

Incorporating Socially Responsible Investing in
Islamic Equity Investments

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Abstract:

Islamic equity investments have been growing at a steady pace in the past decade. However, it is necessary to expand this asset-class for Islamic Finance to continue its strong growth. Drawing similarities from Socially Responsible Investing can expand this asset-class for Islamic Finance.

This study builds upon the existing Shariah screening methodologies to incorporate the principles of Socially Responsible Investing. This is carried out by applying the Shariah screens to a universe of companies accepted to be leaders in social and ethical responsibility. These companies are constituents of the Dow Jones Sustainability Index and the FTSE4GOOD Index. Three out of the four resulting portfolios outperformed their SRI indexes in terms of weighted average annual returns as well as Sharpe and Treynor measures.

A qualitative assessment was also carried out in the form of a review of business practices of a UK-listed company: Vedanta Resources. It was found that Vedanta Resources is a Shariah compliant company (constituent of FTSE Shariah UK index) based on the negative financial and business sector screening. However, the astonishing result is that Vedanta Resources was found to be involved in serious human rights violations and practices that have caused long-term damage to the environment. This results in a conflicting circumstance, as it is contrary to the teachings of Shariah to be involved in such business practices.

These findings bolster the core idea of this dissertation: Islamic Equity investments methodologies must take the next step and add positive screening and shareholder activism to negative screening.

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Introduction:

The Islamic finance industry has grown tremendously in the past decade. According to research from State Street Corporation, the industry has grown 20% annually since 2003. Various research estimates the current size of the industry between US\$600 Billion and US\$1 Trillion. A recent report published by Praesidium, a consulting company, and Dubai International Financial Center (DIFC) forecast that the Islamic Finance industry is expected to grow at 15-20% annually to hold US\$4 trillion in invested funds over the next 8-10 years. The report mentions that the industry aims to capture the savings of about half of the 1.6 billion Muslims around the world¹.

The world is presently recovering from the effects of the financial crisis that began in 2007 and has proven to be the greatest economic shock in the past half a century. This crisis has forced the financial industry to rethink the balance between risk and reward. In this situation, Islamic finance has emerged as a viable alternative financial system as Islamic financial institutions have weathered the crisis much better than their conventional counterparts. Even though Islamic finance has not been completely shielded from the crises, the scale of the damage is certainly minute as compared to the conventional financial system that saw government bailouts in excess of \$1 trillion.

¹[http://business.maktoob.com/20090000008194/Islamic_finance_seen_quadrupling_to_\\$4_tln/Article.htm](http://business.maktoob.com/20090000008194/Islamic_finance_seen_quadrupling_to_$4_tln/Article.htm)

Another factor that accounts for the growth of Islamic Finance is the fact that the Muslim countries of the Gulf Cooperation Council (GCC) have experienced exponential economic prosperity in the past decade, as they boast two thirds of the global oil reserves and benefitted by rising oil prices.

As Muslim populations across the world experience economic prosperity, Islamic investments will see an increased level of participation by retail investors. This transition shall bring about the fundamental change in the industry that is from one being a supply driven industry to a demand driven industry. In terms of equity investments, this will transform the current passively managed Shariah compliant equity portfolios driven towards actively managed Shariah compliant portfolios. This introduces us to the core idea of this study: The synergy between Islamic Finance and Socially Responsible Investing (SRI), a movement with religious origins.

This study aims to expand the current Islamic equity investment asset-class by merging the investing principles of SRI with Shariah. A quantitative assessment will be carried out that applies Shariah screens to companies that are constituents of SRI index, thereby creating a Shariah compliant, ethical and responsible portfolio. To further examine the need for such positive screens in Islamic equity investments, a qualitative assessment is carried out by conducting a review of the activities of a company that is Shariah compliant but is not part of an SRI index.

The remaining of this research is organized such that an introduction to Islamic finance and Islamic investments is given, followed by an introduction to SRI. A literature review is conducted to understand the research on both Islamic equity investing and SRI funds, and also research on the comparison between Islamic and ethical investments. This

is followed by a detailed examination of the screening processes of Islamic equity investments and SRI screening processes. An analysis is then carried out on the similarities and conflicts between Shariah screens and SRI screens. Practical application of screening methodologies is detailed by examining the index screening rules for both investment styles. Next, a description of the methodology applied to expand the Islamic equity screening to incorporate SRI principles is given. The data, methodology and analysis of results are described for the quantitative analysis that is carried out to determine performance of the portfolios, followed by a qualitative assessment in the form of a case study. A snapshot of the current trends in the industry pertaining to the idea of this dissertation is also given. This research concludes by summarizing the findings and discussing its implications.

This study will be of value to asset managers who can use this research to launch new Islamic equity funds that incorporate both SRI and Islamic principles. This research can also be helpful to index providers. Currently, only Dow Jones has created an index that contains Shariah compliant as well as socially responsible companies.

Islamic Finance

Islamic Finance is based on the principles of Shariah (Islamic Law), the goal of which is to promote social and economic justice. It is the basis for providing guidelines that encompass all avenues of a Muslims life, from family responsibilities and religious teachings to politics, business and economics. Shariah law is derived from three primary sources: the Quran, the Hadith (sayings of the Prophet Muhammad (PBUH)), and the Sunnah (practice and traditions of the Prophet Muhammad (PBUH)). The three secondary sources are Qiyas (analogical deductions and reasoning), Ijma (consensus of Islamic scholars) and Ijtihad (legal reasoning).

As it relates to Islamic Finance, Shariah has 5 pillars that distinguish itself from conventional finance:

1. Ban on interest (Riba)
2. Ban on uncertainty (Gharar)
3. Promotion of risk and profit sharing
4. Promotion of ethical investments that enhance society
5. Promotion of asset-backed transactions in which each financial transaction must be tied to a tangible and identifiable underlying asset.

Adhering to the Shariah guidelines promotes risk sharing, entrepreneurship, transparency and the preservation of property rights, while discouraging speculative behavior. As seen in the 4th tenet of Islamic finance, Shariah is also concerned with promoting ethical investing, and it is this code that helps investors to determine whether an investment is Halal (acceptable) or Haram (unacceptable).

Islamic Investment

Prominent Islamic financial institutions began to widen their coverage in the 1980's to cater to the increasingly sophisticated financial needs of high net worth individuals in the Gulf region. With the intent to manage the savings of customers in line with Shariah law, collective investment schemes were implemented through special purpose vehicles. As a result, Islamic asset management instruments were created to fulfill this need.

Islamic mutual fund industry has seen dramatic growth in the past decade. According to research from State Street, the number of Islamic Mutual funds is expected to grow to 925 by the end of 2009, from 102 in 2000. This trend can be observed in Figure 1 below:

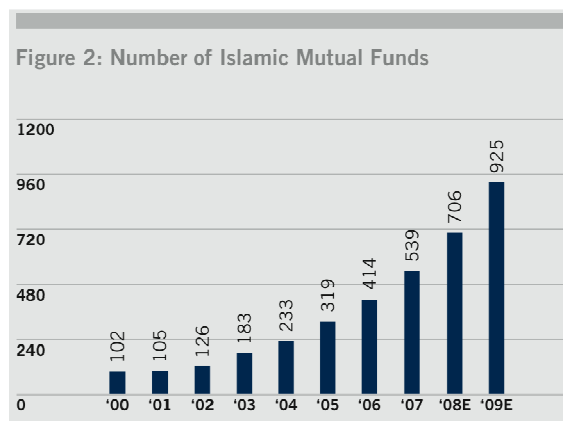


Figure 1²

² State Street Corporation (2009) "Islamic Finance" Vision Focus

Socially Responsible Investing

SRI came into existence during the 1920's in the UK when the Methodist Church began avoiding "sinful stocks" in its investment policy. The movement gained momentum in the 1960's as churches and religious groups across Europe demanded that their investments adhere to their religious principles. In 1971, the Pax World Fund became the world's first socially responsible mutual fund, based in the USA. The underlying ideology behind the fund was that companies that maintain good relations with employees, customers, communities and the environment will also serve investors well in the long run. In 1984, Friends Provident launched the Friend Provident Stewardship.

As this investment concept evolves, veteran and new players debate the mechanics and definitions in this area. There are many terms use to describe this investment style, such as "social", "ethical", "responsible", "socially responsible" and "sustainable", all of which are overlapping in many ways.

The European SRI study 2008 by Eurosif (The European Social Investment Forum) states that "SRI, a generic term covering ethical investments, responsible investments, sustainable investments, and any other investment process that combines investors' financial objectives with their concerns about environmental, social and governance (ESG) issues." The North American Social Investment Forum states "SRI considers both the investor's financial needs and an investment's impact on society. SRI investors encourage corporations to improve their practices on environmental, social, and governance issues." The core idea of these definitions is that SRI is an investment style

that goes beyond looking at only financial performance and takes into consideration the impact of underlying business activities of the investment on society.

SRI is certainly a growing area of investment in the world. According to Eurosif research, the total SRI assets under management (AuM) have reached €2.665 trillion as of December 31, 2007 and represent as much as 17.5% of the asset management industry. This corresponds to a remarkable growth of 102% since December 31, 2005. As seen from the information in Figure 2 (Eurosif 2008), Europe leads the pack with 53% of the approximately €5 trillion Global SRI market. Also seen in Table 1 below, Broad SRI makes up the majority of the SRI market as compared to the Core SRI category. The reason for this division is that institutional investors make up the majority of the SRI investment, and they are included in the Broad SRI category.

In Billions		2007	Total SRI	Total SRI in Euros
United States (2007)	Social Screening	US\$2098	US\$2710	€1917.3
	Shareholder Advocacy	US\$739		
	Screening and Shareholder*	(US\$151)		
	Community investing	US\$26		
Canada (2006)	Core SRI	Cnd\$57.4	Cnd\$503.6	€333.6
	Broad SR	Cnd\$446		
Australia / NZ (2007)	Core SRI	Au\$19.4	Au\$72.2	€41.4
	Broad SRI	Au\$52.8		
Japan (30/09/2007)		Y840	Y 840	€ 5.5
Europe (2007)	Core SRI	€ 511.7	€ 2665.4	€2665.4
	Broad SRI	€ 2153.7		
TOTAL WORLD				€ 4963.2

Source: Social Investment Forum, RIAA, SIO, Eurosif, SIF-Japan.

