Islamic Versus Conventional Mutual Funds Performance in Saudi Arabia: A Case Study

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Abstract. Using a sample of Islamic and conventional mutual funds managed by HSBC, the fourth largest fund manager in Saudi Arabia, from January 2003 to January 2010, we examine their risk-return behavior by employing a number of performance measures such as Sharpe, Treynor, Jensen Alpha and their variants. We divide the sample period in four segments such as full period, bull period, bearish period and financial crisis period to analyze further if these two funds performance differ from each other. We also examine the market timing and selectivity of HSBC managers of their portfolio performance. We find that Islamic funds underperform Conventional funds during full period and bullish period, but they overperform conventional funds during bearish and financial crisis period. Such results are consistent with prior studies with other Islamic and conventional mutual funds. HSBC managers are good at showing timing and selectivity for Islamic funds during bearish period, and for conventional funds during bullish period. One important portfolio lesson from this case study is that Islamic mutual funds do offer hedging opportunity for investors during economic downturns because of the restrictions that Islamic law imposes on portfolio selection.

I. Introduction

Muslims represent 21.01% of the world's population (CIA world's fact book–2007)[2] growing at 1.84% annually (Carnegie Endowment for International

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(2) "The world factbook, " Central Intelligence Agency,"
https://www.cia.gov/library/publications/the-world-factbook/geos/xx.html, Oct. 20, 2008.

Peace – 2007)[3] and they have between USD 250 billion and USD 1 trillion to invest Chow (2006) growing at 15% annually in a market that is not fully exploited (Hassan,2001). Islamic mutual funds have been around for less than a decade and are still in their infancy stage of growth and development (Girard and Hassan, 2005).

According to a McKinsey Management Consulting Firm report, "Islamic finance is the new force in the financial market place." Islamic banking, growing at a rate of 15% in the mid-1990s (Hamid and Azmin, 2001) is expected to be a dominant growth engine in finance and banking in this millennium. The past decade witnessed a rapid growth in the Islamic banking and finance market making it one of the fastest growing niches in global finance (Aggarwal and Yousef, 2000).

Many Western financial institutions (including, for example, Citibank, Barclays, Morgan Stanley, Merrill Lynch and HSBC) now sell Islamic financial products. The New York and London Stock Exchanges launched Islamic indexes to track the performances of firms that conform to Islamic investing rules. In December 1998, FTSE, in collaboration with the International investor, launched FTSE Global Islamic Index Series (GIIS). GIIS are equity benchmark indices designed to track the performance of leading publicly trading companies whose activities are consistent with Islamic trade and investment principles.

Academic research on Islamic mutual funds, however, is limited. Most of the research done is a thought experiment where Islamic rules are imposed on conventional funds to create portfolios of hypothetical Islamic funds. Further, most of previous research is conducted with reference to a conventional market (*i.e.* Islamic investment rules are not applicable).

In general, mutual funds are investment vehicles that pool financial resources of individuals and companies and invest in tradable financial securities. They are an ideal choice for small investors seeking liquidity, portfolio diversification, and investment expertise. However, investment goals of investors vary in terms of return requirements, risk tolerance, liquidity needs, as well as religious and ethical compliance. In this paper, we investigate the impact of adhering to investors' religious preferences and we focus on the performance of all HSBC managed mutual funds in Saudi Arabia.

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(3) "The world Christian Database, Carnegie Endowment for International Peace," http://www.carnegieendowment.org , Oct.20, 2008.

That is, we use all mutual funds managed by HSBC, the fourth largest fund manager in Saudi Arabia, from January 2003 to January 2010 to examine the risk-return characteristics of all these funds and investigate if there are any performance difference between Islamic and conventional mutual funds. Further, since HSBC is a very experienced financial institution and has highly good reputation managing funds not only in Saudi Arabia, but also around the world, we take a deeper look into its selectivity and market timing skills and examine if such skills are different if fund under management are Islamic or conventional. Moreover, to further examine the behavior of these HSBC managed funds and the HSBC selectivity and market timing abilities under different market conditions, we divided our sample into four periods: the overall sample, bullish, bearish, and the recent financial crisis periods. The risk-return characteristics and the HSBC selectivity and market timing abilities are examined under each period.

Finally, all the HSBC managed funds are divided between locally or globally focused. Thus, in order to lessen the benchmark problem that most studies suffered from and to properly assess the performance of these HSCB managed firms, we employed four different market indices that are globally and locally focused as well as Islamic and conventional funds.

Overall, consistent with other studies such as Abdullah, Hassan, & Mohamad (2007) and Kräussl & Hayat (2008), we found that Islamic portfolios underperform the conventional funds during the overall and bullish periods. However, these Islamic funds perform better than the conventional funds during the bearish and the financial crisis periods. In other words, Islamic funds punish investors less than conventional funds during adverse economic conditions.

Also, we found that HSBC do indeed possess significant and economically modest selectivity skills during the bullish and the financial crisis periods. However, such skills are higher when HSBC is managing conventional funds during the bullish periods. In the bearish period, these skills are higher for Islamic funds than for conventional funds.

The rest of the paper is organized as follows: section II presents a primer on Islamic Investing. Section III presents a review of previous studies. Section IV presents the Saudi Arabia's economy, financial markets, and mutual funds. Section V presents the data. Section VI shows the methodology used. Section VII presents the results and discussion. Finally, section VIII presents the conclusion.

II. A Primer on Islamic Investing

The Islamic Jurisprudence (*Shariah*) encourages profit-sharing, partnership, and leasing[4] schemes. It also advocates socially-responsible investments, and forbids fixed interest[5]. A sizeable body of academic finance literature has documented Islamic investment guidelines, such as El-Gamal (2000) Hassan (2001), Girard and Hassan, (2005); Ibrahim, Ong, & Parsa (2006). We believe that it is convenient to categorize these guidelines into two major categories (1) financial and (2) operational.

Financial guidelines pertain to means of income, sources of funds, and insurance. Islamic business and trade guidelines prohibit fixed interest income (*riba*). Accordingly, corporate bonds, treasury bonds and bills, certificates of deposit (CDs), and preferred stocks may not be used as a source of funds or a means of income. Additionally, Islamic business and trade guidelines prohibit conventional insurance products such as life insurance.

At the *operational* level, Islamic principles mandate that trading must be free of ambiguity[6]. Thus, they prohibit selling something that is not owned or that cannot be described in accurate detail in terms of type, size, and amount, El-Gamal (2000). Thus, the trading of futures, warrants, options, as well as short-selling and anything speculative is prohibited. It also prohibits investments in non-productive and/or potentially harmful activities such as pure games of chance,[7] El-Gamal (2000), and prostitution. Also prohibited are the production and/or distribution of few non-permissible products such as alcohol, tobacco, pork, pornography and arms Hassan (2001).

The final say on what constitutes a prohibited investment rests in the arm of "Shariah Board" who may, for practical considerations, allow investments in partially 'contaminated' ventures,[8] Elfakhani and Hassan (2005) and Elfakhani, Hassan, & Sidani (2007). Practically, it is permissible to invest in securities of companies with gross interest-bearing debt less than 33% of total assets. Similarly, it is permissible to invest in securities of companies with interest income less than 5% of total. Accounts receivables and cash accounts may not exceed 50% of total assets revenues, Ibrahim, Ong, & Parsa (2006).

Girard and Hassan (2005) classified Shariah laws into three main rules that govern Islamic mutual fund creation: asset allocation, investment and trading

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(4) Called "*Ijarah*" in Arabic Language.
(5) Called "*Riba*" in Arabic Language.
(6) Called "*gharar*" in Arabic language.
(7) Called "*maysir*" in Arabic language.
(8) They may require, however, income to be cleansed or purified by donations to charities or by "*zakat*".

practices, and income distribution (purification). Asset allocation refers to what assets may be included in the portfolio. Islamic fund managers cannot invest in money markets (because of the risk free investments), but they can invest in the Islamic bond market (*sukuk market)*. Similarly, investing in securities of financial institutions where interest is a major source of income (such as banks) is prohibited, Abdullah, Hassan, & Mohamad (2007). Moreover, managers of Islamic mutual funds must exclude stocks of companies that have prohibited activities. Investments and trading practices prevent Islamic fund managers from excessive speculating, which includes trading on margin (*i.e.* using interest-paying debt to finance their investments). Income distribution requirements are sort of a "purification" measure[9]. Since partially "contaminated" investments are allowed as explained above, earnings must be cleansed or purified by giving away the contaminant part to designated charities. For instance, if 8 percent of income is interest-related, then 8 percent of every dividend payment must be given away, Elfakhani, Hassan, & Sidani, Islamic Mutual Funds (2007). Valpey (2001) noted that the cleansing process could be done directly by the fund managers before any distribution of income or indirectly by final investors. Cleansing capital gains is debatable. Some scholars believe that stock price changes are not interest but others suggest that it is safer to purify capital gain as well, Usmani (2002).

