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“Islamic investment funds versus hedge funds”

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Abstract

The literature discusses Islamic investment funds and hedge funds as isolated issues. At present not much work is known, comparing these two very prominent alternative investment forms. This thesis attempts to fill this gap by providing a first insight into both and also tries to answer the following question: Can Islamic investment funds catch up with hedge funds? For this, the thesis compares Islamic investment funds and hedge funds on the basis of different factors, trying to answer three sub questions:

- What are the advantages and disadvantages of each?
- Are there differences and/or similarities between the two?
- How can an investment portfolio including both be balanced?

As will be seen throughout the thesis, Islamic investment funds provide a handfull of advantages over hedge funds, even enabling the former to outperform the latter.

Hedge funds rely mainly on gaining advantage through market inefficiencies, hedging the market risk through short-term opportunities. This construction puts the fund manager into a high risk position with high profit potential. Despite investment restrictions under Islamic law, a fund manager is not prohibited from facilitating hedge funds by these restrictions. The main difference is that Islamic investments offer more risk control by cooperative arrangements. This characteristic enables an investor to cover the risk of hedge funds by investing in Islamic investment funds. Nevertheless, such differences raise the issue of whether it is sensible to invest solely in Islamic investment funds or hedge funds.

Zusammenfassung

In der Literatur werden islamische Investmentfonds und Hedge-Fonds stets als getrennte Spezialgebiete behandelt. Es gibt nur sehr wenige wissenschaftliche Arbeiten, die diese beiden alternativen Investmentmöglichkeiten vergleichen. Die vorliegende Diplomarbeit ist ein Versuch, diese Lücke zu schließen und erste Erkenntnisse zu liefern.

Die Arbeit versucht eine Antwort auf die folgende Frage zu finden: Können islamische Investmentfonds mit Hedge-Fonds überhaupt mithalten? Um diese Frage zu beantworten, werden in der Diplomarbeit beide Investitionsmöglichkeiten anhand von drei Fragestellungen verglichen:

- Was sind die Vor- und Nachteile der beiden Investitionsmöglichkeiten?
- In welchen Punkten unterscheiden bzw. ähneln sich die beiden?
- Wie kann ein Investitionsportfolio durch den Einsatz beider Investmentmöglichkeiten sinnvoll ausbalanciert werden?

Wie diese Diplomarbeit zeigen wird, haben islamische Investmentfonds mehrere Vorteile gegenüber Hedge-Fonds, die es ihnen sogar erlauben, profitablere Ergebnisse zu liefern. Hedge-Fonds versuchen hauptsächlich, Marktineffizienzen auszunutzen und das Risiko durch kurzfristige Investmenttechniken zu reduzieren. Doch gerade diese Kurzfristigkeit birgt ein gewisses Risiko in sich und der Fondmanager findet sich oft in einer Situation wieder, die durch hohe Profite aber auch hohes Risiko gekennzeichnet ist.

Obwohl die Scharia – das religiös legitimierte Gesetz des Islams – bestimmte Investmenttechniken verbietet, kann der Manager eines islamischen Investmentfonds einige Hedge-Fond Techniken einsetzen. Der Hauptunterschied ist jedoch, dass islamische Investmentfonds eine stärkere Kontrolle über das Risiko bieten. Diese Stabilität wird durch den kooperativen Charakter der Vereinbarungen ermöglicht, die bei den unterschiedlichen islamischen Investitionen zwischen den Parteien abgeschlossen werden. Dieser Umstand ermöglicht es einem Fondmanager, das Risiko, das durch kurzfristige Investmenttechniken der Hedge-Fonds entsteht, durch das Investieren in islamische Investmentfonds zu vermindern. Die vorliegende Arbeit zeigt, dass sich Hedge-Fonds und islamische Investmentfonds in einem Investmentportfolio sinnvoll ergänzen.

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1 Introduction

1.1 Background

Alternative investments represent an "alternative" to traditional investments like mutual funds. However, there is no single definition. A popular Alternative investment is the so called hedge fund.

Hedge funds gained popularity in the 1960s when Alfred Winslow Jones generated a significantly higher profit by using hedge funds than he would have made using traditional investment funds. He tried to optimize the return of his traditional portfolio by selling short and borrowing debt capital. As a result of the short sales, he also benefited from declining share prices and became independent from the general market development. Through the investment in borrowing debt capital, he achieved a leverage effect, as he could apply much more capital than he had equity. In 1986, the value of a Hedge fund increased by 750% in only six years. Most of today's hedge funds are built on the agreement of a "limited partnership with lucrative incentive-fee structure".[1]

However, there also has been some turbulence on the hedge funds' flight to the top. One famous example is the Long Term Capital Management (LTCM) hedge fund, founded in 1994. It began trading with an investors' capital of $ 1.3 billion, being initially very successful with annualized returns of over 40% in its first years. Although this looks to be a very successful story, the dream ended in late summer of 1998. Due to various reasons, LTCM's equity fell from $ 4.72 billion at the beginning of 1998 to $ 600 million in September without shrinking the portfolio, which also led to a significant elevation of the already high leverage. Total losses were found to be $ 4.6 billion. This was a disaster for both managers and investors.

Nevertheless, the market recovered and hedge funds continued to be successful. Up until the end of 2007, assets under management worth around $1.5 trillion, spread over more than 10,000 funds (investments including pension funds and university endowments).[2] Recent studies suggest a further increase in volume and number of hedge funds: By 2010, it is predicted that the number of funds will be at the same level (10,000 funds) but the invested capital will be about $ 3 trillion, twice the amount of today's capital.[3]

[1] Koh/Koh/Lee/Phoon (2004), p.4

[2] Shadab (2007), p.36

[3] Shadab (2007), p.38

Islamic investment funds are a special type of alternative investment funds, which may become more popular than hedge funds in the next years. They can be described as "a joint pool wherein the investors contribute their surplus money for the purpose of its investment to earn permitted profits in strict conformity with the precepts of Islamic Shariah"[4]. The history of Islamic finance goes back to the time of the Prophet Muhammad. However, Islamic investment funds started at almost the same time as hedge funds.

The first Islamic financial institutions were established in the 1960s in Egypt and Malaysia. However, it was not until the oil boom in the 1970s that the industry began to attempt to create financial products in accordance with the Shariah. This growth continued in the 1980s and 1990s. Islamic financial institutions spread to several western countries, which consequently started to establish "Islamic windows" in their commercial banks. Today there are more than 270 financial institutions[5] operating on the basis of non-interest instruments in more than 40 different countries.[6]

The Islamic bank and financial activities are estimated to be about $ 260 billion[7] and $ 350 billion respectively today, which are 40 times higher than the amount of $ 6 billion it reached on the early 1980s.[8] As this growth suggests, there is a lot of movement in the market of Islamic financial institutions which arose from the desire to achieve Islamisation of the economy. The Islamic capital market is still growing. The overall size of the market for Islamic investments and Muslim capital is estimated to be around $ 750 billion. Islamic financial institutions have increased by a factor of 40 since 1982, demonstrating tremendous growth of the Islamic financial market.[9]

1.2 Statement of the problem

The following main issues arise for hedge funds:

- Risk: Hedge funds contain a large portion of risk, due to the applied instruments like short selling or leveraging. Investors have to be aware of the risk-factor when investing in hedge funds.
- Manager: The manager carries two responsibilities, summarized as the "alpha factor". First of all he is solely responsible for the outcome. Thus, the selection of the manager is essential. Further, there is the problem of asymmetric information, as he can decide which information he wants to forward to his

[4] Usmani (2007), p.2

[5] Ayub (2005), p. 3

[6] Iqbal/Tsubota (2006), p.8

[7] Ayub (2005), p. 3

[8] Iqbal/Tsubota (2006), p.7

[9] Abdel-Khaleq/Richardson (2007), p.413

investors and which not. Consequently, there is a huge potential of encountering the problems of moral hazard and adverse selection.

- Regulation: In order to prevent the market from contamination, huge efforts have been made to regulate the hedge fund business. However, these regulations have also narrowed the freedom to manage hedge funds and thus led to decreasing profit opportunities.

In comparison, Islamic investment funds face the following problems:

- Structural issues: As Islamic investment funds need to comply with Islamic law, some business areas like gambling, pork and weapons are excluded and some financial techniques like interest, short selling or leverage must not be applied. This fact reduces the opportunities for these sorts of funds.
- Legal issues: As Islamic investment funds are still "underdogs" in the investment industry, not all countries offer optimal legal structures for them. For example, in some cases, problems of double taxation exist. This implies a competitive disadvantage compared to traditional investment funds.
- Regulation: As for legal issues, Islamic investment funds also face regulatory boundaries. These also imply disadvantages for Islamic investment funds.

1.3 Objectives

Despite these issues, hedge funds and Islamic investment funds offer a variety of advantages, which can not be dismissed. One objective of this thesis is to analyze the advantages and disadvantages to get a better picture of both.

Another important question is how to balance an investment portfolio including hedge funds and Islamic investment funds. In some cases, there are similarities between both, which can be used in a synergetic way. For example, Islamic investment funds enable better hedging against market risks, which may help hedge funds to achieve a better profit-risk relation. Strong differences are born out of the appliance of Islamic law and the short-term actions of hedge funds. Out of the issues raised above, it becomes necessary to consider the special characteristics of each, balancing the investment portfolio. This paper tries contributing to this issue by giving a bigger picture of Islamic investment funds and analyzing the differences and synergies between both.

To reach this objective, the following three questions will be considered to provide a framework for the thesis:

- Can Islamic investment funds catch up with conventional investment funds?
- Is hedging for Islamic investments possible at all?
- Can Islamic investment Funds appeal to Non-Muslims?

Through these answers, the conclusion shall then derive a better understanding of

- their advantages and disadvantages,
- their differences and synergies,
- and how to possibly balance an investment portfolio including

Islamic investment funds and hedge funds.

1.4 Justification

Existing literature mostly discusses alternative investments and Islamic finance separately and rarely provides direct comparison between hedge funds and Islamic investments. This thesis shall contribute in filling this gap, by exploring the characteristics of both in the same paper.

Further it shall provide a first insight for investors, taking hedge funds and Islamic investment funds into consideration for their investment portfolio.

1.5 Structure

While alternative investments like hedge funds, provide tremendous advantages in comparison to conventional investment funds (like hedging, etc…); Islamic investment funds are a bit different. Most of the financial instruments like hedging, options and futures cannot be applied by Islamic investment fund managers, due to religious constraints. Nevertheless, as we show in chapter 4.2, Islamic funds seem to be even less risky than hedge funds while reaching the same or even better profits. There are various other facts that might or might not appeal to investors (e.g. that Islamic investment funds are classified as ethical investments) and in the end of this paper we want to examine Islamic investment funds as a serious alternative to conventional investment funds like mutual funds or hedge funds.

In the first part of this paper we discuss Islamic investment funds. Islamic investment funds are basically investment funds that are compliant with the rules of Islamic law, which is called the Shariah. Islamic investment funds are one part of a larger Islamic finance movement that started to become serious in the first half of the 20th century and continues to gain enormous economic power until today. Islamic finance itself goes back to the beginning of Islam. Due to the colonization of the Islamic countries, it got replaced by western financial systems, but as these countries gained independence, Islamic finance re-emerged.

Islamic banks seem to be the basis for all Islamic finance activities. As Wilson (1999) discussed in his paper, the success of Islamic banks in Europe is accompanied by the spread of Islamic investment funds. A good example for this development is the experience of the bank Al-Baraka.

Al-Baraka International Bank was the first bank to solely offer Islamic banking services in the 1990s. Its major business was with clients from the Gulf region that resided in

London, but with the increase in the number of British Muslims, more and more Islamic services were used by British citizens as well. Next to usual banking services, Al-Baraka also offered investment deposits on a mudarabah profit sharing basis (see chapter 2.7.5 for more details on mudarabah). The deposits rose from £ 23 million to £ 154 million within 8 years and soon Al-Baraka could not handle all the funds by itself and had to trade through an affiliate company. Soon investment management became more profitable than banking services and Al-Baraka acted more and more as an investment company than as a bank. Consequently, in 1993 Al-Baraka surrendered its banking license and closed its branches to focus solely on investment activities. The Al-Baraka Investment Company and the Dallah Al Baraka Investment Company were founded shortly after.[10]

The example of Al-Baraka shows how Islamic investment funds are dependent on Islamic banking and the Islamic financial system as a whole. We concluded out of such historic processes that this would also be a perfect structure for our research on Islamic investment funds: first we point out Islamic finance to provide an understanding for Islamic economy, which is essential to understand Islamic investment funds, following this we consider Islamic investment funds themselves.

Since little effort has been made into researching Islamic investment funds until now, we try to utilize the enormous academic work on Islamic banks and finance to derive conclusions for Islamic investment funds. Nevertheless, some academic work has been done on Islamic investments and we tried to include as much as we thought would be useful in serving our purpose for providing a full picture of Islamic investment funds.

After defining Islamic investment funds and discussing the principles and fundamentals of the Islamic finance System (chapter 2.1), we give an overview of the history of Islamic Finance and Islamic investment funds (chapter 2.2). In chapter 2.3 we discuss the special characteristics of Islamic finance, resulting from the Islamic law and the principles and strategies for Islamic financial engineering and product development. In this section, we also take a closer look at the religious constraints, which build the basis for Islamic finance.

After this section on Islamic finance, we turn to Islamic investment funds and start with special characteristics and principles of Islamic investment funds, which are mainly based on the special characteristics of Islamic finance (chapter 2.5). Regulation plays an important role for alternative investment funds and in chapter 2.6 you can observe, why it is even more important for Islamic investment funds.

After these general considerations, we turn to specific investment vehicles that are available for an Islamic investment fund manager in chapter 2.7 and talk about the principles that underlie such investment techniques (chapter 2.8). In contrast to conventional finance, an investment in Islamic finance is always seen as a venture or

[10] Wilson (1999) p.41 f.

business set up by parties providing capital and investment experience and expertise. For this, Islamic finance instruments are contracts, closed between the engaging parties. The main contracts will be discussed in this section. We conclude this part with an analysis of various types of Islamic investment funds. The final chapters of our Islamic investment fund section are about the various types of Islamic investment funds that are derived out of the various trading vehicles and techniques (chapter 2.9) and Islamic fund databases (chapter 2.10).

To provide a base for such an analysis, we discuss the archetypal alternative investment fund - the hedge fund – in the second part of this paper. We will define hedge funds in chapter 3.1 and give a short overview of the history of hedge funds in chapter 3.1.1. Since hedge funds are huge players in the investment fund society, we discuss their differences to conventional investment funds in chapter 3.2 to provide reasons for the success of hedge funds and why they appeal to investors to such a huge extend.

In chapter 3.3, we discuss various strategies of a hedge fund manager. As will be seen in our further discussion, most of these tools and strategies are unique to hedge funds and cannot be applied by Islamic investment funds due to specific reasons. After that we talk about the typical investment characteristics of hedge funds (chapter 3.5). For example, an analysis of the alpha factor showed that hedge funds mainly are dependent on the alpha factor and thus of the hedge fund manager himself.

We finish the part about hedge funds with hedge fund trends (chapter 3.6 and chapter 3.7) and further development of hedge funds (chapter 3.8) that show the huge potential for this kind of alternative investment.

The third section of the thesis concludes the chapter by answering the research questions. We start this discussion by looking at Islamic investment funds as a reasonable alternative to conventional investment funds (chapter 4.1). Afterwards, we compare Islamic investment funds to conventional funds and hedge funds (chapter 4.2). In chapter 4.3 we discuss if and why Islamic investment funds appeal to Non-Muslims.

Iqbal and Tsubota (2006) did an extensive analysis of the reasons for the growth of the Islamic capital market. They conclude that both the supply and the demand for Islamic investments will fuel the momentum for the Islamic capital market to become a huge marketplace, especially for emerging market borrowers in the regions of the Middle-East, South-East Asia, South Asia and North Africa. On the supply side, the amount of Shariah compliant Islamic investments is still increasing and evolving into a truly international market. Besides multilateral Development Banks – like the World Bank – even low credit rating countries like Pakistan have raised a considerable amount of funds in their markets. The demand side is also developing. The middle-income countries in the developing world will require more and more investments in infrastructure over the next decade. Their domestic capital markets are often not deep enough to satisfy their huge investment needs and thus they need to access external sources of financing.

Another source for the high growth of Islamic financial markets, as identified by Iqbal and Tsubota (2006), is the increasing demand of Muslim stakeholders that call for more Shariah compliant financing. Due to the growth of oil-dollars and the migration of Muslims all over the world, the voices calling for Islamic investment products get louder and financial intermediaries will pay more attention to the needs of their Muslim clients.[11] However, not only Muslim clients will call for more Shariah compliant products – as we will see in chapter 4.3.

[11] Iqbal/Tsubota (2006), p.11

2 Islamic investment funds

2.1 What are Islamic investment funds?

An Islamic investment fund can be described as "a joint pool wherein the investors contribute their surplus money for the purpose of its investment to earn permitted profits in strict conformity with the precepts of Islamic Shariah".[12] For an investor, it is important to understand that he is participating in a fund, whose profits earned are distributed according to the Islamic law of Shariah.

2.1.1 The Shariah

The Shariah is translated as "the path to the source of water" and concerns theology, practice and legal matters.[13] It means, it is the "source of life for Muslims" and represents the "clear and correct path that one must follow in life so as to be submitting to the will of God".[14] The Shariah includes laws derived from revelation, wisdom, and consensus and analogy. It is based on six sources: [15]

- The Quran
- The Sunna
- The Hadith
- Ijma
- Qiyas
- Ijtihad

In the Quran, the Prophet Muhammad received the word of God over a period of time (revelation). The Sunna consists of "practices and sayings", in overall the behavior of the Prophet Muhammad (wisdom). They then built a standard set of behavior for Muslims, which was passed on as a "collection of traditions", also known as Hadith.[16] Ijma relates to the decisions derived from religious sources taken by religious scholars on issues not faced by the Prophet in his lifetime. Qiyas refers to the decisions taken by

[12] Usmani (2007), p.2

[13] Jahn (2006), p.1

[14] Jahn (2006), p.1

[15] Gait/Worthington (2007), p.4

[16] Jahn (2006), p.1

analogy on matters not addressed to in the Quran or the Sunna compared with a matter addressed in the Quran or the Sunna.[17]

Still there is one other source for the Shariah, the Islamic concept of Ijtihad, meaning human or independent reasoning/interpretation.[18] This concept is not authoritative like the Quran or the Sunna, but derivative. After the Prophet Muhammad died, his followers tried to interpret the Shariah according to the concept of Ijtihad by finding agreement on decisions and their basis (consensus and analogy).[19] This was also the time, where the four main religious schools were formed, which provide their interpretation of Islamic law on matters that concern life, economics, finance and much more under the Islamic law. These equally orthodox and authoritative schools are the Hanafi, Mâliki, Shâfi'î and Hanbali school.[20]

In order to understand the role of Shariah, Jahn (2006) distinguishes between religion and law in Islam. The religion sets the goals and the law – the Shariah – builds the way, these goals can be reached.

Justice represents the main goal in Islam. For the Muslim, justice builds the centre of the relationship between man and God and also between men. Thus, the Shariah can be seen as the "Islamic corpus juris", expressed through permissions, called "halal", and prohibitions, called "haram".[21] By this, a Muslim knows what he must do, what is allowed and what is explicitly prohibited.

For this, the Shariah represents and protects the interests of the community. Jahn (2006) concludes, that after a long period of interpretation over centuries, the Shariah today contains "detailed rules, covering commercial and penal law, marriage and divorce (family law), as well as devotional matters."[22]

2.1.2 The principles of Shariah

Islamic finance means using and applying financial methods according to Islamic law.[23] The Islamic law is called Shariah and is based on the Quran and the Sunna, as described above. The most discussed matter in Islamic finance is the strong and explicit

[17] Gait/Worthington (2007), p.4

[18] Jackson (2004), p.2

[19] Jahn (2006), p.1

[20] Jackson (2004), p. 2

[21] Jahn (2006), p.2

[22] Jahn (2006), p.2

[23] Rowey/July/Fèvre (2006), p.1

prohibition of interest (riba) by Allah in the Holy Quran.[24] The following can be seen as the main principles of Islamic finance:[25]

- Riba, meaning usury is prohibited.[26] This mainly refers to giving or receiving interest.
- Money cannot be invested solely to earn profit. It must have a social and ethical purpose.
- Investments can only be made in businesses allowed by the Shariah. The following businesses are classified as unlawful:[27]
  - Manufacturing, packaging or distribution of alcohol or pork products for human consumption
  - Gambling casinos or the manufacture of gambling machines
  - Movie theatres
  - Pornography
  - Hotels
  - Financial services including banks, insurance companies, brokerage firms
  - Restaurants earning mainly from selling alcohol
  - Airlines, as their profits also include duty free sales of alcohol and tobacco.
- Maysir, meaning gambling, is not allowed. These are transactions including speculation or gambling.
- Gharar, meaning excessive uncertainty, is prohibited. It also means risk in Arabic language.[28] It includes uncertainty about the subject or the terms of a contract, as well as selling something that the seller does not own. Returns can only be earned, if the seller is the owner of the good.[29] That means, short selling is not possible in Islamic finance.
- The risk of a transaction and business must be shared between the borrower and the lender.[30]

[24] Khaf/Khan (1992), p.9

[25] Rowey/July/Fèvre (2006), p.1

[26] Al-Suwailem (2006), p.96

[27] Tannenbaum (1999), p.2

[28] Al-Suwailem (2006), p.69

[29] Khaf/Khan (1992), p.10

[30] Rogers (2004), p.4

2.1.3 The Shariah board

In modern Islamic financial institutions, a Shariah board is established. This Shariah board is part of an Islamic bank and supervises and approves the bank's work. Whenever there is a doubtful situation according to the Shariah, the board must clear it before it can be undertaken.[31] The board members are well known and respected in their profession and possess high knowledge and experience of Shariah teachings. Official statements of the Shariah board are published as fatwa.

Functioning as an independent body, the International Association of Islamic Bankers monitors all the Shariah boards and controls their fatwas by the Supreme Religious Board to make sure they comply with Shariah. As the Shariah offers space for interpretation, there can be different opinions of Shariah. Some issues may be cleared by some boards, but not by others.

2.2 Historic and future development

2.2.1 Financing in the beginning of Islam

Islamic finance came in use for enabling trade and business activities for Muslims. Islamic salesmen were quite active in Spain, the Mediterranean and the Baltic states and were known for their trading activities. Their techniques and instruments were adopted even by European financiers and businessmen.[32]

In the pre-Islamic era, interest was not only a common but also a dominating instrument of financing in Saudi Arabia.[33] Merchant was the main profession in those times, and interest was heavily used by tribes and the Jewish community. According to Khaf and Khan (1992), many Jews took over the function of a "bank" in that time and lent money at rates of 12% per annum.

Mudarabah, an Islamic trading instrument which will be described later in more detail, was also applied in that era, even before the rise of Islam. Here, the profit is shared between two parties, where one provides the funds and the other works with it, providing his experience. The Prophet Muhammad was the first to use the mudarabah when trading with a rich woman called Khadijah, whom he later married. Musharakah, an instrument for full partnership, was mainly applied when large commercial enterprises should work according to a profit and loss principle. Another common transaction was sale on credit, permitted by the Prophet to enable "finance of

[31] Usmani (2007). p.2

[32] Rogers (2004), p.11

[33] Khaf/Khan (1992), p.11

consumption or production without usury".[34] He further motivated Muslims to give "benevolent loans", known as Quard Hassan.

Gait and Worthington (2007) stated that after the Prophet Muhammad died, Islam spread very fast over Asia, Africa and Europe and with it the use of Islamic finance. Historical records show that mudarabah and musharakah were used by businessmen. Islamic finance remained the same until the beginning of the 19th century. At this time, the Muslim countries were colonized by Western countries which brought in the capitalistic system and put an end to Islamic finance. After gaining independence at the end of colonization, Islamic finance re-emerged in Islamic countries and began to develop.

2.2.2 Islamisation of the economy – Pakistan in its outrider role

A very good example for the Islamisation of the economy in an Islamic country is the history of Pakistan. In the last 200 years the economic system changed dramatically and one of the reasons for this change was the interest based economic order, spreading all over the world. Islamic countries were no exception to this development, even though interest is prohibited by Shariah (as discussed above).

In the late 1940s, Asian scholars started discussing about an economy compliant with Shariah. In that time, rural landlords created an interest-free credit network. But the experiment was only short-lived.[35]

Nevertheless, Pakistan established its constitution to align the state with the rules of Islam. The Objective Resolution of 1949 states that the sovereignty over the entire universe belongs to Allah Almighty and that people can act independently within the limits prescribed by Him.[36] Thus, the principles of Pakistan claim for the accordance of people's life with the teachings of Islam and the economy is no exception to that.

Mehmood (2002) stated that it needed three constitutional assemblies until the present one was signed in 1973. However, the Objective Resolution remained an essential part. The provisions of the Constitution of 1973 included the following:

- Islam was declared as the state religion.
- Steps were taken to enable the Muslims of Pakistan to order their lives in accordance with Islam.
- The principles of democracy, freedom and equity, tolerance and social justice had to be fully observed.
- The state had to eliminate riba as early as possible

[34] Gait/Worthington (2007), p.5

[35] Mehmood (2002), p.675

[36] Aslam (2003), p.7

- o The law should be brought into conformity with the injunctions of Islam.

Mehmood (2002) further mentioned that several institutions were established to assist the Islamisation further. Three of them are worth mentioning in more detail:

- o The Council of Islamic Ideology

  The task of the council is to make recommendations to the parliament and the provincial assemblies as to possibilities of enabling and encouraging Muslims of Pakistan to further order their lives in accordance with Islam.

- o Federal Shariah Court

  The Federal Shariah Court consists of seven Muslim judges and a Chief Justice who is qualified to be a judge of the Supreme Court of Pakistan or is or has been a permanent judge of the High Court. Its task is to examine and decide, if any law is consistent with Islam. Its authority is limited however by the constitution, the Muslim Personal Law and the law relating to the procedure of a court or tribunal.

- o Islamic Research Institute

  Its task is to define Islam in terms of its fundamentals, emphasizing the basic Islamic ideals of “universal brotherhood”, tolerance and social justice. Thus, the Islamic Research Institute focuses on research regarding Islamic thought, science and culture.

Although the constitution and the institutions described above were designed to align the life of people with the principles of Islam, the prevention of riba was not much of interest during the first three decades, after the partition from India. Then in 1977, General Muhammad Zia-ul-Haq took first measures.[37]

One of his first actions was to assign the Council of Islamic Ideology to prepare a report with measures of how to eliminate riba. These steps were very progressive and Pakistan became the first country that seriously focused on a full Islamisation of the economy. Another report about the introduction of Zakat and Ushr – also a step for the Islamisation of the economy – was submitted in 1978. In 1980 the Council of Islamic Ideology suggested to eliminate interest from the economy in stages. Further, Pakistan was one of the first Islamic countries that revived Isbah, the office that supervised markets, provided municipal services and settled disputes. However, in its revived form it was only established to protect ordinary citizens from administrative mistakes.

In 1980, Zakat and Ushr were introduced in Pakistan.[38] Zakat was collected from a 2.5% p.a. levy on saving accounts, numerous bank deposits, unit trusts, government

[37] Mehmood (2002), p.682ff.

[38] Husain (2004), p.2

securities, corporate shares and debentures, annuities and life insurances. Other comparable assets were distributed through a voluntary system of Zakat board.[39]

Mehmood (2002) indicated that in 1981, the government directed all nationalized commercial banks to open interest free counters next to their existing, interest-bearing counters. In 1984 the State Bank of Pakistan planned to eliminate interest within one year. However, various loopholes remained and no substantial change could be achieved in practice.

The Enforcement of Shariah Act was entitled in 1991. Under this law, the state was required to "take steps to ensure that the economic system of Pakistan is constructed on the basis of Islam economic objectives, principles, and priorities."[40] To do so, the Commission for Islamisation of Economy was appointed, with the aim to eliminate riba.

The Federal Shariah Court revised various fiscal laws in 1990, including provisions regarding interest. They were confirmed by the Supreme Court of Pakistan in 1999. In order to do so, the government needed to prepare an infrastructure, supporting the elimination of riba from banking and the financial system in the following four subjects: Banking and financial sector, share market, bond/debt market, and government borrowing and lending.[41]

In 2000, a fully empowered commission emerged, entitled "the Commission for the Transformation of Economy". This commission reported various actions and identified numerous Shariah compliant modes of financing.

In pursuance of the court proposals, the Ministry of Finance set up a task force. It should convert domestic borrowings into project-related financing and further establish a mutual fund that would finance the government on a Shariah-compliant basis.

As Mehmood (2002) stated other steps taken were the licensing of a fully dedicated Islamic bank and the allowance for existing banks to start Islamic Banking subsidiaries.

This short abstract of Pakistan's attempt for the Islamisation of its economy should emphasize the difficulty of changing a long tradition of interest-bearing economy into a riba-free economic system. Even Pakistan, as one of the first countries that progressed so far, has not yet achieved it.

2.2.3 The history of the Islamic capital market

Although it seems, the main problem in Pakistan was to eliminate riba, describing an Islamic financial system as simply interest-free does not capture the full picture. It also emphasizes entrepreneurship, preservation of property rights, transparency and the sanctity of contractual obligations. Today, the Islamic bank and financial activities are

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[39] Mehmood (2002), p.685

[40] Husain (2004), p.4f.

[41] Mehmood (2002), p.689ff.

estimated between $ 260 billion[42] and $ 350 billion, which is 40 times higher than the amount of $ 6 billion, which it reached in the early 1980s.[43] As this growth suggests, there is a lot of movement in the Islamic financial institutions market, pushed by the wish to Islamize of the economy, as seen in the example of Pakistan.

The first Islamic financial institutions were established in the 1960s in Egypt and Malaysia. But it was not until the oil boom in the 1970s that fuelled the ambition and attempts of the industry to create financial products in accordance with the Shariah. This growth continued in the 1980s and in the 1990s Islamic Financial Institutions spread to several western countries. They started “Islamic windows” in their commercial banks. Today there are more than 270 financial institutions[44] operating on the basis of non-interest instruments in more than 40 different countries.[45]

Iqbal and Tsubota (2006) stated that the momentum of the 1980s and 1990s was basically fuelled by acquiring funds through deposits invested mainly in trade financing. These activities included:

- Cost-plus-sale or purchase finance (murabaha)
- Leasing (ijara)
- Trust financing (mudarabah)
- Equity participation (musharakah)

But the assets of Islamic financial institutions stayed very static and were solely based on short term instruments, because of the market conditions, lack of liquid assets and some other constraints. Thus, one may not wonder that in the end of the 1990s new and more sophisticated products were needed. Areas of concern were mainly:

- Lack of liquidity
- Lack of portfolio and risk management tools
- Absence of derivative instruments.

That is when Islamic financial institutions realized that new products were needed, if they wanted to survive or even push further growth. Two essential products then were introduced that really achieved this objective:

- Equity funds compatible with Shariah (as described in chapter 2.1.1)
- Sukuk – Islamic asset-backed securities (as described in chapter 2.7.9)

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[42] Ayub (2005), p. 3

[43] Iqbal/Tsubota (2006), p.7

[44] Ayub (2005), p. 3

[45] Iqbal/Tsubota (2006), p.8

While equity funds mainly attract investors with a healthy risk appetite, Sukuk became more popular with people who sought securities that were more like fixed-income debt securities but also comply with Shariah.

2.2.4 Current market environment of Islamic capital market

The Islamic capital market is still growing until today. The overall size of the market of Islamic investments and Muslim capital is estimated at around $ 750 billion. Islamic financial institutions have increased by a factor of 40 since 1982, denoting a tremendous growth of the Islamic financial market.[46]

Iqbal and Tsubota (2006) carried out an extensive analysis on the reasons for the growth of the Islamic capital market. They concluded that both, the supply and demand side will fuel the momentum for the Islamic capital market in becoming a huge marketplace, especially for emerging market borrowers in the regions of the Middle-East, South-East Asia, South Asia and North Africa. On the supply side, the amount of Shariah compliant Islamic investments is still increasing and evolving into a truly international market. Besides multilateral Development Banks – like the World Bank – even low credit rating countries like Pakistan have achieved to raise a considerable amount of funds in their markets. And the demand side is developing as well. The middle-income countries in the developing world will require more and more investments in infrastructure over the next decade. Their domestic capital markets are often not deep enough to satisfy their huge investment needs and thus they need to access external sources of financing.

Another source for the high growth of the Islamic financial markets, as identified by Iqbal and Tsubota (2006), is the increasing demand of Muslim stakeholders that call for more Shariah compliant financing. Due to the growth of oil-dollars and the migration of Muslims all over the world, the voices calling for Islamic investment products get louder and financial intermediaries will pay more attention to the needs of their Muslim clients.[47] However, not only they will call for more Shariah compliant products – as we will see in chapter 4.3.

2.2.5 Further development of Islamic capital markets

In their paper, Iqbal and Tsubota (2006) write that most likely, instruments providing investors with a predetermined return as well as full recourse to the obligor – like ijara or murabaha – will have more market potential than other instruments. They identified three variables influencing the growth of structures, supporting this evolution:

- Sponsorship from the host country
- Competitive advantage to conventional bond issues

[46] Abdel-Khaleq/Richardson (2007), p.413

[47] Iqbal/Tsubota (2006), p.11

- o Shariah scholars

The market development is strongly influenced by the leadership and sponsorship of the host country, especially on legal and regulatory issues. Ijara can serve here as an example. The owner of the operating asset needs to sign a leasing contract. In most cases, the government itself owns this operating asset and it depends on the legal environment, if the government is allowed to lease assets at all. Thus, it is a key requirement for countries and their governments to take further actions in fostering the growth of Islamic financial markets.

The second variable is the competitive advantage to conventional commercial institutions. Islamic transactions often face a competitive disadvantage to conventional bond issues in terms of cost efficiency. Islamic transactions denote often higher legal and documentary expenses and higher distribution costs. There is also no funding cost advantage of Islamic markets, since most terms are derived from more liquid capital markets. Iqbal and Tsubota (2006) show that borrowers need to formulate a long-term strategy to reduce the overall funding costs instead of focusing on a single transaction. On the other hand, investors should express their demand for Shariah compliant services in terms of bid pricing. And intermediaries can contribute to stimulate the growth of Islamic capital markets by further standardizing their processes and thus reducing transaction costs.