Note: Exchange rate as of 10/09/2008.

* negative number to avoid double-counting

Figure 2³

³ Eurosif (2008) “European SRI Study 2008” (www.eurosif.org)

In the study of SRI markets globally, Eurosif has classified the SRI into two categories: Core SRI and Broad SRI. Core SRI is composed of the following strategies:

- Ethical exclusions (more than two negative criteria applied),
- Positive screening, including Best-in-Class and SRI Theme Funds,
- Combination of ethical exclusion and positive screening

Broad SRI is composed of the following strategies:

- Simple screening, including norms-based screening (up to two negative criteria),
- Engagement,
- Integration

Exclusion strategies are applied to a significant portion of the total SRI investments. In this strategy, weapons and tobacco are the most commonly excluded investments. Apart from screening certain sectors, exclusions can also take other forms such as countries being excluded for human right violation or other factors. An example of such a practice was seen when the Dutch Pension fund PGGM decided to exclude Petrochina in January 2008 because of its activities in Sudan.

Thematic funds are those where investors' focus on specific sustainability themes based on opportunities in the market. These themes may take the form of technological innovations, water, climate change, eco-efficiency, health or renewable energy.

Engagement strategies involve the investors actively communicating their environmental, social and governance concerns to the company, resulting in the company addressing these issues. Majority of the engagement activities concern governance issues, the rest

being split between social and environmental issues. An integration strategy is one in which asset managers explicitly include ESG-risk in financial analysis. Integration is generally not practice in combination with typical screening strategies. However, integration and engagement are typically used in conjunction with each other.

Literature Review:

This section reviews the present research that has been carried out in both Islamic and Socially Responsible Investing and their screening procedures. To date, there has been very little research in exploring the synergies between Islamic Finance and SRI. During this research project, only one research paper was found that carries out a comparative analysis of these two investment styles.

In the recent past, there have been a number of studies that research the impact of applying Shariah screens on portfolio performance. According to modern portfolio theory as described by Markowitz (1958), limiting the investment universe (as seen in applying screens) will result in an inefficient portfolio. However, many studies in Islamic fund performance have concluded that quite the contrary.

Hussein (2005) compared the Dow Jones Islamic Index and the FTSE Global Islamic Index to their conventional counterparts, namely the Dow Jones World Index and the FTSE All-World Index. Hussein measured the performance of the four indexes over the following periods to account for changes in market conditions: Dec 1993 – Dec 2004, bull period (1) from Dec 1993 – Dec 2000, bear period from Dec 2000- Sept 2002, bull period (2) from Sept 2002 to Dec 2004. Hussein's research showed that Islamic indices

are not adversely affected by the application of Shariah screens.

Hayat (2006) researched the performance of Islamic Equity Funds (IEF) in comparison to conventional equity funds. In the study, 59 open ended IEF's were researched for the period of August 2001 till August 2006. The research concluded that IEF's do not significantly under or outperform (in terms of total return) their Islamic as well as conventional benchmarks under normal market conditions. However, Hayat found that during the bear market of 2002, the IEF's significantly outperform their Islamic and conventional benchmarks. IEF's were also found to have a low-risk profile, with an average Beta of 0.75. The aspect of diversification was also examined since the IEF's exhibited a better systemic risk-to-return ratio.

Hakim and Rashidian (2002) research the statistical attributes of the Dow Jones Islamic Market Index in comparison to the Dow Jones Wilshire 5000 index. The Islamic Index was found to have slightly better standard deviation of 22% as compared to 24% of the Wilshire 5000. The most astonishing contrast between the indexes was in the Sharpe ratio: 118% for the Islamic Index as compared to 194% for the Wilshire 5000. The findings of the study suggest that the diversification value is further enhanced since the Islamic index was influenced by factors independent from the broad market or interest rates.

Hassan and Girard (2005) examine the Dow Jones Islamic indexes as compared the seven counterpart indexes. The data from January 1996 till November 2005 was researched and the study suggests similar conclusion as reached by studies previously mentioned. The Dow Jones Islamic indices outperformed from 1996 to 2000 and underperformed from 2001 to 2005 their conventional counterparts. Also, similar reward

to risk and diversification benefits exist for both Islamic and conventional indices.

There is very little research that explores the screening methodologies of Islamic Investments. Ulrich Derigs and Shehab Marzban from the University of Cologne, Germany have submitted a paper for publishing: “Review and Analysis of Current Shariah-Compliant Equity Screening Practices”. This study examines the various screening methodologies adopted by the providers of Islamic indexes. They touch on some points that are crucial to the development and expansion of the Islamic fund management industry. Their study concludes that the Shariah scholars are classifying equity investments as Shariah compliant for one index and non-shariah compliant for another. This difference arises from the fact that the index providers use different screening techniques to create their Shariah compliant stock universe. Derigs and Marzban conclude that “Mathematical formalism may not be able to fully account for the subtle and subjective interpretation of the Islamic sources and that the effect of bundles of such formal constraints may be too complex to be anticipated on every possible asset universe.”

Nisar and Khatkhatay (2006) critically analyze the current screening norms for Shariah investments and conclude that in terms of the qualitative screening carried out at the business level, any company that has even a small proportion of a business that is non-Shariah compliant should be excluded. They also suggest that the use of market capitalization as a divisor for calculating financial ratios is inappropriate and leads to unnecessary volatility in the screening process. Nisar and Khatkhatay hold the opinion that a ratio that calculates the total receivables and cash to total assets (or market capitalization) is unnecessary in determining Shariah compliance.

It should be noted that the lack of research in this field could be attributed to the shortage of Shariah scholars needed to explore this area. The screening norms for Islamic investment cannot be created using quantitative or other methodologies but through an in-depth study of the Islamic law and apply the teachings of Shariah to the world of finance.

We now turn our focus towards research conducted in the field of SRI. As with Islamic finance, critics have pointed out that limiting the stock universe by choosing to exclude investment in certain sectors or regions with adversely affect performance of SRI funds due to diversification limitations.

Liedekerke, De Moor and Vanwalleghem (2007) explore the performance of the Belgian SRI funds in comparison with conventional funds. They find that Belgian funds do not under or outperform conventional funds. They conclude that even though SRI portfolios are not randomly selected from the market portfolio, the selection allows the portfolio to be sufficiently diversified and therefore does not differ significantly from the market portfolio. They also touch upon the question of why European SRI's are not seeing massive growth (the industry has however seen drastic growth in the past 5-10 years). The paper attributes this to the supply side of the equation and suggests that it is essential that institutions strongly market these products to the retail investors in order to achieve and sustain growth.

Statman (2005) examined four SRI indexes in comparison to the conventional S&P 500 index. His study finds that during the period May 1990 to April 2004, the monthly alpha of DS (Domini Social) 400 index exceeded that of the S&P 500 Index by 0.9%. However, because the alpha is not statistically significant, the study could not reject the hypothesis that returns of conventional companies are equal to socially responsible

companies.

Derwall Günster Bauer Koedijk (2004) utilize Innovest's corporate efficiency scores to create two equity portfolios differing in eco-efficiency attributes. Their research showed evidence that the portfolio ranked higher based on corporate efficiency scores provided substantially higher average returns compared to its lower ranked counterpart over the period 1995 to 2003. They also conclude that this difference in performance cannot be explained by differences in market sensitivity, investment style or industry-specific factors. They go further to suggest a technique to achieve higher returns after taking transaction costs into consideration by employing a best-in-class stock selection strategy.

It is interesting to note that although most studies have concluded that investment portfolios based on SRI principles do not have significant costs in terms of returns, there are some studies that go into depth and identify certain circumstances under which these portfolios deliver same returns as compared to conventional unrestrained portfolios.

Renneboog, Horst, Zhang (2007) conclude that investors do in fact pay a price when investing in SRI funds, as they explicitly pursue social objectives instead of the economic goal of wealth-maximization. The study mentions, "SRI funds in many European and Asia-Pacific countries strongly underperform domestic benchmark portfolios. In particular, the average risk-adjusted returns of the SRI funds in Belgium, France, Ireland, Japan, Norway, Singapore, and Sweden are lower than -5% per annum." This research also concludes that screening activities have a positive impact on portfolios. The risk-adjusted returns of a portfolio that applies corporate governance screen increases by 2.1% as compared to one that does not use screens. However, with

other type of screens such as environmental screens, the alpha goes down to 1.6%.

Having examined the research of Islamic and Socially Responsible investments, we turn our attention to research that draws parallels between these investment styles. Forte and Miglietta (2007) explore the concept of Islamic mutual funds in a socially responsible context. They discuss a quantitative and qualitative comparison between the two investment styles and also perform a co-integration analysis. The study finds that Islamic funds and SRI exhibit different characteristics in terms of asset allocation, econometric profile and country and sector exposure. However, the study suggests that it would be beneficial to classify norm-based funds as “religious funds”.

The core idea of this dissertation diverges from Forte and Miglietta’s (2007) conclusion and aims to derive greater parallels between Islamic investments and SRI funds. The current lack of research in this area serves as the first motivation for this dissertation. Also, the Islamic mutual fund industry has been growing at a steady pace but in order to sustain this growth the industry needs to develop and expand asset classes, which serves as the second motivating factor for this dissertation.

Shariah Screening:

A multi-stage screening process is involved in order to create a Shariah compliant equity portfolio. The screening process can be divided into two type types of screens: Qualitative screen and Quantitative screen. The qualitative screen involves excluding the companies that participate in business activities prohibited by Shariah. The quantitative screening involves excluding companies based on financial ratios. An important point to

note here is that there is not a globally accepted standard for the screens that are applied. The reason for this is that the Quran, Hadith and Sunnah do not explicitly state guidelines for such financial transactions. The Shariah scholars, based on Qiyas, Ijma and Ijtihad, have created the guidelines for the screening process. This leaves room for differences arising from the varying interpretations that the Shariah scholars decide upon. These differences can arise from Scholars following different schools of Islamic thought and can also be influenced by heterogeneous cultures. The impact of the varying criteria used for the screening process will be explored in later sections that will examine the practical application of the screens.