III. Review of Previous Studies

As we noted earlier, research on Islamic mutual funds is very limited. However, there has been much research on conventional mutual funds and socially-responsible mutual funds (also known as ethical mutual funds), a close relative to Islamic mutual funds. We will discuss the major findings on conventional mutual funds and ethical mutual funds. Finally, we list the existing literature on Islamic mutual funds.

Mutual funds do not, on average, outperform the market portfolio. Also, the level of diversification in mutual funds is less than that of the market index by at least 50 percent. Furthermore, mutual funds managers engage in activities such as market timing and stock selection. However, the managers' selection skills seem to be significant in most cases, but market timing remains insignificant. Empirical results on ethical funds are inconclusive. It is unclear whether ethical funds underperform the market in general. There is stronger evidence, yet inconclusive, that ethical funds underperform conventional ones.

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(9) **Elfakhani, Hassan,** & **Sidani, Islamic Mutual Funds** (2007) also mentioned another form of purification which is *zakat* - a charity paid on personal wealth exceeding a minimum amount (called *nisab*) and held idol for one lunar year. The rate of *zakat* is 2.5 percent for most monetary wealth and earned income **Al-Qaradawi** (1999). Other rates also exist but *zakat* calculation on investment profits is still controversial **DeLorenzo** (2002).

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Empirical studies show that Islamic indexes have normally distributed efficient returns just as the conventional ones. Moreover, because of the non-compliance filtering, Islamic indexes have developed some unique risk-return characteristics that are not affected by the broad equity markets. Islamic mutual funds' behavior relative to conventional mutual funds' is inconclusive. Some Shariah-compliant mutual funds outperform their benchmarks and others underperform them. Therefore, there is no penalty in including Shariah-compliant funds in the portfolio. In some markets, such as the Malaysian market, Islamic mutual funds show better performance in the bearish market. However, in other markets, such as the US, Islamic funds performed better in bullish markets. Thus, Islamic mutual funds could be used for hedging against adverse economic trends.

Detailed List of Previous Studies on Conventional, Ethical, and Islamic Mutual Funds

Study	Data	Methodology	Major Findings
Previous Studies on Mutual Funds			
McDonald (1974)	Monthly data of 123 mutual funds 1960 - 1969	Sharpe Ratio, Treynor Ratio, and Jensen's Alpha	Majority of mutual funds did not outperform the New York Stock Exchange (NYSE) index.
Kon and Jen (1979)	Monthly returns of 49 mutual funds Jan 1960 – Dec 1971	Run a standard regression on different risk regimes	Multi-level beta for 37 funds and existence of market timing.
Kon (1983)	Monthly returns of 49 mutual funds Jan 1960 - Dec 1971		Statistically significant overall stock selectivity performance in 23 funds and statistically insignificant positive overall timing performance in 14 funds.
Chen, Cheng, Rahman, and Chan (1992)	93 mutual funds Jan 1977 - March 1984	Quadratic market model in conjunction with a systematically varying parameter regression method	Trade-off between market timing and security selection skills. Fund managers do not possess the market timing skills.
Annuar, Shamsher, and Ngu (1997)	31 mutual funds (*called unit trust funds in Malaysia*) July 1990 - August 1995	Treynor and Mazuy model	Positive stock selectivity and a negative timing performance with positive correlation between them. Funds have not reached to the expected level of diversification. Risk-return characteristics of funds are inconsistent with their stated objectives.

Study	Data	Methodology	Major Findings
Shamsher, Annuar, and Taufiq (2000)	41 actively- and passively-managed mutual funds in Malaysia 1995 - 1999.	Sharpe and Treynor Ratios and Jensen's alpha	No significant difference in performance between actively- and passively-managed funds and both underperform the market portfolio and have diversification levels less than 50 percent the diversification level of the market index (Kuala Lumpur composite Index - KLCI). Selection skills of active fund managers are not better than those of the passive fund managers and both do not outperform the market in terms of selection.

Previous Studies on Socially-responsible Funds

Study	Data	Methodology	Major Findings
Luther and Matatko (1994)	UK ethical funds		Weak evidence that ethical funds perform much better when evaluated against a small company benchmark than against the Financial Times All Share Index (FTSA).
Mallin, Saadouni, and Briston (1995)	matched-pair analysis on 29 ethical and 29 non-ethical funds 1986 - 1993	Sharpe and Treynor Ratios	Majority of funds from both groups under-perform the market (FTSA index). Weak evidence that ethical funds outperform their matched non-ethical ones.
Gregory, Matatko and Luther, (1997)	match-pair analysis		No significant difference between the returns earned by the ethical and non-ethical funds, and both underperform the FTSA index. Age of the fund has a noticeable impact on each fund's alpha measure. Size and ethical status have an insignificant impact on the fund's alpha measure.
M'Zali and Turcotte (1998)	American and Canadian 18 ethical funds vs. 10 non-ethical funds 1994 - 1997	Sharpe and Treynor Ratios measures	Only 4 of the ethical funds outperform the market index. Majority of funds underperform the Standard & Poor's (S&P 500) Index and the Toronto Stock Exchange TSE 300 Index.
Hamilton, Jo, and Statman (1993)	32 American ethical funds and 170 ordinary funds 1981-1990		Average return of ethical funds is higher than that of ordinary funds.
Reyes and Grieb (1998)			Average return for ethical funds is higher than that of ordinary funds.
Forte & Miglietta (2007)	Focused on major indices for the European market from June 2000 to April 2007	Unlike other studies on faith-based Islamic investing, they compared Islamic indices to Socially Responsible Investing (SRI). They employed both qualitative and quantitative approaches.	They found that Islamic funds when compared to SRI have different characteristics in terms of both asset allocation and econometric profile. They suggested defining classes of religious investments because even though these investments are similar to SRI, they exhibit unique characteristics.

Study	Data	Methodology	Major Findings
Girard & Hassan (2008)	Five FTSE Islamic Indices and their corresponding non-Islamic indices from December 1998 to December 2006	Sharpe, Treynor, Jenson, and Fama's (selectivity, net selectivity, and diversification) measures. Also, they examined the performance persistence of these indices using Carhart (1997) four-factor model	No significant performance difference between Islamic and non-Islamic indices, even after controlling for the market risk, size, book-to-market, momentum, and local and global factors. They attributed the insignificant difference in performance to style differences. They also found that Islamic indices are growth and small cap oriented, whereas conventional indices are more value and mid cap oriented. The co-integration analysis revealed that both types of indices are integrated for the overall period and the behavior of Islamic indices do not differ from that of conventional indices.

Previous Studies on Islamic Funds

Study	Data	Methodology	Major Findings
Hassan (2001)	DJIM, Dow Jones Islamic Market Index 1996-2000	Serial correlation, variance ratio, and Dickey Fuller tests GARCH framework	DJIM returns are normally distributed and efficient. Significant positive relationship between conditional volatility and DJIM equity index returns.
Hakim and Rashidian (2002)	DJIM, Wilshire 5000 Index, and the risk-free rate (3-month T-bill) 1999-2002	co-integration and causality analysis	No correlation between the DJIM and the Wilshire 5000 Index, or the three month Treasury bill. Changes in the DJIM are not caused by either the Wilshire 5000 Index or the three month Treasury bill. Concluded that the filtering criteria adopted to eliminate non-compliant firms led to an Islamic index with unique risk-return characteristics and these characteristics are unaffected by the broad equity market.
Hakim and Rashidian (2004)	Shariah-compliant index (DJIM), Dow Jones World Index (DJW) and Dow Jones Sustainability World Index (DJS).	capital asset pricing model (CAPM)	DJIM has done relatively well compared to the DJW, but has underperformed the DJS.
Hussein (2005)	DJIM returns 1996-2003	comprehensive study capturing the effects of industry, size, and economic conditions	Islamic indexes provide investors with positive abnormal returns throughout the entire bull period, but they under-perform their non-Islamic index counterparts during the bear market period. Concludes that abnormal returns are driven by investing in small size, basic material, consumer cyclical, industrial and telecommunication firms.