And finally Shariah scholars can play an important role: Multi-disciplinary expertise covering topics from the theological interpretation to financial structuring is essential for a further market development. Also, the unification of the laws of the Shariah and their implications on the financial market would represent a huge step in the history of Islamic financial markets. And if such unification would be too difficult to achieve – as it seems – the simple acceptance of differences across borders and schools could stimulate cross-border activities and secondary market trade.[48]

2.3 Special characteristics of Islamic finance

2.3.1 Interest in Islamic finance

2.3.1.1 Prohibition of interest by Islam

Islamic finance is mainly based on one concept: “Avoiding trading directly present for future money”.[49] According to Islamic finance, finance can be interpreted as money being returned for equity or the right to participate in future business profits to a pre-determined share. Further, goods and services can be delivered, while their payment is committed and due at a future date.

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[48] Iqbal/Tsubota (2006), p.12

[49] Al-Jarhi (2003), p.3

In the Quran (2:275) is written:[50]

"…That is because they say: Trade (bai') is only like interest (riba), but God has permitted trade and forbidden interest…"

Further, it can be found:[51]

- "Those who devour usury will not stand except as stands one whom The Evil One by his touch hath driven to madness. That is because they say: Trade is like usury. But Allah hath permitted trade and forbidden usury. (2:275)"
- "O Ye who believe! Fear Allah and give up what remains of your demand for usury, if ye are indeed believers. If ye do it not, take notice of war from Allah and His Apostle. But if ye turn back, ye shall have your capital Sums: Deal not unjustly and ye shall not be dealt with unjustly." (2:278-279)
- "The Prophet has condemned both the receiver and the giver of usury. It is claimed that the Prophet said: Sell not gold for gold except in equal quantity, nor sell silver for silver in equal quantity, nor sell anything present for that which is absent. "(Hadith)

As mentioned above, there is a clear prohibition of interest in Islamic finance. Allah has permitted sale and prohibited interest. To understand the functionality of Islamic financial instruments and the prohibition of riba, it is important to know, how interest is defined in Islam. This can be best explained, when differentiating sale from interest. By definition, interest is "a contractual increment received by a lender from a borrower over and above the principal".[52] This means, that interest mainly refers to money lending. First of all, when lending money with interest, all the risk is shifted to the borrower. In a trade transaction, natural uncertainty is part of the transaction.

Further, Khaf and Khan (1992) cited Quraishi, who pointed out the main difference:[53]

"One, who sells clothes worth Rs. 10 for Rs. 20 does so, believing that the clothes are equivalent to that sum. When mutual agreement has been arrived, the exchanges value become equal with the result that the parties to the transactions all benefit. But if a person were to acquire Rs. 20 for Rs. 10, the additional Rs. 10 does not represent any real benefit. It will not be then admissible for him to say that he obtained the additional sum in exchange nor any such thing which could be pointed out as an exchangeable wealth (1946, p.50)."

According to this explanation, interest is the price paid by the borrower for receiving time. In other words, interest is solely justified by allowing the delayed the payment. In

[50] Khaf/Khan (1992), p.27

[51] Gait/Worthington (2007), p.8

[52] Khaf/Khan (1992), p.21

[53] Khaf/Khan (1992), p.20

that way the borrower receives a return on capital for borrowing money and carrying no risk at all for any asset. While in a "real sale", an asset is sold or borrowed and delivers a return with both parties carrying the risk of the asset, as uncertainty is part of the asset's nature. Here, time has an effect on the profit and loss of the transaction.

So it can be said, that the setup of risk and time differentiate a sale from an interest-based transaction. In a sale, uncertainty and risk appear in relation to time and profits as well as losses can be created over time. Interest-based transactions do not follow the natural conditions of uncertainty and risk. Also the capital can not decrease, but increases automatically with time.[54] The interest separates finance from the transaction and by this, interest becomes the "cost of time, or the cost of pure finance".[55]

Muslim scholars have questioned this construction in terms of ethics and efficiency. Khaf and Khan (1992) describe that by citing Maudidi:[56]

"…Which rationale principle, which logic, which cannon of justice and which sound economic principle can justify that those who spend their time, energy, capacity and resources, and whose efforts and skills make a business thrive, are not guaranteed a profit at any fixed rate, whereas those who merely lend out their funds are fully secured against all risk of loss and are guaranteed a profit at a fixed rate? (ibid. p. 214)"

2.3.1.2 The need of a zero interest rate

In the 1950s, the system seemed to work perfectly for everyone. No faults were seen in taking and receiving interest. The rate of interest was seen as a price, more specifically, as the "relative price of present money to future money".[57] Price was an important instrument for resource allocation. For this, no economist was interested in a zero interest rate.

Some years later, economists declared the instability of the interest-based system in practice.[58] It was then, that Friedman's monetary rule was discovered, which implies that for optimal efficiency and allocation of resources, a zero nominal interest rate is needed. Al-Jarhi (2003) describes that by adding one marginal unit of real balances in a fiat-money world, which does not cost the community any real resources. If there would be a positive price for the use of money, traders would try to gain profit out of it by using real resources. However, as the interest rate is zero, traders have no motivation in exchanging real resources for money. Instead, they can be used for consumption and investment. This shows that the prohibition of interest by Islam and other major religions like Christianity, Jewish and Hinduism does not violate the economy.

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54 Khaf/Khan (1992), p.21

55 Al-Suwailem (2006), p.96

56 Khaf/Khan (1992), p.21

57 Al-Jarhi (2003), p.4

58 El-Gamal (1998), p.2

A zero interest rate can only be realized by deflating the economy at the real rate of interest. For this, the money supply is consistently contracted at a “rate equal to the representative household time preference”.[59] Thus, a long-run policy of deflation is necessary, which central bankers would never agree on. They would worry that a liquidity trap could be created by a zero interest rate. Others suggest deflating only asymptotically, when implementing Friedman’s Rule. Further, monetary authorities would lose their mobility.

However, Islamic banks already apply these rules. The prevention of interest-based lending affects the applied monetary policy. First of all the real rate of growth is observed and the rate of monetary expansion can be aligned with the level of price stability and expected real growth. Al-Jarhi (2004) stated that by implementing a 100 per cent required reserve ratio, monetary authorities, instead of banks’ shareholders, gain absolute control over money supply and direct profits from monetary expansion to the government,. As the economy is as close to price stability as possible, monetary growth is optimal and real resources need not to be transferred to monetary use. No problems of deflationary policy arise.

Now, people can execute spot purchases with their cash balances. In case the cash balances are deficient or not enough for their purchases of assets and commodities, they can go back to finance. Instead of interest rates, rates of profit on equity and profit-sharing finance, mark-ups on credit-purchase finance and rental rates on leasing finance are used.[60] Al-Jarhi (2004) points out that as the time value of money is consistent, the interest rate must not be brought down to zero to achieve an optimal allocation of resources.

Profitability and return rates for investments would become the main issues for profit sharing modes of Islamic finance. The most productive investment would receive the financial resources and this optimizes the financing process. In credit-purchases and leasing transactions in Islamic finance, debt obligations are taken for giving commodities. Al-Jarhi (2004) notes that credit-purchase of assets and commodities would be directly associated to higher demand of these, having a direct influence on aggregate supply. This development further shows that credit finance under Islamic finance would be less inflationary compared to conventional banking and finance.[61]

2.3.2 Risk in Islamic economics

The structure of the following discussion is mainly based on Al-Suwailem (2006), as he offers a compact discussion of available literature and topics, which need to be taken into account.

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[59] Al-Jarhi (2004), p.15

[60] Al-Jarhi (2004), p.15

[61] Al-Jarhi (2003), p.9

Risk is an issue of Islamic finance and conventional finance in equals measures. It has advantages and disadvantages.[62] On one side, it is not possible to grow or gain extraordinary profits without taking risks. Also, by deleting risk out of the equation, no incentives remain and economic efficiency drifts away. However, excessive risk will distract and aggravate investment and growth. Thus, it is important to find a middle course and a compromise to be able to work with risk and to achieve the best results possible. Islamic finance offers such a possibility.

Already in the beginning of Islam, Muslim scholars declared the different "faces" of risk. Ibn Taymiah wrote more than 670 years ago:[63]

"Risk falls into two categories: commercial risk, where one would buy a commodity in order to sell it for profit, and rely on Allah for that. This risk is necessary for merchants, and although one might occasionally lose, but this is the nature of commerce.

The other type of risk is that of gambling, which implies eating wealth for nothing. This is what Allah and his Messenger (peace be upon him) have prohibited. ([2]; pp.700-701.)"

According to this, Al-Suwailem (2006) differentiates between two types of risks:

- Risk in normal economic transactions, like value-adding and wealth-creating activities.
- Risk with the aim of "eating wealth for nothing", where no additional wealth is created.

2.3.2.1 Risk-sharing in Islamic finance

Before taking a deeper look at risk itself, it is important to declare one main difference between conventional and Islamic finance: the risk-sharing. Al-Jarhi (2004) explains it painting the following picture:

"Conventional finance can be likened to a spectator's game where few skilled players stay in the playground and a big crowd is watching from outside. Islamic finance, meanwhile, is similar to participatory sports, where everyone is playing and no one is mere watching."[64]

Risk can not be taken out of the equation, as it is an essential part of the investment. But Al-Jarhi (2004) holds that the difference to conventional finance is that the investor too carries an essential part of the risk, not only the fund manager. In conventional finance risk is only carried by borrower. Loans are only given with the security that the investor or lender will receive his money back and does not carry any sort of risk attached to the loan and what it is used for.

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[62] Al-Suwailem (2006), p.14

[63] Al-Suwailem (2006), p.55

[64] Al-Jarhi (2004), p.17

In Islamic finance on the other hand, investors and managers both share the risk of choosing the right investment and its profitability, engaging in a partnership and not a simple borrower-lender relationship.[65] Investors share the risk with the manager for example for production, distribution and so on. So it can be held that investors and managers (or banks and depositors) both play an important role in the decision-making process. This transforms the simple borrower-lender relationship into a prospering partnership.

Al-Jarhi (2004) states, that the responsibility and taken decisions are carried by all involved people, making all "partners rather than spectators". But not only the higher involvement is an advantage, it further leads to a better stability of banks. Investors participate with their deposits in firms with whom they indirectly share risk and rely on the banks to observe these firms. By the investor's participation, the banks could influence the firm's corporate governance to reduce risk and raise profits. This means, "the stability of the banking system will reinforce and be reinforced by the stability of the real sector".[66] By this, a better integrity of the system can be achieved.

2.3.2.2 The legitimating of risk in Islamic economics

If risk is equal to the possibility of loss, its prohibition in Islam is understood, as Islam clearly states that wealth shall be developed and protected. Still, risk can be found in almost all economic activities, though it is intrinsic. However, decisions are not made regarding the risk it involves nor can the value of a decision be measured according to its risk. The decision is made on the basis of the "wealth it creates and value it adds".[67] Thus, risk is part of the value and does not determine the value in its own. When risk is seen positive, it refers to added value and created wealth. For this, it can be said:

"Risk is legitimate when it is necessary for value creating. But when no value is added, it is a form of gambling."[68]

2.3.2.3 Tolerable risk

Risk can be acceptable, when it complies with the following conditions:[69]

- It is inevitable: This means that the aimed value cannot be acquired in any additional way without taking the specific risk of loss or failure.
- It is insignificant: This condition implies that the possibility of failure must be considerably small, compared to the possibility of success.

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[65] Matthews/Tlemsani/Siddiqui (2004), p.3

[66] Al-Jarhi (2004), p.17

[67] Al-Suwailem (2006), p.56

[68] Al-Suwailem (2006), p.57

[69] Al-Suwailem (2006), p.58

- o It is unintentional: The final condition is derived from the others. As mentioned before, an economic activity is engaged to create value. Risk cannot lead the intention for participating in a transaction.

2.3.2.4 Inevitability of risk

For this, risk must be an inseparable part of real, value-adding transactions. By separating it from real transactions even more different risks are developed and economy becomes highly unstable. the

According to Shariah, the "exchange of pure liability for a given price is unanimously prohibited".[70] Furthermore, already by nature risk and economic activities are inseparable. So Islamic economics only complies with economic reality.

2.3.2.5 Likelihood of failure

As said, this condition implies that a smaller possibility of failure than that of success. The expected utility rule does not align with this thought. It is based on the expected value, which equals the probability of the outcome times its magnitude.[71]

In a lottery for example, the possibility of losing is much higher than that of winning. According to Islam, lotteries for this reason are prohibited. But the expected utility rule only looks at the expected value, no matter what situation seems to be more likely. Thus, a "wishful behavior" according to the decision maker's preferences is triggered, what must not necessarily reflect objective reality. This behavior is seen as gharar, as the decision maker does not look objectively at the situation, but only at the size of the prize and believes he can get it, though the opposite is more probable.

From an Islamic point of view the decision maker is obligated to take the right steps to reach his goal and to believe in Allah guiding him to avoid possible but less likely failures. It is his duty and not a recommendation to act this way. So "entrusting Allah thus compliments rational decision-making and never substitutes for it."[72]

2.3.3 Gharar

2.3.3.1 Definition

Gharar means risk or trading in risk.[73] It is derived from the word "gharra" meaning "to deceive" and is also translated as "that which has a pleasant appearance and hated essence".[74] It stands for low probability but high prizes, as it is common in all forms of gambling. This is the reason, why a decision maker even engages in such situations.

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[70] Al-Suwailem (2006), p.59

[71] Al-Suwailem (2006), p.60

[72] Al-Suwailem (2006), p.61

[73] El-Gamal (2001), p.2

[74] El-Gamal (2001), p.5

Gharar is defined in many different ways, but Kotby (1990) points out two definitions. The first is by Al-Kasani: “Gharar is risk in which existence and non-existence are equally likely”.[75] The second is by Al-Ramly: “Gharar is what involves two possibilities; the more likely of them is the less desirable”.[76] The essence of these definitions is that “any transaction with probability of success less than or equal 0.5 involves gharar”.[77] Islam does not forbid risk for its being, but certain levels of it, which make a transaction illegal according to Islamic rules. The difficulty is given in determining the “significance level” from where risk gets prohibited. It is not 0.5 for all kinds of transactions.

In the Shariah gharar is defined as a situation, in which at least two parties are engaged and it is “equivalent to a zero-sum game with uncertain payoffs”.[78] To better understand the types of games, this section briefly describes them.

2.3.3.2 Investment vs. gambling

Al-Suwailem (2006) determines one main difference to distinguish between investment and gambling and that is the confidence of success. A fund manager starts a new fund, because he believes in its success. However, a gambler already knows from the beginning that his probability to lose is much higher. As stated before, the high price encourages him to participate in the losing project.

This differentiation also complies with the concept of causality of Islamic principles. Al-Suwailem (2006) holds that if an action fails more often than it is successful, it can neither be seen as efficient nor as successful. It must be accepted as a failure.

2.3.3.3 Types of games

As defined before, a game is a situation, where at least two parties engage and their payoffs are uncertain at the beginning. Looking at the sum of players payoffs, three categories can be defined:[79]

- Positive-sum games
- Zero-sum games
- Mixed-sum games

2.3.3.4 Positive-sum games

These are games where players have the same interests, making them gain and lose together. The objective will be to reach a positive outcome.

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[75] Cited by Kotby (1990), p. 65

[76] Cited by Kotby (1990), p. 65

[77] Kotby (1990), p. 65

[78] Al-Suwailem (2006), p.69

[79] Al-Suwailem (2006), p.70

Figure 1 shows such a situation. (A, B) are the players and the branches showing the possible outcomes. As stated above, in a positive-sum game, the players have the same goal, which means they will either win or lose together. The left branch will bring up the negative payoff, the right branch the positive. As the game starts, the players do not know which branch they will take. But as they both have the same aim, their objective will become mutual gain. This situation makes it a Pareto-optimal game, as "both players are likely to be better off playing the game compared to not playing".[80] It is also important to hold, that it is not necessary that both parties gain equal payoffs, but they may gain and lose together.

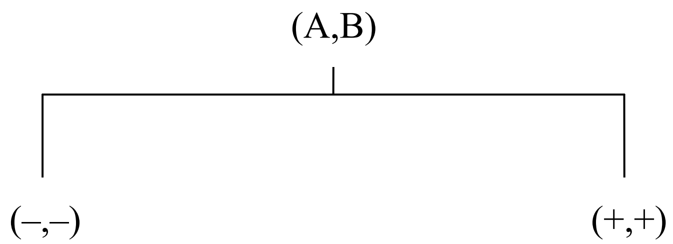

Figure 1. Positive-sum games (source: Al-Suwailem (2006), p.71)

An example for such a game is musharakah, where both partners invest capital and labor, gaining and losing together as the project succeeds or fails.

2.3.3.5 Zero-sum game

In difference to positive-sum games, here one party will win for sure while the other will lose.[81] This is a classic case of gambling. For example, two parties betting on a football match with each being for the other team. If A wins, he will get the whole amount and vice versa. This situation is shown in Figure 2.

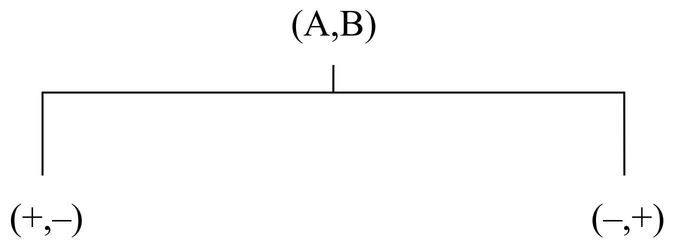

Figure 2. Zero-sum game (source: Al-Suwailem (2006), p.71)

The "zero-sum" indicates that the players' interests are in opposite direction, but their gain and loss need not to be equally proportioned. In comparison to the positive-sum game, the zero-sum game is pare to inferior, as mutual gain is not possible and the players are better off, not playing the game.

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[80] Al-Suwailem (2006), p.70

[81] Al-Suwailem (2006), p.71

2.3.3.6 Mixed games

As the name suggests, this situation is a mixture of the first two. It is possible that both win, but just like in a zero-sum game, because of different interests, also only one could win, leaving the other to lose.[82] This situation is shown in Figure 3.

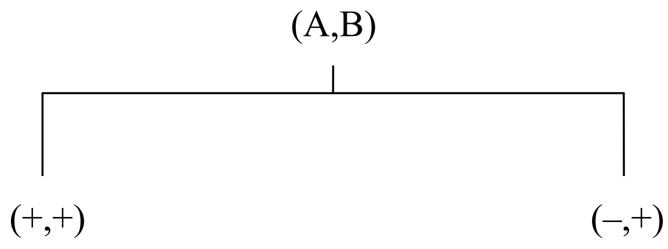

Figure 3. Mixed games (source: Al-Suwailem (2006), p.72)

Most economic activities account to such a mixed or non-zero-sum game. A situation can either end up as a conflict or in cooperation.[83]

2.4 Financial engineering in Islamic finance

As defined in the beginning, the Shariah determines the way by which the goals set by Islam can be achieved.[84] For this the Shariah offers a substantial set of rules and guidelines. One might say, that because of these “constraints” it is not possible to move freely enough to develop new products and options to ease the financial life. However, literature proves that people are most creative under constraints.[85] Creativity is set free when facing a constraint and trying to find a way to overcome it. Al-Suwailem (2006) notes that history shows that it were constraints which drove financial innovation ahead and enhanced economic performance and welfare.

This shows that constraints do not prevent creativity. This can especially be seen with respect to Divine rulings, which comprise the wisdom of Allah and following them will only enhance life. Islam offers the necessary environment to best practice creativity and innovation. The Quran underlines that “reflecting and pondering upon signs of truth, and condemns those who blindly follow inherited culture even if it contradicts the facts”.[86] This is especially important when trying to invent necessary instruments, which enable the participation in economics and finance. Creativity is a crucial factor for financial engineering.

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[82] Al-Suwailem (2006), p.72

[83] Al-Suwailem (2006), p.72

[84] Jahn (2006), p.1

[85] Al-Suwailem (2006), p.89

[86] Al-Suwailem (2006), p.90

2.4.1 Principles of financial engineering

Financial engineering describes how to "use risk management strategies to manipulate the shape of risk profiles one firm is facing".[87] There are four principles of financial engineering:

- o Principle of balance
- o Principle of integration
- o Principle of acceptability
- o Principle of consistency

The first two determine the objectives, the next the methodology.

2.4.1.1 Principle of balance

This principle is concerned with finding the right balance between Islamic teachings and human incentives. For example, capitalism tries to solve all problems using for-profit and market-oriented approaches. On the other hand, communism concentrates on solving the same problems by solely emphasizing non-profit approaches. Islamic economics teaches to use a "balanced approach", as both for-profit and non-profit are necessary to reach economic satisfaction.[88]

Cooperative approaches are better in realizing financial and economic objectives. The best example for this is insurance. Taking the Shariah into account, commercial insurance is unacceptable, but cooperative and mutual insurance is accepted without any doubt. Thus, cooperative arrangements offer more efficiency than commercial instruments and can better serve economic needs.

2.4.1.2 Principle of acceptability

Though this principle belongs to methodology, it must be stated here because of logical sequencing. This principle holds that "all economic dealings are generally acceptable unless otherwise stated by Shariah".[89]

The belief here is that all economic activities have the goal to satisfy human needs and preferences. Islam believes that human beings are naturally drawn to the good, so their activities should add to the good of the society. To avoid the evil in the world, Islam offers a set of rules to enable economic activities.

For-profit activities face a more preventive set of rules while non-profit activities are taken on with affirmative rules. Al-Suwailem (2006) notes, that this is derived from human nature of incentives. When the incentive is strong enough to aim for profits, Quran tries to prevent extreme response by confirming it with caution. For example, if

[87] Kotby (1990), p.63

[88] Al-Suwailem (2006), p.92

[89] Al-Suwailem (2006), p.95

the incentive for donating is not strong enough, Quran emphasizes it to enhance it. However, commerce and trade are important in Islam and by the Quran confirmed activities.[90]

This principle is mainly important for innovation, as it states that there are no bounds to innovation and creativity as long as the positive effects prevail. It is just important to make sure that none of the prohibited activities is part of the business. If that is the case, everything is possible. Al-Suwailem (2006) explains it the following way: “Accordingly, if two views are presented regarding a certain product, one considers it acceptable while the other doesn’t, then the burden of proof is on the latter. Those who accept don’t have to prove it, since this is the default position of Shariah.” From this point of view, Shariah calls the one who rejects to prove his position.

2.4.1.3 Principle of integration

As stated earlier, interest separates finance from real activities. This separation does not align with economic activities, as it creates extra costs to keep up the separation and so is inefficient. The higher the costs of separation, the higher the transaction costs and inefficiencies rise. Al-Suwailem (2006) notes that the separation itself may cost much more than keeping the sectors integrated. Thus, the Shariah “insists on the integration between two sectors to achieve balanced and sustained economic growth”.[91]

2.4.1.4 Principle of consistency

The final principle holds, that “form and substance of Islamic products must be consistent with each other, i.e. form should serve substance and, means should conform to ends”[92]. Figure 4 shows the steps, a product evaluation should go through.

According to Al-Suwailem (2006), the steps are:

1. Evaluate the substance or the end result of the product. If acceptable, go to step 2. Otherwise, go to step 3
2. Evaluate the form of the product. If acceptable, the product is acceptable. Otherwise, go to step 3.
3. Revise the product, and then go to step 1

The starting point is the substance, followed by form. The final approval cannot be made with only one of them, both is important.

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[90] Al-Suwailem (2006), p.95

[91] Al-Suwailem (2006), p.99

[92] Al-Suwailem (2006), p.102

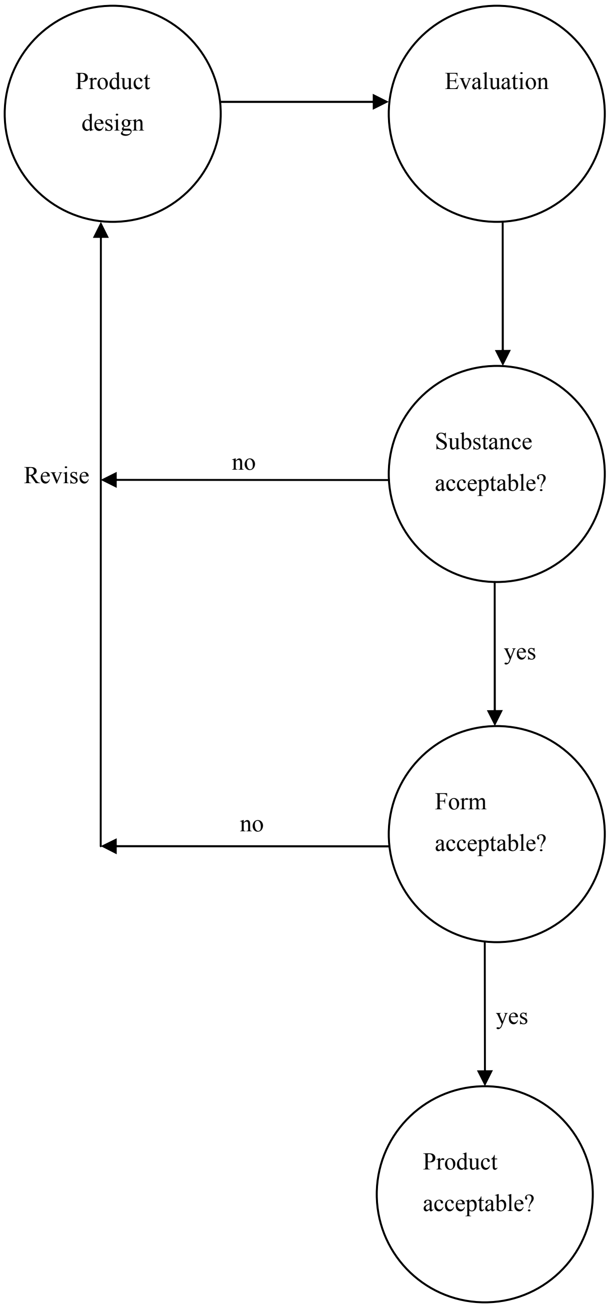

Figure 4. Steps of product evaluation (source: Al-Suwailem (2006), p.102)

2.4.2 Strategies for product development

There are three strategies for product development:[93]

- To start from conventional products (imitation)
- To start from Islamic products (mutation)
- To start from the real needs of customers (satisfaction)

2.4.2.1 Imitation

Here, a conventional product, which does not apply to the Islamic point of view, is reconstructed using Islamic contracts. This strategy is also known as “reverse engineering”.[94]

As the aim is already known, imitation offers an easy possibility to develop products. Gainor (2000) notes that a lot of Islamic products found their way to existence by imitating conventional products. However, in a long term view, it implies more negative consequences. The necessity to adapt conventional products can only evoke, if Muslim customers have the same preferences and needs as customers of conventional products have. If a conventional product is successful, it still must be set in compliance with the Shariah, before it can be appealing to Muslim customers. Further, the only difference between Muslim customers and customers of conventional products should be that Muslim customers demand the application of the Shariah.[95] Al-Suwailem (2006) points out the main problems:

- First of all form rules over substance and means over ends. So Islamic rules are applied in a passive and visionless way with a minimum economic value.
- The Islamic industry becomes a follower of the conventional industry as all products are imitations. This neglects the true meaning of innovation and creativity, which are essential for financial engineering.
- As the industry stays a follower, the products will also be inferior to conventional products as they carry additional restrictions by the Shariah. This is because the conventional product is seen as the aim. However, the approach should be to take the Shariah as basis and out of these constraints derive the objective with the solution.
- Last but not least, conventional products can only offer solutions to the problems of the conventional industry. Imitating them adds these problems to the Islamic industry, which already carries its own problems. Thus, the Islamic industry will call for more conventional products and more imitations will be made and the circle will continue.

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[93] Al-Suwailem (2006), p.105

[94] Al-Suwailem (2006), p.105

[95] Gainor (2000), p.6

2.4.2.2 Mutation

For mutation, the basis is an Islamic product. The product is looked at in different variations and modifications and then tested, how it could be used in the market.[96] This strategy can help develop a range of effective products. Taking the principle of acceptability into account, most of the developed products will be useful as the basis is already is an Islamic accepted product.

2.4.2.3 Satisfaction

This strategy asks: What does the customer really need? After getting an answer, it should be looked at, which product or design could serve these needs.[97] This is the real process for product and market evolution. Customers play a major role in defining the direction of a market and by satisfying their needs, economic progress can be measured. As Al-Suwailem (2006) stated that "ends determine means", the products are the means developed to satisfy the needs.

2.5 Special characteristics of Islamic investment funds

2.5.1 Shariah principles for Islamic investment funds

Usmani (2007a) points out the two main Shariah principles which must be taken into account:[98]

1. First of all, the investor does not receive a fix amount. Instead, the investor does not only gain the profits of the fund, but also shares its losses. Only if the loss is created by a false management decision, then the management and not the stockholders carry the responsibility.
2. Furthermore, the fund must invest in a business allowed by the Shariah. Also, the terms agreed upon for the investment must align with the Shariah principles.

2.5.2 Investing in shares

When investing in equity shares, the following conditions apply:[99]

- First of all, the business must be permitted by the Shariah. An investment in a prohibited business, like the ones mentioned in chapter 2.1.2, is not allowed.
- If it is a permitted business, but the profits are held in interest – bearing accounts or they borrow money on interest, the shareholder must point out officially that he is against such transactions and does not support them. The

[96] Al-Suwailem (2006), p.107

[97] Al-Suwailem (2006), p.108

[98] Usmani (2007a), p.2

[99] Usmani (2007b)

preferred way would be to raise his voice in the annual general meeting of the specific company.

- If the received profits of the company include some portion of interest-bearing accounts, this proportion must be given to charity and must not be held by the investor.
- Shares are only negotiable if the company has illiquid assets. In case of assets in liquid form only, meaning in the form of money, purchasing or selling them is not possible except at par value. These shares represent money only and money can not be traded except at par value.

For this, it is important to determine what the ratio of illiquid and liquid assets of a company can be to allow negotiability of its shares. Here, the views of Islamic scholars' vary. Some say illiquid assets must account for at least 51% of the assets of the company. If they form less than 50% of the company's assets, then most of its assets are in liquid form, which further means that all assets should be treated as liquid according to the Islamic juristic principle that the "majority deserves to be treated as the whole of a thing".[100]

Others say that the shares of a company are negotiable, even if the illiquid ratio accounts for only 33%. This view is based on the Hanafi jurisprudence, which believes that if an illiquid part in an asset exists together with a liquid part, it is negotiable, no matter what the ratio of the liquid part is. However, this is only possible if two conditions apply:[101]

- The illiquid part must be in a considerable proportion, which cannot be ignored.
- The combination of the liquid and illiquid part should have a higher value together than the liquid part on its own. Usmani (2007b) explains it the following way: "If a share of 100 dollars represents 75 dollars, plus some fixed assets, the price of the share must be more than 75 dollars. In this case, if the price of the share is fixed as 105, it will mean that 75 dollars are in exchange of 75 dollars owned by the share and the balance of 30 dollars is in exchange of the fixed assets. Conversely, if the price of that share is fixed as 70 dollars, it will not be allowed, because the 75 dollars owned by the share in this case are against an amount which is less than 75. This kind of exchange falls within the definition of 'riba' and is not allowed. Similarly, if the price of the share, in the above example, is fixed as 75 dollars, it will not be permissible, because if we presume that 75 dollars of the price are against 75 dollars owned by the share, no part of the price can be attributed to the fixed assets owned by the share. Therefore, some part of the price (75

[100] Usmani (2007b)

[101] Usmani (2007b)

> dollars) must be presumed to be in exchange of the fixed assets of the share. In this case, the remaining amount will not be adequate for being the price of 75 dollars. For this reason, the transaction will not be valid. However, in practical terms, this is merely a theoretical possibility, because it is difficult to imagine a situation where the price of a share goes lower than its liquid assets."

By this, it is understood that dealing with shares is allowed according to Shariah, meaning it is a halal business, if the above rules apply. This further means that an Islamic equity fund can be created. As declared in the initial definition of Islamic investment funds, a joint pool is formed, where the investors are seen and treated as partners and their investments are used to buy shares of different firms.

2.5.3 The purification

Any effort to identify companies which are successful in staying out of businesses and actions prohibited by the Shariah and which do not give or receive interest, would very quickly lead to a dead end in today's western civilization. It is simply impossible to find such firms and businesses that have been able to apply this to the necessary level.

Out of this necessity, the Joint Declaration of July 1987 was born, which made investments in prohibited areas acceptable, if they accounted only for a minor proportion of the company.[102] The Joint Declaration, also known as rule of necessity, included the following three rules:[103]

- Exclude companies for which accounts receivables constituted a major share of their assets
- Exclude companies that had too much debt
- Exclude companies that received too much interest

After testing these rules they were enhanced as follows:[104]

- Exclude companies whose receivables account for more than 45% of assets
- Exclude companies whose debt to moving average of market capitalization exceed 33%

El-Gamal (2006) holds that an optional third rule held by some imposes a maximum interest rate of 5% to 10%, which leads to exclusion.

As stated above, the investor must still raise his voice and state his disagreement with such investments and further take out the percentage from his dividend that emerged from the prohibited business and donate this part to charity. This procedure is called

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[102] Tannenbaum (1998), p.3

[103] El-Gamal (2006), p.6

[104] El-Gamal (2006), p.6

“purification”, also known as “dividend cleansing”.[105] So here it gets important for the investment fund to apply instruments that track and filter the investments flowing into prohibited businesses. In the next step, these profits then must be contributed to charity.

2.6 Regulation of Islamic investment funds

Hakim and Rashidian (2004) stated that although Islamic investment funds are based on religious and ethical principles, they have not convinced all investors in terms of financial theory. This fact highlights further the need for regulation, information disclosure and transparency. While investors know and understand conventional investment funds, their Islamic counterparts are much more complex and are not equally trusted by investors.

Thus, regulation in the Islamic investment industry may not only be essential for a smooth market flow and avoidance of unfavorable behavior. It could be seen as a chance to compete with conventional investments. The mere “ethical” aspect may not be convincing enough for Western investors.

