bodies such as AAOIFI (Accounting and Auditing organization for Islamic financial institutions).

The issue of a Scholar approving of an instrument of its own bank is a similar conflict as of the credit rating agencies being paid to rate instruments issued by their clients. When asked about such conflict of being paid for, prominent Shariah scholar Sheikh Hussein Hamed Hassan stated (Torchia, 2012):

"*What's wrong with getting paid for issuing a fatwa or reviewing the sharia compliancy of a financial instrument?" Sheikh Hussein said. "We're just like auditors, lawyers. Each one of us has years and years of experience in sharia law. We do our job and get paid for it. Nobody is allowed to question our honor, integrity and truthfulness."*

The last point is quite worrying, as it hinges on a complex part of religion, which is its indisputable acceptance as divine law. If such characteristics are attributed to the scholars, the unquestionability of their decisions and interpretations, it becomes a worrying factor for the industry, specially compiled with the subjectivity and lack of cross country institution that that define criteria for acceptance of these instruments and has actual enforcement power where there are discrepancies of interpretation.

The lack of such unifying body originates from the fact that depending the country, the Shariah Boards of institutions there are composed by scholars of the religious schools in the respective countries and as such, depending on the religious majority within the population, the interpretation of the Quran can differ greatly. The impact in terms of business is not only, the inexistence of clear guidelines across institutions, but mainly that standardization of instruments becomes quite the obstacle.

In (report, 2014) Islamic Financial services board (IFSB) acknowledge that this standardization and alignment on industry level is essential for Islamic banking to progress though no real guideline is provided in the report on how this should be achieved. This lack of clear action plan for such a crucial step is not unexpected when putting into perspective what it is expected of each country/institution, which is basically an agreement on differences that have span since the creation of Islam.

In order to reach standardization of products across markets and possibly attracting more investment, an agreement has to be reached between scholars at national level and ultimately at an industry level on clear interpretations of Shariah on each type of service. The true scale of such endeavor is only clear when such agreements do not only depend on negotiations and compromises between countries with vast cultural differences but also on interpretations of religious doctrine that also vary extremely between countries, religious schools and individual scholars.

Chapter 8: Conventional banking vs Islamic banking

Though not a core part of this thesis, a direct comparison in terms of performance between Islamic Banking and conventional banking is of interest.

With previous chapters, it is clear that Islamic Banking has growth potential as well as several hurdles that it still has to go through before it competes on the same level as conventional banking in terms of business complementing tools and investment possibilities available to their clients. The question then presented is: With the lack of a mature derivatives offering, how efficient and competitive is Islamic banking when compared to Conventional banking?

In several studies that analyzed and compared the efficiency, both in terms of ratios and managerial oversight, there seems to be so far no concrete evidence that points positive in either way. When purely looking at the business model of each, and also taking into account the theoretical risk averseness of Islamic banking, it would be expected that while the returns could be more moderate, the stability of the earnings would be less rocked by the financial crisis that occur in cycles.

(Beck, Demirguc-Kunt, & Merrouche, 2013), is an example of such study where there does not seem to exist conclusive evidence in either way.

One justification for the lack of differentiation in resulting data, could be that the Islamic banking industry has not yet matured enough or fully realized its potential to show a concrete discrepancy. However as (Mansour, Jedidia, & Majdoub, 2015) states, the instruments developed by Islamic banks (and considered Shariah compliant) are created to mimic traditional banking instruments instead of following the substance of Shariah law.

When analyzing how in reality these instruments /services are designed, the clear similarities found are in line with the existence of no clear difference in performance between Islamic Banking and conventional Banking. The differentiation factor could mainly be management of the operations side of these institutions.

Conclusion

There are several aspects that have to be weighted in before we can discern the clear points on the future of derivatives in Islamic banking:

As it stands, Islamic banking is mimicking traditional banking, while tapping into a high growth segment of consumers that so far could not make use of a mature financial system due to their own religion's restraints. While Islamic banking has not suffered as much from the previous crisis, there is no evidence that the Islamic banking is either more risk averse or more efficient in practice than conventional banking.

It is possible to deduce that it has not been as much impacted due to less complex instruments and just plain reduced scale due to a not so developed industry. With the progress of these two (scale and complexity), which is inevitable in case it wants to compete directly with major banks, there will come into full prominence the added complication of Shariah boards that on each institution/country will follow different schools of Islam and have completely different interpretations of Shariah.

For derivatives common standards and a unified approach to approval of instruments is especially important as they represent the group of products where scholars are more divisive on its permissibility. Only with a clear solution on the problem of standardization can real development of a Shariah compliant alternative really commence.

From the analysis of literature and products developed by Islamic banks to match the use of derivatives, Sukuks (the flagship in terms of advertising this industry), 'Islamic derivatives' and the Non PLS products are all indirectly connected with the same valuation method as conventional banks. If such convergence continues to occur, the only differentiation left is the addition of a supervisory Shariah board and the added partiality, through Shariah scholars that determine eligible activities/products, in a world financial system that used to be devoid of it.

It is important to state that the principles of Shariah if followed in its principle could lead to a more accountable and responsible banking system, but as it stands in its development and the latest reports on its evolution (report, 2014), it does not seem to be heading in that direction.

It is clear, by viewing the cyclical nature of crisis we have experienced in the last decades that a certain level of structural change and approach to financial services need to happen. Islamic

Banking could be that change, as long as it returns to its true intentions and principles. The idea that the activities that a bank engages on are on a Profit-Loss sharing basis and that depositors, entrepreneurs and the banks must actively hold each other accountable is an improvement to the current system. In my opinion the prohibitions of Gharar and Maysir are especially important as they reflect on introducing ethical thinking behind the activities done in this market, more so than Riba (the defining characteristic from Islamic banking).

As most things that could have a positive impact in society, it depends on how the stakeholders associated apply it in reality. Either the spirt and objectives of Shariah are held to its fullest, or Islamic Banking remains a mere shadow of what it could be and at worst a puppet of religious agenda.

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