Study	Data	Methodology	Major Findings
Elfakhani, Hassan and Sidani (2007)	46 Islamic mutual funds	Sharpe and Treynor Ratios and Jensen's alpha and ANOVA	Total number of outperforming funds ranges between 29 funds (63% of the sample) and 11 funds (24%), depending on the used performance measure and market benchmark. 4 of 8 fund categories outperform their benchmarks regardless of what performance measure is used. ANOVA statistical test showed that no statistically significant disparity existed for the performance of the funds compared to all used indexes. Concludes that the behavior of Islamic mutual funds does not differ from that of other conventional funds, with some Shariah-compliant mutual funds outperforming their benchmarks and others underperforming them.
Abdullah, Hassan, & Mohamad (2007)	14 Islamic funds and 51 conventional mutual funds in the Malaysian capital market Jan 1992 – Dec 2001	Sharpe index, adjusted Sharpe index, Jensen Alpha, Modigliani measure, and Timing and selectivity ability	Islamic funds performed better than the conventional funds during a bearish market, while conventional funds performed better than Islamic ones during a bullish market. Including Islamic mutual funds in a portfolio helps hedge the downside risk in adverse economic conditions. Islamic and conventional funds have a diversification level that is less than 50 percent the diversification level of the market index proxied by Kuala Lumpur Composite Index (KLCI). Concluded that there is a poor selection and timing performance in both Islamic and conventional mutual funds.
Abderrezak (2008)	46 Islamic Equity funds (IEFs) during January 1997 to August 2002. Employed 3 different benchmarks to assess the performance of these IEFs: conventional, Islamic and ethical benchmarks. Funds were divided based on their regional categories.	Sharpe measure, one factor model, Fama and French (1993) 3 factor model. Fama's measures of diversifications	Islamic funds performed poorly against their respective indices. The co-movement of IEFs returns with the market, measured by the betas, is low. Further, he found poor evidence for selectivity. IEFs are significantly affected by small cap firms and growth preference stocks. However, he did not find any significant performance differences between Islamic and ethical funds using Fama's performance measures. Finally, he found that IEFs do suffer from lower diversification.

Study	Data	Methodology	Major Findings
Kräussl & Hayat (2008)	59 Islamic Equity Funds (IEFs) during 2001 and 2006. Their sample was divided based on the regional focus: global, Malaysian, and other local regions.	Jensen's measure, Sharpe ratio, Treynor ratio, Modigliani and Modigliani measure, TT measure, and the information ratio. Further, they used Treynor & Mazuy (1966) measure for market timing. Finally they used conditional CAPM for negative movements.	On average, there is not any significant performance difference when IEFs are benchmarked against Islamic and conventional benchmarks during normal market condition. A closer look at the bear market of 2002 using conditional CAPM, they documented that IEFs did significantly outperform the Islamic and conventional market indices. They also fund that IEFs possess superior systematic risk-to-return ratios, thus, they argued that these IEFs "seem most attractive as part of a larger fully diversified portfolio like a fund of funds." However, consistent with previous studies, they did not find any evidence for market timing ability.
Mansor & Bhatti, (2009)	Yearly data of Malaysian mutual funds industry from 1999 to March 2009, and daily return data of Malaysian mutual funds from July 1, 2008 to May 10, 2009.	General analysis on the performance and growth rates of Islamic mutual funds and conventional mutual funds in Malaysia. Used non-risk adjusted average returns, standard deviation, and correlation analysis. No statistical test were presented except for Jarque-Bera test	There is strong correlation between Islamic mutual funds and conventional mutual funds. They are moving together as proportion of the total industry. The ratio of Islamic to conventional funds is increasing indicating the importance of Islamic funds. The Growth rates of Islamic mutual funds are higher than that of conventional funds in terms of NAVs. They attributed factors such as expectations' stability, higher growth rates, and resilience during crisis, to the increasing global demand on Islamic mutual funds. They argued that Islamic funds are lesser than conventional funds in terms of size.
Hoepner, Rammal, & Rezec (2009)	Unique dataset of 262 Islamic equity funds from 20 countries and 4 regions from September1990 to April 2009	One factor model, Fama and French (1993) 3 factor model, Carhart (1997) model, 3 level Carhart model, and conditional 3 level Carhart model	Islamic funds from eight nations (mostly from the western regions) significantly underperform their international equity market benchmarks, and funds from only three nations overperform their respective market benchmarks. Second, only small stocks have an effect on Islamic funds. Third, Islamic funds from the Gulf Cooperation Council (GCC) or Malaysia did not significantly underperform their respective benchmarks or were affected by small stocks. Finally, they asserted that Islamic equity funds "exhibit a hedging function, as their investment universe is limited to low debt/equity ratio stocks."

IV. Saudi Arabia's Economy, Financial Markets, and Mutual Funds

Saudi Arabia's economy and stock market are the largest in the Middle East. The largest crude oil producer's product markets are blessed with high liquidity and strong purchasing power and steady growth. When it comes to enforcement of Islamic investment rules, Saudi Arabia ranks the first among all other Muslim countries. Some Islamic trade and investments rules are enforced by law such as prohibition of dealing with pork, alcohol, as well as gambling and prostitution. Other rules, such as the prohibition of fixed-interest contaminated transactions, are not enforced by law and are widely recognized by investors.

According to the official Saudi Stock market website,[10] the Saudi Stock Exchange market remained informal, until the early 1980's when the government embarked on forming a regulated market for trading. In 1984, a Ministerial Committee (SAMA) was formed to regulate and develop the market. Capital Market Authority (CMA) was established in July 2003 and is now the sole regulator and supervisor of the capital market. There are now 126 companies listed and the daily trading volume has been recently ranging between $1 billion and $3 billion. Total market capitalization was about $61 billion in 1999, rose to a market high of more than $650 billion in 2006, and then declined to about $246 billion in 2008. Similarly, the Tadawul All Stock Index (TASI) reached a market high of about 20,000 points in February 2006 before it declined to about 6000 points in 2008. The period before February 2006 has all the characteristics of a bullish market in terms of price and trading volume increases. Similarly, the period from February 2006 until now is marked by bearish market activities.

The Gulf Cooperation Council[11] mutual fund industry is rapidly growing. In 2006, the size of that industry was $56.69 billion with 402 listed funds. The industry is estimated to grow to $160 billion in 2010 and $300 billion in 2015, Dabbeeru (2006a). In Saudi Arabia, there were 182 listed funds in 2006 and 234 listed funds as of April 1, 2010. managed by 28 financial institutions. Table 1 shows a list of financial institutions managing mutual funds in Saudi Arabia, number of funds managed by each one, and the percentage share of each.

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(10) www.tadawul.com.sa

(11) The Gulf Cooperation Council (GCC) is a short name of the Cooperation Council for the Arab States of the Gulf (CCASG) which is a trade bloc with many economic and social objectives involving the six Arab states of the Persian Gulf: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

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Table 1. A List of Financial Institutions Managing Mutual Funds in Saudi Arabia–2010.

No	Fund Manager	No. of MFs	%
1	Riyad Capital	31	13.25
2	NCB Capital	27	11.54
3	Samba Capital & Investment Management	25	10.68
4	HSBC SAUDI ARABIA LIMITED	21	8.97
5	ANB Invest	18	7.69
6	Saudi Hollandi Capital	15	6.41
7	Al Rajhi Capital	14	5.98
8	Jadwa Investment	14	5.98
9	Caam Saudi Fransi	12	5.13
10	SAIB BNP Paribas Asset Management	10	4.27
11	FALCOM Financial Services	6	2.56
12	ALBILAD Investment	5	2.14
13	Aljazira Capital	5	2.14
14	KSB Capital Group	5	2.14
15	Al Tawfeek Financial Group	3	1.28
16	Audi Capital	3	1.28
17	SHUAA Capital Saudi Arabia	3	1.28
18	Alawwal financial Services Co	2	0.85
19	Bakheet Investment Group	2	0.85
20	Global Investment House Saudi	2	0.85
21	Khalijia Invest	2	0.85
22	Rasmala Investments Saudi	2	0.85
23	The Investor For Securities	2	0.85
24	EFG-Hermes KSA	1	0.43
25	Middle East Financial Investment	1	0.43
26	Morgan Stanley Saudi Arabia	1	0.43
27	Rana Investment	1	0.43
28	Watan Investment & Securities	1	0.43
	Total	**234**	**100%**

Source: official site of the Saudi Stock Exchange (*Tadawul*): **http://www.tadawul.com.sa/**

V. Data

The empirical data consist of monthly net asset values (NAVs) of all 28 mutual funds available in Saudi Arabia and managed by the fourth largest fund manager in Saudi Arabia, HSBC Saudi Arabia Limited, during the period from January 2003 to January 2010. Information on these funds was obtained from two main sources:1) the official site of the Saudi Stock Exchange[12] (*Tadawul*) and the official site of HSBC Saudi Arabia Limited[13].

For these NAVs we calculate the monthly returns of all 28 funds. As of April 1, 2010, HSBC managed 21 out of 234 funds (8.97 percent)[14]. During the

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(12) Source is: http://www.tadawul.com.sa/
(13) Source is: http://www.hsbcsaudi.com
(14) See Table 1.

studied period, only seven funds managed by HSBC became dead[15]. Thus, in order to avoid the survivorship bias, these seven dead funds were included in the studied sample. Therefore the studied sample contains 12 Islamic funds and 16 non-Islamic funds (seven funds are dead funds).