An example for the undisclosed situation on the Islamic investment market can be found on the Saudi stock market, Al Tadawil. More than 50% of the 130 mutual funds are Shariah compliant. Although this is a significant amount of the market, there are no statistics reporting the performance of these funds. Moreover, the Al-Ahli US Trading Equity fund marketed by the National Commercial Bank of Saudi Arabia claims to track the “Russell 1000 Islamic-Index”. The truth is, such an index does not exist and the fund description provided states, “growth” is not enough to estimate the risks and return of the fund.[106] There are several other examples of Islamic investment funds that provide no or only limited information about their performance.

The situation is worse for the Islamic investment industry than it is for the Islamic banking sector. The reason for missing disclosure and regulation is not the fault of the Islamic financial industry itself – the academic literature has not kept pace with the rapid growth of Islamic investment funds. They have grown without the scrutiny they may have needed. Nowadays investors in Islamic investment funds are quite disorientated and the market and its performance are quite opaque.[107] Regulation and higher market scrutiny may contribute a lot to the transparency of the market.

One of the institutions that do put some effort into regulating the market of Islamic financial products is the Accounting and Auditing Organization of Islamic Financial Institutions (AAOIFI). It prepared auditing and accounting standards for Islamic banks

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[105] Usmani (2007); Tannenbaum (1998), p.3

[106] Hakim/Rashidian (2004), p.1

[107] Hakim/ Rashidian (2004), p.8f.

and other Islamic financial institutions.[108] In 2003, the AAOIFI issued standards for Investment Sukuks, containing numerous types of Shariah compliant assets including:

- Ijara sukuks
- Salam certificates
- Istisna certificates
- Murabaha certificates
- Participatory certificates
- Mudarabah certificates / sukuk
- Investment agency sukuk
- Muzara / musaqah certificates[109]

2.6.1 Difficulties of adopting existing regulations

It seems logical that the regulation of Islamic financial institutions will work best where there is already regulation, e.g. for conventional financial institutions. Reporting, monitoring of capital adequacy, risk management controls and customer disclosure could easily be adapted to the needs of an Islamic financial system. There are only some areas where no regulatory framework exists and new regulations must be constructed in order to ensure the smooth flow of the Islamic financial system.

However, a balance between over- and under regulation must be found. Over restrictive regulation can of course be counterproductive. It reduces the number of financial products and raises transaction costs and thus reduces efficiency, as stated by Wilson (2006).

The main challenge is to adapt existing regulations in a way that protects clients of Islamic financial systems similar to clients of conventional banks – even though these protections are not exactly the same. Regulators have the task of avoiding the disadvantages of Islamic financial institutions as well as of conventional ones. Although Islamic financial institutions are the latecomers, positive as well as negative effects may arise from this position. Regulators should not only copy regulatory frameworks but instead adapt them adequately.[110]

2.6.2 Unifying regulations

Regulation of financial institutions cannot be unified across all countries, neither that of Islamic financial institutions nor of their conventional counterparts. Like conventional

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[108] Ayub (2005), p.4

[109] Ayub (2005), p. 16

[110] Wilson (2006), p.43

financial institutions, Islamic financial institutions operate in many countries and also in offshore jurisdictions like Bahrain or Labuan. These jurisdictions are characterized by significantly less stringent regulation than in many other countries.

Wilson (2006) anticipates a problem in these countries, because they may start to compete with each other to lower transaction costs. Islamic financial institutions would be more efficient in these countries and thus prefer to do business there. However, this situation would be damaging the Islamic financial system in the long-run. Bankruptcies and other unwanted scenarios would put its clients in jeopardy.

As outlined before, the regulation must establish an environment that provides enough freedom to develop new financial products but at the same time be characterized by soundness and credibility of the Islamic finance industry.

2.6.3 Information disclosure

Information disclosure is also an important issue in the world of Islamic finance. Regulators should emphasize the need of clients to have information about the risks of their financial investment. There also exists the issue that rating should be obligatory[111] as it is a source of information for clients.

2.6.4 The Shariah board

A Shariah board – or at least a Shariah advisor – should be present in every financial institution that offers Islamic financial products. The tasks of this body consist of ensuring Shariah compliance for the various financial products. Establishing a Shariah board is an effective way to ensure that the financial products are compliant to Shariah and that the needs of the clients are truly respected and fulfilled.

For the securities market this means that the board will ensure that the securities are asset-backed and the companies do not participate in forbidden activities. The Shariah board will also not accept any speculative practices, closely related to gambling, which is forbidden under Islamic law. The board will also check, if the debt-asset ratio is lower than the 1/3 threshold.

Often cases are not as general as described above. The HSBC Amanah Finance from Dubai has launched capital protected funds. This agreement may not be acceptable under Shariah law since returns have to be related to the performance. A Shariah board should check such single cases.

However, this check is not always easy since there are many interpretations of the Shariah, leading to many different opinions as to whether an instrument is compliant to

[111] Wilson (2006), p.53

Shariah or not. The Accounting Organization for Islamic Financial Institutions (AAOIFI) has made great effort to improve Shariah standards.[112]

2.7 Vehicles of Islamic finance

Although Islamic banking is well established throughout the Muslim world and has received much attention in the academic literature, the same is not true for the Islamic investment industry – at least not to that extent. The biggest hurdle in the way of Islamic banking throughout the world is the prohibition of interest. As pointed out in chapter 2.2, economists have been facing this issue for decades and various papers have been written about it. Thus, one might say that the Islamic banking industry is quite well developed and still a big fish in the economic world.

Islamic investment still has some more hurdles in its way and only few economists and scientists have stumbled across this issue. Thus, Islamic investment is still underdeveloped in the industry.

In the equity markets, common stocks are a Shariah compliant instrument – but many practices related to their trading are strictly forbidden. These practices include:

- Speculation
- Short selling
- Margin trading
- Equity futures and options

These practices are limited or even completely forbidden and an economist trading with Islamic common stocks cannot make use of them.[113]

The following elements are also not Shariah compliant:

- Corporate bonds
- Treasury bonds and bills
- Certificates of deposit
- Preferred stocks
- Warrants
- Trade on margin
- Repos[114]

[112] Wilson (2006), p.50

[113] Hakim/ Rashidian (2004), p.3

[114] Girard/Hassan (2005), p.6

Over the last decades, various investment vehicles have emerged that are compliant to Shariah. These include:[115]

- Murabaha (cost plus financing)
- Bai muajjall (deferred payment)
- Bai salam (prepaid purchases)
- Istisna (construction/ engineering and procurement contract)
- Mudarabah (partnership)
- Musharakah (profit and loss sharing)
- Ijara (lease)
- Quard Hassan (benevolent loans)
- Sukuk (certificate)
- Sale and buy back assets
- Islamic accepted bills
- Government investment issues
- Islamic treasury bills
- Islamic negotiable certificates of deposit
- Islamic debt secure
- Al rahnu agreement-I

With assistance from the Accounting and Auditing Organization of Islamic Financial Institutions and some Islamic bankers, sukuk offerings arose as an alternative to the more traditional ones (see also discussion in chapter 2.7.9.1).[116]

Additionally, today there are over one hundred Islamic equity funds with a concentration in Saudi Arabia and Malaysia.[117] On the Saudi Stock Market, more than half of the 130 mutual funds are Shariah compliant.[118]

2.7.1 Murabaha (cost plus financing)

Murabaha is a contemporary contract designed out of a combination of different contracts.[119] It is equal to cost-plus financing. It is an instrument to finance asset

[115] Abdel-Khaleq/Richardson (2007), p.411f.

[116] Abdel-Khaleq/Richardson (2007), p.412.

[117] Wilson (2006), p.51

[118] Hakim/Rashidian (2004), p.1

[119] Khan/Ahmed (2001), p.56

allocation.[120] It is used for “buying and reselling the purchase or import of capital goods and other commodities by institutions”.[121] In the case of murabaha, a contract between a bank and a client is made, which includes two transactions: The purchase of an asset desired by the client and the sale of it to the client by the bank. The details of the product are provided by the client. The sale price is fixed in advance and includes a profit mark-up. After agreeing on the conditions, the bank buys the product and sells it to the customer. The price cannot be increased afterwards, even if the client does not pay within the agreed time. The difference to conventional banking is that fees for delayed payments are not allowed. The reason is that this payment would be connected to a time component and thus would be interpreted as interest.[122] Usually the bank enables the client to receive the asset directly from the seller by using an agency agreement. The payments are usually made in installments. Gait/Worthington (2007) identified four main components for murabaha, which must be ensured at the time of sale:

- The goods must be classified, clearly identified according to commonly accepted standards and must exist at the time of sale.
- The goods for sale must be in the ownership of the bank at the time of sale.
- The price must be known at the time of sale and this should be declared to the client.
- The time of delivery of the goods and the time of payment must be specified.

Despite its severe restrictions, murabaha still contains some risks. The first problem arises from a promise of being part of the contract. Khan and Ahmed (2001) note that the client only promises to buy the product after the bank has purchased it. The product can only be sold when the seller is the owner of it. Some scholars do say that the promise binds on the client, but some disagree with this view. They leave the client an option of cancelling the contract and not being bound by the promise.[123] Further, Islamic finance forbids the charge of any sort of fine for delayed payments. If the installments are not paid in the agreed time period, losses are generated for the bank.

2.7.2 Bai muajjall (deferred payment)

Here, the payment is delayed to a future date agreed on by the parties, enabling the client to use the product now and pay for it later.[124] The difference to murabaha is that

[120] Rowey/July/Fèvre (2006), p.3

[121] Gait/Worthington (2007), p.16

[122] Tannenbaum (1999), p.5

[123] Khan/Ahmed (2001), p.56

[124] Gait/Worthington (2007), p.17

for a murabaha contract to be acceptable, the price of the commodity must be known in advance. This is not the case for bai muajjall.

2.7.3 Bai salam (prepaid purchases)

Bai salam works the other way round to bai muajjal. First, the payment is made and then the products are received at an agreed time in the future.[125] The sale of something that one does not possess at the time of sale is prohibited in Islam. However, in order to enable and facilitate trade in some sectors like agriculture, bai salam was introduced and can also be found in the Sunna and Hadith. According to Gait and Worthington (2007), the following main principles can be held for bai salam:

- When the contract is made, the goods should not be available
- The quality and quantity of the goods must be known
- The date and place of delivery should be detailed
- The purchase prices should be paid completely at the time when the contract is made

There are two main risks in bai salam:[126]

- First of all, there is a risk in supply. This refers to a possible delay or total fall out of supply and agreed quality of the goods. As bai salam is mainly a contract for agricultural activities, some factors such as catastrophic risk or natural disasters cannot be calculated in advance. However, as these are basic risks for agricultural activities they are seen as normal in bai salam.
- Further, salam contracts cannot be traded in exchange or over the counter. They are made between two parties and always lead to a delivery of goods combined with a transaction of ownership to the other party. Therefor, banks face storage costs and other price risks. “Such costs and risks are unique to Islamic banks”.[127]

2.7.4 Istisna (manufacturing contracts)

Istisna is a manufacturing contract enabling a client to “obtain industrial goods with either an upfront cash payment and deferred delivery or deferred payment and delivery”.[128] The main advantage of istisna is that by paying in advance or delaying it to pay in installments, the product can be produced at a lower price compared to buying the complete product. Usually the client makes a contract with the bank who assigns a

[125] Gait/Worthington (2007), p.18

[126] Khan/Ahmed (2001), p.57

[127] Khan/Ahmed (2001), p.57

[128] Gait/Worthington (2007), p.18

third party with the construction of the specific product and enters an istisna contract with the third party for it.[129] This sort of contract is not permitted by all Islamic scholars as the possibility of price differences may arise and lead to speculation.[130]

The following risks are faced by istisna:[131]

- First of all, istisna is similar to bai salam and faces the risk of failure in terms of time of delivery and quality. However, as this refers to a product, this risk is more under control of the producer in comparison to bai salam. Also the risk of natural disasters is not that high.
- The seller faces the risk that the buyer may not be able to pay the full price on time.
- Further, as in murabaha, the contract may be seen as optional and not obligating. For this the seller carries the risk that the buyer may cancel the contract. This cancellation then may lead to additional risks.

2.7.5 Mudarabah (partnership)

Mudarabah is an instrument often used for investment funds. It is one of the oldest forms of profit and loss sharing and was used by salesmen even before the time of Islam.[132] Mudarabah describes a contract in which capital and experience are divided between both parties. One, called rab-al-mal, puts in 100 per cent of the capital and the other, called the mudarib, carries the experience of how to invest and manage the capital.[133] Mudarabah is a profit sharing equity-based contract. The profits are shared according to a ratio, which is determined in advance. However, as stated before, there is no profit guarantee. Financial losses are carried by the party providing the capital and the entrepreneur or manager carries the operating losses like the loss of his time and effort. This can also be seen as their opportunity costs.[134] This party has no control over the party, managing the investment. In an investment fund, usually the investors provide the capital and the fund manager invests the money as mudarib in return for a management fee. This process is described in Figure 5.

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[129] Gait/Worthington (2007), p.19

[130] Obaidullah (2002), p.7

[131] Khan/Ahmed (2001), p.57f.

[132] Gait/Worthington (2007), p.15

[133] Rowey/July/Fèvre (2006), p.3

[134] Gait/Worthington (2007), p.15

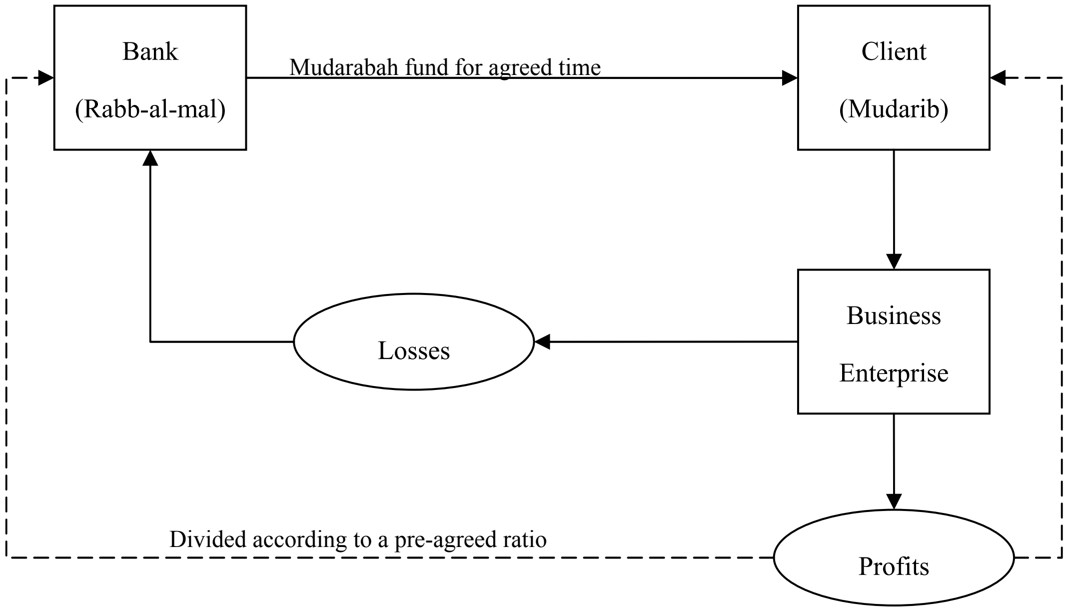

Figure 5. Mudarabah transaction (source: Gait/Worthington (2007), p.30)

2.7.6 Musharakah (profit and loss sharing)

In contrary to mudarabah, musharakah means full partnership.[135] Both parties provide the capital and experience. The profits are shared according to a ratio, which is, just like in mudarabah, agreed upon by the parties in advance. The manager receives remuneration and the losses are divided according to their capital share. The other difference to mudarabah is that both parties can manage the investment. Therefore, the risk of investment is also shared by both parties. As described in Figure 6.

There are two possible types of musharakah. First, musharakah can be established as a permanent contract through which all participants receive an annual share of the profits and losses of the fund according to the predetermined ratios. The second version is the so called "diminishing musharakah", in which one party reduces its share on an annual basis. It receives "periodic profits based on the reducing equity balance".[136] The other party's equity share increases with time until it is the sole owner of the fund or business.

[135] Gait/Worthington (2007), p.16

[136] Gait/Worthington (2007), p.16

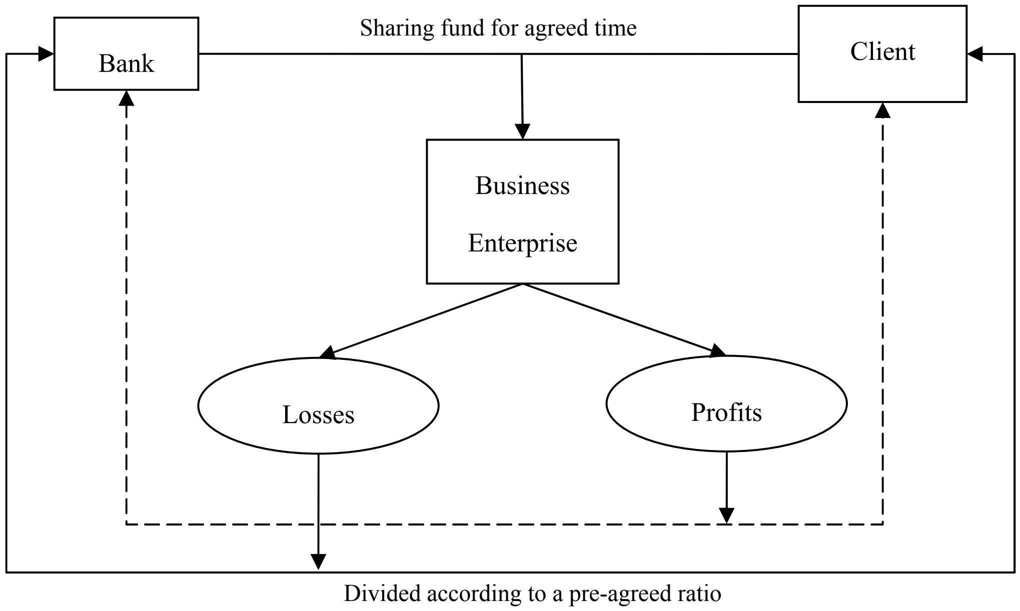

Figure 6. Musharakah transaction between bank and client, (source: Gait/Worthington (2007), p.30)

Mudarabah and musharakah face a high credit risk as there is no security. Additionally, the level of moral hazard and adverse selection is also high.[137] Moral hazard problems in mudarabah arise as the investor has no control or opportunity to observe how funds are managed. He carries the financial losses, but cannot demand the fund manager to put in a certain effort for achieving the necessary returns.[138] The manager can easily take advantage of this situation. In musharakah, this risk can be reduced as all parties participate in the fund with their capital and can manage the fund.

2.7.7 Ijara (leasing)

Ijara means "to give something for rent".[139] Ijara equals the leasing model as applied in conventional finance. The bank or investor (the lessor) buys or possesses the needed item and then leases it to the client (the lessee).[140] The lease time and rental fee is agreed upon before the lease starts. The lessor continues to be the owner of the item. There can be a purchase option at the end of the lease period. The lessor differentiates between two types of ijara: The operating lease or direct leasing finance and the lease purchase.[141] In the direct leasing finance, the item is leased to the borrower for a predetermined period of time. The ownership remains with the lender and cannot be

[137] Khan/Ahmed (2001), p.58

[138] El-Hawary/Grais/Iqbal (2004), p.24

[139] Gait/Worthington (2007), p.19

[140] Tannenbaum (1999), p.4

[141] Usmani (2007), p.3

transferred to the borrower.[142] The lessor is responsible for the insurance of the item. In the lease purchase the lessee promises to buy the item at the end of the lease term. With time, the lessee becomes the owner of the product or the asset. The price is pre-agreed.

In a conventional lease, rate fluctuations, which emerge from using floating rate funds for financing, are included in the rental fees and so passed on to the lessee. This could be seen as interest by Islamic finance, as the rate differs over time. However, the problem can be solved. As the subject of the lease is an asset, not a fund, the return is a rent and not principle interest. The rents and their payment timings should be pre-agreed. Further, the parties could stipulate that the payments may be adjusted over time according to a predetermined basis.[143] These methods may align with some Shariah boards, but others may not clear them.

2.7.8 Quard hassan (benevolent loans)

Quard Hassan stands for a "benevolent loan without interest to assist the needy in an attempt to alleviate hardship".[144] The Shariah forbids charging and receiving interest, but not lending money itself. To lend money without charging interest for it is allowed and also welcomed by Islam, especially in cases where it can help people, for example for education or marriage. It is seen as an interest-free loan over the whole period. However, Gait and Worthington (2007) note that the lender may request assets as security and charge expenses born out of administrative work related with the loan.

2.7.9 Sukuk

2.7.9.1 What is a sukuk?

The word sukuk is derived from the Arabic word "Sakk" and stands for certificate and a participation right in the underlying asset.[145] Since interest is forbidden, sukuk is not a pure debt security, but more an obligation that is related to the performance of a real asset. Therefore, sukuk could be seen as the beneficial ownership of a part of the asset with the risk and return, associated with cash-flows being passed to the investor.

The basis legal vehicle of a sukuk is a contract of intermediation (mudarabah or trust financing). This contract allows one party to act as a manager on behalf of the capital owner for an agreed fee or profit-sharing arrangement. A special entity (Special Purpose mudarabah) has to be created and well defined, because the underlying assets need to be acquired by the Special Purpose mudarabah in accordance with the Shariah.[146]

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[142] Gait/Worthington (2007), p.19

[143] Usmani (2007), p.4

[144] Gait/Worthington (2007), p.20

[145] Iqbal/Tsubota (2006), p.10

[146] Iqbal/Tsubota (2006), p.10

2.7.9.2 Various kinds of sukuk

There are various kinds of sukuks. One of the most common is the salam-based sukuk. Salam-based sukuks are short-term maturity vehicles for commodity financing. Short-term means a range of three months to one year. The main problem with this kind of sukuk is its pure financial security character. Therefore it is somehow unrelated to the underlying asset's risk and return. Thus, Shariah forbids it's trading and the investors have no other choice than to hold it until the certificate's maturity.[147]

Another issue arises with murabaha sukuk. It is commonly accepted that murabaha debts cannot be securitized; because the sale of a document representing only money is forbidden (trading money is prohibited by Shariah). However, Malaysian scholars disagree. According to them, as long as the debt is related to tradable goods, the trading of a murabaha sukuk is allowed.[148]

This problem is solved by ijara-based sukuks. Ijara (leasing) is quite close to a conventional lease contract and offers the flexibility of fixed and floating-rate payoffs. The cash-flows of the lease are passed to investors in form of coupons and principal payments.[149]

Recently, sukuk offerings have started shifting from ijara-based to musharakah- and wakala-based sukuks. This may be explained by a rising demand for leading infrastructures, utilities, and investment companies in this region. One example is the $ 125 million Lagoon City Musharakah Sukuk in Kuwait.[150]

2.7.9.3 The sukuk market

As mentioned in chapter 2.2.4, the overall worth of the Islamic investment market is estimated at $ 750 billion and sukuk is a faster growing piece of this cake. As of May 2006, over $ 41 billion in sukuks have been issued.[151]

A lot of these Sukuks have been issued by governments as in the Gulf States and Malaysia. One of these sovereign Sukuks was issued by the provincial government of Saxony Anhalt in Germany in 2004, which was the first sukuk ever offered by a Western government. This sukuk raised € 100 million from Middle Eastern and European investors. The bond was backed by real estate assets held in a trust organization in the Netherlands.[152] Nevertheless, the majority of the sukuks was corporate, including an $ 800 million sukuk offered by Saudi Arabian petrochemical giant SABIC in 2006.

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[147] Iqbal/Tsubota (2006), p.10

[148] Abdel-Khaleq/Richardson (2007), p.412

[149] Iqbal/Tsubota (2006), p.10

[150] Abdel-Khaleq/Richardson (2007), p.414.

[151] Abdel-Khaleq/Richardson (2007), p.413

[152] Abdel-Khaleq/Richardson (2007), p.413

Finally, the sukuk even arrived in the United States of America. Oil and gas assets in the Gulf of Mexico backed a $ 165 million sukuk in July 2006. These deals, especially in the Non-Islamic countries, may further push the spread of the sukuk market all over the world.

2.7.9.4 Sukuk in Islamic countries

A good example is the sukuk security issued by the Bahrain Monetary Agency in 2001, worth $ 25 million. Although the countries in the Gulf region were issuing conventional bonds for years, these bonds failed to raise funds directly from the public. Further, since the governments issued bonds that were held by the commercial banks up to maturity, the liquidity of bank assets got restricted.[153]

The sukuk solved this problem by offering a fixed return based on the true value of the investment, instead of an interest rate.

2.7.9.5 Sukuks in Non-Islamic countries

Even though there are some advents in Non-Islamic countries, sukuks face several additional challenges outside the Muslim world. The legal and regulatory environment was not originally made for Islamic finance instruments.

As described, it is forbidden to trade with companies involved in prohibited activities, such as gambling or alcohol. Thus, sukuks must not be backed by such companies. Whereas it may be easier in an Islamic country to distinguish between companies, compliant with Shariah and those that are not. In a Non-Islamic environment this determination is much more difficult.

Furthermore, an issuer is not allowed to have a too high debt load or to provide conventional financial services, because of the prohibition of Riba. Thus, a sukuk issued by a Western company requires a financial analysis of existing leverage and debt ratio. Many legal and practical issues arise when Sukuks' offerings are centered outside the Islamic world:[154]

- Tax planning and legal analysis of tax implication: The complicated structure of a sukuk offered in a Non-Islamic country may trigger attempts to overcome the challenge of developing a tax efficient structure compliant with Shariah.
- Bankruptcy considerations: Since insolvency laws differ widely among countries, a careful evaluation of the country's rules where the asset is located is essential. It needs to be emphasized, that the sukuk transaction creates an undivided beneficial ownership interest for the sukuk holder. Thus,

[153] Wilson (2006), p.52f.

[154] Abdel-Khaleq/Richardson (2007), p.417ff.

the sukuk creditors of the sukuk holder do not have any recourse to any asset of the issuer, other than the trust asset.

- Investment laws: Investment laws often hinder innovation. For example, foreign ownership limitations and high ownership transfer taxes may hinder the true sale of an asset in an ijara-based sukuk.
- Security laws: In the U.S. especially, there are strict and complicated laws concerning security trading (e.g. Security Act of 1933). Parties of a sukuk must be aware of all restrictions on advertising, press releases and other interactions with the public.

This listing is not at all exhaustive. Specialized legal advice must be sought to identify other legal issues. However, not only legal issues may be relevant: Language, sensitivity to religion, and regional approaches may disturb a smooth flow of business. Thus, it may be advisable to consult people who are familiar with conducting business in Non-Islamic/Islamic countries. Various international and Middle Eastern banks act as managers and agents between these two different worlds.[155]

As stated by Abdel-Khaleq and Richardson (2007), and despite all problems and challenges, Sukuks are spreading all over the world, like the previously mentioned Sukuks in Germany and the U.S. The latter was offered by the East Cameron Gas Company in July 2006 and is worth $ 165.7 million. Great effort had to be made to meet Shariah requirements as well as tax, bankruptcy, corporate, and security laws of many Non-Islamic jurisdictions. The sukuk was Shariah-compliant because the raised fund was used as capital to cover operating costs at drilling and operating wells in the Gulf of Mexico for a Texas-based oil and gas company. Further, it eliminated most of the outstanding conventional debts and created a debt-equity ratio that was acceptable for Shariah scholars.

The sukuk's success is also emphasized because of the fact that both, Islamic and Non-Islamic investors purchased it. At the same time, by choosing a sukuk instead of a conventional financial instrument, the fund gained access to a broader source of liquid money: the Muslim investors.

2.7.10 Sale and buy back agreement

The Sale and buy back agreement is basically a variation of repurchase agreements (repos). In contrast to their conventional alternatives, Sale and buy back agreements are not the trade of money – which is strictly forbidden under the Shariah law – but the sale and purchase of an asset.

Dali and Ismail (2006) stated that sale and buy back agreements are often used by banks to manage their liquidity by selling the general Islamic investment or general Islamic

[155] Abdel-Khaleq/Richardson (2007), p.420

certificates and other approved securities to get cash for liquidity reasons. It is an Islamic repurchase agreement transaction, whereby the seller sells Islamic securities at a certain price to the buyer. Afterwards, the buyer and the seller agree on a contract, with the buyer promising to sell the asset to the seller at a specified future date for an agreed price.

2.7.11 Islamic accepted bills

By accepting a draft, one party promises the other to pay the holder of that draft an agreed amount of money at a specific date. It is usually issued to finance the shipment or temporary storage of foods. For banks, it is mainly a substitution of its own credit. In the process, Islamic accepted bills are negotiable instruments that are allowed to be freely traded.[156]

The Bank Islam gives a practical example, offering two different kinds of Islamic accepted bills: Import and export. Islamic accepted bill import means capital financing based on murabaha. The customer accepts a bill of exchange drawn by the bank, which is an Islamic accepted bill that can be traded on a secondary market.

The Islamic accepted bill export is a short-term financing facility whereby the customer sells his right to a debt to the bank which is securitized as a bill of exchange. A person that wishes to avail him of this facility is called the exporter. He prepares export documents as required under the sale contract. These documents will be presented to the bank for purchasing. The export documents are sent to the buyer overseas and the bank requests the exporter to draw another bill of exchange drawn on the bank. This Islamic accepted bill export can then be traded in the secondary market. [157]

2.7.12 Government investment issues

This instrument is tailored to a government's need to get money. They are liquefiable assets for financial institutions and thus can be traded in the secondary market. In the case of Malaysia for example, government investment issues were created for Islamic banks to fulfill their liquidity needs. [158]

2.7.13 Islamic treasury bills

Treasury bills usually have maturities of three, six and twelve months and are sold at a discount by the government or central bank to cope with short-term deficits – the investor buys it for less than its face value.[159] If the investor wants to sell before

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[156] Dali/Ismail (2006), p.196

[157] Obaidullah (2005), p.108

[158] Dali/Ismail (2006), p.198

[159] Hrvoľová (2002), p28

maturity, he at least gets the value paid. The new investor pays this discount value and gets the difference to the face value as interest. This is strictly forbidden under Shariah.

In the Islamic version of treasury bills, mudarabah bonds are issued in a way, allowing the government to collect the proceedings from banks within short-term liquidity. Doing this on a regular basis secures a constant cash flow of funds. The government's investment activities need to be carefully studied to guarantee liquidation within the specific period.[160]

2.7.14 Islamic negotiable certificates of deposit

Dali and Ismail (2006) stated that conventional negotiable certificates of deposit are forbidden under Shariah because of the payment of interest. There are two types of Islamic counterparts: Islamic negotiable instruments of deposit and negotiable Islamic debt certificates.

Islamic negotiable instruments of deposit refer to a sum of money deposited in an Islamic banking institution. It is supposed to be repaid on a specific future date at the nominal value plus a declared dividend.

The negotiable Islamic debt certificates work as follows: The bank sells an asset to the customer at an agreed price. After that, the asset is re-sold at the principal value plus profit and settled at an agreed future date.

2.7.15 Islamic private debt securities

A bank may issue Islamic Bonds or commercial paper to finance projects and business activities. These bonds are based on Shariah law of Bai Bithaman Ajil, murabaha and al mudarabah.[161] Especially in Malaysia a high-growth Islamic private debt securities market has emerged[162] which is now even larger than the local government bond market.[163]

2.7.16 Al rahnu agreement-I

The lender will provide a loan to the borrower based on quard hassan. The borrower will pledge securities as collateral. If the borrower is unable to repay the loan on maturity date, the lender has the right to sell the pledged securities to settle the loan. Surplus money from the sold securities will be returned to the borrower.[164]

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[160] Dali/Ismail (2006), p.198

[161] Dali/Ismail (2006), p.200

[162] Obaidullah (2005), p.218

[163] Ma/Remolona/Jianxiong (2006), p.1

[164] Dali/Ismail (2006), p.200

2.8 Principles of Islamic financing techniques

Islamic financing techniques are based on five basic modes of financing:[165]

- Mudarabah
- Musharakah
- Ijara
- Bai salam
- Murabaha

Further developed techniques are based on or have evolved out of these modes of financing either in a direct or indirect way. For better understanding of Islamic financing techniques, Khan (1991) differentiated these modes according to five dimensions to distinguish their features:

- Nature of financing
- Role of the investor in the management and use of funds
- Risk bearing by the investor
- Uncertainty of the rate of return on capital for the investor
- Cost of capital for the fund manager/finance user
- Relationship between the cost of capital and the rate of return on capital

This categorization shall be taken as example for further discussion and for better comprehension and to gain insight into financing techniques in Islamic finance.

2.8.1 Nature of financing

First of all, it is necessary to understand the nature of the financing involved in each technique. Khan (1991) distinguishes between debt creating and non-debt creating modes. In a debt creating mode, a debt burden on the finance user exists independent of the profits and benefits created by the fund. In a non-debt creating mode, the debt burden does not exist. The finance user pays according to the profits generated.[166] According to Khan (1991), the five modes can be seen as follows:

- Bai salam and mark-up based mode: Bai salam and mark-up based modes are seen as debt creating modes as their financing is similar to that of a debt. It is agreed upon in advance that the borrower is committed to pay back the whole amount or commodity, as in case of bai salam, and how the payment is to be made. Thus, from the borrower's perspective, the situation equals a debt.

[165] Khan (1991), p.3

[166] Khan (1991), p.4

- o Mudarabah and musharakah: These two financing techniques are non-debt creating modes. The finance user or fund manager must not repay the whole amount, but only the cost of capital generated by the profit or loss out of the investment.
- o Ijara: Ijara can also be seen as a non-debt creating mode. The borrower pays a fixed rent which may only account for a small part of the total value of the asset.

2.8.2 Role of the investor in the management and use of funds

Another consideration in financing techniques is the control the investor has over the use of his investment. Khan (1991) describes it as follows for the five financing modes:[167]

- o Bai salam: The investor has no control over the management of the funds. As soon as the fund manager receives the investment, he can use it according to his knowledge and perspective.
- o Mudarabah: Even in mudarabah, the investor has no control over and no right to participate in the management of the funds. The investor must not participate in the management of the firm, in which the fund invested.
- o Musharakah: Here, the investor has the opportunity to participate in the fund management.
- o Mark-up and ijara: Both mark-up and ijara (leasing) provide full control for the fund management, as the funds are applied by the investor himself.