Qualitative Screening:

The first step in the stock selection process in Shariah compliant equity portfolio is the qualitative screen, often referred to as 'industry screen' or 'sin screen'. The underlying business activity of the company must be evaluated and deemed to be compatible with Shariah restrictions with respect to exposure to certain business activities. Any company engaged in an activity contrary to Shariah law will be ineligible for investment and must be excluded from the stock universe. Table 1 below gives a list of industry sectors that are typically classified as non-Shariah compliant and therefore excluded:

Insurance	All insurance companies are excluded
Banking	Conventional financial activities are excluded since they are interest based
Alcohol	Producers/Distributors/Liquor stores are excluded. Special attention is focused on businesses that derive significant income from this area, such as supermarkets, hotels & restaurants
Pork	Producers, distributors and meat stores are excluded. Special attention is focused on companies that are involved in handling pork products, such as supermarkets, hotels & restaurants
Defense	Companies that derive significant income from defense and armaments are excluded
Gambling	Casinos, hotels and bookmakers are excluded
Entertainment	Companies involved in adult entertainment are excluded
Tobacco	Companies involved in tobacco production are excluded

Table 1

Apart from applying these sector screens, additional examination of business activities is also necessary at this stage. It is important to evaluate the business activities at the subsidiary level also, in order to identify business activities contrary to Shariah law. A typical example of such a situation can be a car manufacturer (Shariah compliant activity) with a finance subsidiary offering conventional financial services such as car loans, credit cards and insurance (non-Shariah compliant activity). In such a case, it must be determined what percentage of total income is being generated through the non-Shariah compliant subsidiary.

Quantitative Screening:

The second screening stage is the quantitative screen. This is a financial screen that examines the corporate structure of the company. This process focuses on leverage, liquidity, interest and non-permissible income of the company. The foremost reason for

applying this type of screen is the fact that Shariah forbids the involvement of interest and the use of money as an asset. However, in today's world of complex financial markets, it is almost impossible to find a company that is not involved in interest bearing transactions because of the presence of cash deposits, loans or credits. Shariah scholars have therefore created acceptable thresholds for the degree of involvement in non-acceptable practices.

Liquidity:

Liquid assets are current assets that may include cash and cash equivalents, short-term investments and accounts receivables. Conventional Analysts regard a high liquidity ratio as a positive sign that indicates a company's ability to meet its short-term debts. However, from a Shariah perspective, a company should generate returns from illiquid assets only and therefore a Shariah compliant company should have a low proportion of liquid assets. Liquidity screens for Shariah compliance generally fall between the range of 33% to 80% of either total assets or 12-month trailing market capitalization.

Interest Income:

Based on Shariah law, interest is prohibited. However, given the nature of financial markets in the world today, almost all companies have a relationship with banks to a certain degree. In light of these circumstances, Shariah scholars have allowed interest income as long as it makes up a small proportion of total income. This category is tested

based on either calculating the ratio of interest income to total income or the ratio of liquid assets to total assets. Typically, companies that have an interest income of less than 5% of total income are acceptable.

Leverage Screen:

Since Shariah prohibits paying interest, leverage levels of a company should be within the acceptable thresholds in order to be Shariah compliant. This is a situation that is favored under conventional financial analysis since low debt levels are considered to be a positive sign for investment. Typically, acceptable levels of leverage are 33% of total assets or 12-month trailing market capitalization.

Non-Permissible Income:

This is a comparatively less used screen. This type of analysis must be conducted on companies with acceptable primary business activities but own non-Shariah compliant subsidiaries. In such situations, the proportion of income generated from non-Shariah compliant business activities must be calculated and compared to the total income of the company. An example of such a situation is when a Hotel company is being analyzed in order to determine what percentage of sales is generated from sale of alcohol and gambling activities. Typically, such a screen requires that income from non-Shariah compliant activity must be less than 5% of total income by a company.

Analysis of Shariah Screens:

As mentioned previously, there is no single set of standardized screening methodology available today. Asset managers, banks, institutions & index providers have formed their own Shariah Committees that decide the Shariah compliance of investments. Since the Quran and Hadith do not explicitly state the acceptable thresholds for financial analysis, the Shariah scholars determine these according to interpretation in the form of Qiyas, Ijma or Ijtihad. Therefore, there is some degree of freedom that scholars might use to generate their quantitative and quantitative criteria.

With regards to qualitative screening, there is a fairly consistent set of excluded sectors and only minor differences among the practically application. There is some debate among the scholars whether the weapons and biotechnology industry are considered acceptable or not. Another aspect of debate is regarding the inclusion of companies with the Shariah compliant primary business activities, but also generate income from non-Shariah compliant sources. Inevitably, the more conservative approach taken towards exclusion criteria, the smaller the investible universe becomes, impacting attributes of a portfolio such as returns, risk, and diversification.

On the other hand, a much wider variety of opinions are held with regards to financial screens used. A major source of debate is the use of Total Assets or Market capitalization as the ratio divisor used to calculate financial ratios. Advocates of using market capitalization argue that it indicates the true value of the company as determined by market forces, and using trailing market capitalization smoothes out seasonality effects. Proponents of total assets as the divisor consider it as a better judge of value. The

argument is that since it is based on a reliable accounting methodology, it is independent from any external influence or speculation.

Both schools of thought hold some merit. Using market capitalization enables Shariah compliance to be conducted on a continuous basis, as compared to annual or quarterly compliance checks if total assets are being used since financial statements are published on an annual and quarterly basis. Using total assets has another disadvantage; it creates a chance for non-uniform comparisons since it is allowed under major accounting rules to use different types of accounting methodologies. An example of this situation is the fact that under US GAAP, LIFO and FIFO methods are both allowed when calculating total assets. These two methods can conclude different values of total assets for the same company. This can lead to inconsistency when applying these screens to company's balance sheets. However, use of market capitalization is not without its disadvantages. In light of the recent decline in market values of companies since the credit crunch in 2007, the leverage ratios calculated based on market capitalization will be increased. This will certainly reduce the number of Shariah compliant companies even though their corporate structure or the nature of their activities has not changed.

Another consequence of varying Shariah rulings among scholars has been the difference among the thresholds that are applied to financial ratios. With reference to the leverage and interest income ratios, no large differences are seen. A vast majority of the screens used apply a 33% threshold for leverage and allowed interest income. These rulings have been derived from the following Hadith and Fiqh:

Hadith: The Prophet PBUH advised Abu Bakr RAA not to donate more than One-Third of his wealth, and commented that “One Third is too much (Al Thuluth Katheer)”.

The following fiqhi rule is also cited in its support:

“Whether a commodity that is part gold and part brass qualifies as gold for purposes of applying the rules of riba is resolved by the percentage of gold in the commodity, i.e., if greater than a third, it is ‘gold.’”

The use of 5% as the threshold for non-Shariah compliant income or interest income is not based on any reference to the Quran or Hadith (Marzban and Derigs 2008). This has been arbitrarily founded on the basis of Ijtihad of the Shariah scholars. The reasoning is that the investor has no control over a business that involves itself in interest bearing transactions. Since companies that have Shariah compliant businesses almost always have cash deposits or short-term investments that generate interest income, the scholars have reached a consensus to classify such a business as Shariah compliant as long as the threshold of 5% is met.

There are a wide variety of opinions regarding liquidity thresholds, ranging from 33% to 80%. Liquidity here is described as the ratio of Cash + Short-term Investments + Accounts receivables to Total Assets or Market Capitalization. The reasoning behind such variance among opinions is explained by Usmani (2002) and has been summarized below:

- Liquidity Threshold of 33%: This is derived from the Hadith and Fiqh that defines a portion of less than one-third as insignificant.
- Liquidity Threshold of 45-50%: This is derived from the basis that if the illiquid assets are greater than the liquid assets (greater than 50%), then investment is Shariah compliant based on the principle that “The majority deserves to be treated as the whole thing”
- Liquidity Threshold of approximately 80%: This threshold is the most conservative and is used by scholars from Pakistan and India who follow the Hanafi School of thought. The argument given is that the distribution of illiquid and liquid assets is not critical if the illiquid portion of the total assets is an insignificant quantity and liquid assets per share value of the company are less than the market price of the company (Marzban and Derigs 2008). These two criteria make sure that the value is derived from the illiquid assets.

Shariah verification:

Once the investment screens have been decided, it is the responsibility of the fund manager to ensure that all the stocks in the portfolio meet compliance. Stocks may become non-Shariah compliant due to a number of reasons such as mergers and acquisitions or volatility in equity markets causing firm value to fluctuate. It is also possible that the firm alters its corporate structure thereby violating financial screens.

The syllabus for the Islamic Finance Qualification (IFQ) from the Securities and Investment Institute describes how to deal with such situations. The IFQ states that in the case of a stock becoming non-compliant, there are three scenarios that are possible:

1. Temporary non-Shariah compliance: If a company violates a financial or industry screen, there shall be a short period of time given to see if the company returns to compliance. The fund manager must report this to the Shariah Committee; however, it is believed that the Committee shall allow the stock to remain in the portfolio.
2. Short-Term non-Shariah compliance: If a stock becomes non-Shariah compliant for a longer period of time but then returns to compliance later, the stock shall be reported to the Shariah Committee. There will also need to be calculations regarding the portion of dividends due for the non-Shariah compliant period. This must be proportionately deducted from payments to investors, and the fund manager shall donate these earnings to a charity as agreed. The frequency of the review of Shariah compliance is usually carried out quarterly or semi-annually.
3. Permanent non-Shariah compliance: If a stock is found to have permanently fallen out of compliance, the Shariah Committee will recommend disinvestment. However, in order to protect investor interests, a period is usually granted to effect sale of stock to enable the fund manager to identify the best time to carry out the transaction.