Our sample is well diversified in terms of investment goal classifications (growth, income and growth, and income), security type (equity, bonds, balanced, trade finance, and money markets), geographical focus (local, global, and Arabian countries), and traded currency (Saudi Riyal and US. dollar).

We obtain the monthly returns of 12 Islamic funds and 16 non-Islamic funds (7 are dead funds) listed in Saudi Arabia's stock market and managed by HSBC Saudi Arabia Limited, the fourth largest fund manager in Saudi Arabia. The studied period is from January 2003 to January 2010. Panel A, lists all information on Islamic funds, and panel B lists information on non-Islamic funds. The information reported is the fund's name, whether it was dead or not, investment goal (growth, income, and income & growth), security type (stocks, bonds, trade finance, balanced, and money markets), geographical focus (local, global, and Arabian countries), and the currency of trade (Saudi Riyal and U.S. dollar).

As shown from Table 2, half of funds managed by HSBC are globally focused (14 funds) and almost half of these funds are locally focused (13 funds). Thus, in order to appropriately assess the risk-return characteristics of these funds and to avoid the benchmark problem presented in such studies, we employed four market benchmarks. These market benchmarks are:1) the Global Index of GCC Islamic Index. This is Islamic locally focused benchmark[16]. 2) The MSCI World Islamic Index. This is Islamic globally focused benchmark. 3) Tadawul All Share Index (TASI). This is conventional locally focused benchmark. And 4) the MSCI World Index IMI. This is conventional globally focused benchmark. The monthly historical prices of all market indices from January 2003 to January 2010 were obtained from three main sources:1) the official site of the Saudi Stock Exchange[17] (Tadawul), the official site of the Global Investment House[18], and MSCI Barra[19]. The risk-free rate used in this paper is proxied by the one-month maturity Saudi Interbank Offering Rate (SIBOR).

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(15) See table 2.

(16) Data on a locally focused Islamic benchmark (MSCI Saudi Arabia Islamic) is only available since 2007. But since our study starts from January 2003, we used the GCC Islamic Index as the Islamic locally focused benchmark..

(17) Source is: http://www.tadawul.com.sa/

(18) Sources is: http://www.globalinv.net

(19) The MSCI data contained herein is the property of MSCI Inc. (MSCI). MSCI, its affiliates and any other party involved in, or related to, making or compiling any MSCI data; make no warranties with respect to any such data. The MSCI data contained herein is used under license and may not be further used, distributed or disseminated without the express written consent of MSCI.

Table 2. Mutual Funds Included in this Study.
Panel A: **Islamic Funds**

No.	FUND NAME	Dead Fund	Classification	Portfolio Composition	Geographical Focus	Currency
1	Amanah Asia Pacific Fund	No	Growth	Stocks	Global	U.S. Dollar
2	Amanah Balanced Portfolio	No	Growth	Balanced	Local	Saudi Riyals
3	Amanah Defensive Portfolio	No	Growth	Balanced	Local	Saudi Riyals
4	Amanah GCC Equity Fund	No	Growth	Stocks	Arabian Countries	Saudi Riyals
5	Amanah Growth Portfolio	No	Growth	Balanced	Local	Saudi Riyals
6	Amanah Pan-European Equity Fund	No	Income & Growth	Stocks	Global	U.S. Dollar
7	Amanah Saudi Equity Fund	No	Growth	Stocks	Local	Saudi Riyals
8	Amanah Saudi Industrial Fund	No	Growth	Stocks	Local	Saudi Riyals
9	Amanah Trading Fund SAR	No	Income	Trade Finance	Local	Saudi Riyals
10	Amanah Trading Fund USD	No	Income	Trade Finance	Global	U.S. Dollar
11	Amanah Global Equity Index Fund	No	Growth	Stocks	Global	U.S. Dollar
12	HSBC Global Emerging Markets	No	Income & Growth	Stocks	Global	U.S. Dollar

Panel B: **Non-Islamic Funds**

No.	FUND NAME	Dead Fund	Classification	Portfolio Composition	Geographical Focus	Currency
1	Asian Equity Index Fund	Yes	Growth	Stocks	Global	Not Available
2	Chindia Freestyle Fund	No	Income & Growth	Stocks	Global	U.S. Dollar
3	European Equity Index Fund	Yes	Growth	Stocks	Global	Not Available
4	Financial Institutions Fund	No	Growth	Stocks	local	Saudi Riyals
5	HSBC Saudi Const. and Cement	No	Income & Growth	Stocks	local	Saudi Riyals
6	HSBC Saudi Equity Index Fund	No	Income	Stocks	local	Saudi Riyals
7	HSBC Saudi Petr. Equity Fund	No	Income & Growth	Stocks	local	Saudi Riyals
8	International Bond Fund	Yes	income	Bond	Global	Not Available
9	Japan Equity Index Fund	Yes	Growth	Stocks	Global	Not Available
10	Saudi Bond Fund	Yes	income	Bond	Global	Saudi Riyals
11	Saudi Equity Fund	No	Growth	Stocks	local	Saudi Riyals
12	Saudi Equity Trading Fund	No	Growth	Stocks	local	Saudi Riyals
13	Saudi Riyal Money Market Fund	No	Income	Money Markets	local	Saudi Riyals
14	Sterling Money Market	Yes	income	Money Markets	Global	Not Available
15	US Equity Index Fund	Yes	Growth	Stocks	Global	U.S. Dollar
16	USD Money Market	No	Income	Money Markets	Global	U.S. Dollar

Finally, we split the sample period into four different periods depending on the economic condition in order to:1) capture the behavior of these HSBC managed funds during different economic conditions, 2) observe any differences between Islamic and conventional funds during these different economic conditions. These periods are: 1) the overall sample period: from January 2003 to January 2010. 2) the bullish period: from January 2003 to February 2006. 3) the bearish period: from March 2006 to January 2010. And 4) the recent financial crisis period: from September 2008 to January 2010. This division will hold throughout the entire paper.

VI. Methodology

A. *Non Risk-Adjusted Returns Methodology*

Returns of a mutual fund are calculated as capital gain plus income (dividends)[20]:

$$R_{i,t} = \frac{NAV_{i,t} - NAV_{i,t-1} + D_{i,t}}{NAV_{i,t-1}} \quad\quad\text{……..............……….………….…...… (1)}$$

where:

$R_{i,t}$	:	Total return of an individual fund (i) at month (t).
$NAV_{i,t}$	:	Net Asset Value of fund (i) at month (t).
$NAV_{i,t-1}$	:	Net Asset Value of fund (i) at month (t-1).
$D_{i,t}$	:	Dividend or cash disbursement for fund (i) at month (t).

We form two equally-weighted portfolios, one is composed of all Islamic funds and the second is composed of all conventional funds[21]. The equally weighted portfolios are calculated as follows:

$$R_{p,t} = \sum_{i=1}^{n_t} \frac{R_{i,t}}{n_t} \quad\quad\text{.....................……………….……………………......… (2)}$$

$R_{p,t}$	:	Return at month (t) for the portfolio (p: Islamic or conventional).
$R_{i,t}$	:	Total return at month (t) of an individual fund (i) that belongs under either: the Islamic category if p=Islamic, or conventional category if p= conventional.
n_t	:	The number of individual fund under each category (Islamic or conventional) at month (t).

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(20) Dividends are not accounted for because of information insufficiency

(21) According to Hoepner, Rammal, & Rezec (2009), "It is common practice to analyze portfolios of assets with religious of ethical characteristics based on equal weighted rather than value weighted portfolios. This practice ensures a focus on the assets religious or ethical characteristics and substantially reduces the risk of bias due to idiosyncratic return characteristics of a specific asset." Further, because of information insufficiency, it is very difficult to apply value weighted approaches.

For each portfolio we calculate average return, cumulative return, maximum, and minimum returns. We do the calculation over the four specified periods (overall sample, bull, bear, and financial crisis periods). Then, using a mean difference t-test, we compared the non-risk adjusted returns of the Islamic portfolio with the conventional portfolio, and all four market indices. Similarly, the conventional portfolio was tested for mean difference when compared to all four market indices.

B. Risk-Adjusted Returns Methodology

We calculate a set of risk-adjusted performance and risk measures for each of the Islamic fund portfolio and the conventional fund portfolio in different economic condition periods. For mutual funds risk-adjusted performance, we employed the absolute risk adjusted performance measures: the Sharpe Ratio; and the relative risk-adjusted performance measures: Treynor Ratio, Modigliani and Modigliani (MM) measure, TT measure, Information ratio (IR) measure, and the Jensen alpha measure. To assess the risk of the fund's portfolio, we employed the standard deviation, coefficient of variation (CV), and the market risk (beta). Further, we also estimate Treynor and Mazuy (1966) model to examine HSBC's stock selection and market timing abilities.