2.8.3 Risk bearing by the investor

In Islamic finance the risk is not only carried by the borrower or fund manager, but by the lender or investor. If an investor agrees to participate in any of the financing modes, he must carry the risk that he may lose all of his capital. Khan (1991) clarifies the risk in the five financing modes the following way:[168]

- o Mudarabah: Here, the whole investment is at risk. The investor carries all the risk for the financial loss of the invested firm. Thus, while the investment project is not completed and the investment is not recovered, it remains at risk.
- o Musharakah: Just like in mudarabah, the investment in musharakah is also at risk, but the investor only carries the risk of the financial loss of his share. So

[167] Khan (1991), p.4

[168] Khan (1991), p.4f

his investment still stays at risk over the whole period of the investment project.

- Ijara: In ijara, there is almost the same situation. The capital is at risk, because its owner carries all the risks of the asset's life. So the capital remains at risk until the completion of the asset's productive life.
- Bai salam: Here the risk is created, as the future prices of the involved commodities are unknown and uncertain.
- Mark-up based financing: The investor does not carry as much risk as in the other financing modes. He carries the risk only until the manager takes over the goods, not until he receives the capital back. After the transaction, the manager is the sole risk carrier. There are two main reasons, that explain why the investor carries a minimum risk:[169]
  - First of all, the investor does not carry the risk until the end of the agreed period in the contract. As mentioned, he only carries the risk during the spot sale and until the point when he hands over the goods to the finance user. Then the risk is carried by the finance user up until the end of the period according to the contract. In this period, the pre-agreed amount including the mark-up is seen as a debt and is risk-free.
  - Secondly, for mark-up based financing, only the current prices of the goods involved are relevant for calculating the financing and return on it. In all other techniques, some forecasting of future developments is necessary. Like in bai salam it is necessary to forecast future market prices for leasing the productive life of the asset and in mudarabah and musharakah the profitability of the company in which the investment shall be made.

2.8.4 Uncertainty of the rate of return on capital for the investor

As seen above, all financing modes include some sort of risk. An often made mistake is to believe that techniques like mark-up, ijara or bai salam are fixed return techniques. The reason for this misunderstanding is to think that the amount charged is the rate of return on capital, which it is not. The investor faces the risk of loss in all techniques. Khan (1991) goes through each technique:

- Mark-up: The risk is attached to the period until the goods are handed over to the finance user. In this period, the goods could be damaged, for example during the transport or due to weather conditions. The investor also carries the risk that the goods may not meet the expectations of the finance user in terms of quality and other factors, meaning he may not accept the goods. So

[169] Khan (1991), p.5

the rate of return cannot be determined until the goods are finally accepted by the finance user.

- Bai salam: In bai salam financing, the delivery of the goods and their sale in the market by the client have an impact on the determination of the return rate. Price, quality and quantity of the goods to be delivered are agreed upon in advance. The final rate of return depends on "the actual prices at the time of disposing of the goods compared with the prices paid for the goods and on the cost incurred in disposing of the goods".[170]
- Ijara: There are two main reasons why a rent on an asset cannot be a rate of return:
  - The total life of the asset is uncertain. Profits from the asset can only be generated during its productive life. The owner also does not know how much he would get if he sells the asset at any point during its productive life.
  - The lease duration of the asset's productive life remains uncertain. When the contract with one lessee ends, there is no assurance or guarantee of how long it will take to find the next one and what the rent will be. Until the next lease, it does not generate any rent. If the last lessee decides to continue, he still could demand changes in the lease contract.
- Mudarabah and musharakah: The risk concerns mainly the finance user. In mudarabah, the investor has only a little role besides financing. In musharakah it could be a secondary role while trying to control the risk of loss.

2.8.5 Cost of capital for the fund manager/finance user

The cost of capital is "the amount that the finance user ends up paying to the finance owner over and above the original finance obtained".[171] For the financing modes, Khan (1991) states it as follows:

- Mudarabah, musharakah and bai salam: For these modes the cost of capital is uncertain until the contract is completed.
- Ijara/mark-up: The cost of capital is pre-agreed and fixed. This means that though the rate of return may be uncertain, it is possible to predetermine and fix the cost of capital, at least in ijara and mark-up modes.

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[170] Khan (1991), p.6

[171] Khan (1991), p.7

2.8.6 Relationship between cost of capital and the rate of return on capital

The relationship between cost of capital and the rate of return on capital is seen by Khan (1991) as follows:[172]

- Mudarabah and musharakah: The cost of capital is equal with the rate of return.
- Ijara and mark-up: The cost of capital and rate of return are different as the costs are pre-agreed and fixed in advance.
- Bai salam: The cost of capital and rate of return are different. The rate of return for the finance owner depends on the price for which he can sell the goods minus any marketing cost. This may not be equal to the cost the finance user pays and may also be independent from it.

Table 1 summarizes the five financing techniques with their features.

			Techniques		
Techniques	**Mudarabah**	**Musharakah**	**Ijara**	**Bai salam**	**Murabaha (mark-up)**
Features					
Nature of financing	Investment based	Investment based	Leasing based	Combination of debt and trading	Combination of debt and trading
Role of the capital provider in the management of funds	Nil	Full control	Full control over the use of the finance	Nil	Full control over the use of the finance
Risk bearing by the capital provider	i) To the full extent of the capital as well as of the opportunity cost of capital ii) For the entire period of the contract	Same as in mudarabah	i) To the full extent of the capital as well as of the opportunity cost of capital ii) Until the asset completes its life or is finally disposed of	i) To the full extent of the capital as well as of the opportunity cost of capital ii) Even after the expiry of the contract until the goods are finally disposed of	i) To the full extent of the capital ii) Only for a short period until the goods are purchased and taken over by the finance user
Uncertainty of rate of return	Complete uncertainty	Complete uncertainty	Complete uncertainty	Complete uncertainty	Uncertainty only for a short period of the contract

[172] Khan (1991), p.8

Cost of capital	Uncertain ex-ante	Uncertain ex-ante	Fixed and predetermined	Uncertain ex-ante	Fixed and predetermined
Relationship between the cost of capital and the rate of return on capital	Perfect correlation	Perfect correlation	Week correlation	No correlation	Strong correlation but not perfect

Table 1: Comparative Features of Islamic Financing Techniques (source: Khan (1991), p.9)

2.9 Types of Islamic investment funds

The term Islamic investment fund perfectly describes the discussion lead until now. An investment fund basically summarizes a joint pool wherein the investors contribute their surplus money for the purpose of its investment to earn profits.[173] An Islamic investment is an investment in financial services and other investment products, which adhere to the principles of Shariah.[174] An Islamic investment fund further means, that these profits are compliant with Shariah and thus represent halal profits. Additionally, the fund needs to be managed according to Shariah law.

The subscriber of the fund usually receives a certificate, share, unit or any other type of document that confirms the subscription and entitles the subscriber to the pro-rata profits. The document described is subject to the following two conditions:[175]

1. The subscriber earns pro-rata profits actually earned by the fund. Neither a principle nor a rate of profit can be guaranteed – the subscription is completely dependent on the profit or loss of the fund. Thus the subscriber is tied to the loss as well.
2. The amounts pooled together need to be invested in Shariah compliant assets.

Nevertheless, Islamic investors could invest in individual assets without any funds. Above all advantages that apply to conventional funds as well, Islamic investment Funds ease the life of an Islamic investor in several ways:

- Search costs are high for Islamic investors since they need to search for Shariah compliant assets. Islamic investment Funds will decrease these search costs for the individual investor.
- Skills are needed to analyze all the information provided by companies to determine whether their activities are compliant with Shariah or not. An individual investor may not have these skills.

[173] Usmani (2007), p.2

[174] Abdullah/Hassan/Mohamad (2007), p.143

[175] Usmani (2007). p.2

- Large investors may have the financial resources to consult Shariah advisors, but they may be conflicting and confuse the investor. An Islamic investment fund is approved by Shariah scholars and thus is always Shariah compliant.[176]

The following types of Islamic investment funds exist:

- Equity funds / mutual funds
- Hedge funds
- Ijara funds
- Commodity funds
- Murabaha funds
- Bai'-al-dain funds
- Mixed funds

All these funds are characterized by different investment modes, challenges and opportunities and shall be described in more detail in the following chapters.

2.9.1 Islamic equity funds

2.9.1.1 Characteristics of Islamic equity funds and difference to conventional counterparts

The characteristics of Islamic equity funds are mainly based on the Shariah principles of Islamic investment funds. As discussed in chapter 2.5.1, the amounts pooled together in an equity fund are invested in the shares of joint stock companies. Profits are earned through capital gains by purchasing shares and selling them at an increased price. Additionally, the investors earn dividends by the respective companies.

The differences between conventional equity funds and Islamic equity funds are:

1. The company invested in, must only be engaged in halal businesses.
2. The company invested in, must not be financed on an interest basis.
3. The investor must give the proportion of his income from interest-bearing accounts in charity.
4. The company's shares are only tradable if the company owns a certain amount of liquid assets.

Some of these issues have been discussed above in more detail. Just to summarize the facts: It is necessary that the main business of the companies invested in are halal, which excludes businesses like cigarettes and firearms – a characteristic that is shared with other ethical funds (see chapter 4.3.1.1 for more detail).

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[176] Wilson (2002), p.5

A further important point is the absence of interest-bearing finance or investment activities of the respective companies. Since the use of interest is forbidden under the Shariah law and because investors are shariks (partners) of the respective company, they are not allowed to invest in enterprises using interest. Only if that applies, a company's shares can be purchased, held and sold. Such enterprises are hard to find in the stock market.[177]

However, there are exceptions to this rule and some scholars have a different view of the interest bearing issue. They say when a company decides to keep surpluses from interest bearing accounts and one investor is overruled by the majority of the stakeholders, he is allowed to buy, hold and sell the shares, if he does not keep the surplus coming from interest for his own benefit.

This is also true when the company is borrowing money. The mere fact that the company borrows money on the basis of interest does not render the whole business as unlawful.[178] Thus, if the investor receives dividends, he must give the proportion of his profits that are gained through interests to charity in order to "purify" his earnings. This is quite simple in the case of dividends.

Unfortunately, simplicity disappears in the case of capital gains. There are many schools of thought arguing pro and contra a purification of profits made through capital gains. Usmani (2007a) suggests that it would be far from satisfactory if purification was made on dividends and capital gains. Either way, before the fund is launched, it is necessary to determine how purification will be achieved. Advice from a Shariah Council may be helpful.

Another issue that should be discussed in more detail is the tradability of a security. The common law is that the company whose shares are tradable owns a certain amount of illiquid assets to a certain extend. This law is derived from the forbidden act of trading money. The term in question here is "certain amount". There exist three schools of thought about what the certain amount is.

1. The juristic principle says: "The majority deserves to be treated as the whole of a thing". Therefore some scholars believe that the shares of a company can be traded freely, if the ratio of illiquid assets is at least 51%.
2. Some scholars interpret this rule more loosely. They state that even a percentage of 33% illiquid assets is enough.
3. The third view is based on Hanafi jurisprudence. It says that any share can be traded if the illiquid part is not an ignorable quantity. Further, the price of the share needs to be higher than the value of its liquid assets. The latter one is more

[177] Usmani (2007), p.2

[178] Usmani (2007), p.3f.

theoretical, since it is hard to imagine a situation in which the price of a share is lower than its liquid assets.[179]

2.9.1.2 Islamic mutual funds

The financial assets held by high net worth from the Gulf States are estimated to be $900 billion, thus suggesting an enormous potential for expanding the business of Islamic Mutual Funds.[180]

Mutual funds are pooled funds in which the buying and selling price of the units are directly related to the prices of the underlying stock. They are created by asset management companies, which pooling savings from retail and institutional investors. The asset is especially interesting for individuals looking for liquidity, portfolio diversification and investment expertise. Mutual funds represent an alternative to saving accounts. They are more risky than a saving account, but less risky than investing in individual securities.[181]

The advantages of a mutual fund for any investor are:

- Lower transaction costs due to large transactions.
- Broader portfolio diversification.
- Participation in assets that is not available in the open market.
- Professional portfolio management.[182]

Thus, mutual funds seem to be most attractive to investors with limited financial resources.

As pointed out before, the number of Islamic investment funds has increased over the past years. In 2000 about 102 funds worth $ 1.5 to $ 2 billion were managed by an Islamic mutual fund.[183]

Mutual funds seem especially suited for Shariah compliant investors because of two characteristics of mutual funds:

- There is a link between the performances of the underlying investments.
- Profit and loss of the fund are dependent on the profit and loss of the underlying investments and thus compliant with Shariah's profit sharing.

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[179] Usmani (2007), p.4f.

[180] Wilson (2002), p.1

[181] Wilson (2002), p.2f.

[182] Wilson (2002), p.3

[183] Wilson (2002), p.1

Nevertheless, the Shariah prohibits some investment vehicles. Islamic mutual fund managers do have some limitations, but also some great opportunities to gain profits through appropriate investments.

The limitations of Islamic mutual funds are mainly in the selection of stocks that have to be Shariah compliant. Therefore, they are unable to invest in banking stocks and are solely dependent on the equity market since there is no money market in an Islamic economy.[184]

These restrictions do not apply to conventional unit trust funds. Here the question arises, whether these funds outperform Islamic mutual funds, since they are not limited in the stock selection.

Abdullah, Hassan and Mohammad (2007) studied this question in Malaysia and found some surprising results. They showed that Islamic mutual funds and conventional mutual funds are below the average return of the KLCI (Kuala, Lumpur Composite Index taken as a market proxy) on a non-risk adjusted basis suggesting that returns of mutual funds, Islamic or not, are lower than market returns. However, Islamic mutual funds outperform conventional non-government funds. Government funds surpass both, Islamic mutual and non-governmental funds, as they are closely monitored and backed by the government.

They made an interesting finding on a risk-adjusted, average monthly return basis. Although conventional mutual funds perform better than Islamic mutual funds, during the crisis in Malaysia in 1997, Islamic mutual funds outperformed the conventional funds. Abdullah, Hassan and Mohammad (2007) explained it as follows: Islamic funds are limited in their choice compared to conventional funds, which are able to invest in high risk stocks. Thus they perform better than Islamic funds by taking advantage of high risk, high return stocks. However, these stocks were at high risk during the crisis period. Islamic mutual funds consist of stocks with low risk, are less volatile and will not lose too much and thus outperform conventional funds.

Islamic mutual funds have a lower market return (also called beta-factor) than conventional funds, suggesting that they are less sensitive to changes in the market when compared to conventional funds. This may be conclusive, since they are restricted to Shariah-compliant stocks. They also have a lower standard deviation than conventional funds. In terms of risk per return, Islamic mutual funds have a lower value than conventional funds. Thus it seems reasonable to argue that Islamic mutual funds bear less risk than conventional funds.[185]

On the other hand, conventional funds have a higher degree of diversification than Islamic mutual funds, as they do not have many restrictions in terms of their choice.

[184] Abdullah/Hassan/Mohamad (2007), p.143

[185] Abdullah/Hassan/Mohammad (2007), p.150

However, these results were not statistically significant in the study of Abdullah, Hassan and Mohammad (2007).

To summarize it, Islamic mutual funds outperform their conventional counterparts during a critical period and may be a good way to diversify one portfolio to hedge some of the risk during crisis periods and economic slowdowns.

2.9.2 Ijara funds

Ijara funds are basically Shariah compliant leasing funds. Ijara has been discussed in more detail in a previous chapter and should not be explained in more detail now. However, ijara funds are characterized by several differences to conventional leasing funds:

1. The leased assets must have some usufruct and rentals can only be charged at the time when the usufruct is handed over.
2. The leased asset must be halal.
3. The fund holds all responsibilities following its ownership of the asset.
4. The rental must be fixed and known to the parties at the beginning of the contract.[186]

In the ijara fund however, the subscription amounts are used to buy assets like motor vehicles, real estates and other assets for the purpose of leasing. The fund remains the owner of the asset and the user of the goods is charged for the rental. These rentals are the income for the fund.[187]

Each subscriber to the fund has a proportionate ownership of the assets and the income is distributed among them at a pre-fixed rate. This ownership is declared via an ijara sukuk (also see chapter 2.7.9). Since these Sukuks are only based on assets, they are freely tradable and do not have the same problems as equity funds.

Obaidullah (2005) explains an ijara sukuk as follows: It can be freely bought, held and sold. The buyer of the sukuk obtains the same pro rata ownership of the assets and all rights and obligations of the original holder. The price of the sukuk is determined on the basis of market forces which are normally based on profitability.

2.9.3 Islamic commodity funds

Islamic commodity funds are based on the bai salam contract, as described in chapter 2.7.3. In a commodity fund, the funds raised by the subscribers are used to buy different commodities for the purpose of their resale. The income of the fund comes from the profits generated by the resale and is distributed pro rata among subscribers.

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[186] Usmani (2007), p.7

[187] Obaidullah (2005), p.213

There are five rules for a commodity fund to be Shariah-compliant:

1. The commodity must be owned by the seller at the time of the sale (short sales are forbidden under the Shariah law).
2. The seller must have physical or constructive possession over the commodity.
3. Forward sales are forbidden except for the case of salam and istisna.
4. The commodities need to be halal.
5. The price of the commodity must be fixed and known to the parties.[188]

2.9.4 Murabaha funds

As described in chapter 2.7.1, in a murabaha contract goods are sold on a cost-plus basis. This contract has been adapted by Islamic financial institutions to provide a Shariah compliant mode of financing: The bank purchases the asset for the client and sells it to him on the basis of deferred payment at an agreed margin added to the cost.

In the case of a murabaha fund, the fund raised from the subscribers is used to buy commodities and then is immediately sold to the client. Thus, the ownership of the asset is passed to the client and a debt payment payable by the client is created. This is an important difference to ijara funds in which the fund remains the possessor of the leased good. Since the fund does not own any tangible asset, but only debt payments, units of the funds cannot be traded under the Shariah law.[189]

2.9.5 Bai-al-dain

Usmani (2007a) discussed bai-al-dain. It is questionable whether bai-al-dain is allowed under the Shariah or not. This contract is a kind of a sale of debts, where a person with a debt receivable from another person seeks to sell it at a discount. The majority of the Muslims believe that this contract is forbidden. This directly refers to the prohibition of riba under which it is forbidden to exchange money for the same denomination of money, but at another value (which is simply interest – see chapter 2.3.1.1).

Nevertheless, some scholars, specifically in Malaysia, depart from this traditional view. They argue that the debt is a direct consequence of the sale of a commodity. In this case, the debt represents the sold commodity and its sale may be taken as the sale of the commodity.

[188] Usmani (2007), p.7f.

[189] Obaidullah (2005), p.212

2.9.6 Mixed funds

If an Islamic fund consists of several types of investments – for example in equity, ijara, commodities, and so on – it is called a mixed fund. Rules applied to other funds are also true for the mixed funds.

For example, the units of an Islamic mixed fund can only be traded, if more than 51% of the assets held by the fund are tangible. Otherwise the fund is a close-end fund and units cannot be traded.[190]

2.9.7 Islamic investment funds companies

A great example of an Islamic investment fund provider is the Al-Tawfeek Company for investment Funds Ltd. The Al-Tawfeek company is a subsidiary of the Dallah Al-Baraka Group, a large Saudi conglomerate that was formed in 1969 by Sheikh Saleh Kamel and is now a multinational enterprise with over 300 operating companies. The Al-Tawfeek Company is an international leader in creating Islamic investment funds. It has launched 14 investment funds of different asset classes, specializing in medium to long-term financing of early stage companies and infrastructure projects, equity participation in listed and unlisted businesses and real estate development. Its assets under management are more than $1 billion[191] (see figure 7 for more information).

Al-Tawfeek provides asset management and investment banking services to individuals and institutions. To meet the need of various market sectors and different investor categories the company designed open and close end funds and private placements. The distribution of the mode of finance shows that they have a focus on equity participation, lease and murabaha funds, which form almost 75% of their investment portfolio.

[190] Usmani (2007a), p.9

[191] Kahn (2001), p.2

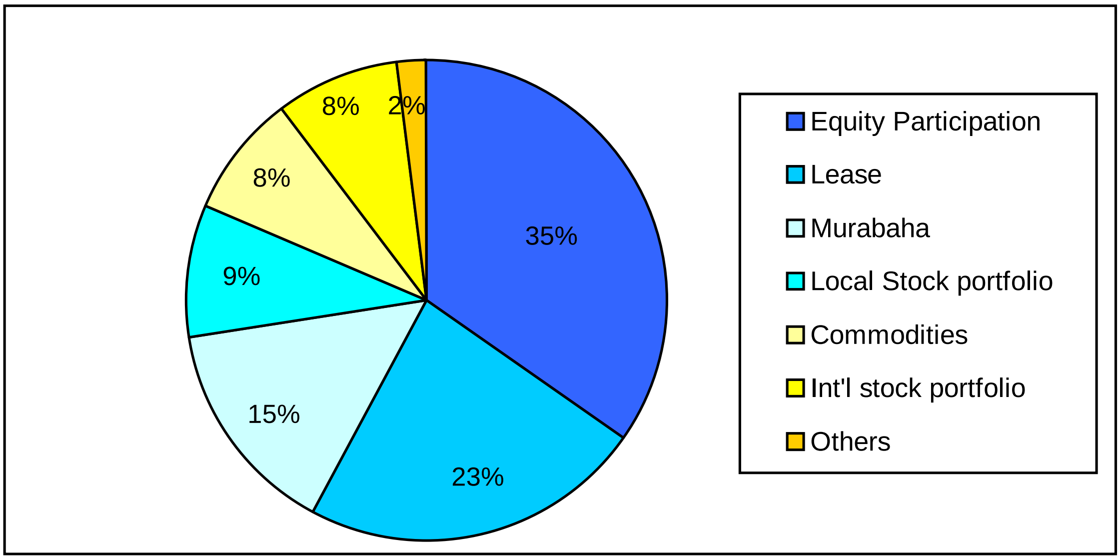

Figure 7. Al-Tawfeek's fund distribution by mode of finance (source: Kahn (2001), p.4)

Their Islamic investment fund activities are concentrated in Saudi Arabia, Turkey and Bahrain, but they are also active in the USA and UK.

Since 1992, Al-Tawfeek has launched 14 Islamic investment funds with an aggregate issued capital of more than $ 1 billion. The three most important funds are:

- Al-Baraka general fund: This fund invests in various economic sectors in the G.C.C. countries and tries to support the application of Islamic economic principles. It uses ijara, musharakah, murabaha, istisna and mudarabah as investment vehicles.
- International leasing fund: By investing in diversified financial leases of capital assets in the medium term, the fund seeks to provide attractive returns with average risk. In the period of 03/2000 – 01/2001 it showed an ROI of 6.30%
- Al-Sukoor European equity fund: This fund invests in equities that are traded on recognized markets of countries included in the Morgan Stanley International European Index – within the limitations provided under the Shariah. The objective is to outperform the designated benchmark on a risk adjusted basis. It tries to provide a high degree of international diversification to Islamic investors.[192]

2.10 Islamic investment fund databases and indexes

The Islamic investment industry has experienced a tremendous growth in the last 20 years. In response to this fact, the largest stock exchanges introduced indexes that track

[192] Kahn (2001), p.7ff.

the stocks of Shariah compliant corporations. The most important index regarding Islamic investments is the Dow Jones Islamic Index (DJI).

The DJI is the first Islamic equity benchmark index created by an independent provider and was launched in 1999. The Dow Jones now plans regional and sectorial Islamic market indexes. They should enable more specialized Islamic investment funds to have an appropriate standard against which performance can be evaluated.[193]

The DJI is a low-debt, non-financial, social-ethical index in a broad sense. Three screenings are necessary to become part of the DJI:

1. The primary business needs to be halal.
2. The equity must fulfill special financial requirements:
    a. The debt ratio must not exceed 33%.
    b. Accounts receivable to total assets must remain below 45%.
    c. Interest income should represent less than 5% of total revenue.
3. If these limits are exceeded, the equity will be removed.[194]

Compared with the Wilshire 5000 – the conventional counterpart to the DJI – the Islamic index identifies unique risk-return characteristics with a risk profile significantly different from the Wilshire 5000. Further, there was no link found between the DJI and the Wilshire 5000. It seems that the Islamic index is influenced by factors independent from the Wilshire 5000.[195]

Once again, the findings described above are also applicable for Islamic indexes:

- Due to the exclusion of risky stocks, Islamic indexes are less risky than their counterparts.
- Due to the restrictive selection, Islamic indexes are less dependent on the overall market.

Another study was done by Girard and Hassan (2005) who support this result: Traditional performance measures show that Islamic indexes outperform conventional counterparts. They also appear to be less risky while being less correlated than conventional indexes. This results in a small beta. Girard and Hassan (2005) based these findings on the fact that Islamic indexes are more exposed to small caps than conventional ones.

[193] Wilson (2002), p.7

[194] Hakim/Rashidian (2002).p.3f.

[195] Hakim/Rashidian (2002).p.5ff.

3 Hedge funds

3.1 What are hedge funds?

There is no clear-cut definition for hedge funds to be found in literature. The Commodity Trading Commission (CFTC), which regulates the future market in the USA offers a definition of the term “hedging” on their website:

“Hedging: Taking a position in a futures market opposite to a position held in the cash market to minimize the risk of financial loss from an adverse price change…”.

Hedging means to ensure or provide security. By hedging you try to lower your losses, which may occur through unfavorable market and price trends. A hedger is a person who takes one position in a cash market and “hedges” himself against losses or adverse market trends through a complementary position on a future market. Because of the risk coverage, finance instruments are developed.

At a closer look, the term “hedge funds” may be deceptive as the aim is not to provide security, but to separate the risk into partial risks and consciously take them on.

In general, hedge funds describe investment opportunities with the aim of creating profits by exploiting market imperfections. In the international financial markets, a variety of different strategies and instruments is being used. For hedge funds, the alpha factor is more important than for other funds. The alpha factor defines the added value by the aptitude of the Manager who is investing or trading. It describes the additional return achieved beyond the performance of the underlying market segment. The value added yields through the ability of the manager to correctly estimate price abnormalities. In a diversified portfolio, the return equals the market return (beta-factor) plus or minus the manager-specific return (alpha factor). The alpha factor is independent from the beta-factor. The difference between the results of a manager and the index is called the performance dispersion.[196]

The name “hedge funds” was created by the journalist Carol Loomis in the late 1940s to describe an innovative investment structure that was used for the first time by Alfred Winslow Jones. This new structure was defined by a market neutral position, a special due structure and a high proprietary investment by the fund manager. The fund he established had the following features:[197]

- He invested in securities and set up “hedges”. He chose those securities that according to him were undervalued. He then funded these positions by taking

[196] Bernstein (2006), p.8

[197] Koh/Koh/Lee/Phoon (2004), p.4

short positions in overvalued securities and so created a “market neutral” position.

- o Then he turned to compensation by designing an incentive fee compensation arrangement, through which he received a percentage of the profits from his clients´ assets.
- o Finally, he invested his own capital in the fund to prove his motivation and also to motivate his clients. Through this, an “investment partnership” was built.

Alfred Winslow Jones tried to optimize the return of his traditional portfolio through short sales and borrowing dept capital. Through the short sales he also benefited from declining share prices and became independent from general market development. By investing in borrowing debt capital, he achieved a leverage effect, as he could apply much more capital than he had equity.

Most of today’s hedge funds include those features and are built on the agreement of a “limited partnership with lucrative incentive-fee structure”.[198] Also, managers often invest significant portions of their own capital.

With time, the term “hedge fund” was generalized and not limited to the name giving strategy anymore. It describes investment strategies including the “market-neutral” style of Jones as well as many other strategies and opportunistic situations, as described in chapter 3.3.[199]

3.1.1 Historic and future development

Hedge funds gained popularity in the 1960s when Jones generated a significantly higher return than with traditional investment funds. In 1986 a hedge fund’s value increased by 750% in only six years.

However, there also has been turbulence on the hedge funds’ flight to the top. One useful example is the Long Term Capital Management (LTCM) hedge fund. The LTCM was founded in 1994 by John Meriwether. The fund was managed by a team of 16 general partners, consisting of the “who’s who in fixed income trading”, for example Myron Scholes and Robert C. Merton who shared the 1997 Nobel Memorial Prize in economics. The LTCM began trading with an investors’ capital of $ 1.3 billion and was initially very successful with annualized returns of over 40% in its first years.

The LTCM started to exploit short-term pricing discrepancies in nearly identical securities by using convergence and relative value trading strategies. The LTCM held government stocks, corporate bonds, and bonds from emerging markets, mortgage

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198 Koh/Koh/Lee/Phoon (2004), p.4

199 Koh/Koh/Lee/Phoon (2004), p.4

certificates and some stocks. It applied three strategies with uncorrelated risk: Merger arbitrage strategy, relative value strategy and fixed income strategy.

Further, they needed to take highly leveraged positions to gain a significant profit by utilizing sale-repurchase agreements (repos) with investment and commercial banks. They reached a ratio of 17:1.[200]

In 1997, the credit spread narrowed and convergence trading became less profitable. New opportunities had to be found. So they increased the leverage to a 26:1 ratio by returning $ 2.7 billion equity capital to its investors. At the beginning of 1998, the LTCM had equity of $ 4.72 billion, with borrowed capital of more than $ 124.5 billion and assets of around $ 129 billion.

Although this seems like a very successful story, the dream ended in late summer 1998. The price of oil decreased which created high pressure on many oil exporting countries, e.g. Russia devalued the ruble and defaulted on their government bonds. Investors sold Japanese and European bonds and bought U.S. treasury bonds. The result was an increased spread of prices between those of emerging markets and Western governments, which caused huge losses in all three applied strategies. Divergent yield spreads caused losses at the fixed income arbitrage strategy. The high increase in volatility and the drop in stock value of the small cap segment created losses for the merger arbitrage and relative value strategy. From the beginning of 1998 until September 1998, LTCM's equity fell from $ 4,72 billion to $ 600 million without shrinking its portfolio, which also led to a significant elevation of the already high leverage. Total losses were found to be $ 4.6 billion.

A lot of U.S. firms had substantial exposure to LTCM through investments, unsecured loans, lines of credit, brokerage services, clearing, and counterparty arrangements. The Federal Reserve Bank of New York intended to discuss a bail-out with those counterparties that were most involved. However, the bail-out offer was refused by LTCM, because such a step would cost the management their equity, jobs and future management fees.[201]

Finally, to avoid a collapse of the financial market, the Federal Reserve Bank organized a bail-out of $ 3.625 billion from 15 investment banks, which got a 90% share in the fund. On September 29, 1998 the control of the LTCM was passed on to Oversight Partner I LLC. Further, a six man oversight committee was formed to manage LTCM's day-to-day business.

Nevertheless, the enthusiasm for hedge funds continued. Until 2002, more than $ 600 billion were managed in more than 7,000 hedge funds. In 2007, the asset under

[200] Halstead/Hedge/Klein (2005), p.67

[201] Halstead/Hedge/Klein (2005), p.67

management constituted of nearly $ 1.5 trillion in more than 10,000 funds (investors including pension funds and university endowments).[202]

Especially U.S. institutions showed growing demand for hedge funds in the past seven years. According to the National Association of College and University Business Officers' (NACUBO) Annual Endowment Survey, university endowment allocation increased from 1.8 % in 1996 to 8.7 % in 2005, which is their highest increase since 2000. This was an increase from $ 14.4 billion in 2001 to $ 49.6 billion in 2005 (+244%). Following these improvements, U.S. pension plans increased their investments in hedge funds.[203]

Recent studies suggest a further increase in the volume and number of hedge funds: By 2010, it is said that the number of funds will remain at the same level (10,000 funds) but the invested capital will be about $ 3 trillion, twice the amount of today's capital.[204]

However, there is a problem in looking at these numbers as exact figures. Unlike other investments, e.g. mutual funds, hedge funds do not have an association, collecting data and information about the hedge fund industry. As we will discuss later, hedge funds do not have to disclose their activities and even indexes vary, depending on the hedge funds they capture (as discussed in chapter 3.8.1).

3.1.2 Special characteristics and objectives of hedge funds

Hedge funds are especially distinguished by the following characteristics:

- They are bound by fewer government regulations than traditional investment funds.
- Regular investment funds set their achieved performance in comparison to a benchmark. Hedge funds pursue a positive return in every market independently of a benchmark.
- The most common instruments are short sales, additional borrowed debt capital (for the leverage effect) and derivatives.
- The fund manager participates with a significant part of his private means and receives profit-related compensation. His participation secures a higher interest in an investment success.
- There are no qualitative or quantitative restrictions for the applicable investment instruments.
- There is less transparency. Hedge fund managers often try to exploit price inefficiencies and in most cases, this information is strictly confidential.

[202] Shadab (2007), p.36

[203] Fung/Hsieh (2006), p.4

[204] Shadab (2007), p.38

Otherwise, everyone would try to use theses strategies and the price inefficiencies would disappear.

There are also three main features that distinguish hedge funds from other investment forms:[205]

- First of all, hedge funds are small and organized around a few experienced people. For example more than half of the U.S. hedge funds manage amounts of less than $ 25 million.
- The majority of the hedge funds are leveraged. Around 70% use leverage and approximately 18% borrow more than one dollar for every dollar of capital.
- Last but not least, hedge funds have a short live span. Most are expected to last about 3.5 years. There are only few hedge funds with track records of more than ten years.

Therefore, hedge funds are seen by many as "risky" and "opportunistic".

3.2 What is the difference between hedge funds and alternative investments?

In an attempt to define hedge funds, Richard Bookstaber (2003) wrote: "It (the hedge fund) encompasses all possible investment vehicles and all possible investment strategies minus the 'traditional' investment funds and vehicles."[206] This means, that Hedge fund managers can apply a whole range of strategies and financial instruments. It can use long and short-term position and can trade all kinds of securities.

3.2.1 Returns and the role of the hedge fund manager

The correlation of the return of hedge funds and of other investments is very low and can even be negative. In adding a hedge fund to the general investment portfolio, a reduction of risk can be achieved. For example, the lowest correlation of the development of hedge fund returns is that of returns from bonds (-0.12), but also the correlation to shares is low. Fung and Hsieh (2005) point out the low correlation in comparison to mutual funds. Whereas most mutual funds correlate with an R^2 between 0,9 and 1 to standard asset classes, hedge funds have a much lower correlation (0,3).[207] Even the correlation between different hedge funds is quite low, making them a perfect diversification possibility to decrease risk and volatility of a deposit.