SRI methods:

SRI funds typically employ three strategies towards their portfolios:

1. Screening
2. Shareholder Advocacy
3. Community Investment

SRI funds utilize positive as well as negative screens. Negative screens exclude the companies that are involved in practices that SRI considers detrimental to society.

Positive screens include companies that demonstrate policies towards the betterment of society. Each SRI fund may adopt a selected set of screens depending on the focus of the fund. Some of the common screens used by SRI described in Petty (2000) are given below:

- Alcohol: Screens for companies that manufacture or distribute alcohol or alcoholic products.
- Tobacco: Screens for companies that farm, process, or manufacture tobacco products
- Gambling: Screens for companies that receive revenues from gambling operations
- Weapons/Defense: Screens for companies that receive revenues from manufacture and or sale of weaponry
- Animal testing: Screens for companies that engage in animal experimentation
- Products/Services: Take into account a company's record of product safety, marketing, and commitment to product quality and consumer protection

- Environment Take into account a company's record on government-imposed fines, waste disposal, toxic emissions, pollution, efforts in waste and emissions reduction, recycling, utilizing environmentally beneficial fuels, products and services
- Human Rights: Screens for companies that are involved in operations that exploit unskilled workers, or support governments that are known human rights violators
- Labor Relations: Take into account a company's record with regards to labor matters, factory safety, employee benefits and profit-sharing practices
- Employment Equality: Take into account a company's record with regard to sexual or racial discrimination
- Community investment: Take into account a company's record on charitable donations and investments in local organizations
- Community relations: Take into account a company's record relating to the communities where they do business.

SRI funds are known for using shareholder advocacy to impact the actions of corporations. Shareholder advocacy is different from screening in that rather than excluding a company all together based on certain criteria as in negative screening, shareholders exercise their ownership rights to engage with the corporation and bring about positive change. Shareholder activism can take the form of voting at annual meetings, initiating dialogue with the company management, sponsoring shareholder resolutions or divesting (Petty 2000).

SRI funds are also involved with community investment that is involved with the development of communities. This type of investment usually takes the form of community banks, community credit unions or microenterprise lenders (Petty 2000).

Analysis of Islamic Screening and SRI screening:

Having explored the issues covered by Islamic Finance and Socially Responsible Investing in depth, we now turn our attention to develop the synergies between the investing principles applied by these two groups.

SRI has no financial screens, as found in Islamic investing. Although a thorough financial analysis will definitely be part of the investment process for SRI's, there are no financial thresholds that the companies need to meet as in Islamic screening. Islamic screening has to involve financial screens because of the Shariah law prohibiting transactions involving interest. Also, Islamic investments are prohibited to exercise the use of financial derivatives such as short selling, swaps, and options. As seen from Figure 3 below, published in the Eurosif SRI study 2008, exclusion, engagement and integration are the most used strategies by SRI funds in Europe.

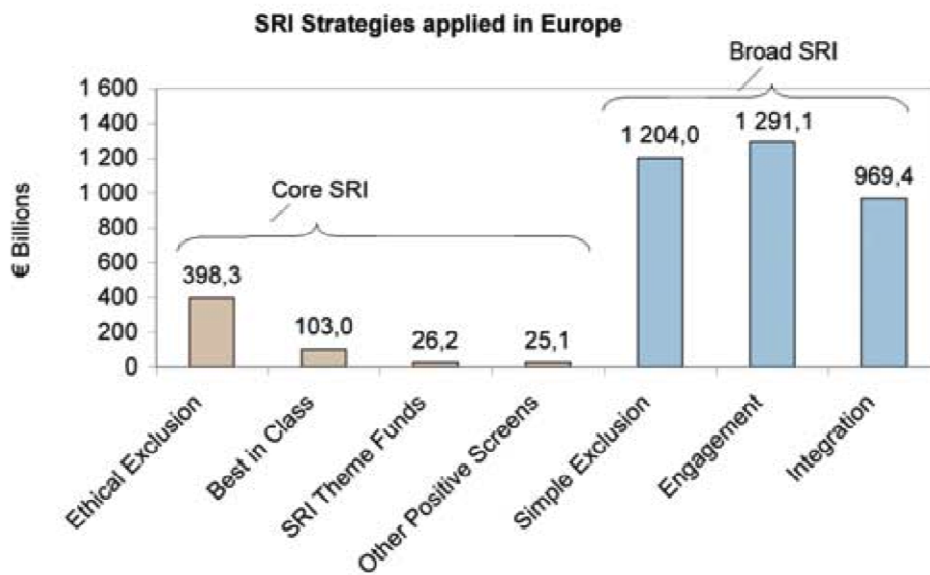


Figure 3⁴

In terms of exclusions, SRI and Islamic screening have some overlap. Both steer clear of companies involved in alcohol, tobacco, gambling, weapons & entertainment. Islamic screens are excluded based on what the Quran prohibits and SRI excludes sectors based on social and environmental concerns. In terms of a clear definition upon which investment strategies must be based, Islamic finance must adhere to the Quran, Sunnah and Hadith along with secondary interpretations, whereas SRI does not adhere to a fixed set of guidelines. A Shariah Committee, whose rulings are binding for the manager, oversees all Shariah compliant funds. In contrast, SRI funds may not always have a formal committee but nonetheless must comply with a set of guidelines depending on the goals of the fund. In Islamic finance, shareholder advocacy is encouraged but currently it is minimally exercised. In contrast, shareholder advocacy is a major occurrence in SRI funds, especially in the USA and Canada.

⁴ Eurosif SRI Study 2008 (www.eurosif.org)

Miglietta and Forte (2007) explain “the general aims of Islamic economic rules and socially responsible funds are very similar. In both cases, the betterment of the whole society represents the ultimate purpose; in the Islamic world, this cannot be reached without a strict compliance to all *Shari’ah* prescriptions. In the case of socially responsible funds, the ultimate goal is a sustainable economic system that takes into account social and environmental effects. The final result of the two approaches is, *strictu sensu*, the same.” In his research, Usmani (2002) states that according to Shariah, businesses must be ‘responsible’ and ‘committed’ to good causes. The findings of these scholars strengthen the argument that the practices of Islamic investment and SRI are overlapping and therefore, there is room for merger of these two investment styles.

There are some aspects that make SRI and Islamic investments incompatible. Two such areas are human rights and environmental screens. Some of the countries that are on the watch list for Human Right violations are Muslim countries such as Syria, Iran and Saudi Arabia. The recent turmoil in Iran regarding the outcome of the presidential elections saw deadly clashes between the public and security forces. This was followed by international condemnation since the government used excessive force to suppress non-violent demonstrations. This was seen as a human rights violation. A report by CNN on July 22nd 2009, mentions that Amnesty International has found that the Saudi Arabian security forces have arrested non-violent reformists.

The report states that “the group [Amnesty International] estimates about 3,000 people are being held without charges, sometimes for years and without access to lawyers, after being swept up in a clampdown that began in 2003.”⁵ These events would certainly drive the SRI managers to exclude investments in these countries. However, these countries being Muslim countries may be favored by Islamic funds and there is currently no criterion in Islamic investing that would rule out investment in these countries based on human rights violations. Environmental concerns are a huge priority for SRI’s and currently there are no specific guidelines on this topic for Islamic investments. One such example is the Oil and Gas sector, which most SRI funds avoid due to the environmental damage these activities bring about. In contrast, Oil and Gas sectors are usually found to have a significant weighting in Islamic portfolios. Al-Harith Sinclair, Middle East partner at law firm DLA Piper, said: “The issues of modern environmentalism are not touched upon by classical Islamic law. There is no developed thinking in current Islamic thought that there is anything bad about oil.”⁶

⁵<http://edition.cnn.com/2009/WORLD/meast/07/22/saudi.amnesty.clampdown/index.html?iref=24hours>

⁶<http://www.efinancialnews.com/archive/keyword/%22Neil+Miller%22/1/content/1054564042>

After exploring the fundamentals of Islamic investing, it can be safely concluded that although the spirit of sustainable and responsible business practices are at the heart of Shariah law, these themes have not been given the highest priority in modern Islamic finance. Contemporary Islamic investment practices touch upon these issues in an implicit manner. Screening ‘sin stocks’ such as alcohol and tobacco avoid investing in activities that are harmful for society, however, a more active strategy is needed to incorporate the issues of ethics, sustainability and social responsibility. Neil Miller, head of Islamic finance at law firm Norton Rose, said: “The term ‘sustainable’ and the vocabulary around it comes from contemporary language. Shariah goes back 1,400 years but when you look at Islamic economic theory and jurisprudence, the Qur’an defines man as ‘vicegerent’ – God’s representative on Earth. Under this definition he should make sure he uses the resources of the planet to benefit mankind while also caring for and replenishing the planet.”⁷

The cumulative analysis of these arguments lead to the core idea of this dissertation: There is a need for Islamic investment products that build upon the basic Shariah investing principles by integrating issues of social, environmental and responsible business practices.

Before a new investing prototype is developed, it is important to examine the practical application of Islamic and SRI benchmarks created by companies such as the Dow Jones, FTSE and Standard & Poor.

⁷<http://www.efinancialnews.com/archive/keyword/%22Neil+Miller%22/1/content/1054564042>

Islamic indexes:

There are four major Islamic benchmarks used in the industry today. These are the Dow Jones Islamic Market World, the FTSE Shariah Global Equity Index Series, the MSCI Islamic Index Series and the S&P Shariah Indexes.

The first company to launch an Islamic benchmark was Dow Jones. In 1999, the Dow Jones Islamic Market World (DJIM WorldSM) was launched. As of March 2009, the stock universe of DJIM includes stocks from more than 50 country-level benchmark indexes. The FTSE Shariah Global Equity Index Series includes large and mid cap companies included in the FTSE Global Equity Index Series (GEIS). The MSCI Global Islamic Indices reflect Shariah investment principles to provide an innovative and relevant opportunity set for Islamic investors. The MSCI Global Islamic Indices are constructed from the conventional MSCI country indices and cover 69 developed, emerging and frontier markets, including regions such as the Gulf Cooperation Council (GCC) countries and Arabian markets. The S&P Shariah Indices are based on the S&P Indices and screen stocks for Shariah compliance. Standard & Poor's uses Ratings Intelligence Partners that is a London/Kuwait based Shariah consultancy to provide the Shariah screens and filter the stocks based on these screens.