Although these used performance and risk measures are very common in the mutual fund literature, the uniqueness of this paper is that it employs these measures on all Saudi mutual funds managed by the fourth largest mutual fund manager in Saudi Arabia, HSBC, in order to provide insights on these fund's performance, risk-return profile, and differences, if they exist, between Shariah compliant and non-Shariah compliant funds. Further, this study covers four important economic condition periods (overall sample, bull, bear, and the recent financial crisis periods). Thus, this paper sheds more light on the behavior of these HSBC managed Saudi funds during these periods as well as compares the behavior of both Islamic and conventional funds during these different economic periods.

1. Performance Measures

The Sharpe ratio was derived by Sharpe (1966) as an absolute risk-adjusted return measure. Thus, no market benchmark is needed to calculate the Sharpe ratio. The idea of the ratio is to see how much additional return is received for the additional volatility of holding the risky asset over the risk-free asset. This ratio measures how well a portfolio compensates the investor for the additional risk taken, where risk is measured by the portfolio's standard deviation. The Sharpe ratio can be used to rank funds or portfolios because higher ratio is only warranted if returns are higher with the same level of risk or if the risk is lower with the same level of returns. It is calculated as:

$$S_{pt} = \frac{\overline{R_{pt}} - \overline{R_{ft}}}{\sigma_{pt}} \quad \text{...} \quad (3)$$

where:

S_{pt} : Sharpe ratio for portfolio p (Islamic or conventional). The t subscript refers to the period under examination (overall, bullish, bearish, and financial crisis periods)

$\overline{R_{pt}}$: The average rate of return of the portfolio p during the period t.

$\overline{R_{ft}}$: The average risk free rate measured by SIBOR one month maturity during period t.

σ_{pt} : Standard deviation of the portfolio p during the period t.

Unlike the Sharpe ratio, the Treynor ratio is a relative risk-adjusted measure, where a market benchmark is needed to calculate the ratio. Thus, the Treynor ratio measures the excess returns over the riskless asset that could be earned per unit of market risk. Market risk is measured by the portfolio's beta, which is the sensitivity of the portfolio's returns with the market returns (systematic risk). The Treynor ratio normalizes excess return by the portfolio's beta instead of the portfolio's standard deviation. Thus, the Treynor ratio is often used to assess the performance of a portfolio or fund that is part of a larger fully diversified investment portfolio. Based on this view, if the fund is a part of a larger fully diversified portfolio, Treynor ratio provides a better performance measure than the Sharpe ratio. This is because the total risk can be diversified away when funds are pooled together in a larger diversified portfolio. It is calculated as follows:

$$TR_{pt} = \frac{\overline{R_{pt}} - \overline{R_{ft}}}{\beta_{pt}} \quad \text{...} \quad (4)$$

where:

TR_{pt} : Treynor ratio for portfolio p (Islamic or conventional). The t subscript refers to the period under examination (overall, bullish, bearish, and financial crisis periods)

$\overline{R_{pt}}$: The average rate of return of the portfolio p during the period t.

$\overline{R_{ft}}$: The average risk free rate measured by SIBOR one month maturity during period t.

β_{pt} : Portfolio's beta (estimated by CAPM model shown in equation 4 below).

The portfolio's beta is estimated using the following one factor model:

$$R_{pt} - R_{ft} = \alpha_p + \beta_p \left(R_{mt} - R_{ft} \right) + \varepsilon_{pt} \quad \text{..} \quad (5)$$

where:

R_{pt} : Rate of return of the portfolio p at time t.

R_{ft} : Risk free rate measured by SIBOR one month maturity at time t.

α_p : The intercept of the model. In the context of this model, it is also called Jensen's (1967) alpha, the selectivity skill coefficient. It is estimated using OLS regression analysis.

β_p :   Portfolio's beta or the market risk being estimated using OLS regression analysis.

R_{mt} The average return on the market index at time t.

ε_{pt} :   The error term with zero mean.

Jensen's alpha was first used by Michael Jensen in the 1970s as a measure to evaluate the mutual fund manager's performance. It is conventionally used to determine the excess return of a security (or portfolio) over the security's theoretical expected return or risk adjusted return predicted by a capital asset pricing model (CAPM). In this paper, Jensen's alpha is the coefficient of the constant term in equation (4) mentioned above. A positive and significant alpha indicates that the manger has superior selectivity skills.

Modigliani & Modigliani (1997) proposed a relative risk-adjusted performance measure which is very intuitive and easy to interpret and is considered an extension to the Sharpe ratio. This measure is called the MM measure. This measure shows the portfolio's performance to the market in percentage terms. That is, it shows the difference in returns of a portfolio and the market if they had the same standard deviation. It is calculated as follows:

$$MM_{pt} = \left(S_{pt} - S_{mt} \right) \sigma_{mt} \quad\quad\quad\quad\quad\quad\quad\quad (6)$$

where:

MM_{pt} The Modigliani and Modigliani measure for portfolio p. The t subscript refers to the period under examination (overall, bullish, bearish, and financial crisis periods)

S_{pt} :   Sharpe ratio for portfolio p (Islamic or conventional). The t subscript refers to the period under examination (overall, bullish, bearish, and financial crisis periods)

S_{mt} :   Sharpe ratio for the market index. The t subscript refers to the period under examination (overall, bullish, bearish, and financial crisis periods). The calculation of the market index Sharpe ratio is similar to that in equation 3.

σ_{mt} :   The standard deviation of the market index. The t subscript refers to the period under examination (overall, bullish, bearish, and financial crisis periods).

As MM is an extenuation to the Sharpe ratio, the TT measure is an extension to the Treynor ratio. The TT measure was proposed by Bodie, Kane, & Marcus (2005) and it provides the excess return of a portfolio per unit of systematic risk above the excess return on the market, which has a beta of one by definition. Thus, one can look at the TT measure as the difference between the portfolio Treynor ratio and the market Treynor ratio. It is calculated as follows:

$$\overline{R_{mt}} - \overline{R_{ft}} \quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad (7)$$

where:

TT_{pt} :   The TT measure for portfolio p. The t subscript refers to the period under examination (overall, bullish, bearish, and financial crisis periods)

$\overline{R_{mt}}$:   The average rate of return of the market index during the period t.

$\overline{R_{ft}}$:   The average risk free rate measured by SIBOR one month maturity during period t.

2. Risk Measures

The standard deviation is a measure of the portfolio's total risk. However, the coefficient of variation measures the amount of risk assumed per unit of average return. The lower the ratio, the better is the risk-return tradeoff. It is calculated as follows:

$$CoV_{pt} = \frac{\sigma(R_{pt})}{\overline{R_{pt}}} \quad\text{…………….…………………………...…………………..…………} (8)$$

where:

CoV_{pt} :   Is the coefficient of variation for portfolio p. The t subscript refers to the period under examination (overall, bullish, bearish, and financial crisis periods)

$\sigma(R_{pt})$ Is the standard deviation of the rate of return of portfolio p (Islamic or conventional) at period t.

$\overline{R_{pt}}$ The average rate of return of the portfolio p during the period t.

Both measures are considered absolute risk measures because they do not need a benchmark to calculate them. The final risk measure used in this study is the relative risk measure: beta. This is the systematic risk and it is the coefficient on the market benchmark in equation 4.

3. Selectivity and Market Timing

The Treynor & Mazuy (1966) model measures both stock selection and market timing abilities. This model is just an extension of Jensen's model by adding a quadratic term in the model. It is calculated as follows:

$$R_{pt} - R_{ft} = \alpha_p + \beta_p \left(R_{mt} - R_{ft}\right) + \gamma_p \left(R_{mt} - R_{ft}\right)^2 + \varepsilon_{pt} \quad\text{…………..} (9)$$

where:

R_{pt} :   Rate of return of the portfolio p at time t.

R_{ft} :   Risk free rate measured by SIBOR one month maturity at time t.

α_p :   The intercept of the model. It is estimated using OLS regression analysis and it is the selectivity skill coefficient

β_p :   Portfolio's beta or the market risk being estimated using OLS regression analysis.

R_{mt} :   The average return on the market index at time t.

γ_p :   This is the market timing coefficient for portfolio p.

ε_{pt} :   The error term with zero mean

If γ_p is positive and significant, then managers posses timing ability, in the sense that they will increase their funds exposure to the market when they think that the market will do well. Further, this model also provides robustness to the Jensen's alpha selection ability of managers. If α_p is positive and significant, then managers possess superior selection ability.