When comparing the long term returns of hedge funds with those of shares or bonds, hedge funds seem to have higher returns than these traditional investments. At the same

[205] Koh/Koh/Lee/Phoon (2004), p.3

[206] Bookstaber (2003), p.19

[207] Fung/Hsieh (2006), p.7

time, hedge funds have a lower volatility than international shares and a slightly higher volatility than international bonds.

However, hedge funds do not necessarily outperform the market. Classic financial theory claims that current asset prices already reflect all available knowledge relevant to public companies and trying to pick undervalued stock is useless (efficient market hypothesis). The observation that hedge funds have higher results may rather be rooted in biases of different databases (as discussed in chapter 3.8.1).[208] Hedge funds may only seem more efficient due to their low correlation with general market returns and thus have an important function for portfolio diversification.

In order to achieve high returns with lower volatility, hedge fund managers apply various trading techniques including futures, swaps and short selling. The hedge fund managers usually use dynamic strategies to adjust to changing market conditions for reaching their absolute return targets. They also take more risk than other financial institutions. The ability of a hedge fund manager to achieve higher performances due to the individual strategy and risk taking ability is also called alpha (as will be discussed in chapter 3.5.1). The success or failure of a hedge fund depends mainly on the hedge fund manager. The alpha factor plays an essential role for the future of a hedge fund. Therefore, investing in hedge funds for example, is necessarily not more risky than in mutual funds[209] – in down markets they can be even safer. As pointed out before, due to their low correlation with the market, they even provide an effective opportunity to diversify the overall deposit.

In order to achieve good results, the hedge fund manager often uses quantitative analysis methods to extract statistically significant conclusions from historic data. Although these tools can be very powerful, they have their drawbacks. Some risks, e.g. merger arb, distressed debts, cannot be taken into account through statistics but through experience and the study of the special cases.[210] Nevertheless, these tools can be powerful if you know how to interpret the results.

Since the fund manager participates in the hedge fund with his own capital, he has a strong motivation to lead the fund to success. His commission usually consists of a fixed and a performance-oriented fee.

This is another major difference: hedge fund managers try to achieve an absolute return target and not to beat a benchmark, like investment funds.

The secondary market for hedge funds is limited due to illiquid investments and the presence of only one market maker.

[208] Shadab (2007), p.38

[209] Shadab (2007), p.38

[210] Bookstaber (2003), p.21

3.2.2 Risk and regulation

Disclosure requirements are essential for stock and investment activities. These requirements guarantee a certain transparency to the public. Hedge funds are typically exempt from registration and disclosure requirements of federal security laws (Security Act of 1933, the Security and Exchange Act of 1934, the Investment Advertiser Act of 1940, the Investment Company Act of 1940).[211]

Further it is not prohibited for hedge funds to leverage trading, short selling or concentrated investing, which are important strategies. Not only does this kind of freedom enable hedge fund managers to apply a wide variety of strategies, disclosure requirements would be fatal for them. Their success mainly depends on the ability to use market inefficiencies before competitors do and they therefore seek to hide their activities. If their activities were not confidential, more and more competitors would copy them and inefficient markets would become more efficient and – at the same time – less profitable.[212]

However, incidents like the LTCM debacle give rise to a lot of discussion about the regulation of hedge funds. How can you regulate something that has such various forms? Some specialists suggest trying not to regulate hedge funds as a whole, but to add rules to its trading techniques, e.g. short sales or offshore entities.[213] However, the International Monetary Fund (IMF) researched the complaints of the Asian government officials that hedge funds were the main cause of the Asian currency crisis in 1997. The IMF stressed three concerns: Investor protection, systemic risk and market integrity, which will be discussed in more detail below.[214]

The following chapters consider whether more regulation is needed and possible and the security developments that the market is going through.

3.2.2.1 Is there need for more regulation? – Risks of hedge funds

As said before, different strategies can diversify the whole portfolio and thus decrease the risk of a hedge fund. But what if hedge funds are characterized by similar strategies? Adrian (2007) has stressed this issue: He says that similarity (and therefore risk) can be examined by looking at how closely the funds' returns move. If the returns of the funds vary together, they could record huge losses at the same time while having critical consequences to the market liquidity and stability. The best metric for Adrian (2007) to

[211] Shadab (2007), p.36

[212] Bookstaber (2003), p.22

[213] Bookstaber (2003), p.22

[214] Fung/Hsieh (2006), p.26ff.

measure co-movement was found to be co-variances of returns. While correlation may be more commonly used, he argued that correlation may also increase when volatility decreases (because volatility is the denominator and co-variances the nominator of the correlation equation). In a study he found out that co-variances do precede volatility whereas no significant correlation between correlation and future volatility could be found.

While high correlation does not usually precede increases in volatility, high co-variances do. This is an important point when you compare the market before the LTCM crisis with today's market. Both situations are characterized by a time of high correlation, but while co-variances were also very high before the LTCM crisis and volatility was increasing, today's markets have only an average co-variance and low volatility.[215]

While speaking of risk, we must consider what risk actually is and how it can be measured? For Adrian (2007), the best way to measure risk is through cross-sectional dispersion of returns (volatility of returns) across funds at each point in time. The major advantage of this risk measurement is that it measures the exact time of spikes in risk. This is helpful given the fact that hedge fund managers change their strategies whenever they think they should and hold derivatives. Calculating volatility over a twelve month period and then averaging across funds – another popular risk metric – has the disadvantage of blurring the exact timing of risk drops and peaks. Another advantage of cross-sectional dispersion is that it captures systematic risk as well as idiosyncratic risk (risk that is unique to an individual asset).

Rogers and Van Dyke (2006) discussed various volatility measures in their article and concluded that there are two basic metrics for a quantitative risk analysis: standard deviation and maximum drawdown. Standard deviation – the square root of the variance of returns – assumes that returns are normally distributed (bell shaped curve) which they may not be (they even suffer from a "fat-tail" distribution[216]). This causes distortion among this metric. Maximum drawdown on the other hand measures the maximum peak to loss that has occurred throughout the data set. It is more commonly used by managers of Hedge funds to determine the risks to their firms: They may have agreed on a "high water mark" which describes a mark for performances under which the manager does not get a fee for his achievements.

The various measures of risks are described in Table 1 and different measures may or may not be appropriate for different situations. It is advisable to be very careful with the interpretation of the measures described above.[217]

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[215] Adrian (2007), p.2

[216] Rogers/Van Dyke (2006), p.45

[217] Rogers /Van Dyke (2006), p.48

Main type	Name	Description
Standard Deviation	Standard Deviation	Calculation: Square root of variance of returns Advantages: Easy to calculate Challenges: Normal distribution assumption
	Sharp Ratio	Calculation: Measures returns relative to risk Advantages: Measure of returns adjusted by risk Challenges: Estimation error due to missing statistical significance and validity of inputs
	M²	Calculation: Attempts to measure the result as if the portfolio ha taken on the same level of risk as the market. Advantages: Insights of incremental return added compared to the market level of risk Challenges: Influenced by standard deviation in the denominator
	Information Ratio	Calculation: Similar to Sharpe Ration, but the return is substituted for return and the denominator is the standard deviation of the difference between returns of the portfolio and the returns of the benchmark. Advantages: Useful for benchmark comparisons Challenges: See Sharpe Ratio
	Downside Deviation	Calculation: Measure of volatility below a certain threshold Advantages: Special measures for volatility Challenges: Only limited application
	Sortino Ratio	Calculation: Numerator of Sharpe Ratio and denominator of Downside Deviation Advantages: Measures incremental return that can be achieved per level of risk below a threshold Challenges: Only limited application
Maximum Drawdown	Maximum Drawdown	Calculation: Maximum peak to through loss that gas occurred throughout a data series Advantages: Relevant to firms that seek to maximize their returns + fees Challenges: More focused on "firm-risk"
	Calmar Ratio	Calculation: Annualized rate of return divided by the maximum drawdown Advantages: Measures the total amount of risk over a given period Challenges: Potential misinterpretation of risk
	Sterling Ratio	Calculation: Annualized rate of return divided by the average yearly maximum drawdown less an arbitrary 10% Advantages: Maximum drawdown is controlled Challenges: If the yearly maximum drawdown is less than 10% it becomes negative and Cannot be compared any more.

Table 1: Measures of risk

3.2.2.2 Can investors take care of themselves? - Need for investor protection

It is commonly understood that investors are able to protect themselves. In the case of hedge funds, investors are either institutions or wealthy private investors that are savvy or rich enough to afford sophisticated advice. They also can usually withstand the risk of sizable losses that might occur. Further, the legal structure of hedge funds also helps to protect investors: Managers often invest a substantial amount of money and hedge funds are usually structured as limited partnerships.[218]

In general, the SEC is responsible for investor protection. Up until 2003, hedge funds were very loosely regulated by the SEC. However as fraud increased, hedge funds became available to a larger, less sophisticated customer group, and with more and more institutional investors (e.g. pension funds) investing in hedge funds, the SEC decided to take actions to register hedge funds in 2004. However Fung and Hsie (2006) question, whether registration will decrease fraud and the investment of less sophisticated customers. They argue that hedge funds will be available to a broader customer base, whether they are registered or not and hedge funds with a lot of institutional participation are registered anyway. However, it would decrease the

[218] Shadab (2007), p.37

number of "amateur investors", if the minimum requirements of accredited investors were raised. Furthermore it is not clear how registration can defeat fraud.

3.2.2.3 Can hedge funds contaminate the market? – Systemic risk and market integrity

Systemic risk is also an issue for hedge fund regulation. If a hedge fund fails, it could have a bad influence on regulated financial institutions like prime brokers or investment banks in transaction with the hedge fund. Since the risk hedge funds expose to third parties is largely hidden, counterparties are unable to act on it (e.g. requiring better credit options).[219] Large losses from hedge funds can cause financial distress to counterparties and thus could initiate a domino effect on other financial institutions as was the case with the LTCM disaster (see chapter 3.1.1) – and this is what the term systemic risk is all about.

However, is the LTCM really a good example of why there should be more regulations on today's market? Shadab (2007) argues that the market has changed since the crisis in 1997, when the loss stemmed from unlikely events (e.g. the 1997 Asian currency crisis) and the fact that LTCM was extremely leveraged – this is no longer the case. Finally, he uses the argument that even if the government had not intervened; LTCM would not have collapsed because the consortium of banks led by Berkshire Hathaway had offered to buy the funds' positions and to continue to run it. Even if the LTCM had collapsed, counterparties could have absorbed the losses in the event of a default. In 1998, aggregate U.S. banks exposure to all hedge funds including LTCM through direct lending formed only 1% of all bank credit exposures.[220]

In contrast to the systemic risk originating from the failure of only one fund, the source for systematic risk lies in the failure of multiple funds at the same time. This kind of systemic risk is called contagion. Contagion could be defined as an economic shock or crisis in one firm or market that is transmitted to other firms or markets. it is characterized by a rapid spillover of falling prices, rising volatility, declining market liquidity, and a significant increase in co-movement of prices and quantities across firms and markets. [221]

Contagion has various faces: It includes the liquidity risk (being required to sell investments at huge loss) and herding (different funds making the same investment which then fails).[222] Halstead, Hedge and Klein (2005) speak of two main types of contagion: Fundamental-based contagion and pure contagion. The first one means that the firm infects other firms that are directly linked via trade or finance. Thus, the shock only affects those firms who share common characteristics with the firm that suffered the original shock. If the "infection" spills over to healthy firms that share only a few

[219] Shadab (2007), p.39

[220] Shadab (2007), p.39

[221] Halstead/Hedge/Klein (2005), p.67

[222] Shadab (2007), p.39

characteristics, it is referred to as pure contagion. The theory says that investors react irrationally – mostly due to a lack of information – and cannot differentiate between healthy and unhealthy firms. Studying the LTCM case, Halstead, Hedge and Klein (2005) found out that due to limited information, the announcement of huge losses in early September 1997 even led to losses in firms that were not directly connected to the LTCM, providing evidence for effects of pure contagion. However, it is only weak evidence and some directly exposed firms even gained earnings, because investors reconsidered their investments. Still, directly exposed firms experienced the biggest losses during the LTCM debacle.[223]

Nevertheless, it seems like contagion is more hypothetical than a real threat to the market; very few cases have been analyzed in academic studies. Some might argue that existing regulations of financial institutions are enough to deal with systemic risk.[224] Federal treasury regulations, for example, limit the amount of money a bank can lend to a hedge fund and Regulation T of the Federal Reserve Board limits the securities of broker dealers. The risk a bank is exposed to by lending money to a hedge fund is reflected in the requirement to hold minimum risk-based capital requirements under the Basel capital accord.[225] Even though hedge funds counterparts are regulated in terms of risk taking, systemic risk could be identified in advance with statistical methods analyzing the current hedge funds market. The problem that arises here, is the consolidation of information into systemic risk exposure in the industry as a whole.

The last issue identified by Fung and Hsieh (2006) is market integrity: What is the impact of hedge funds on the market as a whole? The general answer is: hedge funds cannot have a significant market impact because they are too small. However, the LTCM crisis may challenge this argument. Further, the growth of the hedge fund industry may also oppose this argument. Halstead, Hedge and Klein (2005) argued for regulation on the basis of two points: first of all, regulation would lead to more information in the market, enabling investors to act rationally, rather than out of fear. Secondly, regulation would ensure the stability of the financial market, as studies have shown that large institutions suffered the most. This could be prevented by increasing disclosure and minimum capital adequacy standards on large hedge funds. They even argue in favor of differentiated regulation, meaning higher regulation for larger hedge funds than for smaller ones.

3.2.2.4 What are the current trends in hedge fund regulation? – Disclosure and net worth requirements

Nevertheless, there are some regulations in the hedge fund business today. Shadab (2007) summarizes recent trends. In general, to qualify a hedge fund and to take

[223] Halstead/Hedge/Klein (2005), p.78

[224] Fung/Hsieh (2006), p.26

[225] Shadab (2007), p.37

advantage of the “unregulated business”, hedge funds may not advertise and can only accept investments from large investors like institutions and wealthy individuals (which is an important point for investor protection).

Recent developments have led to regulation and hedge funds are now subject to government oversight. Federal Security law prohibits hedge fund managers from committing fraud and insider trading. In 2006, almost 86% of hedge funds were registered (Security and Exchange Commission, Commodity Futures Trading Commission) and hedge fund managers have to follow the Advisers Act that requires them to put the interest of the funds over their personal interest.[226] This may not be a problem for them, since hedge fund managers typically invest a huge amount of personal wealth in the hedge fund which in turn tends to align personal interest to interests of the fund. Nevertheless, most hedge funds try to avoid having to register by relying on the minimum requirements. Thus, if the funds under management are less than 15 and the manager neither is an investment manager nor works for a registered investment company, the Hedge fund manager does not need to be registered.[227]

Hedge fund managers also have to make disclosures to potential investors to ensure they are in accordance with the anti fraud rules. They further have to report any nontrivial holdings in public companies to the SEC and all of their stocks if they exceed $ 100 million in public companies. Furthermore, if the fund trades futures or commodity options contracts, they come under the scrutiny of the CFTC. If more than 25% of their equity assets are held by a qualified employee benefit plan it must comply with the Employee Retirement Income Security Act. There were also efforts to protect “amateur investors” because of the reasons mentioned above. In December 2006, the SEC raised hedge fund’s net worth requirements for participants which are believed to prevent 88% of household investors.[228]

The importance of these issues can not be questioned, but regulating the hedge fund industry is not easy and critics and proponents regulation have raised their voices throughout the industry. Proponents of greater government scrutiny argue that regulations must be established to prevent negative externalities for regulated counterparts, caused by economic shocks of a Hedge fund failure. On the other side, critics contend that increased regulation will not only curtail the benefits of the enhanced market efficiencies and improved liquidity that hedge funds offer. They even say that government intervention bail-outs will lead to more irresponsible risk taking.[229]

[226] Shadab (2007), p.37

[227] Tiffith (2007), p.514

[228] Shadab (2007), p.38

[229] Halstead/Hedge/Klein (2005), p.65

3.2.2.5 Are there other ways to regulate besides regulation? – Market improvements

Besides regulation, there are several trends that help improving the demand side market. Next to improving transparency, more sophisticated risk management tools have emerged and are becoming common. Many lessons were learned from the LTCM crisis and since then, risk management tools have spread not only into the hedge fund industry, but the whole financial market. The failure of Amaranth Advisors in September 2006 is a good example of how the industry nowadays is able to handle risk. Amaranth Advisors lost $ 6.6 billion on natural gas trade in few weeks, making this incident the largest Hedge fund failure ever; and the market hardly noticed it. Amaranth's assets were quickly purchased and its losses did not spread beyond investors.[230]

Capital requirements cause investors to ask for more risk management tools[231] and transparency. Shadab (2007) indicated that there is a trend toward disclosing information by registering (voluntarily) with regulatory bodies. 86% of funds are registered today. Disclosing information has some advantages to the hedge fund manager: The fund can attract more investors, thus raise capital, and enter into trades with counterparties at lower costs.

Compliance requirements from regulators and the institutionalization process of hedge funds help further to improve market integrity. Also on the supply side some helpful products have emerged. Multistrategy funds are becoming a reasonable alternative to life cycle strategies. The demand for institutional quality products has led to better organized and better diversified hedge fund firms that are averse to volatile developing performances that decreasing their enterprise value.[232]

The hedge funds market is changing in to a more mature and serious market. Nevertheless, there is still hard work to be done to create a regulatory body that does not harm hedge funds business, but makes the market a safer place. To conclude this chapter, only 3-5% of all hedge funds fail, with no indication that this percentage will increase.[233]

3.2.3 Investment instruments and trading techniques

3.2.3.1 Short selling

Short selling tries to benefit from an expected decline of share or a market. By buying shares, you can only profit from price advances. Price losses always lead to a decline in value of the invested capital. Profits are realized by a following sale.

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[230] Shadab (2007), p.40

[231] For a risk management overview also see Lo (2001), p.20ff.

[232] Fung/Hsieh (2006), p.29

[233] Shadab (2007), p.39

Short selling works the other way round. With short selling, the investor gains only if the share price declines. If an investor sells short, he borrows shares for this sale from a broker. The revenue is credited to his account. While returning the shares to the broker, he repurchases them on the market. If the share price has fallen in the meantime, he can buy them at a lower price than he sold them for and so gains a profit. In declining share markets, holding shares is loss – generating. Short selling on the other hand is in this case profitable.

3.2.3.2 Leverage

The principal of leverage can easily be explained by an example regarding futures. In these trading transactions, the investor finances only a part of the contract volume by equity. If, for example, the future contract has a value of € 100.000, the initial margin to be paid is normally € 10.000. If the contract value now rises 1% (meaning € 1.000), the value of the invested capital rises ten times as much, which is 10%. The leverage – effect can multiply the relative change in value of the invested capital.

Still, there is no simple definition of leverage. Leverage plays an important role for investors, counterparts and fund managers, as it has an impact on the three major quantifiable sources of risk: market risk, credit risk and liquidity risk[234].

3.2.3.3 Leverage measures

We can differentiate between two measures: Accounting-based (also called “asset-based”) and risk-based measures.

The traditional function of leverage as a way to invest borrowed funds is described by accounting-based measures. The investment of extra money enables the manager to increase the assets controlled for a given level of equity capital. Furthermore, some measure of asset value is correlated by accounting-based measures to equity. Return and risk can be increased relative to equity by the use of traditional, accounting-based leverage. The problem with accounting-based measures is they cannot capture the nature and risk of the assets in the portfolio.[235]

Risk-based measures envisage the risk of insolvency created by changes in the value of the portfolio. They show the correlation of a fund’s market risk measure to its equity (or liquidity). The problem with risk-based leverage measures is that they cannot display the role of borrowed money in the risk of insolvency.

3.2.3.4 Arbitrage

Arbitrage describes the simultaneous purchase and sale of identical or equivalent finance instruments or future contracts to benefit from a discrepancy in price relationships. The aim is the exploitation of existing arbitrages and inefficiencies on the

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[234] Ineichen (2002), p.32

[235] Ineichen (2002), p.34

market. The differences can be on different stock exchanges or cash and future markets. In this context, the term “simultaneous” is arbitrative. If a bond is purchased and sold simultaneously, the purchase and selling price is definitely known. In this case, the investor knows for sure, what profit will result from the arbitrage.

3.2.3.5 Hedging

Hedge funds managers focus on specific risk aspects of the overall risk and separate these from the remaining risk aspects. After that a risk component is neutralized. This is called “hedging”.

3.2.3.6 Quantitative trading strategies

In quantitative trading strategies, the decision for buying and selling shares, bonds, futures or options are supported by data-based, computer-supported forecast models. A quantitative trader takes all his trading decisions using a computer model. He trusts the model more than his own intuition.

The development of data-based, computer-supported forecast models is supported by modern econometric methods or techniques of artificial intelligence. The development of such models also includes the application of objective statistical testing procedures to evaluate the model performance and the comparison and choice of competitive forecast models.

Other than traditional stock broking, there are three main approaches of stock broking:

- Methods that rely on fundamental analysis and are characterized by a qualitative evaluation process.
- Technical trading systems relying on technical analysis.
- Quantitative trading strategies that use multivariate forecast models, which apply methods of econometrics and statistics.

These approaches differ in the degree of objectivity and the amount of information which can be processed. The fundamental analysis is a pure evaluating process, using quantitative and especially qualitative facts for decision making. The human brain may be able to process qualitative and quantitative information and come to an evaluation, but this evaluation is neither verifiable nor objective. For this, quantitative trading strategies do not leave the decision to an individual, but go through a process which leads to an objective, transparent and verifiable forecast. The generated forecasts are interpersonally verifiable. Every market researcher can check if the stated conclusion results from data, the used method and the model specifications.

3.2.3.7 What are the advantages of quantitative trading models?

Apart from the fact that quantitative, multivariate trading models never get sick or go on vacation. There are four advantages:

1. **The capacity of quantitative methods to process information greatly exceeds that of humans.**

   Human capacity only allows the processing of a single time series with repeated price structures. However, on stock markets, dozens of prices and volumes are changed and traded for a single product in a very short time. The human brain is not made to process that amount of data at once.

2. **Quantitative trading models are objective and interpersonally verifiable.** Quantitative trading models are objective and the model structure is transparent. Everyone who understands the mathematical and statistical base of the model can reconstruct the methods used by the developer of the quantitative trading model and get the same results. The developer is able to communicate all relevant steps of the model construction and implementation that was used to get his results. Conversely, a trader who relies on his subjective evaluation ability cannot prove explicitly how he came to the complied forecasts. That is why the validity of quantitative trading strategies is interpersonally verifiable. If the simulation confirms the model's reliability, the developers cannot be held responsible.

3. **The possible results and benefits realized by the quantitative trading model can be simulated. This means that the "track record" of a model, which is its result series, can be evaluated before it is used for real trading.**

   To get a good position and salary, traders need good track records and results, but to build such records, you need a lot of time and experience. Inexperienced traders would never be able to get good jobs as they would not be trusted to work with bigger volumes. A quantitative trading model can develop such track records by simulation, without any risk for the firm. So the firm gets a picture of the trader. If the firm wants to start a competition between traders, they will have to pay every participating trader. With quantitative trading models, the firm only needs to hire one econometrist to compare different quantitative trading models and so pays only one salary.

4. **The success of a new idea in the development of quantitative trading models can be multiplied and used in similar markets.**

   If a firm hires a trader who was successful in one market, how can they know he will be successful in another market? He does not have any experience or knowledge of the new market. The knowledge gained in one market cannot easily be applied to another market. However, the missing knowledge is not a drawback for quantitative trading models. They replace the need for such models, as quantitative methods use the whole history of a market. They take all information from the market history and generate results using it in very short time. A new forecast model, a new arbitrage strategy or a new method, which was successful in one market, can easily be checked for its feasibility in another market. So it is possible to test whether a new, innovative forecast method that was successful in one market would deliver reliable results in another market.

3.2.4 Incentives and payment structures

The incentive and payment structure of a hedge fund manager are fundamentally different than that of a traditional investment fund or asset manager.

Normally the hedge fund manager receives a management fee and performance-based fee paid by the customer. The performance-based component accounts for about 15% to 25% of the annual earned revenue. This shows that the hedge Funds manager can earn additional fees by achieving a high net-return.

Furthermore the hedge fund's manager participates in the managed fund under the same regulations and conditions as the investor. In case of losses or wrong trading decisions his own equity is also affected. So it is in the interest of the hedge funds manager to make the right investment and trading decisions. For incentives, it is also important to take intangibles into account.

3.2.4.1 Impact of intangibles – Motivation

Motivation is probably one of the more important intangibles. If a manager is highly motivated, they are probably more willing to "go the extra mile" and put in more effort into negotiation fees, capacity, liquidity and transparency than a less motivated manager[236].

One indicator could be the invested capital of the manager, but this is not always true. In general you could say that a manager investing his lifetime savings is more motivated than a manager who only invests his last year's earnings. However, this picture could be deceptive. For example, a young manager who had just entered the business could participate using his lifetime's savings together with those of the investors. Yet it is not necessary that he is highly motivated. He only has a small amount to lose. In case of a loss, he can leave the business and go back to a normal 9-to-5 job, having lost only his savings plus the payment of some months' of work.

On the other hand, there is the well experienced hedge fund manager who has been in business for 20 years or more and has most of his wealth invested in his own funds. It is possible that he may have other priorities, like winning a certain trade, that are more important than diminishing the risk of loss. Still the loss would hardly affect the lifestyle of the manager.

Comparing these extremes, it can be said that motivation may be most important in a manager who falls somewhere in between these examples. A highly motivated manager may have interest in doing a good job, but still it is no guarantee for success. [237]

[236] Ineichen (2002), p.18

[237] Ineichen (2002), p.20

3.2.4.2 Impact of intangibles – Conflicts of interest

Another important aspect is the conflict between principal and agent. As they have a "fees-only" relationship, their motivations do not fully match. One possible way of reducing the conflict is to reconcile the motivations of the manager with those of the investor. This can enhance co-operation in the management of funds. The conflict can also be reduced if the manager himself is a principal.[238]

There can also be conflicts between managers and investors, for example, if a manager favors certain investors. Another can arise in the reporting of fees. Some managers show all fees to their investors, others do not. Others show different constructions of fees like relative low flat-fees or performance-related fees with flat fees. To evaluate the conflict potential, the investor needs to gain transparency from the manager.

3.2.4.3 Impact of intangibles – Trust and integrity

Trust and integrity play an important role in the hedge fund industry, being not as regulated as the traditional industry. The manager has a much greater influence than a regulatory body controlling the business. This also means that fraud can be more easily committed than in a traditional regulated environment.

3.3 What are the strategies of a hedge fund manager?

Hedge fund managers pursue different trading strategies. To make the various techniques understandable, they are classified into the following types (with several subtypes):

- Global macro
- Event driven
- Equity hedge
- Relative value
- Short selling

Long/short equity hedge is the most common strategy – 41% of all hedge funds used this as a major strategy in 2004 – followed by event driven and managed futures as shown in Figure 8. These percentages in terms of the number of hedge funds have been quite stable over the last ten years. For assets under management however, there has been a slight decline in macro funds and long/short funds and an increase in others.[239] Another observable trend is that hedge fund managers use multiple strategies more frequently to achieve their goals.

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[238] Ineichen (2002), p.23

[239] Fung/Hsieh (2006), p.8

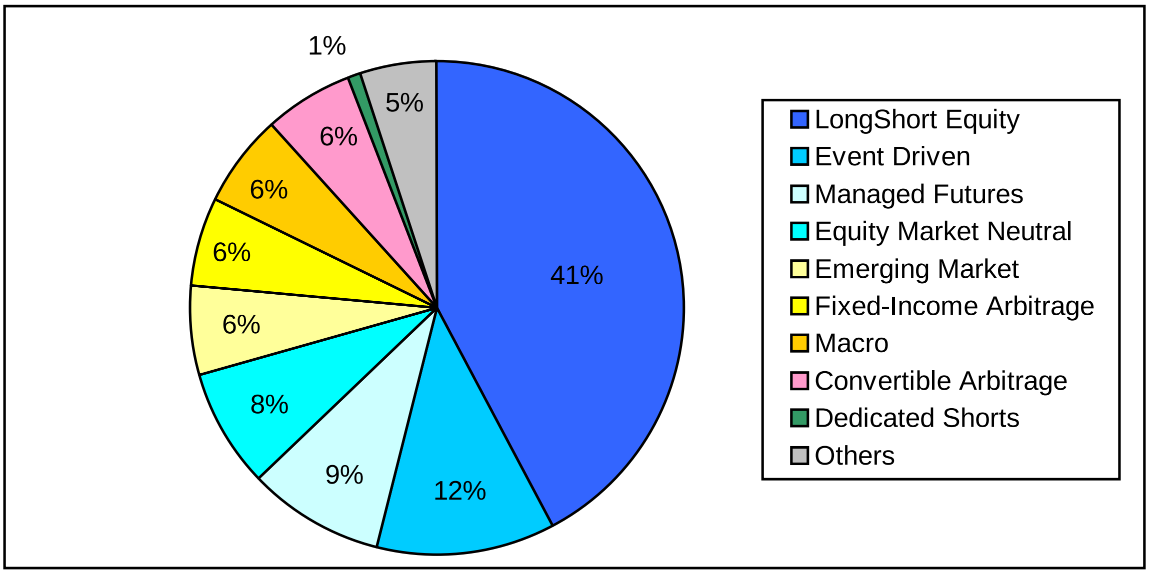

Figure 8 Percentage of Strategies over all TASS Hedge Funds (source: Fung and Hsieh (2005), p.9)

Table 2 shows the annual returns of the different trading strategies. The highest returns were generated by equity hedge and event-driven strategy, the lowest by fixed income arbitrage, statistical arbitrage and commodity futures.

The different strategies and trading styles can also be used to classify hedge funds. For example, the S&P hedge fund index denotes hedge funds with three strategies: arbitrage, event driven, and directional/tactical. Although this classification scheme seems very straight forward, it is not perfect. A trading style based classification has to be revised with the time as old strategies fail and new strategies emerge.[240]

Major differences among strategies are the average returns and standard deviation (Table 3). The global macro strategy had a monthly average return of 1.11 % while returns of dedicated short bias made a return of -0.03%. Standard deviation as a measure of risk varies among the strategies and ranges from 0.84% (low risk) to 4.92% (higher risk).

[240] Bookstaber (2003), p.20

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Commodity Futures	13.7	9.1	10.9	7	-1.2	7.9	0.8	12.2	5.3	N/A
Convertible Arbitrage	19.9	14.6	12.7	7.8	14.4	14.5	13.4	9.1	8.9	0.9
Distressed	19.7	20.8	15.4	-4.2	16.9	2.8	13.3	5.3	26.8	18.2
Equity Hedge	31	21.8	23.4	16	44.2	9.1	0.4	-4.7	18.4	7.6
Equity Market Neutral	16.3	14.2	13.6	8.3	7.1	14.6	6.7	1	2.8	4.6
Fixed Income Arbitrage	6.1	11.9	7	-10.3	7.3	4.8	4.8	8.8	8	5.1
Fixed Income Mortgage	6.6	17.1	17.3	-9.2	11.3	-1.4	21.2	8.6	6.3	12.9
Global Macro	29.3	9.3	18.8	6.2	17.6	2	6.9	7.4	4.3	4.7
Merger Arbitrage	17.9	16.6	16.4	7.2	14.3	18	2.8	-0.9	7.2	3.5
Statistical Arbitrage	14.3	19.6	19.4	1.1	-0.2	8.9	1.6	-3.2	3.4	N/A
Event-Driven	25.1	24.8	21.2	1.7	24.3	6.7	12.2	-4.3	22.9	14.2

Table 2. Annual Returns for Various Hedge Fund Investment Strategies[241]

	Mean	Standard Deviation	Minimum	Maximum	Months
Hedge Fund Index	0.87	2.23	7.55	8.53	153
Convertible Arbitrage	0.73	1.35	-4.68	3.57	153
Dedicated Short Bias	-0.03	4.92	-8.69	22.71	153
Emerging Markets	0.81	4.65	-23.03	16.42	153
Equity Market Neutral	0.80	0.84	-1.15	3.26	153
Event Driven	0.92	1.61	-11.77	3.68	153
Fixed Income Mortgage	0.52	1.07	-6.96	2.05	153
Global Macro	1.11	3.13	-11.55	10.60	153
Long/Short Equity	0.97	2.92	-11.44	13.01	153
Managed Futures	0.54	3.44	-9.35	9.95	153
Multi-Strategy	0.77	1.24	-4.76	3.61	150

Table 3. Summary of statistics for Hedge fund index returns (Source: Adrian (2007), p. 2)

Data from 1994-2006 shows, that correlation among hedge funds was quite high (40%). Only the dedicated short bias strategy had a negative correlation with others.[242]

3.3.1 Global macro

By relying on macroeconomic analysis, these funds take bets on major risk factors, like currencies, interest rates, stock indices or commodities. Global macro hedge funds try to discover undesirable developments in the economic policy of individual countries, which cannot be allowed to continue. The correction of these developments leads to strong changes in value at the stock markets in these countries (for example for exchange rates, interest rates or share values).

When pursuing their strategies, global macro hedge funds use a wide range of bonds and derivatives. Some funds may use hedging, but the majority use leverage and derivatives to tighten the changes in value on bonds by the political changes.

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[241] Papier (2005), p.16

[242] Adrian (2007), p.2

3.3.1.1 Discretionary strategy

Managers using discretionary strategies tend to bet on market movements according to their own basic analysis. This strategy is characterized by the very high risk of experiencing price fluctuations, but also its high benefit opportunities.

3.3.1.2 Systematic strategy

In this strategy, the manager develops his own quantitative models to identify market chances and take on positions. He tries to identify a trend and follow it.

3.3.2 Event driven

Event driven strategies are only used occasionally and are linked to a special event, e.g. merger, fusion and re-organization of an enterprise. Generally, these events have an impact over a short period of time.[243]

The most known kinds are merger arbitrage, distressed securities and multi-event.

3.3.2.1 Merger/risk arbitrage

The focus of this strategy lies on the companies involved in a merger or takeover. As a result out of the risk that the merger could be cancelled before completion, the target company's share value is usually underestimated. The stock value finally rises, when the merger is complete and the arbitrageur makes a gain.