Table 2 below compares the various benchmarks in their screening criteria. This forms the first phase towards Shariah compliance.

Index Provider	Dow Jones	FTSE	MSCI	S&P
Index Family	DJ Islamic Indexes	FTSE Shariah Global Equity Index Series	MSCI Islamic Index Series	S&P Shariah Indices
Shari'ah screening	Companies may not be involved in any of the defined non-Shari'ah compliant activities.	Total interest and non-compliant activities income should not exceed 5% of total revenue.	Investment in companies that are directly active in, or derive more than 5% of their revenues (cumulatively) from prohibited activities.	In certain cases, revenue from non-compliant activities are permissible, if they comply with the following threshold: (Non-Permissible Income other than Interest Income)/Revenue <5%
Prohibited sectors	Alcohol Conventional financial services (banking, insurance etc) Pork-related products Entertainment (hotels, casinos/gambling, cinema, pornography, music etc) Tobacco Weapons and defense	Alcohol Conventional Finance (non-Islamic Banking, Finance and Insurance etc. Pork related products and non-halal food production, packaging and processing or any other activity related to pork and non-halal food Entertainment (casinos, gambling, cinema, music, pornography and hotels) Tobacco Weapons, arms and defense manufacturing	Brewers Distillers & Vintners Banks and all sub-industries Diversified Financials and all sub-industries Insurance and all sub-industries Aerospace and Defense Casinos & Gaming Hotels, Resorts & Cruise Lines Restaurants Broadcasting Cable & Satellite Movies and Entertainment Tobacco	Alcohol Advertising and Media (newspapers are allowed, sub-industries are analyzed individually) Financials Gambling Pork Pornography Tobacco Trading of gold and silver as cash on deferred basis

Table 2⁸

⁸ Hamid, N., and Sandford, Y. (2009) "Shari'ah Indices: Gaining Equity Exposure Using Islamic Indices" iShares, Barclays Global Investors

The most important variance among the index screening methodologies is that Dow Jones takes the most conservative stance by not allowing any companies that are involved in the prohibited sectors. The other 3 indexes allow income from prohibited sectors as long as it forms less than 5% of total income.

With regards to financial screens that form the second phase of Shariah compliance, Table 3 below shows the differences among the screens used by major indexes.

Index Provider	Dow Jones	FTSE	MSCI	S&P
Financial Screen	<p>The following must be less than 33%</p> <p>Total debt divided by trailing 12-month average market capitalisation</p> <p>The sum of a company's cash and interest-bearing securities divided by trailing 12-month average market capitalisation</p> <p>Accounts receivables divided by trailing 12-month average market capitalisation</p>	<p>Debt is less than 33% of total assets</p> <p>Cash and interest bearing items are less than 33% of total assets</p> <p>Accounts receivable and cash are less than 50% of total assets</p> <p>Total interest and non compliant activities income should not exceed 5% of total revenue</p>	<p>The following must not exceed 33.33%</p> <p>Total debt over total assets</p> <p>Sum of a company's cash and interest-bearing securities over total assets</p> <p>Sum of a company's accounts receivables and cash over total assets</p>	<p>Debt/market value of equity (12 month average) < 33%</p> <p>Accounts receivable/market value of equity (12 month average) < 49%</p> <p>(Cash + interest bearing securities)/market value of equity (12 month average) < 33%</p> <p>(Non-permissible income other than interest income)/Revenue < 5%</p>
Dividend purification	<p>Dividend purification not applicable as non-compliant companies ineligible for index inclusion.</p>	<p>Appropriate purification of dividends at 5%. This ratio calculates the recommended purification amount to be paid by the investor.</p>	<p>MSCI Barra apply a dividend adjustment factor to all reinvested dividends - this is defined as (total earnings - (income from prohibited activities + interest income))/total earnings.</p>	<p>Dividends * (Non permissible revenue/total revenue)</p>

Table 3⁹

⁹ Hamid, N., and Sandford, Y. (2009) "Shari'ah Indices: Gaining Equity Exposure Using Islamic Indices" iShares, Barclays Global Investors

The table above shows the differences in financial screens and dividend purification. FTSE and MSCI use total assets as the denominator, whereas Dow Jones and S&P use market capitalization. As discussed in the previous sections, this can lead to vastly different stock universes.

SRI indexes:

The Dow Jones Sustainable World index is a benchmark comprising of the leading companies in terms of sustainability around the globe. The Dow Jones website states “Corporate Sustainability is a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments.”

The companies are included based on information gathered by SAM Research. The criteria and weightings used to assess the inclusion of companies are given below in

Table 4:

Dimension	Criteria
Economic	Codes of Conduct / Compliance / Corruption & Bribery
	Corporate Governance
	Risk & Crisis Management
	Industry Specific Criteria
Environment	Environmental Reporting
	Industry specific criteria
Social	Corporate Citizenship/ Philanthropy
	Labor Practice Indicators
	Human Capital Development
	Social Reporting*
	Talent Attraction & Retention
	Industry Specific Criteria

*Criteria assessed based on publicly available information only
Table 4¹⁰

¹⁰ http://www.sustainability-index.com/07_html/assessment/criteria.html

Another major index for Socially Responsible Investing is provided by FTSE known as FTSE4GOOD. To qualify for inclusion in the FTSE4GOOD index series, companies must be constituents of either the FTSE All-Share Index (UK) or the FTSE developed Index (Global). FTSE4GOOD combines positive and negative screens to create a stock universe that can be used as a benchmark by asset managers for SRI. The research and analysis of companies to be included is managed by the Ethical Investment Research Service (EIRIS).

The table below gives the positive and negative screens used by the benchmark.

Positive screen criteria	Working towards environmental sustainability
	Developing positive relationships with stakeholders
	Up-holding and supporting universal human rights
	Ensuring good supply chain labor standards
	Countering bribery
Negative Screen criteria	Tobacco producers
	Companies manufacturing whole weapons systems
	Owners/operators of nuclear power stations
	Companies involved in the extraction or processing of Uranium

Table 5¹¹

As seen by the methodologies used by the benchmark indexes, Socially Responsible Investments seek companies that are concerned issues such as integrating long-term economic, environmental and social aspects into their business strategies, along with meeting shareholder demands for sound financial returns.

¹¹ FTSE “FTSE4GOOD Index Series: Inclusion Criteria” (www.ftse.com)

Integrating SRI principles in Islamic Equity investments:

In order to expand the Islamic finance asset class of equities to include SRI principles, this study has applied traditional Islamic investing screens to companies that have taken a proactive approach towards corporate and social responsibility. Devising a strategy to rank companies according to their social and corporate responsibility is beyond the scale and topic of this dissertation. Therefore, in order to examine the performance and attributes of a portfolio that passes Islamic screens as well as SRI criteria, the Islamic screens were applied to the constituent companies of the Dow Jones Sustainability Index and the FTSE4GOOD Index.

This study has applied the following set of Islamic screens:

- Qualitative Screens:
 - Companies were screened based on GCIS Codes to exclude those that participate in the following business activities: Aerospace & Defence, Asset management, Bank, Brewers, Capital markets, Casinos and gaming, Consumer finance, Distillers and vintners, Diversified Financial Services, Diversified banks, Insurance (Health and Life), REIT, Specialized finance, Tobacco, Pork Products.
- Quantitative Screens:
 - Exclude companies with Debt/Total Assets ratio > 33%
 - Exclude companies with (Cash + Receivable)/Total Assets > 45%
 - Exclude companies with Interest income/Revenue > 5%

Data

The aim of this study is to conduct a comparative analysis of a portfolio that contains companies that are Shariah compliant as well as being leaders in corporate and social responsibility.

Constituent companies of the Dow Jones Sustainability Index and the FTSE4GOOD Index were collected. Although both of these indexes contain companies from all the major stock exchanges, this study examines constituent companies from the USA and the UK. The FTSE4GOOD constituents were provided by FTSE and the Dow Jones Sustainability index constituents were downloaded from www.djindexes.com. Balance Sheet and Income Statement data for all companies was downloaded from Thomson One Banker. Weekly stock prices and company Beta for all the companies were downloaded from Bloomberg.

The US and UK portion of the Dow Jones Sustainability Index and the FTSE4GOOD Index was used as a benchmark portfolio. The 3-month US Treasury Bill was used as a proxy for the risk-free interest rate. The US Treasury Bill data was downloaded from the Federal Reserve website¹². All data was collected for the period 1998-2008.

¹² www.federalreserve.gov

Methodology

The performance of the portfolio constructed by applying Islamic screens to SRI Indexes was calculated using the monthly & annual returns, weighted average return, geometric mean, Treynor's Index (1965), Sharpe Ratio (1966). All calculations are carried out using Microsoft Excel.

The first step towards comparing performance of portfolios is to calculate returns. Three types of returns were calculated: Monthly returns, Annual returns & Weighted Average returns of 11 years (1998-2008). The weighted average return is calculated because since the Islamic screening is carried out on an annual basis, the Shariah portfolio changes every year. The weighted average return for the portfolio was calculated by adjusting the returns according to the starting price of the portfolio.

The monthly and annual returns were calculated as follows:

$$R_t = (P_t - P_{t-1}) / P_{t-1} , \quad (1)$$

where R_t is the return of the portfolio at time t , P_t is the price of the portfolio at time t and P_{t-1} is the price of the portfolio at time $t-1$. For monthly returns, equation (1) was applied on a monthly basis and for annual returns equation (1) was applied on an annual basis, for the time period Jan 1st 1998 - December 31st 2008. The standard deviation and geometric mean was calculated for monthly returns. The geometric mean was calculated using the excel function GEOMEAN and the standard deviation was calculated using the excel function STDEV.

In the next phase of portfolio evaluation, the Treynor and Sharpe ratios are calculated. The Treynor ratio is calculated using equation (2) below:

$$\text{Treynor} = (R_p - R_f) / \beta_p , \quad (2)$$

where R_p is the portfolio return, R_f is the risk-free rate (3-month US Treasury Bill) and β_p is the portfolio beta.