VII. Empirical Results and Discussion

A. *Non Risk-Adjusted Returns Analysis*

Table 3 presents descriptive statistics, non risk-adjusted return mean difference and testing, and cumulative returns for the Islamic portfolio, non-Islamic portfolio, and the four market indices.

Panel A, reports the descriptive statistics for both Islamic and non-Islamic portfolios and the four market indices: the GCC Islamic Index (locally focused Islamic index), MSCI World Islamic Index (globally focused Islamic index), TASI (locally focused conventional index), and MSCI World Index IMI (globally focused conventional index). The sample is broken down into 4 periods: the overall all period, the bullish period, the bearish period, and the financial crisis period. The average (non-risk adjusted) returns, minimum, and maximum returns are reported for all mentioned variables. Panel B (I) reports the difference between the Islamic portfolio and the conventional portfolio, GCC Islamic Index, MSCI World Islamic Index, TASI, and MSCI World Index IMI using non risk-adjusted returns. Panel B (II) reports the difference between the conventional portfolio and all four indices. A two-tail mean difference t-test is also performed. Panel C reports the cumulative returns.

Panel A, reports the descriptive statistics for both Islamic and non-Islamic portfolios and the four market indices. The average (non risk-adjusted) returns, minimum, and maximum returns are reported.

As shown from panel B (I), the Islamic portfolios underperform their peer conventional portfolios in both the overall period and the bull period by 0.13 and 0.32 percent, respectively. However, in both periods, that underperformance is not statistically significant at any conventional level. On the other hand, the Islamic portfolios outperform the conventional portfolios by 0.02 and 0.22 percent in both the bear and the financial crisis periods, but they are not statistically significant.

Table 3. Descriptive Statistics, Mean Difference Testing, and Cumulative Returns.

Panel A: **Descriptive Statistics- Average Return, Minimum, and Maximum**

Period		Descriptive Statistics					
		Islamic	Conventional	GCC Islamic Index	MSCI World Islamic Index	TASI	MSCI World Index IMI
Jan-2003 to Jan-2010 (Full period)	**Average Return**	0.25%	0.38%	1.13%	0.61%	1.02%	0.50%
	Min	-26.79%	-27.59%	-32.25%	-18.80%	-29.78%	-21.67%
	Max	8.54%	13.44%	15.54%	8.15%	17.90%	10.90%
Jan-2003 to Feb-2006 (bullish period)	**Average Return**	1.27%	1.59%	5.71%	1.37%	5.40%	1.54%
	Min	-1.25%	-1.45%	-2.26%	-3.31%	-6.59%	-3.62%
	Max	7.83%	4.65%	15.54%	6.64%	14.34%	8.15%
Mar-2006 to Jan-2010 (bearish period)	**Average Return**	-0.55%	-0.57%	-2.48%	0.0025%	-2.42%	-0.32%
	Min	-26.79%	-27.59%	-32.25%	-18.80%	-29.78%	-21.67%
	Max	8.54%	13.44%	14.45%	8.15%	17.90%	10.90%
Sept-2008 to Jan-2010 (Financial crisis period)	**Average Return**	-1.01%	-1.23%	-3.92%	-0.91%	-1.98%	-1.03%
	Min	-26.79%	-27.59%	-28.41%	-18.80%	-29.78%	-21.67%
	Max	7.69%	13.44%	14.45%	8.15%	17.90%	10.90%

Panel B: **Non Risk-Adjusted Return Mean Difference Testing**

	Jan-2003 to Jan-2010 (Full Period)	Jan-2003 to Feb-2006 (Bearish Period)	Mar-2006 to Jan-2010 (Bearish Period)	Sept-2008 to Jan-2010 (Financial Crisis Period)
I. The Difference between the Islamic Portfolio and				
Conventional funds	-0.13%	-0.32%	0.02%	0.22%
GCC Islamic index	-0.87%	-4.44%***	1.93%	2.91%
MSCI World Islamic Index	-0.35%	-0.10%	-0.55%	-0.10%
TASI	-0.77%	-4.13%***	1.87%	0.97%
MSCI World IMI Index	-0.25%	-0.27%	-0.23%	0.02%
II. The Difference between the Conventional Portfolio and				
GCC Islamic index	-0.75%	-4.12%***	1.91%	2.70%
MSCI World Islamic Index	-0.23%	0.21%	-0.57%	-0.32%
TASI	-0.64%	-3.81%***	1.85%	0.75%
MSCI World IMI Index	-0.12%	0.05%	-0.25%	-0.20%

*, **, *** significant at 10%, 5%, 1%, respectively.

***Panel C:* Cumulative Returns**

Period	Islamic	Conventional	GCC Islamic Index	MSCI World Islamic Index	TASI	MSCI World Index IMI
Jan-2003 to Jan-2010 (entire studied period)	11.15%	24.07%	73.72%	52.96%	55.74%	37.50%
Jan-2003 to Feb-2006 (bullish markets)	58.52%	78.68%	648.15%	63.66%	574.06%	73.72%
Mar-2006 to Jan-2010 (bearish markets)	-29.88%	-30.56%	-76.78%	-6.54%	-76.90%	-20.85%
Sept-2008 to Jan-2010 (Financial crisis markets)	-19.74%	-26.29%	-54.48%	-12.94%	-40.01%	-16.70%

Further, the non risk-adjusted average returns of both Islamic and conventional portfolios are tested for any significant difference in means against different indices. That is, the Islamic portfolios are tested against the GCC Islamic index (the locally focused Islamic benchmark). The Islamic portfolios underperform the index in both the overall and the bull periods. The underperformance is only statistically significant at 0.1 percent in the bull period. The underperformance was around 4.44 percent. Further, the Islamic portfolio was tested against the globally focused Islamic index (MSCI World Islamic Index). The underperformance of the Islamic portfolio is not statistically significant in all periods.

Finally, since non-Muslims investors start investing into Islamic mutual funds because they consider such investing as Socially Responsible Investing (SRI), we test the Islamic portfolio against conventional indices- both locally focused (TASI) and globally focused (MSCI World Index IMI). In general, Islamic funds underperform the conventional indices in the overall and the bull periods, but outperform these conventional indices in the financial crisis period. However, the over or underperformance in all periods is statistically insignificant except when the Islamic portfolio is tested against the locally focused conventional index (TASI) in the bull period. The Islamic portfolio underperforms TASI by 4.133 percent and the underperformance is significant at 0.1 percent level of significance.

Similar testing was done on the conventional portfolio, where the portfolio was tested against locally and globally Islamic and conventional indices. Panel B (II) shows that the conventional portfolio statistically (at 0.1 percent level of significance) underperforms both the locally focused Islamic and conventional indices. That is, during the bull period, the conventional portfolios significantly

underperform the GCC Islamic Index by 4.12 percent, and significantly underperform TASI by 3.81 percent.

The non risk-adjusted returns analysis reveals that there no evidence that the Islamic portfolios under or outperform their peer conventional portfolio in all economic conditions. Further, there is no evidence that both portfolios under or outperform the market indices (locally and globally) in the overall, bear, and financial crisis period. These results indicate that there is no penalty of holding either an equally weighted Islamic or a conventional portfolio in these economic conditions.

However, in the bull period, both portfolios significantly underperform the locally focused benchmark both the Islamic and conventional benchmarks by around 4 percent. These results indicate that during a bullish period, it is better to hold an index fund that mimics either the GCC Islamic index or the TASI. The cumulative return results from panel C are also consistent with this argument. The cumulative returns of both the GCC Islamic index and TASI during a bullish period are 648.15 and 574.06 percent, respectively. These cumulative returns are considered the highest when compared with the cumulative returns of the Islamic portfolio, conventional portfolio, MSCI World Islamic Index, and MSCI World Index IMI.

B. *Absolute Risk-Adjusted Performance and Risk Measures*

The Sharpe ratio provides an insightful view in ranking and making comparison between portfolios, but fails to show how well the portfolio have done relative to the market. Thus, it is an absolute risk-adjusted measure. The results of the Sharpe ratio in table 4 indicate that the conventional fund portfolio have outperformed the Islamic portfolio in the overall and bullish periods.

We constructed two equally weighted portfolios. The first portfolio (Islamic) is based on the monthly returns of 12 Islamic funds, and the second portfolio (conventional) is based on the monthly returns of 16 non-Islamic funds (7 are dead funds). These funds are listed in Saudi Arabia's stock market and managed by HSBC Saudi Arabia Limited, the fourth largest fund manager in Saudi Arabia. The studied period is from January 2003 to January 2010. The sample covers four economic conditions: the overall sample period (Jan. 2003 to Jan. 2010), bull period (Jan. 2003 to Feb. 2006), the bear period (Mar. 2006 to Jan. 2010), and the financial crisis period (Sept. 2008 to Jan. 2010). Panel A reports the results on the Sharpe ratio: the absolute risk-adjusted performance measure. Panel B reports the results on the absolute risk measures: the standard deviation and the coefficient of variation.