There are two types of merger: A cash merger and a stock merger. In a cash merger, the hedge fund manager buys the shares of the target. During the merger, the stock price of the target is typically below the final buying price (arbitrage spread is positive) and the arbitrageur finally makes a gain if the acquirer ultimately buys the target.

In a stock merger, the acquirer exchanges his own stock for the target stock. An arbitrageur then short sells the acquirer's stock and buys the target stock, which is called "setting a spread". A stock merger is much more difficult to manage than a cash merger since the target firm's stock price depends on the other company's share price. When a merger is announced, the stock of the target firm rises while the stock of the bidding company falls. The Hedge fund manager will buy the stocks of the target and short-sells the bidding company's stock. If the merger is complete, he makes a gain.

There is also risk involved in the merger arbitrage strategy:

- Antitrust issues → regulators will block the deal
- Financial risk → acquirer could lack financial resources for the merger

The manager could hedge for some risks by investing in a large number of deals simultaneously.[244]

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[243] Connor/Lasarte (2003), p.5

[244] Connor/Lasarte (2003), p.6

3.3.2.2 Distressed securities

Distressed securities are shares or bonds from enterprises that are threatened by bankruptcy or re-organization. The price of such securities is below the fair market value and so they may be profitable market opportunities. The hedge fund manager is not limited to a certain asset type and may be active in bonds, stocks, bank debt, trade, etc.

For example, the hedge fund manager can take a long position from the troubled – and thus undervalued – enterprise and then try influencing the restructuring process. On the other hand the manager can take short positions in firms, which he thinks will go through even worse times in the future.

However, this strategy holds various risks for the hedge fund manager. For example the time needed for restructuring cannot be forecasted. There are also legal risks: Regulators may forbid the selling of a company’s stock during the restructuring process.

The distressed securities strategy will profit from relative as well as from absolute pricing inefficiencies. These inefficiencies may appear because of various reasons, e.g. investor’s irrationality, risk aversion or lack of research. They are worsened, as it is forbidden for traditional investments to add junk bonds in their portfolio and therefore, distressed securities suffer from low demand.

3.3.2.3 Multi-event strategy

Managers who apply a multi-event strategy take advantage of price differences for similar securities. Examples for such securities are preferred and common stock.

3.3.3 Equity hedge

Hedge funds that pursue a so called “equity Hedge” or “equity market neutral” trading strategy simultaneously take long and short positions in shares that belong to the same market segment (industry or country). To raise the returns, debt capital is used as leverage. The managers try to beat the performance of the market with their portfolio’s smaller volatility.

For example, U.S.-long-managers specialize in the American stock market. Managers employing an U.S. opportunistic strategy try to achieve a better performance by exploiting specific situations of companies. The same strategies are applied to the international market in the global international strategy. There, funds invest in Non–U.S. stocks and bonds with no specific strategy reference. They hold the largest number of funds and specialize in emerging markets.

3.3.4 Relative value

Hedge fund managers using relative value strategies are looking for mispricing of different securities. Relative value is the assessment of risk, liquidity or return of one security relative to another. They try to gain returns with an arbitrage or market neutral strategy by using short selling. As stated by Connor and Lasarte (2003), relative value strategies are not completely independent from market risk, but are still characterized by a low market correlation and low volatility.

The risk of this strategy class depends on how closely related the securities are that are bought and sold short. Managers applying a relative value strategy usually try to hedge their exposure to the price movements of the underlying securities, interest rates etc. Further, since price discrepancies are usually quite small, managers extensively use a lot of leverage to magnify gains.

Some of the strategies of relative value will be discussed in this chapter.

3.3.4.1 Long/short strategy

A manager who applies a long/short strategy tries to identify over- and underrated securities and buy underrated ones and selling overrated securities. A long/short strategy separates individual stock risk from market risk.

However, the classification and characterization of the long/short strategies is not easily determined. Even in the literature, contradictory classes can be found. Thus, some of the long/short strategies are discussed in this chapter and others are described in other chapters.

According to Connor and Lasarte (2003), there are five types of long/short strategies: equity market neutral strategy, equity long/short, pairs trading, statistical arbitrage and dedicated short bias. All of these strategies will be introduced now, except statistical arbitrage and dedicated short bias, which will be discussed later.

Equity market neutral is the original hedge fund strategy. The strategy was introduced by Alfred Winslow Jones who managed the first hedge fund in 1949. This strategy uses short-sales in a way that means the correlation between the portfolio return and the overall market return will be neutralized (that is why it is called “market neutral”).

Portable alpha is an important concept for this strategy. When a manager has superior information about the return of a collection of assets, he can take long positions in the securities he expects to make positive returns on and short positions in securities where he expects to receive negative returns.

The equity long/short strategy is similar to equity market neutral except in the promise to maintain market neutrality.[245] This makes it possible for a manager to choose net-long or net-short market exposure while still focusing on stock-selection opportunities. This holds the disadvantage for the investor, that he cannot predict how the fund affects overall portfolio risk.

Pairs’ trading is a variant of equity long/short and is the combined purchase and sale of two similar securities overvalued relative to each other. As the prices of these two

[245] Connor/Lasarte (2003), p.4

securities will converge in future, the hedge fund manager yields a positive payoff. In general, these securities have been similarly valued in the past and the value difference is not based on market fundamentals.

3.3.4.2 Convertible arbitrage strategy

A convertible security is a fixed income instrument like a debt or a preferred share. The holder receives a fixed coupon or preferred dividend as a payment as well as cash at maturity. Further, the holder has the right to convert the security into a certain number of shares instead of receiving the payment.[246] Consequently, it is very difficult to estimate the value of convertible securities, which depends on various factors. Generally speaking, if a share price rises, the convertible bond price will also rise. On the other hand, when the share price falls, convertible prices are more closely related to those of regular bonds.

Convertible securities are usually undervalued because of various reasons:

- Small markets
- Lack of liquidity in the market
- Convertible issues are quite small
- Investors prefer more transparent assets

The manager buys undervalued convertible bonds and short sells shares at the same time to eliminate risk. An important parameter concerning this technique is delta. Delta means the proportional change of value of the convertible bond relative to the one of the underlying stock price. When the stock price increases, the convertible bond usually increases at a proportionally higher rate.

The success of the convertible arbitrage strategy is influenced by:

- Interest rate risk
- Credit risk
- Regulatory risk
- Equity risk

Additionally, convertible bond arbitrage tends to be a good way to diversify the portfolio. Correlations using the adjusted returns series of convertible bonds to other strategies are quite low.[247]

Interestingly, according to Connor and Lasarte (2003), hedge funds are now one of the main sources of liquidity in the hedge fund market.

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[246] Connor/Lasarte (2003), p.8

[247] Loudon/Okunev/White (2006), p.48

3.3.4.3 Fixed-income arbitrage strategy

The hedge fund manager tries to identify inefficiencies in the pricing of bonds – e.g. government bonds. In order to identify these inefficiencies, this strategy relies heavily on mathematical models. This strategy has its roots in the fixed income trading desks of brokerage houses and investment banks.[248]

3.3.4.4 Statistical arbitrage strategy

The manager believes that stock development can be achieved by using mathematical methods – e.g. time series analysis, neural networks and economic models – and thus it is possible to identify inefficiencies. The strategy is based on the arbitrage pricing theory. The statistical arbitrage opportunity is a zero-cost portfolio where the probability of a negative payoff is very small. The hedge fund manager usually seeks to exploit a pricing discrepancy between related securities while hedging against various risks (market risk, sector risk, factor-related risk).

3.3.4.5 Rational strategy

Relative value strategies in different market segments are also called rational strategies.

3.3.4.6 Other strategies

Other relative value strategies shall be mentioned now:

- Aggressive strategy
- Capital arbitrage strategy
- Yield curve arbitrage
- Corporate spread arbitrage
- Treasury/Eurodollar arbitrage
- Mortgage arbitrage
- Derivatives arbitrage
- Stock index futures arbitrage
- ADR arbitrage

3.3.5 Short selling

Short sellers try to take short positions in stocks with or without matching long positions. Short sellers focus on fast developing markets and apply mean reversion strategies.

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[248] Connor/Lasarte (2003), p.10

For traditional investment funds it is prohibited by law to short sell. They have to limit themselves to holding shares. Thus, these funds gain positive returns in rising stock markets and lose, if the market declines.

Hedge funds on the other hand are allowed to short sell and thus can gain positive returns in even declining markets. In a “dedicated short selling” strategy, the hedge fund tries to apply short selling only. In a “dedicated short bias” strategy, the manager also holds shares, but is rather more engaged in the short than the long side of the market.

3.4 Style drift

In the hedge fund environment, consistency of styles is usually assumed.[249] Style drift refers to the situation, where a manager leaves a field in which he has experience and quite probably a competitive advantage, to enter a field in which he has no experience or advantage at all. It can be differentiated between two types of style drifts: A short-term opportunistic style drift and a permanent shift[250].

In a permanent shift it is necessary to reassess the investment. At first glance, it may look as if a short-term opportunistic drift may not have an as negative impact as a permanent shift. It represents a risk for the investor as well as the opportunity to exploit market inefficiencies.

Market changes make it difficult for a manager to keep one single strategy. Therefore, a lot of hedge fund managers apply multiple strategies.[251] The possibility to gain more stable returns over different market cycles has led hedge fund managers to take on multi-strategy approaches. If the manager makes up his mind to invest in a certain fund and invests in it, he doesn’t invest in the fund, but in the skill of the manager. This situation enables him to use much more flexibility, as he does not need to replicate a benchmark. He can try to take advantage of investment opportunities or market inefficiencies. It is important for the investor to decide how much freedom the manager should be allowed.

Restricting a manager can have advantages, but also disadvantages. A restriction leads to a reduction of risk, but it also prohibits the manager from exploiting opportunities in order to add value. Market inefficiencies only exist as long as they are unknown. If a manager is not able to move to other markets, he could miss the first-mover advantages.

On the other hand, higher flexibility for the manager equals more complicated risk monitoring. Investors find it harder to observe the manager’s moves and may not find the higher risk very appealing to their portfolio. That is why investors try to construct and align their portfolios to their own risk tolerances and return preferences.

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[249] Gibson/Gyger (2006), p.3

[250] Ineichen (2002), p.36

[251] Ineichen (2002), p.36

3.5 Investing in hedge funds

Today, there is no doubt that hedge funds can deliver superior returns. Hedge fund managers apply a much broader set of instruments than traditional portfolio managers. Compared to the traditional industry, the hedge fund industry is heterogeneous. As a result of this heterogeneity, hedge fund managers can apply different strategies.[252] Investing assets traditionally optimizes the use of equities, bonds, real estate and private equity. They can be invested in a portfolio that maximizes returns and minimizes portfolio risk. According to this, hedge fund managers could improve returns in an investment portfolio. Furthermore, looking at some investment managers in bear markets, they do not find it interesting to just beat the market index, which may have negative returns. They prefer rather going short or avoiding long positions to achieve positive returns.[253] By choosing the right hedge funds it may be possible to earn positive "absolute returns".

3.5.1 The alpha factor

As stated at the beginning, hedge fund returns depend heavily on a manager's investment skill, much more than in traditional investment portfolios. In the period of 1996-2005, 80% of hedge funds' success was dependent on manager's decision making and only 20% on broad market. The part depending on market movements and systemic risk is also called "beta".[254]

In a case where so much of the portfolio return is a function of alpha rather than beta, good managers have the opportunity to achieve a very attractive return profile. They can avoid market downturns and target positive absolute returns regardless of the environment. Such heavy reliance on manager skill can also be a problem. If they do not perform well, a fund can do very poorly.

Hedge funds represent collections of discrete managers, each one relying on their ability to exploit inefficiencies in the capital markets using specific tool sets and orientation.[255] Consequently, the performance dispersion in hedge funds is much higher than in traditionally managed stock and bond portfolios.

Although it is always important to choose a good manager, in hedge funds it is crucial. By knowing only the results of the hedge fund index, the investor can hardly know what to expect from the chosen fund. Also, fund managers cannot be differentiated between looking at their funds' past return levels. A manager's total returns are weakly correlated with his performance in subsequent periods. In the period of 1996-2005 only 28% of the top-quartile hedge fund managers could maintain their success from their

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[252] Ineichen (2002), p 15

[253] Koh/Koh/Lee/Phoon (2004), p.8

[254] Altweg/Labhart (2007), p.33

[255] Bernstein (2006), p.8

last three-year period to the next one. Also, 28% of these managers could not maintain their performance and fell to the bottom of the pack.[256]

To get the most out of hedge funds, it is necessary to understand the dynamic of hedge funds and of their risk and return profile.

3.5.2 Key determinants of return and risk

For hedge funds, there are many details which need to be taken into consideration. The following can be seen as the key determinants.[257]

3.5.2.1 Return/risk drivers

- Manager skill (alpha): Alpha is the core of a hedge fund, as the manager's decision determines a good or bad return. The more information and knowledge an investor can gain about the value produced by the fund beyond market movements and future strategies, the more the investor can take accurate decisions and estimate the uncertainties.
- Market exposure (beta): Some hedge funds are also dependent on market movements. The development of a market has a definite influence on a fund's risk and reward profile. Knowing a market's dimensions can be crucial.
- Cash return: By selling securities short, investors can achieve a cash rate of return on their revenues. These earnings function as securities for short positions and generate interest until the positions are closed.

3.5.2.2 Costs

- Fees: Fees are levied on assets under management as well as on profits and normally at quite high levels.
- Taxes: Taxation can be a major disadvantage of hedge funds. As a lot of hedge funds trade frequently, they are notoriously tax-inefficient.

3.5.3 The hedge fund manager – a crucial driver for return

As seen before, the hedge fund manager plays a vital role in the hedge fund return equation. Different managers may pursue different objectives. Different portfolios can be designed for different purposes. Taking this into account, managers might focus on a certain investment style[258].

[256] Bernstein (2006), p.9

[257] Bernstein (2006), p.10

[258] Ineichen (2002), p.3

That is why it is important for an investor to understand a manager's thinking, his nature and his way of working and then, after reviewing all criteria and options, wisely choose the manager.

3.5.3.1 Manager selection and monitoring

The investment process starts as soon as the manager has set up his business and defined his main targets. Before this, there are two variables and two processes, which have to be passed through. The variables are the Hedge fund managers and the overall portfolio. The processes are the selection and monitoring processes. Both processes and variables are dynamically interrelated[259] (see Figure 9).

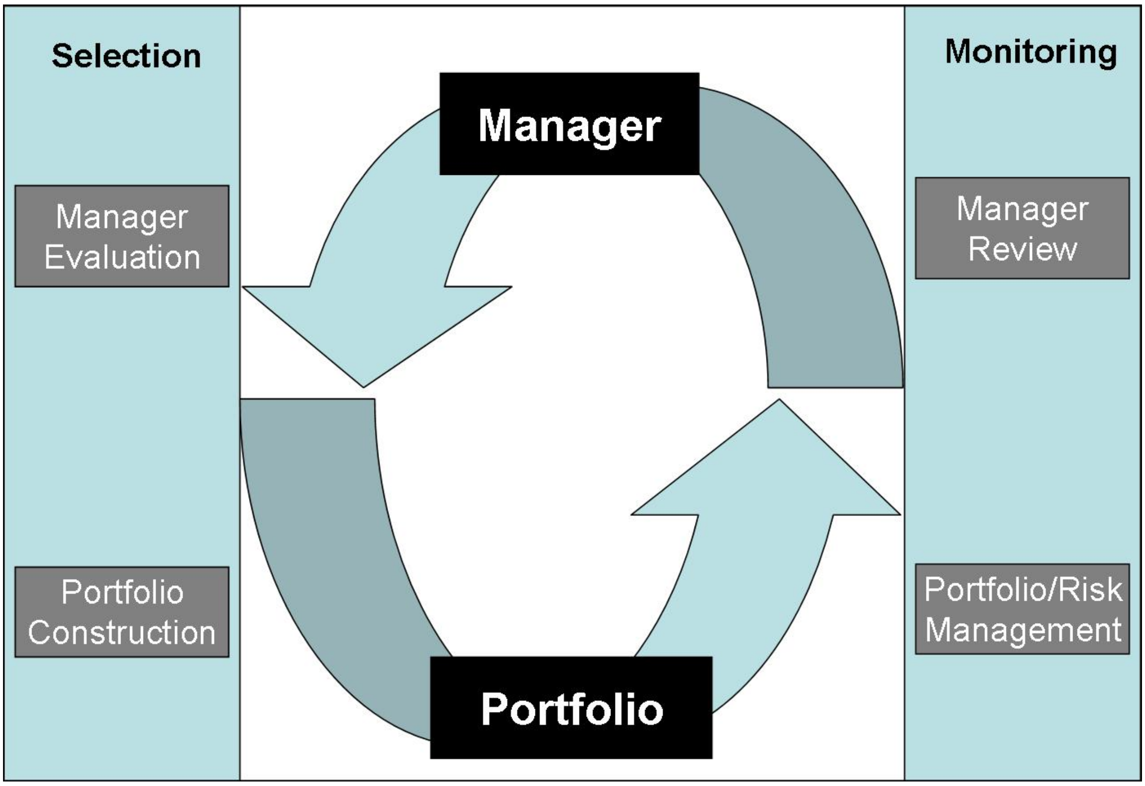

Figure 9: Dynamic Investment Process of Fund Managers (source: Ineichen (2002) p.4)

3.5.3.2 Manager evaluation

The hedge fund investment business is more a relationship than a business. By investing in a fund, the investor does not participate in a certain investment strategy or process; he trusts the manager's skill. Therefore, it is crucial to identify and evaluate managers.

It is important for manager evaluation to get the necessary information about the manager and his past work. This can be a very tough job to do, as there is little information-sharing in the hedge fund industry. Commercial databases can provide some information, but mostly they are incomplete. Thus, being able to submit a C.V.

[259] Ineichen (2002), p.4

including a couple of years work history, may provide a manager with a competitive advantage compared to those who just entered in to the business.[260]

For an investor, the most important issue is due diligence. Due diligence is an accurate analysis of the fund as a business and a validation of manager information. It consists of a quantitative and qualitative part. The quantitative analysis of data is incomplete. The qualitative judgment is weighted with at least the same importance as the quantitative analysis. Due diligence checks operational infrastructure, financial and legal documentation, affiliates, investment terms, investor base etc. The process of due diligence is part of a manager's value proposition.

There is always doubt as to whether it is possible to learn how to pick the best manager. Still, Ineichen (2002) points out some factors that can be seen as important:

- Intangibles: Integrity, lifestyle and attitude
- Strategy: Identifiable opportunity sets, embedded market risks, definition of investment process, market knowledge in defined strategy
- Experience: Portfolio management ability, risk assessment and management ability, strategy implementation, experience of different market conditions, understanding of the impact of market flows, overall trading savvy
- Assets: Size (critical mass versus manageable amount), ability to manage growth, quality of investors
- Operation: Back office infrastructure and reliability; fee structure; decision and execution process; quality, stability, compensation and turnover of staff

These are only some of the factors that need to be considered.

3.5.3.3 Manager review

Reviewing managers is a continuous and dynamic process. As the industry is non-transparent, there are no efficient information channels that can be used to find and analyze information. For this, scarce resources must be utilized to get the information needed.

3.5.3.4 Portfolio management

At the same time as reviewing the manager, it is important to monitor the portfolio or manage the risk of the portfolio on a continuous basis. For the construction of a successful portfolio, it is important to estimate the three input variables of the mean – variance optimization process, return, volatility and correlation and to combine them to construct a mean – variance efficient portfolio. The managers will have different calculations for the future, which means that they all will have different portfolios.

[260] Ineichen (2002), p.5

The strategy applied to a portfolio and its rebalancing may also be dependent on opportunistic thoughts of the manager. For example, if there are strategies that are currently proving successful, the manager may have the desire to apply those strategies and so bias the portfolio construction.

3.5.3.5 Risk management

Risk management is not a synonym for risk measurement. Risk measurement of a portfolio is a quantitative process, meaning it is more objective. Risk management on the other hand is judgmental, which means it is more subjective. Evaluating whether a manager is able to measure risk is quite simple. The investor only needs to look at the models, the data, the skill and the experience of management operation. All these parameters are more objective.

As the parameters change, the manager needs to make a decision or make a judgment. This judgment is more subjective. Whether the manager acts is uncertain. It may be reassuring for the investor if the manager is also a principal. This does not guarantee deliberate risk management, but Ineichen (2002) holds that the interests of the investor and manager should still be balanced.

According to the above discussed topics, a hedge funds manager should meet the following aspects to be successful:[261]

- Understand all hedge fund strategies
- Understand all instruments used by hedge funds
- Emphasize qualitative aspects relative to quantitative variables
- Be in the "information loop" and have extensive proprietary data
- Be of highest integrity, as there is little regulation or risk to reputation for large corporate in order to assist investors
- Have his interests aligned with those of his investors

Furthermore, it is important that a manager is able to identify and understand risk characteristics.

3.5.3.6 Manager risk factors

Risk is often incorrectly seen as a synonym for volatility, yet this is not true, particularly when investing in non-marketable securities or ventures. The risk factors of a manager can be divided into three categories:[262] portfolio market and non-market related factors and operational factors.

- Portfolio factors: non-market related

[261] Ineichen (2002), p.15

[262] Ineichen (2002), p.30

    - Leverage
    - Concentration
    - Illiquidity
    - Trading behavior
- Portfolio factors: market-related
    - Directional factors: long bias, short bias, neutral, etc.
    - Technical factors: volatility
    - Spread-related factors: sector tilts, style tilts, credit spreads
- Organizational factors
    - Length of record
    - Assets under management (rate of growth, nature of client base)
    - Ownership/compensation structure
    - Risk monitoring/control systems

It is necessary to have experience and an operational setup evaluate and weigh all factors.

3.5.3.7 Risk categories

For risk, three categories can be identified:[263]

- Market risk: If market factors change, then the losses caused by these relate to market risk. These changes can be in price, volatilities and correlations.
- Credit risk: Losses resulting from a decline in the creditworthiness of entities in which the fund invests or with which it deals as a counterpart, refer to credit risk.
- Liquidity risk: Losses relating to liquidity risk appear, when declines in the market either diminish the value of the investments or the ability of the fund to fund its investments.
- There is also "operational risk", but it is harder to identify.

Managers should not only consider the risks separately, but try to recognize and assess the interdependence of the market, credit and liquidity risk. The overlap can be seen in Figure 10.

[263] Managed Funds Association (2007), p.57

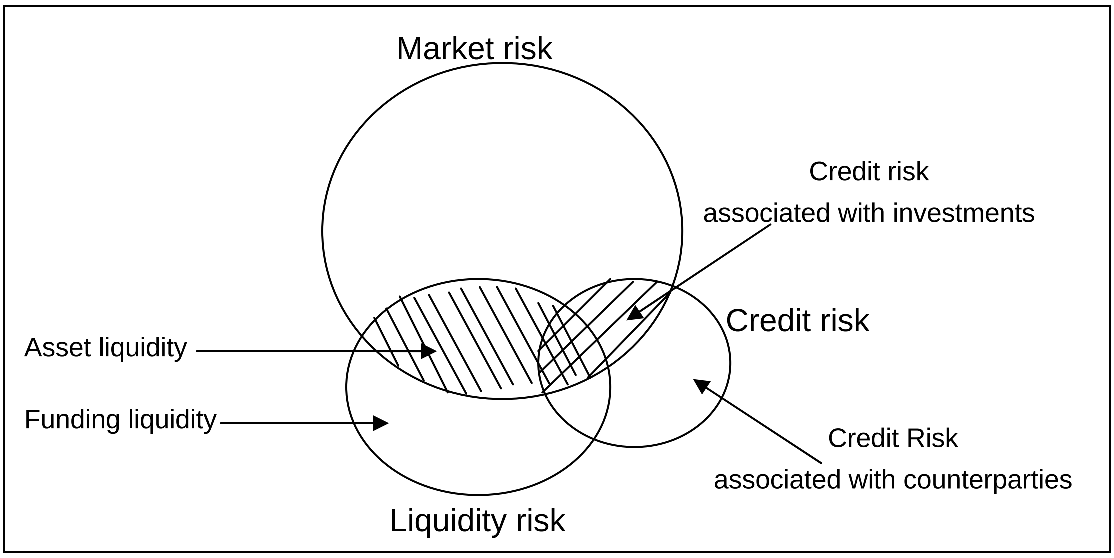

Figure 10: Risk Monitoring Function (source: Ineichen (2002), p.31)

Taking this overlap into account, the following interrelated variants of market, liquidity and credit risks should be monitored:[264]

- Market risk – together with asset liquidity and the credit risk associated with investments
- Funding liquidity risk
- Counterpart credit risk

Risk in this framework is also called "sovereign risk". If a risk is related to the financial solvency of the sovereign, then it is a credit risk. If there is dependence on policy decisions of the sovereign that change the market value of positions, then it is a market risk.[265] If the risk includes parts of credit, operational and market risk, it may be referred to as "event risk".

For a manager to be able to continue trading in times of stress, it is important that he can fund liquidity. A funding liquidity analysis should consider the applied investment strategies, the terms of the investor's rights to redeem their interests and the liquidity assets. The potential for funding requirements increases with the expected period necessary to liquidate assets. Planning funding liquidity enables the manager to continue his trading strategy without being forced to liquidate assets because of losses.

3.5.3.8 Manager selection

The search for new talents plays an important role in the investment process of hedge funds. There are many factors that can be considered.

[264] Ineichen (2002), p.31

[265] Managed Funds Association (2007), p.125

3.5.3.9 Reputation

Ineichen (2002) compares reputation with brand recognition. A better reputation can lead to faster recognition and identification by investors and managers seeking new personnel.

3.5.3.10 Insight information

To identify talents, it is important to have inside information on both the selling and buying side of the investment business. With this, it is possible to recognize a talent early in the evaluation process. Having inside information on key personnel in the main investment centers creates a competitive advantage for a manager.

3.5.3.11 Due diligence and track record

Though the past performance is not a conclusive indicator for future performance, many investors still include track records in their evaluation processes. However, a quantitative analysis can only be applied with limitations.

Quantitative analysis is cheap and not hard to get, as a database can easily be bought and screened for top quartile performers. However, good hedge fund managers generally are not generally listed in commercial databases. A proprietary database with qualitative information is needed. With this information, a ranking can be set up to compare different managers within a strategy and evaluate their strengths and weaknesses. One manager's weakness can then be aligned with another's strength in the portfolio construction. Another important consideration is whether the manager is able to handle the exhausting task of due diligence on an increasing number of funds.[266]

Track records can rather be used to support due diligence. Quantitative analysis is more significant and important for risk monitoring than for manager selection.

3.5.4 The life cycle of a hedge fund strategy

First of all the hedge fund manager has to identify inefficiencies in the market and develop hypotheses and return analysis. After that, one or more strategies – as described above – need to be implemented. Initially, the hedge fund manager will earn high returns through market inefficiencies. However, these inefficiencies will shrink – e.g. other managers will copy that strategy – and the manager has to identify new market inefficiencies.

3.6 Hedge fund trends

One of the main drivers of change in the hedge funds market is the dynamic competition. As a result, international diversification is less successful than it was in the past, as a lot of players have entered the market. Only those who can apply the full

[266] Ineichen (2002), p.27

portfolio of hedge fund strategies will succeed in future. Even new hedge funds can arise. For example the “absolute return investment” seeks to achieve traditional equity-market returns with volatility similar to that in the bond market.[267]

Another change is caused by scientific insights that influence strategies. Event politics and an increase in dynamic market regulation set a diverse environment for hedge fund managers.

Furthermore, managed accounts became more and more important. A managed account is provided by a bank which acts as a risk controller and transaction agent. Reporting and risk monitoring plays an important role.

3.7 The opportunities and risks of hedge funds

Alternative investments are characterized by different opportunities and risks than of traditional investment. Four points are especially important for hedge funds: Yield and yield targets, high flexibility of investment opportunities, leverage effects and risk of loss.

Historically, hedge funds have generated a higher yield than traditional investments, as they are more influenced by the manager’s ability to identify market inefficiencies and to set proper strategies than the development of the market. Further, hedge funds are assessed by the absolute positive return and not by indexes of different markets. This enables a Hedge fund manager to choose their markets, strategies and instruments with more flexibility.

Hedge funds use debts as major instruments to invest in the markets. This leverage effect increases the risk of losses in the event of negative market development. On the other hand, it allows the manager to achieve high returns even when small changes appear.

Hedge funds rely on standardized trading and risk management systems that make hypotheses on the market. If this system fails, the hedge fund may lose a lot of money.

3.8 Further development of hedge funds

3.8.1 Hedge fund databases and indexes

As pointed out in chapter 3.1.1, the hedge funds industry grew tremendously in the last year but exact numbers are hard to gather. Unlike mutual funds, hedge funds do not have an industry association to collect and report relevant data. There are some databases, but hedge funds may voluntarily provide relevant information to one or more

[267] Papier (2005), p.16

databases.[268] So in adding up all databases you may not simply exclude some hedge funds, you will also double count others that report to more than one database. Getting roughly correct numbers cannot be done without a lot of effort. One institution that is merging the databases to achieve a complete picture is the BNP Paribas Hedge Fund Centre of the London Business School.

There are three notable commercial databases:

- The Center for Institutional Securities and Derivatives Markets (CISDM)
- Hedge Fund Research (HFR)
- Lipper TASS (TASS)

These three databases have collected data for more than ten years. As of December 2004, the CISDM had 3,246 funds, the HFR 5,158 funds, and the TASS 4,130 funds.[269]

To further understand how data from these databases is distorted, a closer look at the various biases should help. Fung and Hsieh (2006) identified five biases: Selection bias, survivorship bias, instant history bias, liquidation bias and serial correlation of hedge fund returns. In the following section, each of these biases shall be described in more detail.

The selection bias means that the hedge funds in the database do not represent all hedge funds. It appears basically because the disclosure of information about the hedge fund is voluntary. The direction of the selection bias cannot be estimated because of two effects: On one hand, hedge fund managers seek to publish information about their hedge funds to acquire new investors. Since they are not allowed to advertise, adding the hedge fund to a database may be the only way to gain attention. On the other hand, hedge funds that are closed to investors may not be included to the database. Thus it is very hard to estimate the direction of the selection bias.

It makes complete sense that only existing funds are included in a database, poorly performing hedge funds either liquidate or stop reporting their returns. Yet, since one can assume that live funds provide better results than dead funds, the databases suffer from survivorship bias, shifting the overall result of databases and causing an overestimation of their success.

The instant history bias is a result of the fact that the history of new funds is often backfilled. Most of the new hedge funds undergo an incubation period at the beginning of their life. If this period shows good results, the hedge fund manager adds his fund to the database, hoping to attract new investors. The incubation history of the hedge fund is typically backfilled and biases the database upwards. Together with the survivorship bias (~2.5% distortion) the instant history bias causes 4% bias effect per year.

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[268] Fung/Hsieh (2006), p.4 f.

[269] Fung/Hsieh (2006), p.5

The liquidation bias, which is unique to hedge funds, is caused by the fact that hedge fund managers stop reporting their results to the database before the final liquidation value of a fund is made. In the case of the LTCM, managers stopped reporting in July, just one month before they lost all their capital and did not report -100 % returns.

The last bias identified by Fung and Hsieh (2006) is the so called serial correlation of hedge fund returns bias. Hedge fund indexes have serial correlation and their returns correlate with past returns of market factors like S&P 500. Reasons for that may be the infrequent trading with illiquid securities or even manipulation by managers who want to smooth out their results.

These biases of databases directly influence hedge fund indexes that are derived from the databases. The creation of indexes is one of the recent trends in the hedge fund industry.[270] Hedge fund indexes and their results vary more than those of traditional investments because of the biases described above. For example, the HFRX Equity Hedge Investable Index has an annualized return of 6.6 % which is less than half of the 14.1 % annualized return of the corresponding HFRI Equity Hedge Index.

An alternative to using indexes as a performance predictor is to use returns of funds of funds. Since funds of funds are a conglomerate of hedge funds, they actually reflect the investment experience in hedge funds. Thus, they are not that sensitive to certain biases such as survivorship or incubation bias and may deliver more accurate results.[271]

3.8.2 Performances in comparison

The success and failure of a hedge fund is strongly linked with the ability of the hedge funds manager to identify price inefficiencies on international finance markets, to develop and apply suitable trading strategies and also to limit their risks.

Compared to traditional investment categories like shares and bonds, hedge funds gain higher risk adjusted returns at lower volatility. This is because of the diversification effect. Though the returns of hedge funds would rather match those of shares, their volatility met those of bonds.

Compared to shares, the return development in the period of 1994 to 2004 of hedge funds was much more continuous. Furthermore, hedge funds could have overtaken the performance of bonds in this period.

Only the 1998 Russian crisis hit both the stock market and hedge funds. The negative impact of the strong devaluation of the Russian currency and the simultaneous one-sided debt moratorium hit hedge fund managers and traditional fund managers in a similar way. The reasons were the declining liquidity of risk fraught bonds and the

[270] Papier (2005), p.17

[271] Fung/Hsieh (2006), p.15

increasing volatility of stock markets. In all other quarters, the hedge funds managers could disengage from the bad performance of shares and even gain positive returns.

Not only different hedge fund indexes show significantly differing performances and volatility figures. They can also be found in the different hedge funds strategies. Differences in performance from 30% to over 60% between strategies are quite ordinary.

As hedge fund managers apply different types of strategies, strong evidence exists that hedge fund returns and hedge fund indexes returns are not normally distributed. Hedge Funds deploy absolute return strategies and are expected to perform regardless of market conditions. For this, hedge funds managers use two main approaches:[272]

- Directional approach: In this approach, the hedge fund manager bets on the expected direction of the market. They invest long or sell short securities and thus gain from their advance and decline.
- Non-directional approach: Being opposite, the fund manager tries to "extract value from a set of embedded arbitrage opportunities within and across securities".[273] This approach tries to take advantage of market inefficiencies.

Mean-variance analysis can be applied in the case of normally distributed returns or if investor preferences are quadratic. This means the reliability of mean-variance analysis is dependent on the degree of non-normality of the returns data and the nature of the non-quadratic utility function. The utility function does not constitute a problem, but the non-normal distribution of returns can be an issue.