The Sharpe ratio is calculated using equation (3) below:

$$\text{Sharpe} = (R_p - R_f) / \sigma_p , \quad (3)$$

where R_p is the portfolio return, R_f is the risk-free rate (3-month US Treasury Bill) and σ_p is the portfolio standard deviation.

Analysis of results

The analysis of results begins with observing the number of companies that are in each portfolio. This is shown in Table 6 below:

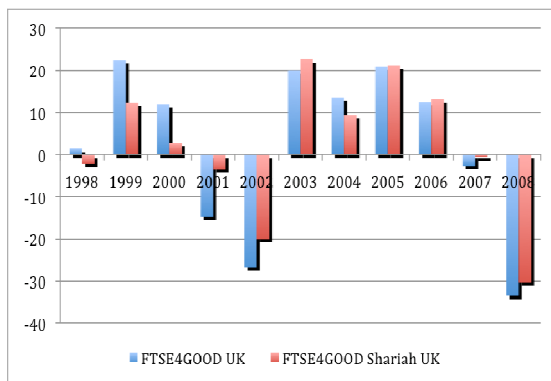
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
FTSE4GOOD UK	85	85	85	85	85	85	85	85	85	85	85
FTSE4GOOD UK Shariah	33	39	41	43	39	38	41	40	46	45	39
DJ Sustainability UK	64	64	64	64	64	64	64	64	64	64	64
DJ Sustainability UK Shariah	24	25	29	29	29	29	30	28	29	30	23
FTSE4GOOD US	137	137	137	137	137	137	137	137	137	137	137
FTSE4GOOD US Shariah	69	70	68	73	71	68	65	70	72	74	67
DJ Sustainability US	49	49	49	49	49	49	49	49	49	49	49
DJ Sustainability US Shariah	32	34	35	36	35	34	34	34	36	35	29

Table 6

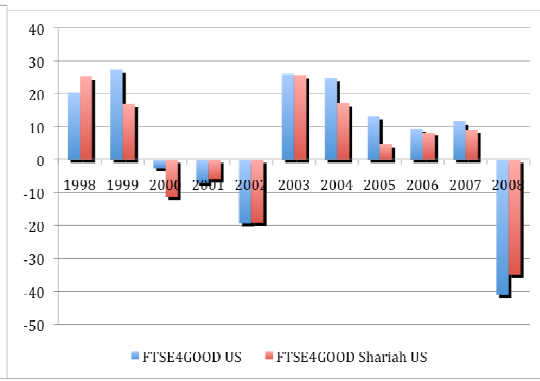
In all the Shariah portfolios constructed, we find the number of companies increasing till 2006 and then decreasing thereafter till 2008. This trend can be explained by the fact that in 2007 and 2008, the credit crisis took its full form and it is possible that the companies' assets reduces, thereby increasing the leverage ratios and thereby

excluding them from the portfolio. Another attribute to this trend could be that in tough economic conditions, companies' could have chosen to increase their cash holdings and since vendors would be delaying payments, receivables increased. These together would cause the cash + receivables ratio to increase, and therefore excluding more companies from the Shariah compliant portfolio.

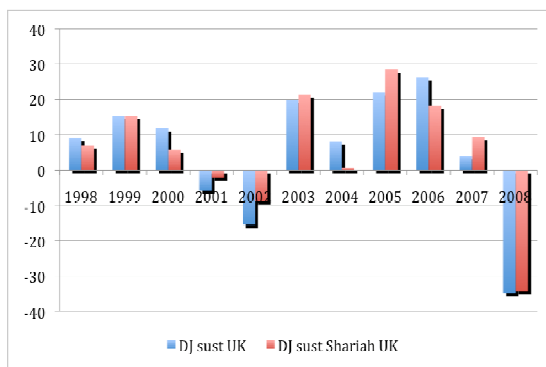
The annual returns (%) of the four Shariah portfolios, along with their benchmarks, are shown in the Graphs 1, 2, 3 & 4 below.