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Table 4. Absolute Measures.

Panel A: **Absolute Risk-Adjusted Performance Measure**

Portfolio	Full sample		Bull		Bear		Financial Crisis	
	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional
Sharpe	0.18%	2.85%	53.51%	108.17%	-13.18%	-13.67%	-13.29%	-14.15%

Panel B: **Absolute Risk Measures**

Portfolio	Full sample		Bull		Bear		Financial Crisis	
	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional
Standard Deviation	4.87%	4.77%	1.97%	1.27%	6.19%	6.13%	8.31%	9.35%
Coefficient of Variation	19.22	12.52	1.55	0.80	-11.31	-10.75	-8.23	-7.62

The conventional portfolio Sharpe ratio is 2.85 and 108.17 percent, whereas the Islamic portfolio Sharpe ratio is 0.18 and 53.51 percent in the overall and bullish period, respectively. However, in the bearish and financial crisis periods, the Islamic fund portfolios perform better than the conventional one, whereby it punishes investors less than conventional fund portfolios do. The Islamic portfolio lost 13.18 and 13.29 percent, whereas, the conventional portfolio lost 13.67 and 14.15 percent in the bearish and financial crisis periods.

Also the absolute risk measures in Panel B shows that the conventional fund portfolios appear to be less risky during the overall and bullish periods than the Islamic portfolio using the standard deviation and coefficient of variation. However, during the financial crisis period, the conventional portfolios become more risky than the Islamic portfolios. The conventional portfolios standard deviation (coefficient of variation) is 4.77 (12.52), 1.27 (0.80), and 9.35 percent (-7.61) in the overall, bullish, and financial crisis periods, respectively. However, the Islamic portfolios standard deviation (coefficient of variation) is 4.87 (19.22), 1.97 (1.55), and 8.31 percent (-8.23) in the overall, bullish, and financial crisis periods, respectively.

C. Correlation Analysis

This section examines the correlation between both the Islamic and conventional portfolios and all four market indices. Table 5 reports the correlation results and the Pearson's correlation tests.

The Table reports the correlation analysis between both the Islamic and conventional portfolios and all four market indices. The first portfolio (Islamic)

is based on the monthly returns of 12 Islamic funds, and the second portfolio (conventional) is based on the monthly returns of 16 non-Islamic funds (7 are dead funds). These funds are listed in Saudi Arabia's stock market and managed by HSBC Saudi Arabia Limited, the fourth largest fund manager in Saudi Arabia. The studied period is from January 2003 to January 2010. The sample covers four economic conditions: the overall sample period (Jan. 2003 to Jan. 2010), bull period (Jan. 2003 to Feb. 2006), the bear period (Mar. 2006 to Jan. 2010), and the financial crisis period (Sept. 2008 to Jan. 2010). The four indices employed in the correlation analysis are: the GCC Islamic Index, MSCI World Islamic Index, TASI, and the MSCI World Index IMI. Further, this table presents the significance of the correlation coefficients using the Pearson's correlation tests.

Table 5. Correlation Analysis.

Correlation	Overall		Bull		Bear		Financial Crisis	
	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional
GCC Islamic Index	0.78***	0.75***	0.57***	0.59***	0.83***	0.77***	0.87***	0.92***
MSCI World Islamic Index	0.66***	0.72***	0.07	0.18	0.72***	0.77***	0.90***	0.86***
TASI	0.83***	0.79***	0.62***	0.73***	0.87***	0.80***	0.92***	0.97***
MSCI World Index IMI	0.65***	0.75***	-0.01	0.2	0.71***	0.79***	0.91***	0.89***

*, **, *** significant at 10%, 5%, 1%, respectively.

In general, the results in Table 5 indicate that both Islamic and conventional portfolios are significantly positively correlated at 1 percent with all four market indices in all four periods. However, the correlation coefficients between both the Islamic and conventional portfolios and both Islamic and conventional globally focused indices (the MSCI World Islamic Index and the MSCI World Index IMI) are statistically insignificant from zero during only the bull period. And the correlation coefficients in all periods between the market index TASI and both portfolios are the highest compared to the correlation coefficients between each of the other three market indices and the both portfolios. The correlation coefficients for the Islamic portfolio (conventional portfolio) during the overall, bull, bear, and financial crisis periods are 0.83 (0.79), 0.62 (0.73), 0.87 (0.80), and 0.92 (0.97).

The overall results from the correlation analysis reveal that it is important to account for the investors' appetite for diversification and their desire to incorporate new exposures into their portfolios, especially when calculating relative performance and risk measures. Thus, all relative performance and risk measures are going to be based on benchmarking each portfolio against each of the four market indices.

In other worlds, almost half of the HSBC managed Islamic funds are globally focused (5 out of 12 funds)[22] and the other half is locally focused (6 out of 12 funds). Also, slightly more than half of the conventional funds are globally focused (9 out of 16 funds) and the other half is locally focused (7 out of 16 funds). Thus, in order to compare the risk-return characteristics between the Islamic fund portfolio and the conventional fund portfolio, we will examine all performance and risk measures when each portfolio is benchmarked against each of the four market indices.

D. Relative Risk-Adjusted Performance and Risk Measures

Table 6 reports the relative performance and risk measures when each portfolio's risk and performance are assessed using each of the four market benchmarks: GCC Islamic Index (panel A), MSCI World Islamic Index (panel B), TASI (panel C), and MSCI World Index (panel D).

We constructed two equally weighted portfolios. The first portfolio (Islamic) is based on the monthly returns of 12 Islamic funds, and the second portfolio (conventional) is based on the monthly returns of 16 non-Islamic funds (7 are dead funds). These funds are listed in Saudi Arabia's stock market and managed by HSBC Saudi Arabia Limited, the fourth largest fund manager in Saudi Arabia. The studied period is from January 2003 to January 2010. The sample covers four economic conditions: the overall sample period (Jan. 2003 to Jan. 2010), bull period (Jan. 2003 to Feb. 2006), the bear period (Mar. 2006 to Jan. 2010), and the financial crisis period (Sept. 2008 to Jan. 2010). The relative risk-adjusted performance measures used are: the Modigliani and Modigliani (MM) measure, Treynor Ratio, TT measure, and the Jensen's Alpha Index. Beta is the relative risk measure. Further the R-square of the Jensen's alpha model is reported. Each portfolio is benchmarked against all market indices. Panel A reports the results when both portfolios are benchmarked against the GCC Islamic Index. Panel B reports the results when each portfolio is benchmarked against the MSCI World Islamic Index. Panel C report the results when each portfolio is benchmarked against TASI. Panel D report the results when each portfolios is benchmarked against the MSCI World Index

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(22) See Table 2.

IMI. Finally, all standard errors from the Jensen's alpha model are corrected for heteroscedasticity problems using White's (1980) correction test.

Table 6. Relative Risk-Adjusted Performance and Risk Measures.

Panel A: **Portfolios are benchmarked against GCC Islamic Index**

	Performance Measures							
	Overall sample		Bull		Bear		Financial Crisis	
Portfolio	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional
MM	-0.87%	-0.62%	-2.78%	0.00%	1.38%	1.33%	2.64%	2.55%
Treynor	0.02%	0.36%	4.91%	9.49%	-1.64%	-1.83%	-1.58%	-1.59%
TT	-0.86%	-0.53%	-0.58%	4.00%	1.10%	0.91%	2.44%	2.42%
Alpha	-0.35%	-0.20%	-0.12%	0.58%	0.55%	0.42%	1.71%*	2.01%
	Risk Measure							
Beta	40.95% ***	38.17% ***	21.51% ***	14.48% ***	49.67% ***	45.73% ***	69.93% ***	82.96% ***
R-squared	61.54%	55.83%	31.45%	33.77%	68.95%	59.59%	76.25%	84.98%

*, **, *** significant at 10%, 5%, 1%, respectively.

Panel B: **Portfolios are benchmarked against MSCI World Islamic Index**

	Performance Measures							
	Overall sample		Bull		Bear		Financial Crisis	
Portfolio	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional
MM	-0.35%	-0.24%	0.26%	1.72%	-0.44%	-0.46%	-0.04%	-0.11%
Treynor	0.01%	0.17%	23.90%	15.83%	-0.96%	-0.94%	-1.15%	-1.30%
TT	-0.35%	-0.19%	22.74%	14.67%	-0.70%	-0.67%	-0.15%	-0.29%
Alpha	-0.26%	-0.15%	1.01%***	1.27%	-0.59%	-0.60%	-0.14%	-0.30%
	Risk Measure							
Beta	73.19% ***	78.2%***	4.42%	8.68%	84.76%***	89.31% ***	95.61% ***	102.05%***
R-squared	43.28%	51.58%	0.37%	3.38%	52.80%	59.78%	81.66%	73.66%

*, **, *** significant at 10%, 5%, 1%, respectively.