3.8.3 Concerns in performance measurement

The different practical issues make it impossible to convey the risk and return for hedge funds. Even if a set of reliable data is available, it is unlikely to be a statistically computed measure of risk-adjusted return, which would satisfy an investor.

These practical issues also increase the "riskiness" of hedge funds. In the literature, the following issues can be found:[274]

- Purity: Hedge funds are assumed to use a pure and consistent style over time. But in practice, this is rarely the case. A lot of funds may be opportunistic and apply more than one style. Consequently, these hedge funds may not work the way their classifications indicate.
- Consistency: Compared to unit trusts and mutual funds, hedge fund's style purity is less consistent over time. By using factor analysis, the underlying

[272] Koh/Koh/Lee/Phoon (2004), p.12

[273] Koh/Koh/Lee/Phoon (2004), p.13

[274] Koh/Koh/Lee/Phoon (2004), p.18

dimensions that drive the returns for funds can be discerned. Using this it may be possible to determine unique hedge fund strategies that differentiate one fund from another.

- Fund size: The hedge fund size also has a significant impact on risk and return. It increases proportionally with its asset under management growth. This comes from the applied specialized strategies, which limit a hedge fund to an "optimal size". After reaching this size, it is hardly possible to keep using the same strategy to get opportunities for execution. Therefore, as soon as the target size is reached, hedge fund managers need to close their funds to further investment, as they know the trade-offs between size and performance.
- Use of leverage and liquidity: To increase potential returns, hedge fund managers often use leverage. They also concentrate their investable funds in a small subset of potentially "rich" opportunities. However, the use of excessive leverage is always connected with a lack of liquidity produced by a disastrous event. Creating a non-diversified, illiquid and leveraged portfolio, which grows over time, may lead to the bankruptcy of the fund if a misfortune takes place.

3.9 Fund of hedge funds

A fund of hedge funds is created by a hedge fund manager. The objective of this construction is the assurance of the invested capital, the reduction of risks and the realization of a consistent value development. Usually, there are no more than 30-40 hedge funds in one fund of hedge funds. In a niche fund of hedge funds there are only hedge funds that apply the same strategy. The opposite is true for diversified funds of hedge funds.

One advantage of such funds is the higher diversification effect, which results in a decreased risk.[275] Furthermore, the value development in a fund of funds should be more consistent. Since the various strategies perform differently over time, a diversified fund of funds – combining different strategies – will have a lower volatility. For the investors a fund of fund has the advantage that only a small amount of money needs to be invested.

Reducing risk has the disadvantage of reduced returns. However, funds of funds are becoming more and more accepted by institutional and high net-worth investors, because of their advantages.[276]

[275] Papier (2005), p.16

[276] Papier (2005), p.16

4 Islamic investment fund as an alternative investment

4.1 Can Islamic investment funds catch up with conventional investment funds?

4.1.1 How costly is Shariah compliant investment

In their paper, Hakim and Rashidian (2004) address three questions concerning the competitiveness of Islamic investment funds:

1. How does the Shariah selection restriction affect performance?
2. What is the competitive risk-return trade-off of a Shariah-compliant index?
3. To what extend is a Shariah compliant index correlated with the broad stock market?

While the third question was elucidated upon in chapter 2.10 in more detail, the findings of their studies on the first two questions will help discussing the "costs" of Shariah-compliant investments.

To compare the performance of Islamic and conventional investment, Hakim and Rashidian (2004) analyzed the Dow Jones Islamic Index (DJI) and the respective Dow Jones World Index (DJW). Further, to better understand the DJI, another index was analyzed: The Dow Jones Sustainability World Index (DJS). This index is a so called "green index" excluding stocks of companies that deal with gambling, alcohol, tobacco, firearms or armaments. Its main difference to Islamic investments is that the DJS does not exclude corporations whose costs or revenues depend on interest or are associated with pork related food products.[277]

The metric in question was the CAPM, the measurement of returns of a fund or index related to the covariance of its returns with the return of the market.

Furthermore they calculated the "Islamic beta", meaning the correlation between the DJI and the DJW. If the Islamic beta is greater than one, then Islamic investments are more volatile than the market, whereas a number smaller than one indicates that Islamic investments are less volatile. A negative beta suggests that the Islamic investments move against the market and may offer a possibility of hedging risk against stock market downturns.[278] Table 4 summarizes these characteristics.

[277] Hakim/ Rashidian (2004), p.2

[278] Hakim/ Rashidian (2004), p.2

	beta > 1	beta < 1
Positive beta	Islamic investments are volatile, moving with the market.	Islamic investments are less volatile moving with the market.
Negative beta	Islamic investments are volatile, moving against the market.	Islamic investments are less volatile, moving against the market.

Table 4. Value of beta and its meanings

The results of their study are quite amazing: They found out that funds that are tracked by the DJI index expose their clients to no more risk than what they would encounter in the DJW, despite moral restrictions having limited their choice of stocks. Thus, Shariah compliant investments are not more expensive than conventional investments.

They further found out that the movement of stock market prices had an asymmetric impact on excess returns and that the risk return relationship is solely explained by beta. Thus, Islamic investment funds may be a good way to hedge against market risk.

Compared to the DJS, the green index, Islamic investments performed more poorly. Unfortunately, Hakim and Rashidian (2004) did not further explain the reasons for this result – they rather suggest a revaluation of the components of the DJI to make sure that companies that are tracked under the DJI are not only Shariah compliant but also market competitive.

One reason for the fact that the DJI performs worse than the DJS was provided by Wilson (1997). He stated that the fact that ethical investments can borrow from banks gives them a tremendous financial advantage.

4.1.2 Advantages of Islamic investment funds

Are Islamic investment funds really a better alternative than conventional investment funds? In Al-Jarhi (2003) about Islamic finance, a lot of points can be derived that are relevant for the analysis of Islamic investment funds.

Regarding general findings on the advantages of Islamic finance, he stated that there are seven main advantages of Islamic finance, compared to conventional finance:

- Efficiency
- Stability
- Moral hazard and adverse selection
- Finance and development
- Integrity
- Equity
- Sustainability

4.1.2.1 Efficiency

Since Islamic finance is based on profit sharing instead of interest, it does not have to look at the borrowers' ability to repay loans. Islamic investors invest in the most profitable investments with the highest rates of return. Al-Jarhi (2003) argues that this fact directs financial resources to the most profitable investments instead of borrowers with the highest ability to pay, which increases the efficiency of the financial process.

4.1.2.2 Stability

Islamic banks are in a way more stable than conventional banks, because they share risk with the investment depositors and are thus unlikely to fail in times of economic crisis. Islamic banks only guarantee demand deposits. Investment deposits are based on profit-and-loss-sharing which makes an Islamic bank more stable.

Another argument for higher stability is the fact that Islamic financial products cannot trade money for future money. Conventional banks trade bonds on the financial market. Al-Jarhi (2003) argues that most of the time bonds are unlikely to vary with real economic changes and bring a source of instability to the financial institutions and products. Islamic finance forbids the trade of money for money and provides a lot of stability to Islamic financial products.

Furthermore, speculation is viewed as gambling and is prohibited under Shariah. The absence of gambling prevents Islamic investment from being unstable.[279]

4.1.2.3 Moral hazard and adverse selection

The moral hazard problem in an investment fund situation refers to the client, giving the manager the power to manage his portfolio, because of his superior knowledge. There is no guarantee that the manager behaves in a profitable manner for the client and thus needs some incentives to do so.

If the manager has superior information about profit-risk relations, his choice may adversely affect the choice of the clients, because he will notice some opportunities that are not seen by the shareholder. This may lead to a suboptimal choice for the client.[280]

Al-Jarhi (2003) argues that due to the screening procedure and the fact that Islamic banks only conduct debt and equity financing simultaneously, they have more information than institutions that only conduct debt financing. This fact is empirically confirmed.

4.1.2.4 Finance and development

Islamic finance supports economic development better than conventional finance. Since bankers choose very carefully which project should be invested in, more profitable

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[279] Al-Jarhi (2003), p.10

[280] Rangel (2004), p.3

investments are made. Further, the fact that the banker becomes a partner of the underlying enterprise, provides better support and helps to develop the economy.

A second factor is that Islamic finance opens the door to investment for Muslims who had never thought about the possibility of financial or investment activities because conventional services contravene their religious beliefs. Thus, a lot of money is literally stored under pillows – Islamic finance has the potential to acquire the money of these people and help them to invest reasonably and on the other hand provide funds for Islamic investment projects.

4.1.2.5 Integrity

Investment activities are complicated and thus are often passed on to specialists, because the normal individual feels overwhelmed by the information. Investors are rather less involved in decision making.

Islamic finance is based on profit-sharing and thus risk-sharing, encouraging the involvement of the investor. People will eventually feel like they are partners rather than spectators.

4.1.2.6 Equity

Equity is stimulated by Islamic financial instruments in two ways. Islam prescribes the collection of Zakat, which is like a tax-subsidy to reduce poverty. Zakat is paid by the wealthy to the poor in proportion to their wealth. Islamic financial institutions can facilitate this process by automatically collecting and distributing Zakat.

However, Islamic finance also supports equity on the investors' side: Since it does not look to prove the ability of the lender to repay but the potential profitability of a project, those who are not wealthy will gain access to finance.[281]

4.1.2.7 Sustainability

A debt crisis is less likely to occur in Islamic finance. For example, the total value of the debt (spot value of commodities plus mark-up) is set at the very beginning of the contract. This value is repaid in installments without increase in its total value. If a debtor becomes temporarily insolvent, they are often granted grace periods with no penalty fees.

4.1.2.8 Conclusion of Islamic investment funds

The findings of Al-Jarhi (2003) are related to Islamic finance in general but also have direct and indirect implications for Islamic investment funds that should be discussed now:

[281] Al-Jarhi (2003), p.13

- **Efficiency**

  Generally, efficiency of Islamic investment funds relates to the fact that investments are made in the most profitable projects rather than in projects with the highest interest rate. Beside macro-economic advantages, this has the advantage for the investor that the time value of money is retained. There is no question of how to bring the interest rate down to zero to optimize resource allocation.[282]

- **Stability**

  The higher stability of an Islamic investment fund resulting from its exclusion of high speculative instruments provides higher security for investors when compared to conventional investment funds.

- **Moral hazards and adverse selection**

  In absence of moral hazard and adverse selection, an investor can be sure that the Islamic investment fund manager is investing only in profitable projects, providing more security for the investors.

- **Finance and development**

  These are important factors to all investors who seek social responsibility and ethical investment (as discussed in chapter 4.3.1.1). Money is allocated to profitable projects in most developing countries and green projects. On the other hand an Islamic investment fund provides a huge chance for managers to acquire money from Muslims that would otherwise remain idle due to the absence of Shariah compliant investment possibilities.

- **Integrity**

  The integrity of Islamic finance provides the opportunity for investors to be part of the Islamic investment fund in contrast to being only a spectator.[283]

- **Equity**

  Again, this factor contributes to the positive social responsibility of an Islamic investment fund. Due to the rise of ethical investment, one can assume that Islamic investment funds have a good chance of spreading quickly.

- **Sustainability**

  This may only indirectly contribute to the rise of Islamic investment funds: When people know about the advantages of Islamic finance and thus get

[282] Al-Jarhi (2003), p.9

[283] Al-Jarhi (2003), p.12

more responsive to respective offers, Islamic investment funds will spread faster through the world of finance.

4.1.3 What are the barriers to growth?

Despite the unique advantages of Islamic finance, it still faces a set of unique issues and challenges on its way to growth and prosperity. In May 2007, the Islamic Research Institute (Irti) and the Islamic Financial Services Board (Ifsb) released a study together, providing a ten-year framework for the development of Islamic finance. In this, they also addressed the problems and areas of Islamic finance, which need to be improved. The main topics shall be discussed here:

4.1.3.1 Uniform regulation

Islamic banks and finance models are still regulated according to Western banking models, even in Islamic countries. Consequently, they can only handle the problems of conventional, but not Islamic banking. There is no regulatory framework compliant with Shariah principles that governs actions of Islamic financial institutions. The current conventional framework should be enhanced to make it applicable to Islamic financing institutions. Such a framework would strengthen and push the integration of Islamic markets[284]. Enhancement is necessary in the following areas[285]:

- Transparency and disclosure
- Risk management
- Corporate governance
- Internal control systems

4.1.3.2 Legal framework

Islamic law provides its own framework for implementing commercial and financial contracts and transactions. However, not many countries have this framework and so Islamic transactions clash with conventional legal frameworks. Islamic financing activities can only be applied in the framework offered by conventional laws, which often leaves little space for the large variety of Islamic financing modes to evolve. For example, Islamic asset-based financing contracts are seen as purchase and re-sales of assets and so lead to a double taxation of the asset. Until now, only the UK and Singapore have eliminated the "double stamp duty on Islamic modes of finance" to offer tax neutrality[286]. Further, Islamic banking laws are necessary to support court agreements on legal matters and avoid extra effort and costs. So, banking, property,

[284] Iqbal (1997), p.44

[285] Irti/ifsb (2007), p. 25

[286] Irti/ifsb (2007), p. 24

company and commercial law require modifications according to Shariah principles to provide a sufficient legal framework.

4.1.3.3 Full compliance with Shariah principles

Many examples of Islamic stock markets in Islamic countries can be found, like Egypt, Jordan or Pakistan, but still they do not fully comply with the Shariah. Iqbal (1997) notes that the secondary market is extremely shallow and illiquid and money markets are close to nonexistence, as the necessary instruments are not available.

4.1.3.4 Accounting procedures and standards

Just as with the lack of a regulative framework, conventional accounting procedures and standards cannot be applied to Islamic financial institutions, due to the different nature and treatment of financial instruments. It is important to offer procedures providing information disclosure, monitoring, surveillance and building investors' confidence[287].

4.1.3.5 Human resources

Islamic financial institutions have unique human resource requirements. Iqbal (1997) notes that trained personnel, able to apply Islamic financial principles for analyzing and managing portfolios or product development, are a scarce resource. Shariah experts need to have knowledge about banking and finance and finance specialist need to have knowledge about Shariah principles and their application[288]. It is important to enhance the training and hiring of such personnel to further meet market growth and customer expectations.

4.1.3.6 Uniformity of applied religious principles

As there is no universally accepted central religious authority, Shariah boards carry this responsibility in Islamic banks. All actions and developments must be approved by them. As the Shariah is open to interpretation, Islamic scholars often have different views and opinions on the same matter[289]. This leads to a situation in which an Islamic instrument may be applicable in one country, but not in another. For example, the sale of debt assets is not allowed except at their face value. Not so in Malaysia which takes a different view on this case, enabling the management of receivables more freedom. Also, the use of hedging techniques like futures, forwards or options is seen differently[290]. Iqbal (1997) states that a single, authoritative council that summarizes and gathers different interpretations is necessary, to define universally valid rules and control product development.

[287] Iqbal (1997), p.44

[288] Irti/ifsb (2007), p. 23

[289] Jobst (2007), p.27

[290] Irti/ifsb (2007), p. 26

4.1.4 Conclusion: Can Islamic investment funds catch up with conventional investment funds?

The study of Hakim and Rashidian (2004) shows that Islamic investment funds perform equally well in terms of risk as conventional funds. Although Islamic funds are more restricted in their choice of stocks, it does not affect their performance. The study even suggests that Islamic funds can be a good way to hedge market risk since their returns do not vary with those of the market.

Al-Jarhi (2003) compared Islamic finance with conventional finance and found useful results useful for investment funds. The most important result of this paper was that Islamic investment funds were more stable than conventional funds. Islamic funds have the potential to gain access to a lot of money from Muslims that has been kept idle due to the absence of investment opportunities.

Nevertheless, there also are disadvantages to Islamic investment funds. Compared to other ethical investment funds, they tend to perform more poorly.[291] One possible explanation is provided by Wilson (1997) who stated that the fact that Islamic investment funds cannot borrow from banks – while other ethical investment funds do – provides a huge financial disadvantage. Furthermore several areas need to be improved or adjusted to enable equal chances for the development and recognition of Islamic finance.

So the answer to the question "Can Islamic investment funds catch up with conventional investment funds?" has to be: "Yes, but…". Yes, Islamic investment funds can catch up in terms of risk and are a good way to hedge market risk, but the performance might be slightly worse than that of other ethical investment funds. Yes, Islamic investment funds provide superior advantages over conventional funds and have the potential to acquire a lot of idle Muslim money, but first a lot of product innovation must occur and Islamic financial instruments need to be continuously developed and improved.

4.2 Is hedging for Islamic investments possible?

4.2.1 Hedging in Islamic finance

Hedging can be seen as an instrument to minimize risk. As stated in the Shariah principles, excessive uncertainty and gambling are prohibited, which means that risk should be avoided in Islamic finance. This could mean that hedging complies with Islamic finance objectives. However, as Al-Suwailem (2006) holds, what counts is not only the result, but how one gets there. For example if excessive uncertainty and speculation was used to reach the goal, it does not comply with the Shariah, though the

[291] Hakim/Rashidian (2004), p.2ff.

goal may be the same. “Ends do not justify means, and thus noble ends necessitate noble means”.[292]

Though hedging offers some sort of security and follows the investors’ interests, it is still partly gambling. This is a problem faced not only by Islamic but also conventional finance. Below, some of the tools, which can be used in Islamic investment shall be discussed.

4.2.1.1 Cooperative hedging

As seen in the previous sections, cooperative arrangements can solve many economic problems much more effectively than looking only at for-profit or non-for-profit arrangements, especially problems of risk sharing and distribution.[293]

An example is mutual insurance. Commercial insurance is prohibited by Islam as it is a gharar contract. Cooperative insurance on the other hand is a non-profit arrangement and can be accepted despite its great uncertainty. In cooperative insurance, the risk is shared and distributed just like in commercial insurance, but it further reduces moral hazard and conflict of interest.[294] Also, Al-Suwailem (2006) notes, its mutual structure may be more stable than stock-ownership structures.

The difference lies in the liability of the insurance company. If a claim comes in, the commercial insurance must pay no matter how much funding is available. In mutual insurance, the payment is made according to available funds. If there are not enough funds, members voluntarily pay the missing amount or the amount is reduced in proportion to available funds.[295] Thus, this structure also ensures that members do not try to take advantage of the system and reduces problems of moral hazard.

In cooperative hedging, the profits are taken out of the equation, which eliminates speculation. Unlike derivatives, cooperative hedging is an arrangement between hedgers only and not between hedgers and speculators. So the benefits of risk distribution can be enjoyed “without creating additional risks that drain resources and endanger the stability of the system”.[296] This means that cooperative arrangements allow Muslim investors and Islamic institutions to share risk. They are further flexible and can handle any type of risk, as they have a not-for-profit structure.

Currency for-profit trading faces strong restrictions by the Shariah. For this reason, cooperative non-profit techniques offer the best strategy to manage currency risk.[297]

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[292] Al-Suwailem (2006), p.57

[293] Al-Suwailem (2006), p.116

[294] Al-Suwailem (2006), p.117

[295] Al-Suwailem (2006), p.117

[296] Al-Suwailem (2006), p.118

[297] Al-Suwailem (2006), p.118

Often Islamic institutions set up a cooperative fund to distribute and share currency risks. The members have different risk profiles to enable risk diversification. All profits and losses resulting from currency exchanges of each member are then added to his account. The surpluses build reserves for future losses. As their risks are uncorrelated, “the gains and losses will be cancelled out and members will be able to hedge their currency risks”.[298] The fund basically has a cooperative structure, but individual member preferences can also be taken into account. By this, risk comes only from the members in the fund. Al-Suwailem (2006) concludes that this allows the achievement of risk sharing in its purest form “without the negative consequences of speculative trading”.[299]

As cooperative arrangements are set up as non-profit arrangements there is no limitation on how many members can participate in a fund. Of course, the more members, the better the risk can be diversified, but having no constraints here enables more flexibility.[300]

Further, Al-Suwailem (2006) notes that rights and obligations can also be decided on in a cooperative way, thus both parties gain the most out of the cooperation. For example, in a murabaha, in which a financier lends money to the customer who pays it back in fix installments, the parties could decide upon payment and duration of the murabaha according to their situation and the environment. If the customer cannot afford to pay the full amount of one installment on one occasion, they could agree to reduce the installment, enabling the customer to pay. This would also lead to an extension of the duration of the contract. Thus, the financier would receive the installments over a longer period. Further, they could agree on raising the installments. This would mean that the financier would receive higher payments. For the customer it would mean that he would not have to pay for such a long period of time as the duration of the contract would be reduced in proportion to the payment. So because of such a cooperative arrangement, both parties can gain.[301]

4.2.1.2 Contractual hedging

As the name implies, contractual hedging concerns to contractual, for-profit instruments. As stated in previous chapters, risk management cannot be separated from real activities in Islamic finance. This means that “a single instrument would provide finance, risk management as well as ownership together”.[302]

Mudarabah is the oldest form of business financing. As described in the previous section, the capital owner (rab-ul-mal) provides capital to an agent (mudarib) for his

[298] Al-Suwailem (2006), p.119

[299] Al-Suwailem (2006), p.119

[300] Al-Suwailem (2006), p.119

[301] Al-Suwailem (2006), p.120

[302] Al-Suwailem (2006), p.120

business project. The profits from the project are shared according to a pre-agreed ratio. Mudarabah faces three types of risks:[303]

- Risk of misreporting

  Misreporting is the most common risk. Here, the fund manager reports losses though the fund is making profits.[304] This allows him to keep the whole profit. Therefore, it is highly recommended to conduct a thorough investigation and do due diligence of the company to be invested in to avoid such actions. Conventional banks do not offer loans unless they are not completely sure that the borrower is able to pay back the amount. If the borrower cannot pay, the bank can even seize his income. Islamic banks face downside risk and because of this they should aim to do even stricter due diligence. So it can be said that, "in equilibrium, Islamic banks would finance better businesses, and achieve higher success rates, than those financed through debt".[305]

- Risk of loss (capital risk)

  In most partnerships of Islamic finance the investors face the risk of losing their capital. So is the case with mudarabah, but this risk can be efficiently minimized by due diligence.[306]

- Risk of liquidity

  According to Shariah, mudarabah is a real investment and does not include any liquidity risk.

4.2.1.3 Third party hedging

Third party hedging creates another possibility for losing capital. Al-Suwailem (2006) describes it as follows:[307]

"The investor or financier provides money to the company through partnership or musharakah, by which the financier becomes a (passive) shareholder in the company. The investor subsequently can sell all or part of his share to a third party. For example, the investor may sell a portion, say 95%, of his share for a deferred price that is equal to his capital, and keeps the remaining 5%. The remaining share allows the investor to participate in the company's profits, while the deferred price protects the investment. The third party enjoys participation in the company without advanced payment and with relatively low markup cost."

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[303] Al-Suwailem (2006), p.121

[304] Al-Suwailem (2006), p.121

[305] Al-Suwailem (2006), p.122

[306] Al-Suwailem (2006), p.123

[307] Al-Suwailem (2006), p.124

The company does not carry any debt at all. Further, the investment has the form of a musharakah, allowing all parties to gain.

4.2.2 Futures

4.2.2.1 The prohibition of futures and forwards

A future or forward contract can be defined as a contract where "the settlement of the transaction is entirely deferred to a future date".[308] The transaction is delayed, but the price is fixed at present. For example, a contract may exist between a producer and a customer who buys a product. Payment and delivery are deferred. Now the producer faces the risk of price decline while the customer carries the risk of price increase. Both can hedge their risks by a forward contract.

First of all, a future contract is basically an exchange of a debt for a debt, which is forbidden. Further, in this contract the product to be sold does not exist or is not owned by the seller which leads to excessive uncertainty (gharar).[309]

4.2.2.2 Salam as an Islamic forward

The Salam contract can be seen as an Islamic forward. An Islamic forward is defined as a "binding promise from the buyer to buy and from the seller to sell a generic product of specific quantity on a specific date in the future at an agreed upon price".[310] The main purpose is the forward purchase with the difference of binding and predetermined conditions.

One might say that even in bai salam, the seller does not own what he sells. However, bai salam refers to generic products only and is the "sale of what one does not have, but what one is reasonably sure of bringing into existence".[311] Still, here the buyer must pay the price for the goods at the time of agreement. Only the seller's obligation is deferred. The salam sale is designed to offer finance to the seller and a healthy and rewarding investment opportunity to the buyer.[312]

4.2.3 Options

4.2.3.1 The prohibition of options

There are two types of options, call and put options. Obaidullah (2002) defines these as follows:

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[308] Obaidullah (2002), p.7

[309] Obaidullah (2002), p.7

[310] Al-Saati (2002), p.10

[311] Obaidullah (2002), p.7

[312] Al-Saati (2002), p.11

- o Call option: The holder has the "right but not the obligation to buy the underlying asset at a predetermined exercise price at or anytime before maturity".[313]
- o Put option: The holder has the "right but not the obligation to sell the underlying asset at a predetermined exercise price at or before maturity".[314]

The main point here is that the holder is not obligated to use his option, as the name says he receives the possibility of doing so. He will only use it when he is sure of gaining an advantage. Obaidullah (2005) holds that usually the holder has to pay a non-refundable premium to receive this flexibility. At the same time, this premium also counts as the maximum loss he will carry. The loss is born, if the option is not used.

The prohibition arises out of the fact that an option "is a promise to sell or purchase a thing at a specific price within a stipulated time and such a promise can not be the subject matter of a sale or purchase".[315] Just like in futures, excessive uncertainty exists as the option speculates with price differences. The subject matter is only the right and not a real activity or tangible commodity. This cannot be the subject matter of a contract.

4.2.3.2 The framework of Al-Khiyar as an alternative to options

The difference between conventional options and the framework of Al-Khiyar lies in the ethical point of view. Options ignore all rights and obligations that have financial importance. Al-Khiyar on the other hand offers the right for one or both parties to confirm or reject the contract. Further, conventional options may be created on agreement between the parties or because of legal implications. The Islamic point of view is that an agreement between the parties cannot be the main priority in an Islamic contract. What is important is "the equity of a contract and fulfillment of proper and reasonable expectations of the parties to the contract".[316] The parties must agree to the contract and must know its content, like the values to be exchanged, what the contract implies and what the outcome shall be. This restricts uncertainty to an accepted limit according to the Shariah, like the outcome, price, etc. Further, it prevents the possibility of one party trying to take advantage or doing so unintentionally. Further, Islamic options offer them the possibility of taking time to revise their decisions. This enables them to rationalize fast, irrational taken decisions and limit conflicts.

There are five categories for options:[317]

- o Option by stipulation (Khiyar al-shart)

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[313] Obaidullah (2002), p.5

[314] Obaidullah (2002), p.5

[315] Obaidullah (2002), p.8

[316] Obaidullah (2005), p.184

[317] Obaidullah (2005), p.184

- Option of determination or choice (Khiyar al-tayeen)
- Option for defect (Khiyar al ayb)
- Option after inspection (Khiyar al-ruyat)
- Option of session (Khiyar al-malis)

Obaidullah (2005) notes, that there are some variations between scholars. For example, some only see the option of determination as a special form of the option by stipulation. Others again include two further options, the option by misrepresentation (khiyar al-wasf) and the option by fraud (khiyar al-tadlis). Others consider only the option for defect.[318] The two main options for risk management are the option by stipulation and the option of determination or choice.

4.2.3.3 Option by stipulation (Khyiar Al-Shart)

"Khiyar al-shart is an option that is in the nature of a condition stipulated in the contract".[319] It gives all involved parties, the contractors and even a third party, the right to confirm or cancel "the contract within a stipulated time period".[320] By this, the parties have the option of taking time to revise the contract and its contents and then make a final decision whether to confirm it or not. Obaidullah (2005) holds that this option is also known as the option of reflection (khiyar al-tarawwi). Any contract involving the exchange of values, and which can be cancelled at any later date, may contain this option. Further, there are three main conditions concerning options in contracts:[321]

1. There are no limits on the duration of the time period for options as long as it is defined and known at the time of contracting.
2. The buyer can own the goods during the option period.
3. The price agreed upon is allowed to be different from the contracted price under certain circumstances.

4.2.3.4 Option of determination (Khiyar-al-Tayeen)

This option is in some ways similar to khiyar al-shart. It offers the buyer the possibility "to choose the object of sale from out of multiple varieties of a given article".[322] The similarity comes from stipulating the option in the contract and continuing for a specified time period. Thus, the party can choose from a number of varieties of the article which can be different in quality, material, design etc. Obaidullah (2005) notes

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[318] Obaidullah (2005), p.184

[319] Obaidullah (2005), p.185

[320] Obaidullah (2005), p.185

[321] Obaidullah (2005), p.186

[322] Obaidullah (2005), p.193

that the party can be more flexible in its decision and furthercompare, whether the object or value to be exchanged matches its expectations.

4.2.4 Swaps

4.2.4.1 The prohibition of swaps

Obaidullah (2005) notes that currency swaps are a popular instrument for risk management. As it is a series of forward contracts it is prohibited according to Shariah.

4.2.4.2 Islamic swaps (Al-muragaha al-Islamiyah)

A currency swap according to Islamic law is constructed as a contract for exchanging or swapping interest-free loans between two parties. Conventional swaps involve interest, but this is removed in Islamic swaps, which are called al-muragaha al-Islamiyah. Thus, Islamic swaps are "an exchange of two interest free loans (quard) in different currencies, which are repaid by both parties at the end of a stipulated time period".[323] This situation partially enables the parties to hedge their currency risk. Obaidullah (2005) explains it using with the following example:

"Bank A in India has liquid funds denominate in US dollars and currently expects the US dollar to weaken against the Indian rupee over the next six months. Bank B in US with its liquidity in Indian rupees has diametrically opposite expectations. It expects the Indian rupee to weaken against the US dollar over the next six months. Thus, both the banks are exposed to and perceive currency risk. An Islamic swap between the two banks may help both banks to partially reduce their risk."

What the banks then do is lend and borrow from each other an amount in the specific currency and repay it after a specific time period. For example, A lends 1 Million US dollars to B, while B borrows 20 Million Indian rupees to A. After six months the same amounts are repaid to each other, meaning A repays 20 Million Indian rupees to B and B 1 Million US dollars to A. Without a swap, they could only invest in their own currencies and generate some profit. As for bank A the reporting currency is the rupee and if the dollar went down in value against the rupee, it would generate a loss created by currency rate changes. However, because it made a swap, the bank can invest in its reporting currency, the rupee, and generate profits in it. When the period ends, it "reverses the transaction and gets back its dollar liquidity".[324] The same works for bank B in dollars.

Obaidullah (2005) states that the difference between a conventional swap and an Islamic swap is that in an Islamic swap only the principal is swapped as the profits are not predetermined. In a conventional swap the principal is swapped together with the interest payments. Excluding the absence of interest-based transactions in Islamic

[323] Obaidullah (2005), p.196

[324] Obaidullah (2005), p.198

swaps, they offer the same advantages as conventional swaps like "reducing the cost of raising resources, identifying appropriate investment opportunities or better asset-liability management".[325] Yet there are still different opinions between scholars on the acceptability of Islamic swaps.

One argument against them is its debt for debt nature. "Any contract where the settlement by both parties is deferred to a future date is a clear case of exchange of debt for debt".[326] Another reason is that "two financial transactions cannot be tied together in the sense that entering into one transaction is made a precondition to entering into the second".[327] This means that the contract could not be possible because the first party accepts the loan only because the second party accepts the first party's loan before.

4.2.5 Islamic venture finance

Venture capital finance is based on cooperation, partnership, mutual help and social solidarity. For this it is very much seen as the only conventional form of finance that complies with Islamic rules, especially mudarabah and musharakah. Islamic venture funds are able to "channel funds into small, start-up businesses, transform people with technical expertise into first generation entrepreneurs and thereby, create wealth and add fillip to the process of development of Muslim societies".[328]

Venture capital finance is mainly based in the small and technology-based sectors, so there is no concern that they will be involved in prohibited activities, as declared in the Shariah. Further, venture capital financing often takes the form of equity and thus the purification process can easily be implied. Obaidullah (2005) notes, that in difference to other forms, venture capital often calls for managerial and technical expertise along with financial capital.

One model of Islamic venture financing is based on declining musharakah. In this form securities can be used and private equity in form of ordinary shares and common stock can be bought. Alternative forms of securities include Islamic preferred stocks which are built as "preference share with predetermined varying profit ratios".[329] Profits cannot be accumulated and one investor cannot be favored over another in sale or during liquidation. Obaidullah (2005) notes, that because of this, it is similar to common stock with predetermined profit ratios. This simple structure can also be applied in a more complex way, as venture financing involves more than just one round of financing. A round can work in the following way:[330]

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[325] Obaidullah (2005), p.198

[326] Obaidullah (2005), p.199

[327] Obaidullah (2005), p.199

[328] Obaidullah (2005), p.155f

[329] Obaidullah (2005), p.156

[330] Obaidullah (2005), p.156

1. Company and interested venture capitals find each other.
2. Company makes a presentation to multiple venture capitals providing detailed business plan, executive summary, financial projections with assumptions, competitive analysis and other relevant details.
3. Interested venture capitals engage in due diligence that involves competitions, business development, legal issues and accounting.
4. A lead investor is identified, rest are followers
5. The following are negotiated:
    a. Company valuation
    b. Size of round
    c. Lead investor's share of round
    d. Terms of investment

This is shown in Figure 11, describing the activities of the venture.

Activity:

1. Entrepreneur and venture capital discuss the business plan and jointly contribute to capital of the venture
2. Entrepreneur and venture capital jointly set up the business venture and manage its operations, sharing the responsibilities as per pre-agreed terms; Business generates positive or negative profits
3. Profits, if positive, are shared between Entrepreneur and venture capital as per a pre-agreed ratio; the profit share of Entrepreneur flows into venture capital too, towards partial redemption of the latter's capital contribution
4. Profits, if negative, are shared between Entrepreneur and venture capital in proportion to their respective capital contributions; effectively bringing down the asset value while keeping their respective shares in it unchanged.