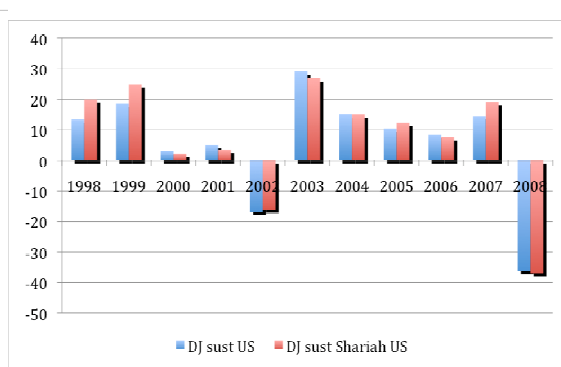
Graph 1



Graph 2



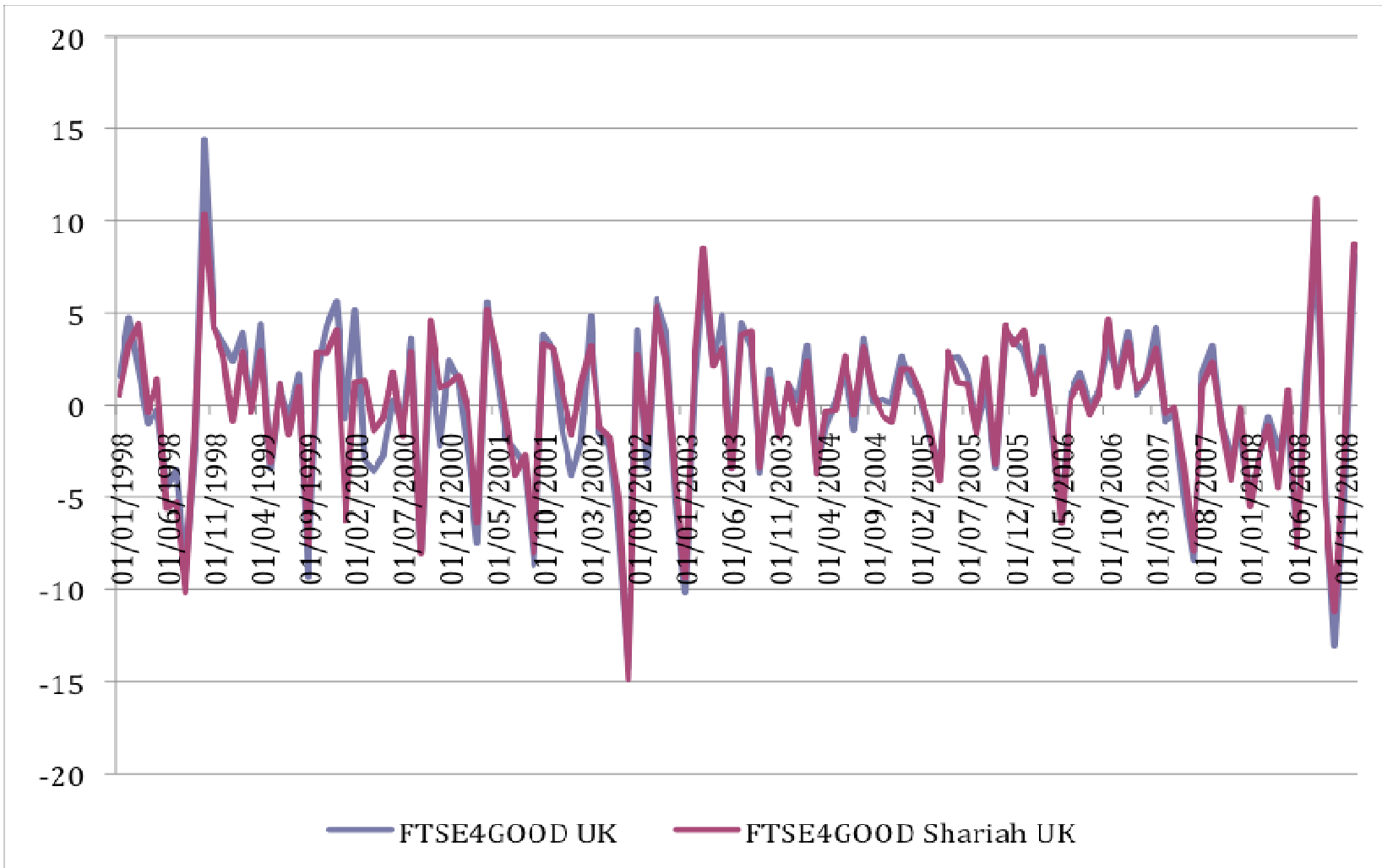
Graph 3



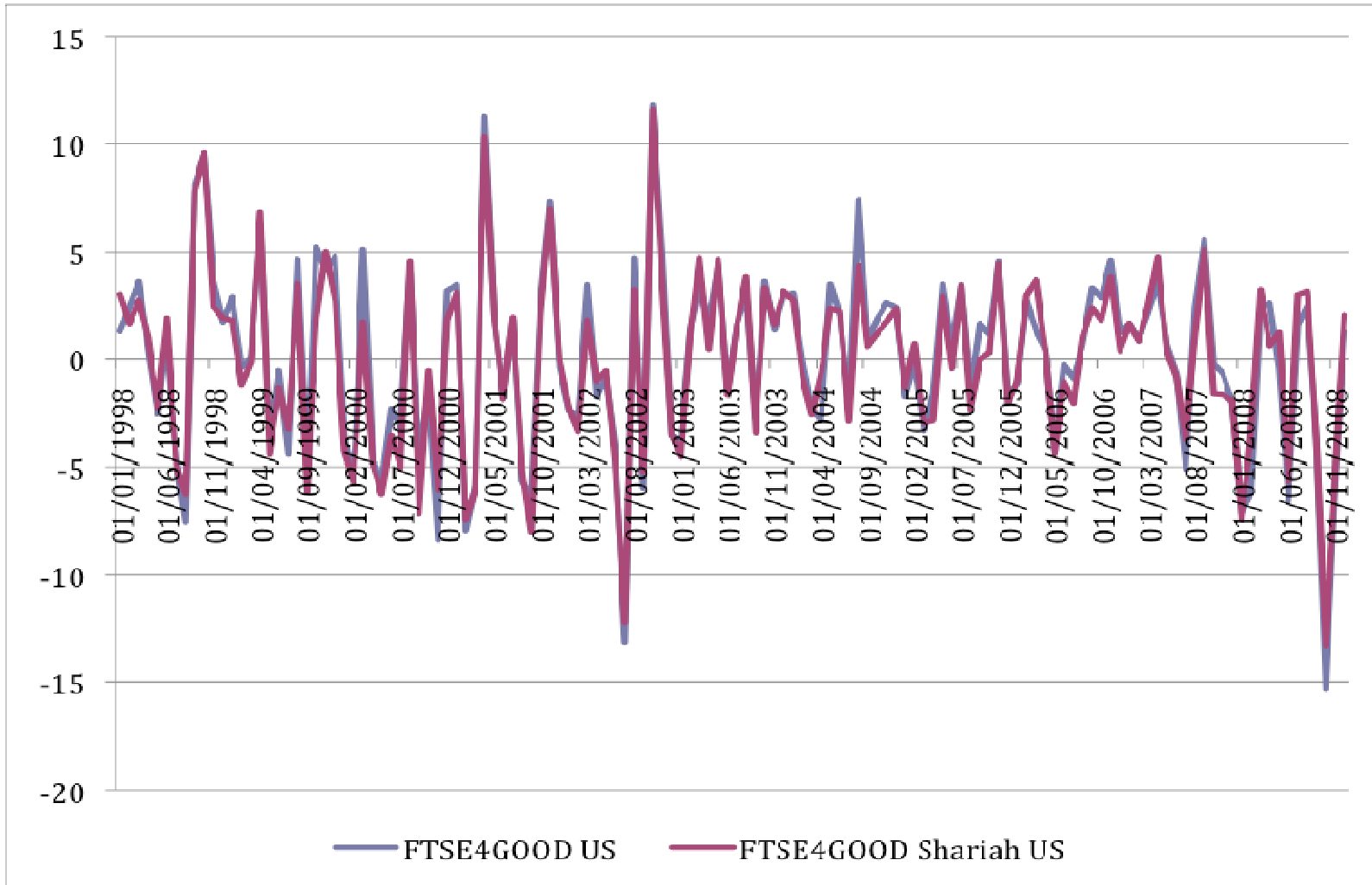
Graph 4

As seen from the graphs of annual returns, all of the portfolios show poor returns in 2000/2001, when the dot-com bubble burst and in 2008, when the credit crisis took maximum effect. An interesting trend seen in the graphs is that in most of the years that the benchmark portfolio has given negative performance, the Shariah counterpart has given a less negative return for that year.

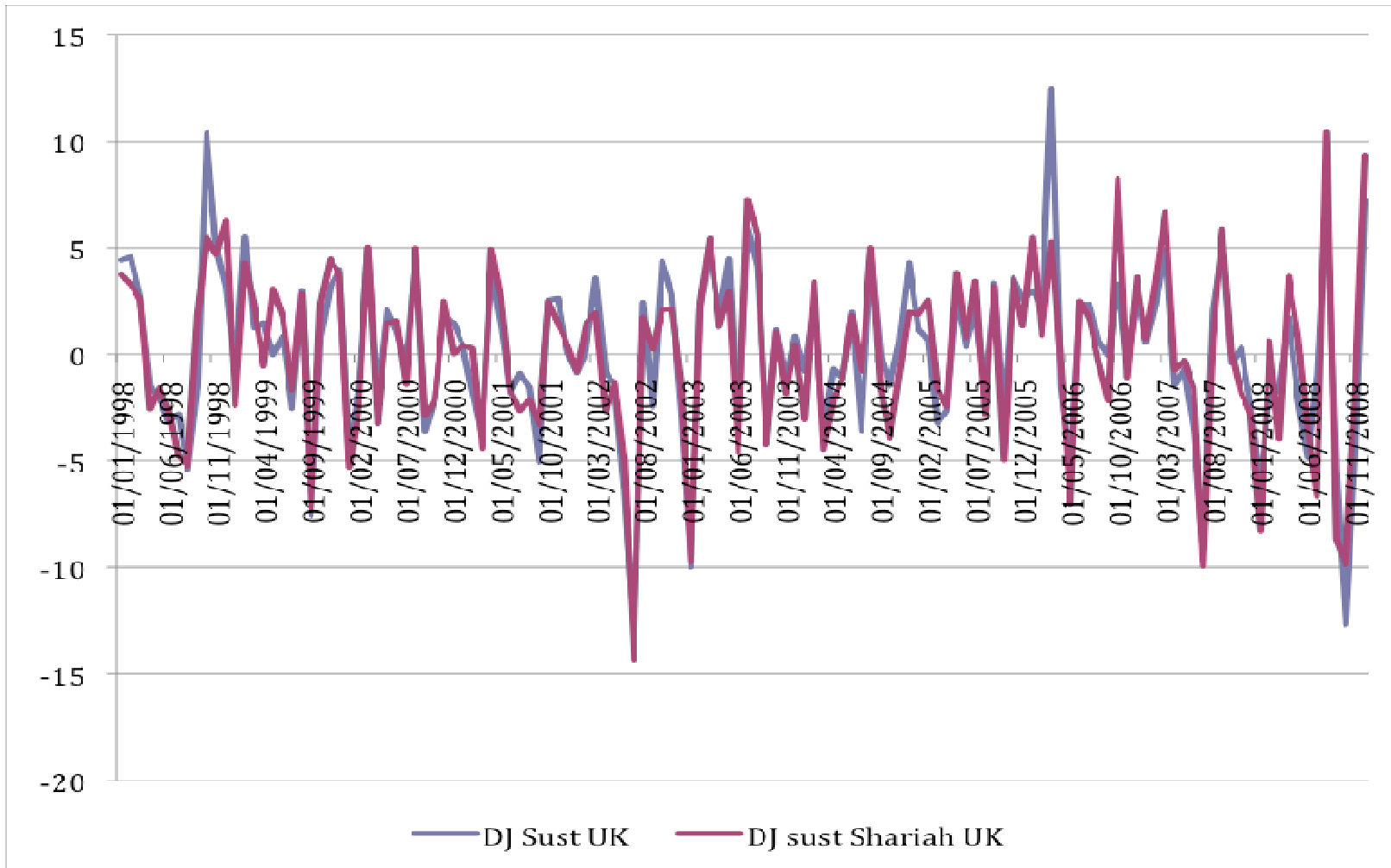
The graphs showing monthly returns for each Shariah portfolio against its conventional counterpart index is shown in Graphs 5, 6, 7 & 8. These graphs show that the Shariah portfolios are highly correlated with their benchmark. This is expected since the Shariah portfolios are a subset of the benchmark.



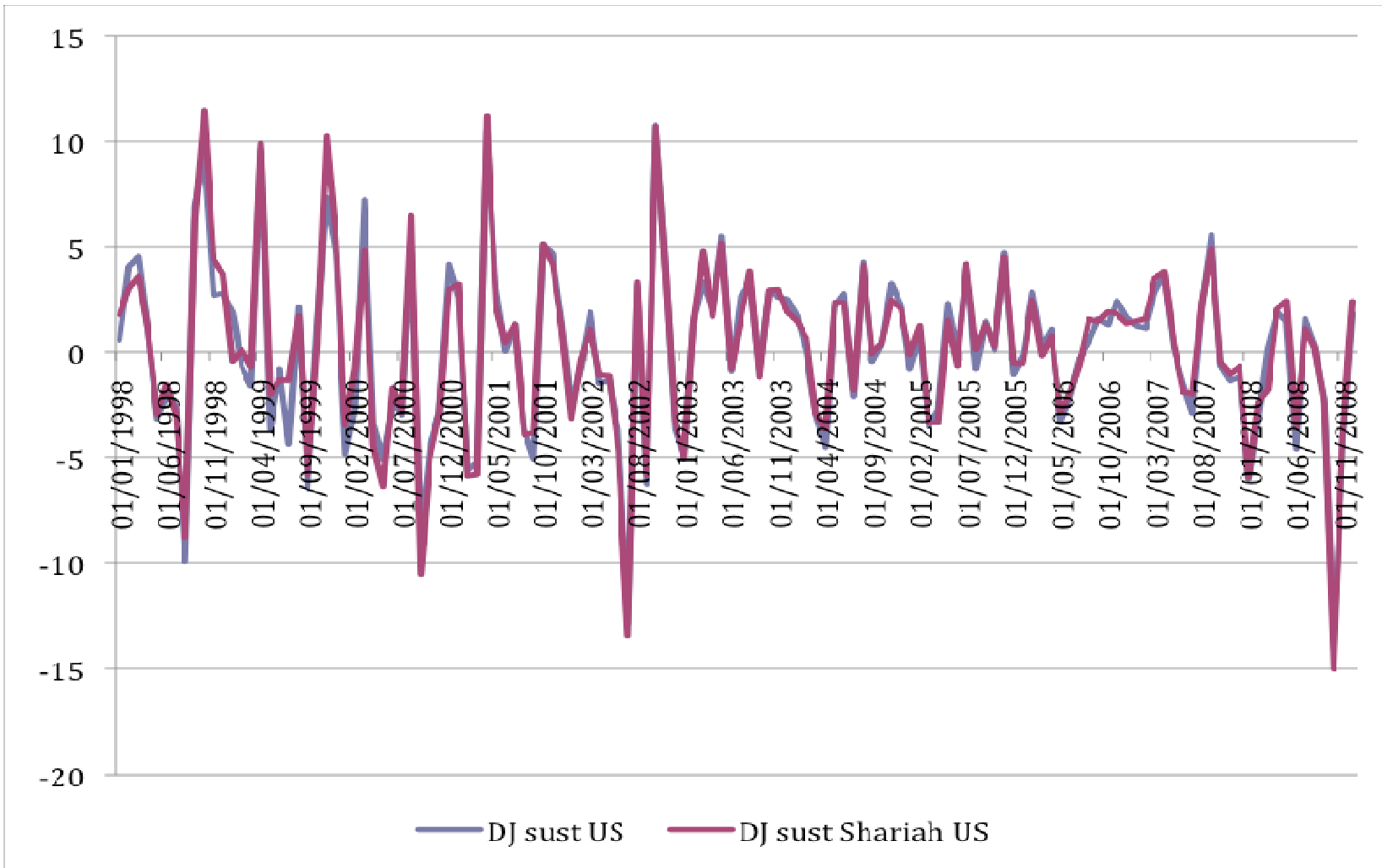
Graph 5



Graph 6



Graph 7



Graph 8

Table 7 below illustrates the salient performance attributes of the portfolios:

	Beta	Mean % (Monthly)	Std Dev % (Monthly)	Return % (Weighted Avg 11 years)	Returns % (Time Weighted)	Rf %
FTSE4GOOD UK	0.84	-0.17	4.29	0.27	0.9974	3.29
FTSE4GOOD UK Shariah	0.80	-0.12	4.07	1.25	0.9980	3.29
DJ Sustainability UK	0.83	0.12	3.92	3.41	1.0004	3.29
DJ Sustainability UK Shariah	0.84	0.09	4.11	4.50	1.0001	3.29
FTSE4GOOD US	1.01	0.13	4.33	2.84	1.0003	3.29
FTSE4GOOD US Shariah	1.02	-0.08	4.11	1.12	0.9983	3.29
DJ Sustainability US	0.97	0.13	4.07	3.46	1.0005	3.29
DJ Sustainability US Shariah	0.97	0.22	4.15	5.26	1.0014	3.29

Table 7

As seen in the table above, the betas of each of the Shariah portfolios match their counterparts very closely. In terms of the Mean Monthly return, the FTSE4GOOD Shariah UK portfolio and the DJ Sustainability US Shariah portfolios are better than their conventional counterparts, whereas the FTSE4GOOD US and DJ Sustainability UK are better than their Shariah counterparts. With respect to Time-Weighted (Geometric Mean) returns, all of the portfolios exhibit a very similar profile. The 3-month US Treasury Bill rate of 3.29 is the average rate taken monthly over the period January 1998 till December 2008. The most important measure for these portfolios is the weighted average returns. In this category we find that only the FTSE4GOOD US Shariah underperforms its conventional counterpart, whereas all the other three Shariah portfolios outperform their conventional counterpart portfolios.

Table 8 below shows the Sharpe and Treynor measures for the portfolios:

	Sharpe	Treynor
FTSE4GOOD UK	-0.70	-3.62
FTSE4GOOD UK Shariah	-0.50	-2.54
DJ Sustainability UK	0.03	0.14
DJ Sustainability UK Shariah	0.29	1.44
FTSE4GOOD US	-0.10	-0.44
FTSE4GOOD US Shariah	-0.53	-2.13
DJ Sustainability US	0.04	0.17
DJ Sustainability US Shariah	0.47	2.03

Table 8

As seen in the table above, the Sharpe and Treynor measures are higher for all the Shariah portfolios except the FTSE4GOOD US Shariah portfolio. This was expected since the FTSE4GOOD US Shariah portfolio was the only one with a lower weighted average return than its conventional counterpart. These results show that the principles of Shariah have a positive impact on a universe of socially responsible companies, in terms of risk-adjusted performance. Additionally, it can also be concluded from these results that there is no additional cost to the investor for choosing to adhere to the principles of Shariah as well as the principles of SRI.

This dissertation has analyzed the UK and USA portions of the sustainable indexes. It should be noted that the aim of this dissertation was to incorporate SRI positive screens to current Islamic negative screens only, and in doing so has shown that there is no additional cost to the investor in adding an additional layer of screening to Islamic investing. It would certainly be possible to create an Islamic and socially responsible portfolio that generates higher returns. This can be achieved by choosing stocks globally to increase diversification.

Case Study:

The core idea of this dissertation is that Islamic investing should incorporate SRI principles as well. In this section, a review of a company is conducted that is Shariah compliant according to the business and financial screens, but are not SRI compliant. The outcome of this section shall bolster the argument that Islamic equity investment methodologies need to be further expanded to incorporate social & ethical issues.

CASE - VEDANTA RESOURCES:

Vedanta Resources is a diversified metals and mining company. It is listed on the London Stock Exchange and is a constituent of the FTSE100 index & FTSE Shariah index (UK). The company's corporate structure is such that it passes the Islamic financial screens. As for its business screening, it is involved in metals and mining, a sector that is allowed in Shariah investing.

In May 2007, the Council on Ethics of the Government Pension Fund – Global of Norway published a report detailing the unethical practices of Vedanta resources. The council's research showed that Sterlite, Vedanta's subsidiary in India, was involved in depositing large quantities of hazardous waste at unsecured deposit sites. These actions had caused long-term heavy metal contamination of soil and groundwater that will persist even after the activities have ceased.

The report also stated that it was highly probable that Vedanta's mining operations in India have led to the expulsion of local farmers and tribes from their homes and land.

The council found this to be a serious violation of fundamental human rights. In light of the above findings, the council of ethics divested the investment in Vedanta Resources.

The questions that must be asked here with regards to the topic of this dissertation are: How can a company that is involved in serious environmental and human rights violations be Shariah compliant? Is it not against the principles of Shariah to disrespect human rights and prevent damage to the environment? Are the investors devoid of any further responsibilities if a company has an Islamic corporate structure and is not involved in any prohibited business activities?

The answer to these questions all point in the same direction that it is certainly against the principles of Shariah to be involved in practices that incur exploitation of any kind. The prohibition of interest is one of the most important pillars of Islamic Finance and the basis of which is to prevent exploitation, as explained by Mufti Barkatulla in his recent article “the religious prohibition of interest’s rationale is social justice, because it is perceived to be unjust and exploitative.”

As seen by the above example, Vedanta Resources is Shariah compliant according to the screens used today. However, it is involved in business practices that are unethical and are facilitating the degradation of the environment. This conflict must be addressed and resolved.

It is imperative that Islamic finance expands its horizons to include SRI principles into its investment guidelines. One way that SRI has successfully achieved its goals is through shareholder activism and engagement. The evolution of the SRI funds has taken the path of starting with negative screening, moving to positive screening and onto active engagement and shareholder activism. Islamic investing is currently at the initial stages of applying only negative screens. This dissertation has undertaken research in the next step

that Islamic investing must take in its path of evolution: Apply positive as well as negative screens to Shariah investing, eventually leading to active engagement with corporations to ensure that their practices are socially and ethically responsible as well as being financially beneficial.

Current industry trends:

The Islamic equity investment industry has only recently begun to move in the direction that this thesis proposes, i.e. expand the equity investment asset class to include positive screens.

Evidence of this is seen from the fact that Malaysian-based Corston-Smith Asset Management will be launching a new fund soon that will invest in companies that not only have a good business model but also have highly rated corporate governance principles. The fund uses a questionnaire to evaluate the corporate governance of the firms. An article from Reuters¹³ states that F&C asset management will also be launching a new fund that integrates Islamic investing with SRI principles.

Another important move for the industry is seen as Dow Jones has created a new index that incorporates both Islamic as well as SRI principles. The new index is known as Dow Jones Islamic Market Sustainability Index and is created in association with SAM Group¹⁴. Currently, Dow Jones is the only index provider that has created a benchmark to incorporate both SRI and Islamic principles.

¹³<http://www.reuters.com/article/IslamicBankingandFinance09/idUSTRE53E49M20090415>

¹⁴<http://www.sam-group.com/html/djsi/islamic.cfm>

Further research:

There is currently very limited research into the synergies between Islamic Investments and SRI. To the best of the author's knowledge, this is one of the first pieces of research that has examined the cost of applying additional layers of screening in Islamic Investments. There is a considerable amount of further research that needs to and can be conducted in this field.

This research can be furthered by developing a set of criteria for Shariah compliant companies to be ranked according to corporate governance, social and ethical issues. Research can also be conducted into designing portfolios to match various investing styles and determining various risk profiles to suit various types of investors. Due to time and resource constraints, it was not possible to obtain information regarding the constituents of the Dow Jones Islamic Market Sustainability Index for this study. It would be very interesting to examine the performance of this benchmark against individual Islamic and ethical indexes.

Conclusion:

Islamic Equity investments are ready for the next step in their evolution. The current practice of negative screening in Islamic investing has been the stepping-stone for Islamic equity investments. Now, in order to expand the equity asset class of Islamic investments and to bring Islamic equity investments closer to the teachings of Shariah, it is necessary to include positive screens in addition to the negative screens.

This study has expanded the Shariah equity investments by applying the Shariah screens to companies that are leaders in social and ethical practices. The leading SRI companies have been taken from constituents of SRI Indexes provided by Dow Jones and FTSE.

The quantitative results of this study have shown that in three of the four cases tested (DJ US, DJ UK, FTSE UK, FTSE US), the portfolios with Shariah as well as SRI companies performed better than portfolios with only SRI companies. This leads to the conclusion that merging the principles of Shariah investing with SRI has a positive impact on returns from equity investments. The risk-adjusted measures are also higher for portfolios that have both SRI and Shariah principles.

Perhaps the more important result of this study was observed in the qualitative review of Vedanta Resources' business activities. It was found that Vedanta Resources was a constituent of the FTSE Shariah index, and was involved with serious human rights and environmental violations. This case presents a serious conflict of interest in Islamic investments. If only negative screens are applied, such cases are bound to slip through and Muslim investors could be involuntarily funding unethical corporate behavior that is contrary to the teachings of Shariah.

The cumulative findings of this dissertation lead to the conclusion that it is necessary for Islamic investment practices to incorporate positive screens as well as negative screens. This will penalize corporations for unethical behavior that goes against the teachings of Shariah, and reward companies that take an active role to benefit society through their business practices.

A very interesting question that was raised by Petty (2000) (Updated by Ahmed 2003) also serves as appropriate concluding remarks for this dissertation: “It is important to ask: What is the cost of not taking social criteria into account in investing decisions?”

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