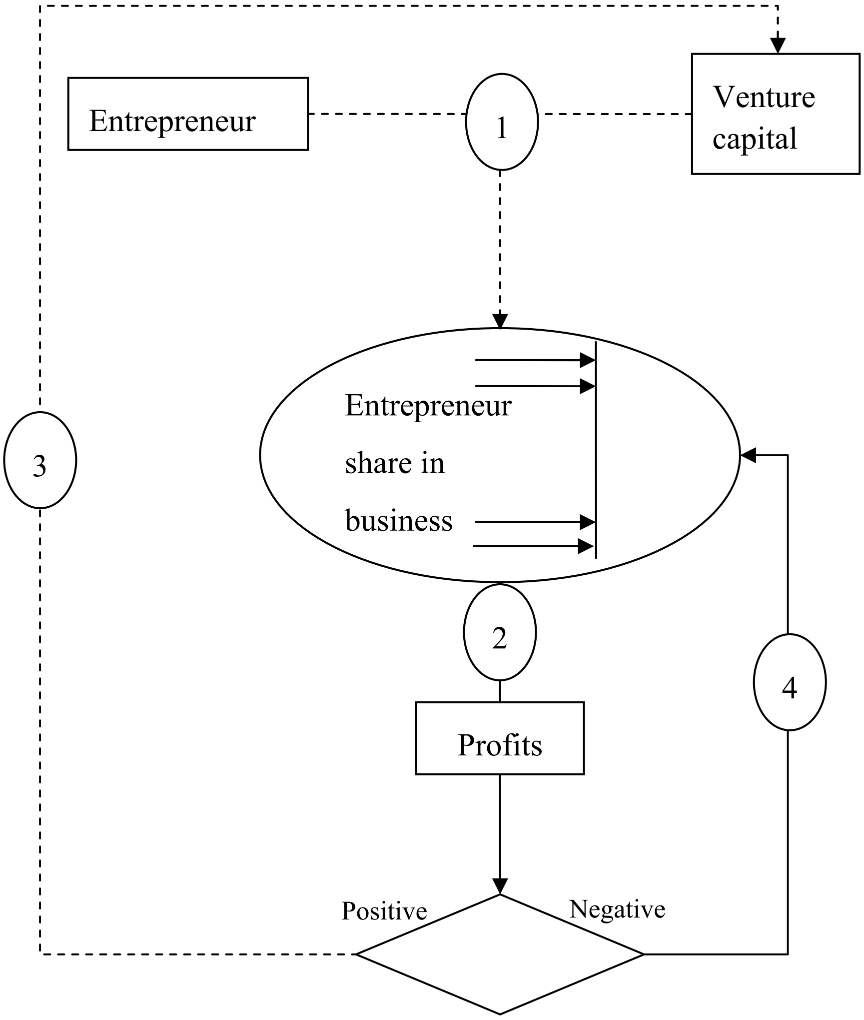

Figure 11. Steps of declining Musharakah (source: Obaidullah (2005), p.157)

These steps are repeated in several rounds, with the next one continuing on from where the last round ends. Islamic venture finance is almost the same as conventional venture finance. The main differences lie in charging clients with interest and using specific financial instruments.[331]

4.2.6 Conclusion: Is hedging for Islamic investments possible at all?

As the preceding discussion shows, hedging is possible for Islamic investment funds and to some extent even better than hedging in conventional financing. Instruments such as futures, options or swaps can be substituted for non-interest-bearing instruments like bai salam or khiyar al-shart. Thus, the problem of not being able to use hedging instruments because of their debt is eliminated. Currency risk is better hedged by Islamic instruments. Islamic forwards offer a security for the seller by being binding and having predetermined conditions.

[331] Obaidullah (2005), p.157

The clear advantage of Islamic investments over conventional investments is the nature of partnership. The same is true for hedging, as the risk is shared between all participants and all are ready and prepared to chip in, like in mutual insurance. There is a much stronger bond between the participants, the investors and managers, than there is in conventional financing. Everyone has the equal chance to gain or lose. Further, because of the non-profit structure of cooperative funds, they are more flexible and can handle any type of risk, especially from currency risks.

Still, problems like misreporting or loss of capital do exist, but can be handled by providing higher incentives, creating a stronger bond between managers and investors and proper due diligence. Rights and obligations can be settled more effectively and the cooperative setup and stronger relationship between the parties and the necessary leeway that exists, allows the parties to make adjustments according to current situations.

4.3 Can Islamic investment funds appeal to Non-Muslims?

One of the developments that will be a main factor in the spread of Islamic investment funds all over the world, is the question of whether Non-Muslims will be attracted to them or not. Two main issues exist that will influence the competitiveness of Islamic investment funds:

- The rise of ethical investments
- Brand issues and prejudices

In the following chapters, these issues shall be discussed in more detail.

4.3.1 Islamic investment funds' spread to the world

4.3.1.1 The rise of ethical investments

As we can see in the market, there is a high demand for ethical investment solutions. The boom of ethical investments started during the 1970s in response to special demands from of customers.[332] The Anti-Vietnam movement as well as the green and ecology movements triggered the demand for these products and as time passed by, ethical investment turned out to be more than a fad. Nowadays, for every $8 invested in the U.S., $1 is invested in a product following moral investment standards.[333] In the U.S., the size of ethical funds almost doubled between 1997 and 2000 from $1.185 to $2.16 trillion.[334]

[332] Wilson (1997), p.2

[333] Hakim/Rashidian (2004), p.1

[334] Hakim/Rashidian (2002), p.2

Wilson (1997) defines ethical investment as being characterized by ethical or social criteria in the selection and management of investment portfolios. Investors of ethical investments do not only worry about performance, but also care about the profile of the companies invested in and the way the portfolio is managed.

That being said, Islamic investment funds are basically a type of ethical investments. Due to the fact that Shariah forbids the investment in non-halal products like weapons or porn, investors that have decided to invest in an Islamic investment fund do not have to worry about the ethical aspect, since Shariah is often stricter in the selection of the company than other ethical investment funds. Thus it might seem conclusive that with a higher demand for ethical investment, Islamic investment funds will benefit as well.

The question that might come up is, whether ethical investment will outperform or underperform the broader market. In the UK, 40% of all investment possibilities are ethical. Given that enormous amount, one might argue that performance is unlikely to be any different from the performance of the whole portfolio.

That is not completely true. There is a bias in ethical investments toward small and medium-sized companies. 80% of the companies listed in the FTSE 100 do not qualify as ethical investment funds.[335] Further, ethical investments consist of slightly more risky companies than the average. Ethical investment companies can also borrow from banks for share purchases, unlike for example unit trusts and of course Islamic investment funds.

Thus, it may not be surprising that ethical investment outperforms both, the broad range of investment possibilities as well as Islamic investment funds. For a deeper discussion see chapter 4.1.1.

4.3.1.2 The rise of Islamic investment in Europe

Considering the trend of ethical investment and the increasing number of Muslims in Europe, it may not seem surprising that Islamic investment funds have spread across Europe and that one of the first countries with a considerable Islamic finance economy was the United Kingdom. There are over two million Muslims living in the United Kingdom and the majority of them are British citizens with many even born there.[336]

One of the most impressive examples of this change is the history of Al-Baraka, which was discussed in the introduction. Yet there are many more examples of Islamic banks and Islamic investment funds that are more or less successful in the UK. What is most notable is that the majority of the banks run successful Islamic investment fund services.

In 1986, Kleinwort Benson became the first investment bank to introduce an Islamic unit trust fund. The fund was not very successful, because the information about share

[335] Wilson (1997), p.4

[336] Wilson (1999), p. 36

prices was not communicated widely. Additionally there was no Shariah board monitoring the fund. Although the fund's performance was not much different to conventional funds, the fund failed because of the 1987 equity market fall, rather than the fact that it was an Islamic investment fund.[337]

Many other Islamic investment funds failed afterwards, because of various reasons and not due to the fact that they were Islamic funds. The Ummah Fund failed because it was offered by an independent provider, rather than a major fund management group of a bank – so there was not very much confidence in it. The Al medina Equity Fund of the Albany Life Insurance Company also failed, because of the lack of confidence in a life insurance company being able to manage an investment fund successfully.

Despite these failures, many Islamic investment funds now successfully run in the western world. The Ibn Majeed Emerging Market Fund run by the Swiss Bank Corporation or the Global Equity Fund managed by the New York Based Wellington Management Company are great examples for successfully launched Islamic investment funds in the western world.

Much preparation and research was made by Flemings to launch their Islamic Oasis Fund in 1996. Wilson (1999) describes that about 40% of the fund was invested in the U.S., 25% in Japanese equities and 8.5% of the funds were used to buy equities on the London stock exchange. This large international portfolio had a performance that was comparable to the Morgan Stanley Capital International (MSCI) World Index.

4.3.1.3 Important factors and favorite locations

Based on a study done by Davidson (2005), tax status and availability of specialist expertise are the main factors considered when Islamic funds consider buying and selling property. Figure 12 will summarize the findings.

Davidson (2005) also asked about the investors preferences for investment locations in Islamic investment funds. The findings show that though UK and Europe are preferred (see Figure 13), Germany and France are especially seen as countries with a high future potential. Nevertheless they also have the image of being inflexible in terms of market environment.

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[337] Wilson (1999), p.51

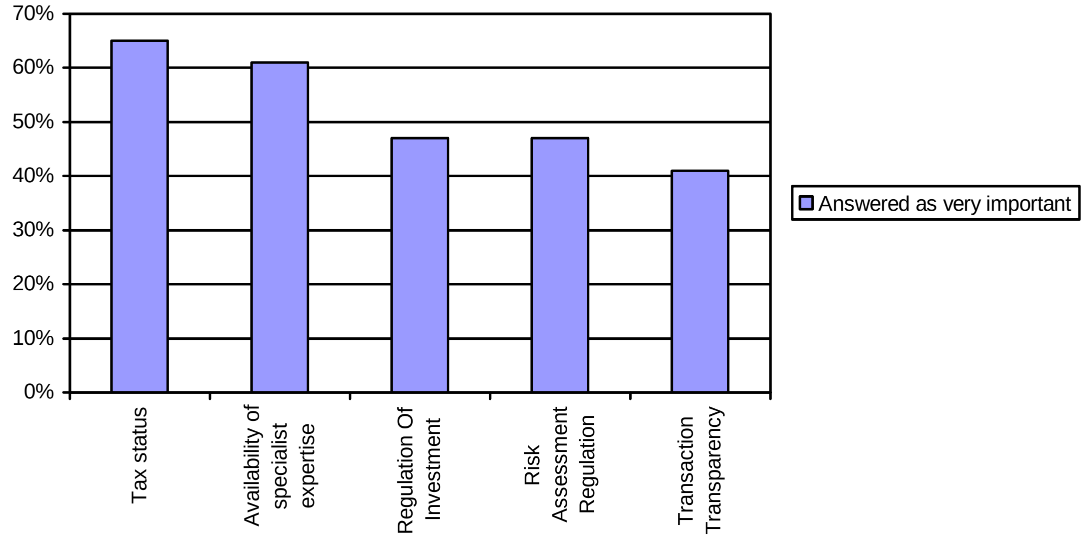

Figure 12. Importance of variables when investing in a fund (source: Davidson (2005), p.3)

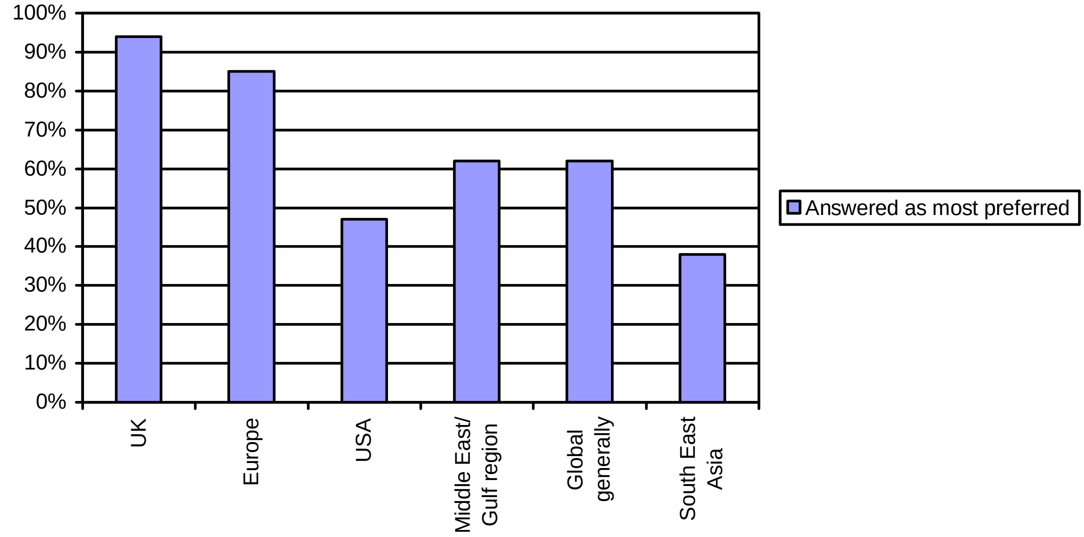

Figure 13. Favored investment location (source: Davidson (2005), p.3)

4.3.1.4 Considerations when issuing in the EU or the USA

As the first sukuk arrived in Europe in 2004 and in the USA in 2006, it is undeniable that Islamic investment funds will spread all over the world. However, the growth in other markets is not made without obstacles being encountered. Abdel-Khaleq (2004) identified three main hurdles, Islamic investment funds face in other Non-Muslim countries: structure, regulation, and tax.

Regarding the structure, one has to consider the most appropriate legal form of investment vehicle available in these countries. These might differ from those offered in Islamic countries. Another issue is the ownership structure. Assets can be held in a trust.

This structure available in common-law jurisdictions allows the investor to beneficially own the assets of the fund. Since this is an important fact for sukuk and other investment vehicles, Islamic funds are more and more often established in a tax-friendly, common-law jurisdiction.

Regulation is another concern. Some jurisdictions have established stricter laws than others, for example Luxembourg and Ireland. Many Islamic investment funds have thus been based in Malaysia or Bahrain which are known for their comprehensive regulations and tax friendly environments, where both Islamic and conventional investment funds can prosper.

The third issue is tax requirements. This is an important variable in decision making: where should the investment vehicle be domiciled. In some cases, problems of double taxation exist, as in the case of murabaha. This implies a competitive disadvantage compared with traditional investment funds. Tax advice is essential in the planning stage of an investment fund – whether Islamic or not.[338]

Beside these main issues, there may be other problems for Islamic investment funds that are domiciled abroad. For example, the English High Court decided that the governing law of a murabaha agreement is English law.

4.3.1.5 Legal framework in the EU

The EU is a very attractive territory for promoters of Islamic investment funds since they have access to a growing and wealthy Muslim community here. There are several steps that a promoter, who has decided to be active in the EU, has to go through.

First of all, the promoter needs to obtain a certificate (European passport) in compliance with the Directive of 20th December 1985 on the Coordination of Laws, Regulation and Administrative Provisions relating to Undertakings for Collective Investments in Transferable Securities (known as the UCITS Directive). No unit trust can carry on activities unless it has been authorized by the respective authorities of the member state in which it is situated.

A unit trust has to be approved based on the management company, the fund rules and choice of depository. Once approved, the authorization is valid for all member countries of the EU and official listings. It has been reported that some EU countries subject financial institutions based in Arab countries to stricter compliance requirements. Additionally, two options for accessing the EU market are possible: Internal funds and Islamic certificates. Internal funds apply, when a European insurance company is promoting Takaful (Islamic insurance) products. The company can now offer Islamic investors the option to invest in that Shariah compliant investment plan – even though this plan is not registered in the EU. This is possible via the so called internal fund of the Takaful company. Islamic equity certificates can be listed in the European stock

[338] Abdel-Khaleq (2004), p.1f.

exchange and mirror the performance of a portfolio and thus allow the Islamic investors to participate in the gains and losses of the portfolio.[339]

4.3.1.6 Legal framework in the USA

Basically, all companies that undertake investment management activities in the USA are required to comply with the requirements of the US Investment Company Act of 1940. This Act regulates the registration and activities of investment companies.

Additionally, the offer and sale of units of an investment fund in the U.S. need to be registered under the US Security Act of 1933. There are two possible exceptions to this act: Rule 144A and Regulation S. When the promoters wish to avoid the registration requirements of the U.S. security laws, detailed information and a declaration are attached to the offering documents and subscription agreements. This is done to ensure that investors are not U.S. persons and that they are not subject to the Security Act in any way.[340]

4.3.2 The problem of the brand “Islamic investment funds”

Nevertheless, the ethical side of Islamic investments is not the only character attracting Non-Muslim investors. As found out by the HSBC group, more than 50% of their customers of their Islamic mortgage product in Malaysia are Non-Muslims.[341]

After all, Islamic investment funds do have the same problem as all Islamic financial products: They are not a very well developed brand. Unfortunately, due to the events of recent years and unfavorable media coverage, the word “Islamic” is associated with terrible incidents. Thus, even the word “Islamic investment funds” may prevent some people from investing their money – whether this is a conscious factor or not.

DiVanna and Strategies (2006) suggest Islamic banks rename their institutions, e.g. into “Shariah compliant bank”. This describes the institution perfectly without the stigma of the word “Islamic”.

Products should also be renamed. ”Murabaha”, ”mudarabah” and other financial instruments may have no meanings for Non-Muslims or Muslims that live in Western countries and are not familiar with the Arabic names.[342]

Beyond this mere branding aspect, the communication of the value proposition is another issue that should be considered by Islamic investment fund managers. Islamic investment funds compete directly with their Non-Islamic counterparts and only have a

339 Abdel-Khaleq (2004), p.2f.

340 Abdel-Khaleq (2004), p.3f.

341 DiVanna/Strategies (2006), p.72

342 DiVanna/Strategies (2006), p.72f.

chance of success if brand, price, convenience and flexibility are set at a level that competes head-to-head with traditional products.

DiVanna and Strategies (2006) stated that Islamic financial products have to go beyond mere faith-based arguments and show Islamic values in action. They took the case of the Qatar National Bank as a brilliant example. In October 2005, during the Islamic month of Ramadan, the bank announced to defer all personal and vehicle loan installments as a Ramadan gesture. The reason for that move was that they had found out that a lot of people overextended themselves during this period and had problems paying their installments. As DiVanna and Strategies (2006) said in there article: “Actions speak louder than words”, this is a great chance to overcome all prejudices.

4.3.3 Conclusion: Can Islamic investment funds appeal to Non-Muslims?

As seen in chapter 4.3.1.1, there is a boom in ethical investment funds which creates good opportunities for Islamic investment funds to attract more Non-Muslim investors. As the previous discussion showed, Islamic investment funds have already spread to Europe and the USA but have been targeted and communicated more at Muslim investors only. Despite some initial failures in the 1980s and 1990s, Islamic investment funds are well established in the UK and the USA and one can assume that they will grow further. Nevertheless, to foster this growth, a lot of legal work has to be done to get rid of all competitive disadvantages that exist in the Western legal framework.

Even if that happens, there may be other difficulties in attracting Non-Muslims. Despite the various connotations of the word “Islamic” and the problem of having Arabic product names that are meaningless to Non-Muslims, Islamic investment funds need to be clearly communicated to Non-Muslims in order to attract them. To label them as ethical investment (what they truly are) might be a useful approach. Simple faith based arguments will fail, if the customer does not share the same religion. Besides brand aspects, as discussed in previous chapters, there are hard financial facts that can be used to convince Non-Muslims to invest in Islamic funds such as the benefits of hedging the market risk and higher stability.

So the answer to the question “Can Islamic investment funds appeal to Non-Muslims?” has to be “Yes, they can”. The advantage of Islamic investment funds is not solely their religious morality but their performance and characteristics. If that investment opportunity can be effectively communicated, Islamic investment funds will attract Non-Muslims on a broad basis.

4.4 How to balance an investment portfolio with Islamic investment funds and hedge funds

4.4.1 Advantages and disadvantages

4.4.1.1 Islamic investment funds

The main advantage of Islamic investment funds is risk-sharing (chapter 2.3.2.1). Both parties are seen as equal partners in an investment and all issues are cleared by a contract in advance.

Additionally, as identified in chapter 2.10, Islamic investment funds are

- less risky than their counterparts
- and less dependent on the overall market.

Another advantage is the fact that Islamic investment funds appeal to ethically concerned investors and Muslims. Thus, new potential investors can be identified and targeted, which could contribute to broadening the investment industry (chapter 4.3.1.1.)

As pointed out in chapter 4.1.2.8, Islamic investment funds offer the following advantages:

- Efficiency
- Stability
- Moral hazards and adverse selection
- Finance and development
- Integrity
- Equity
- Sustainability

On the other side, given the restrictions, it becomes more and more difficult to identify businesses and markets aligning with the Shariah. The issue of the prohibition of interest rate, specific businesses and some trading techniques means various market opportunities cannot be used by an Islamic investment fund manager. Consequently, some ethical investments outperform Islamic investments (chapter 4.3.1.1.).

A problem specific to Islamic investment funds arises from legal issues like double taxation and bureaucratic barriers for Islamic financing modes (chapter 4.3.1.4). Over time, it will become important for countries to change their laws and regulations to become attractive for Islamic and ethical investors.

As seen in chapter 2.6, regulation of Islamic investment funds is also an issue. The absence of contradiction regulation prevents the market from being transparent. This is the main problem for new players in the market.

4.4.1.2 Hedge funds

The following three points can be seen as the main advantages of hedge funds (chapter 3.7):

- Profit-risk relation: Hedge funds have generated a higher yield than traditional investments, because they are more influenced by the manager's ability to identify market inefficiencies and to set proper strategies than the development of the market (alpha factor, see chapter 3.5.1). Compared to traditional investment categories like shares and bonds, hedge funds achieve higher risk adjusted returns at lower volatility (chapter 3.8.2).
- High flexibility of investment opportunities: Hedge funds are assessed by the absolute positive return and not by indexes of different markets. This and the lesser regulation for hedge funds enables the manager to choose his markets, strategies and instruments with more flexibility (chapter 3.1.2).
- Leverage effects: Hedge funds use debts as a major instrument to invest in the markets. This leverage effect increases the risk of losses, if the market develops negatively. On the other hand, it allows the manager to achieve high returns, even when small changes appear.

The following problems with hedge funds can be raised:

- Risk: Hedge funds contain various kinds of risks for investors, e.g. sovereign risk, event risk or market risk (chapter 3.5.3.7). On the other side, a hedge fund's failure can contaminate the whole market. Examples like the LTCM disaster prove the high risk level of hedge funds and the negative impact it can have for investors and the market (chapter 3.1.1). Further, hedge funds rely on standardized trading and risk management systems that make hypotheses on the market. If this system fails, the hedge fund may lose a lot of money (chapter 3.7).
- Manager: As seen in chapter 3.5.1, the manager plays an important role in the hedge fund investment process, known as the alpha factor. Further, he has no obligation to disclose any information regarding his investments or how he hedges the risk (chapter 3.8.1). Also important regarding the manager is the selection process, as it is necessary to rely on his abilities as a hedge fund manager (chapter 3.5.3.1). This leads to the problem of adverse selection and moral hazard.
- Regulation: To avoid these two disadvantages, more and more regulative measures emerge, but these regulations have also narrowed the freedom to manage hedge funds, thus decreasing profit opportunities (chapter 3.2.2).

4.4.2 Balancing the portfolio

Having hedge funds in a portfolio enables the investor to make profits on a short-term basis and allows the exploitation of market inefficiencies faster than any other type of investment fund (e.g. arbitrage strategy, chapter 3.2.3.4). As discussed above, this comes with high risk.

Islamic investment funds on the other hand, offer long-term investment opportunities together with good risk hedging possibilities. As we have seen in chapter 2.10, Islamic investment funds do not depend on the market, but cannot be used to generate huge short-term profits.

Taking these two different classes of funds into account, it can be seen that hedge funds and Islamic investment funds can offer good opportunities to fill in the gaps where the other one cannot. If Islamic investment fund investors want to generate short-term profits, they can extend their portfolio by including hedge funds. Similarly, hedge fund investors can hedge their market risks by investing in Islamic investment funds.

In any situation, it is necessary to find the right ratio between money invested in hedge funds and Islamic investment funds, taking the risk profile of the investor into account. In this sense, hedge funds and Islamic investment funds can be used in a complementary way.

However, Islamic investment funds offer more potential than just being a support hedge funds. They can be a real alternative to hedge funds. As seen in chapter 4.2.1, hedging is also possible with Islamic investment funds and is even more efficient. Cooperative hedging diversifies the risk by a much greater extent than is possible with hedge funds (chapter 4.2.1.1). Further, the contractual nature of Islamic finance enables the substitution of successful hedge fund techniques like options or futures and applies a better risk management on these (chapter 4.2.2, 4.2.3 and 4.2.4). Last but not least, because of the contractual nature and partnership structure of Islamic finance, a much stronger bond based on trust and integrity is built between investor and manager, seeing both seenas equal partners (chapter 2.3.2.1).

From this, Islamic investment funds can be seen as a serious player in the investment fund business, offering better profit options than hedge funds on a long-term basis.

5 Conclusion

First of all, this paper tried to answer the question of whether or not Islamic investment funds could catch-up with conventional investment funds. In order to do so, we divided this question into three sub questions:

- How costly is Shariah compliant investment?
- What are the advantages of Islamic investment funds?
- What are the barriers to growth?

The answer to the first question is that Shariah compliant investments are not more expensive than investments in traditional investment funds. This may be unexpected given the fact that Islamic investment funds must follow the rules of Shariah, which limits the freedom of selecting investment vehicles, products to be invested in and interest.

The analysis of the Dow Jones Islamic Index (DJI) and the corresponding Dow Jones World Index (DJW) showed that the DJI does not put clients at any more risk than the DJW. Further, the movements of the Islamic index do correlate to their conventional counterpart and the risk-return relationship is solely explained by beta, which suggests that Islamic investment funds are an effective way to hedge against market risk.

Concerning performance, it seems Islamic investment funds can actually catch up with or even outperform conventional investment funds.

By looking at the advantages of Islamic investment funds for the market, we could identify the following:

- Efficiency
  In general, investments are made in more profitable projects
- Stability
  Exclusion of highly speculative businesses leads to the greater stability of the fund.
- Moral hazard and adverse selection

  Absence of moral hazard and adverse selection leads to more trust.
- Finance and development

  Islamic investment funds may be able to acquire idle Muslim money.
- Integrity

  Islamic contractual relation means that the parties act more like partners than managers and spectators.

Equity

Investments are allocated to profitable projects in developing countries.

- Sustainability

  Sustainable investment may lead to a quicker spread of Islamic investment funds around the world.

Given the fact that there are no costs in investing in Islamic investments and the advantages listed above, one can expect that Islamic investment will catch up with its conventional counterparts and will quickly spread around the world.

However, are there also barriers that may prevent this growth? The answer is found when looking at the various issues surrounding Islamic investment funds.

- Islamic financial models are still regulated according to Western standards, which do not fit the needs of Islamic investors and finance.
- A special legal framework for implementing commercial and financial contracts and transaction is provided by Islamic law, but of the most countries do not support this framework which leads to various competitive disadvantages like double trading.
- Stock markets do not comply fully with Shariah, not even in Muslim countries.
- Western accounting procedures cannot be applied by Islamic financial institutions.
- There is a shortage of trained Islamic investment personnel.
- There is no universally accepted central authority that provides universal Shariah rules.

Despite these barriers, one still can assume that Islamic investment will rise and spread all over the world, although this will not happen easily. Islamic investment funds and Islamic finance as a whole have to put a lot of effort into the development of their products and regulation.

There is a further reason to assume that Islamic investment will grow in the coming years. Compared to the most popular form of Alternative investment funds, hedging in Islamic finance is not only possible, but even more efficient. Islamic finance is based on partnership and risk sharing and so is hedging. Cooperative arrangements can solve many economic problems much more efficiently than for-profit or non-for-profit arrangements alone, especially the problems of risk sharing and distribution. The example of cooperative insurance showed that all participants work together and what is important is to help each other out and reduce each other’s risk. An important factor here is communication, which is encouraged by this model. Instead of hiding and providing false information to prevent one’s probable advantage or profit opportunity, the participants share their information and so not only minimize each other’s risk, but also reduce moral hazard and opportunistic actions. Further, rules are decided upon by the participants themselves, so that all get the most out of it. Risk is better diversified by a bigger number of participants, the system is more flexible and stable and all participants are better off.

In contractual hedging it becomes clear that Islamic finance puts a lot of effort in giving investors the necessary security they require when accepting the risk of Islamic ventures. A thorough and intense due diligence of interesting businesses builds the base for Islamic investments. On the other hand, third party hedging shows that Islamic finance further promotes entrepreneurship by offering a variety of possibilities to engage in halal businesses as an investor and at the same time offering capital for entrepreneurs to set up businesses. These steps further support the building of a strong bond between investor, manager and entrepreneur.

The problem of not being able to use successful hedging techniques, is overcome by the existence of a great spectrum of Islamic contracts. Every technique in Islamic finance is based on contracts, which offers clear-cut advantages over conventional techniques: The contracts clearly define all rights and obligations between the parties:

- How the investment will be undertaken?
- How the risk is shared between all parties?
- How profit and loss is shared?

Hedge funds are based on the technique of taking advantage of market inefficiencies. These advantages can only be realized by opportunistic and risk-taking behavior. Somehow some will lose for sure. Hedging techniques like options, forwards or swaps all include some sort of unregulated action or even advantages which arise from non-transparency creating unnecessary uncertainty. Options offer the buyer a right, which he may or may not use, depending on specific factors. Pressure is placed on the buyer, as there is a predetermined loss, even if he does not use the option, and uncertainty even if he gets the chance to use it. Further the party offering the option also stays under pressure until the expiration of the option. So both will keep their future moves secret so as not to provide any potentially useful information to the other party. The same can be observed for forwards and swapping, when the parties try to gain advantages by holding back information of how they judge future developments.

These examples just prove the high level of uncertainty, risk and moral hazard that are attached to hedge funds. Islamic financing techniques clear out most of the issues through

- clearly defined contracts regulating rights and obligations,
- open communication supported by a partnership
- and risk- and profit-sharing approaches promoting teamwork.

An Islamic investment is a step taken by equal partners with all providing some sort of capital, be it in the form of money or skills.

This school of thought and the promotion of businesses are also proven by Islamic venture finance. Venture capital finance is based on cooperation, partnership, mutual help and social solidarity. Islamic venture funds help small start-up businesses by offering capital to transform their expertise into functioning businesses if they help developing Muslim societies in bringing them forward. This proves that the restrictions and constraints applied by the Shariah are not meant to make life harder for Muslims, but to provide the best possible living environment for them. Businesses and ideas contributing to the Muslim world in any positive way will always find support. Compared to conventional finance, Muslims are motivated by the Shariah to take steps into entrepreneurship. The applied restrictions create another motivation for finding ways for halal businesses to prosper. As long as they stay within the given boundaries, they are allowed to move freely. Looked at from an ethical point of view, Islamic investment funds promote “good for the society”.

That being said, this paper tried to answer the question of whether Islamic investments can appeal to Non-Muslims since this seems to be an important variable in the success of Islamic investment funds.

When we look at the market, we can identify a high demand for ethical investments and as pointed out earlier, Islamic investment funds are a sort of an ethical investment opportunity. The hype of ethical investments started in the 1970s during the Anti-Vietnam movement. Nowadays, one in every eight dollars invested in the US is an ethical investment and the demand and supply has grown by almost 100% in three years.

It may seem that ethical investments are not suitable for profit driven investments and it is only for people who do not care about their financial success. However, this is not true, if looked at historical data. Ethical investment outperforms the average market investment opportunities. This trend seems to fuel a further spread of Islamic investment funds.

Indeed, Islamic finance and investment is expanding all over the world. Its European centre is the UK, with over two million Muslims. A lot of Islamic banks were established in the UK but not without problems. Islamic investment funds were very important Islamic financial products and it is not surprising to see that some institutions that started as banks turned into investment companies, like the Al-Baraka example pointed out.

Surveys confirm the fact that he UK is the favorite European country for Islamic investment funds, but Germany and France also provide great opportunities for Islamic investors. This result is based on the following variables sorted by importance:

- Tax structure

- o Availability of specialist expertise
- o Regulation of investment
- o Risk assessment regulation
- o Transaction transparency

The barriers to Islamic investment funds in Non-Muslim countries can be summarized as the following:

- o Structure
- o Regulation
- o Tax

Structure stresses the issue of choosing the most appropriate legal form for an investment vehicle or the ownership structure of an Islamic investment vehicle agreement. Often, structural issues lead to double taxation and other problems that cause a competitive disadvantage for Islamic investment funds compared to traditional investment opportunities.

Regulation is the second issue that may cause a problem for an Islamic investment fund manager. Different countries have different regulations and most European countries and the U.S. have unfriendly Islamic finance regulation. This fact means that a lot of funds stay in the comprehensively regulated and tax friendly Muslim market. The last issue concerns tax requirements which is an important decision variable and may mean a competitive disadvantage in most the Non-Muslim countries.

Further, the brand "Islamic investment fund" is also an issue that may prevent the expansion of Islamic investment funds to Non-Muslim countries. Unfortunately, the word "Islamic" is associated with terrible incidents due to the media coverage of the last years. Moreover, names of Islamic financial products sound very strange to Western ears and do not make much sense for them. A simple renaming may avoid these problems.

Finally, the question is: Which investment form should be considered by investors and offered by fund managers? Looking at both investment forms, it very quickly becomes clear that an investment portfolio should have a good ratio of both to offer a good balance between short- and long-term profits and a healthy risk management. For investors with strong ethical focus, Islamic investment funds provide a good alternative when looking for strong long-term investments. Hedge funds are able to identify market inefficiencies and transform these into large profits. They can very quickly mix up the market and change their direction. Islamic investment funds provide stability to markets by investing in healthy businesses with the discussed profile. Of course the issue faced by Islamic investments, is the long and exhausting search for the right businesses, which becomes harder as the business moves on. For this reason, other ethical investments can outperform Islamic investment funds. On the other side, the hedge funds market itself is organized around a small and experienced group of people, who do not offer much external examination of their work. Transparency issues necessary to prevent competitive advantages make it hard for the market to become well-known to general public.

However in some areas, Islamic investment funds and hedge funds face the same issues because of regulatory issues. The industry is not able to offer the necessary degree of regulation to find the right balance between centralized regulation and individual freedom. Legal issues further complicate the expansion of the Islamic investment funds market.

Still, it is clear that Islamic investment funds provide a reasonable, grounded and serious alternative to hedge funds, offering opportunities and techniques of its own. Further, for hedge fund investors, they are a positive extension to hedge risk and provide more security with long-term return options. Taking this into account, Islamic investment funds should be taken into consideration for any investment portfolio.

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