Panel C: **Portfolios are benchmarked against TASI**

	Performance Measures							
	Overall sample		Bull		Bear		Financial Crisis	
Portfolio	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional
MM	-0.76%	-0.50%	-2.61%	0.02%	1.22%	1.16%	0.60%	0.50%
Treynor	0.02%	0.35%	4.19%	7.21%	-1.70%	-1.90%	-1.60%	-1.62%
TT	-0.76%	-0.43%	-0.99%	2.02%	0.99%	0.78%	0.47%	0.46%
Alpha	-0.32%	-0.17%	-0.25%	0.39%*	0.48%	0.35%	0.33%	0.38%
					Risk Measure			
Beta	41.73% ***	38.82% ***	25.19% ***	19.06% ***	48.10%**	44.04% ***	68.88%**	81.83% ***
R-squared	69.15%	62.45%	39.15%	53.12%	75.09%	64.19%	84.75%	94.70%

*, **, *** significant at 10%, 5%, 1%, respectively.

Panel D: **Portfolios are benchmarked against MSCI World Index**

	Performance Measures							
	Overall sample		Bull		Bear		Financial Crisis	
Portfolio	**Islamic**	**Conven tional**	**Islamic**	**Conven tional**	**Islamic**	**Conven tional**	**Islamic**	**Conven tional**
MM	-0.25%	-0.12%	0.14%	1.63%	-0.19%	-0.22%	-0.06%	-0.13%
Treynor	0.01%	0.18%	-70.55%	15.07%	-1.08%	-1.01%	-1.29%	-1.41%
TT	-0.24%	-0.07%	-71.88%	13.74%	-0.49%	-0.42%	-0.17%	-0.28%
Alpha	-0.16%	-0.05%	1.08%***	1.25%***	-0.37%	-0.35%	-0.14%	-0.27%
	Risk Measure							
Beta	65.81% ***	74.14% ***	-1.50%	9.12%	75.67% ***	83.17% ***	85.38% ***	93.95% ***
R-squared	42.34%	56.09%	0.04%	3.95%	51.39%	63.28%	83.13%	79.68%

*, **, *** significant at 10%, 5%, 1%, respectively.

Panel A, reports the relative performance and risk measures when the portfolios are benchmarked against the GCC Islamic Index. In general, the results are consistent with the Sharpe ratio results. The conventional portfolios outperform the Islamic portfolio during the overall and bullish periods and underperform the Islamic portfolios during the bearish and financial crisis periods using all relative performance measures.

MM measure is just an extension to the Sharpe ratio. The results from panel A shows that if the conventional portfolio had the same standard deviation as the GCC Islamic Index, it would underperform the benchmark (0.62 percent) less than the Islamic portfolio would underperform the benchmark (0.87 percent) during the overall period. However, in the bullish period, only the Islamic portfolio would underperform the GCC Islamic Index and the underperformance is around 2.78 percent. In the bearish and financial crisis periods, the Islamic portfolio would outperform the GCC Islamic Index (1.38 and 2.64 percent) more than the conventional portfolio would (1.33 and 2.55 percent), respectively.

We find similar results using the MM measure when both the Islamic and conventional portfolios are benchmarked against the MSCI World Islamic Index (panel B), TASI (panel C) and the MSCI World Index IMI (panel D).

The Treynor measure indicates excess return over the risk free per unit of systematic risk. The Treynor measures show in panel A are also consistent with MM and Sharpe measures. The excess return per unit of systematic risk (when GCC Islamic Index is used as the market benchmark) is higher for the conventional portfolio (0.36 and 9.49 percent) during the overall and bull periods, respectively. The Treynor measure for the Islamic portfolio during the same period is 0.02 and 4.91 percent, respectively. However, the losses during

the bearish and financial crisis periods for the Islamic portfolios are less than its counterpart. The conventional portfolio punishes investors more (1.83 and 1.59 percent) than the Islamic portfolios (1.64 and 1.58 percent) during the bearish and financial crisis periods, respectively.

We find similar results for all periods using the TASI (panel C). However, when using MSCI World Islamic Index (panel B) and MSCI World Index IMI (panel D), we find results similar to the overall and the financial crisis periods.

The TT measure is an extension to the Treynor measure where it shows how the systematic risk-return relationship of each portfolio when it is compared to the market index. Panel A shows the results when the GCC Islamic Index is used as the market index. Similar to all performance measures discussed, the conventional portfolios underperform the GCC Islamic Index (0.53 percent) less than the Islamic portfolio (0.86 percent) in the overall sample period. In the bullish period the conventional portfolios outperform the benchmark (4 percent), and the Islamic portfolios underperform it (0.58 percent). On the other hand, in both the bearish and financial crisis periods, the Islamic portfolios outperform the market index (1.10 and 2.44 percent) more than the conventional portfolios (0.91 and 2.42 percent, respectively).

We find similar results for the TT measures using the TASI (panel C) as the market benchmark. However, these conclusions hold only in the overall and the financial crisis periods when using the MSCI World Islamic Index (panel B) and the MSCI World Index IMI (panel D).

The Jensen's alpha index is one way to examine HSBC selection ability. In order for HSBC to possess superior selection ability, Jensen's alpha must be positive and significant. In general, the Jensen alpha measure when using all indices: GCC Islamic Index (panel A), MSCI World Islamic Index (panel B), TASI (panel C), and MSCI World Index IMI (panel D) indicate that HSCB do not possess superior selection ability except in few cases. However, the benchmark choice plays an essential rule in showing selectivity in these few cases.

For example, in panel A (when GCC Islamic Index is used as the market benchmark), the Jensen alpha measure is positive (1.71 percent) and significant only for the Islamic portfolio during the financial crisis period. Although the conventional portfolio has an alpha that is higher than that for the Islamic portfolio (2.01), it is not statistically significantly different from zero. In panel B (when the MSCI World Islamic Index is used as the market benchmark), the Jensen alpha is also positive (1.01 percent) and significant at 1 percent level.

However, the R-squared (0.37 percent) is low to explain the Islamic fund portfolio returns. However, the model where TASI is used as the market index (panel C) has more explanatory power (R-squared is 53.12 percent). The alpha from that model is positive (0.39 percent) and significant at 10 percent level of significant only for the conventional portfolios during the bull period. Finally, in panel D when MSCI World Index is used as a benchmark, the Jensen's alphas for both portfolios, the Islamic and conventional, are positive (1.08 and 1.25 percent, respectively) and highly significant at 1 percent level of significant during only bull period. Consistent with previous results, the conventional portfolios have higher alpha than the Islamic portfolios. However, R-squared for both Islamic and conventional portfolios are low implying that the MSCI indices are not good explanatory variables for these funds' performance.

The overall absolute and relative performance measures reveal that the conventional portfolio performs better than the Islamic portfolio in the overall and bull periods. However, the opposite is true during the bear and financial crisis periods. These results are consistent with previous literature on Islamic mutual funds such as Abdullah, Hassan, & Mohamad (2007) and (Kräussl & Hayat (2008).

E. Beta: The Relative Risk Measures

Table 6 shows that the systematic risk for each portfolio varies depending on the benchmark used. Using a locally focused Islamic index (panel A: GCC Islamic Index) and a locally focused conventional index (panel C: TASI), we find that the systematic risk for the Islamic portfolio is higher than that for the conventional portfolios in the overall, bull, and bear periods, but lower in the financial crisis period. However, when using a globally focused Islamic and conventional indices (the MSCI World Islamic Index and the MSCI Index IMI), we find that the Islamic portfolio has a systematic risk that always lower than its counterpart. All betas are statically significant at 1 percent, except during the bull periods when using the MSCI World Islamic Index (panel B) and the MSCI World Index IMI (panel D). The most important results are that regardless what index is used, the systematic risk for the Islamic portfolio is noticeably always lower than that for their counterpart during the financial crisis periods.

In sum, the conclusion from all the risk-adjusted performance measures is that investors can include Islamic HSBC managed funds in their portfolios during a bear or a crisis period to hedge downside risk in such adverse economic conditions.

F. Selectivity and Market Timing Analysis

In order to examine the HSBC selectivity and market timing skill, we employed the Treynor & Mazuy (1966) model. Table 7 shows the all results when each portfolios is benchmarked against the GCC Islamic Index (panel A), MSCI World Islamic Index (panel B), TASI (panel C), and MSCI World Index IMI (panel D).

We constructed two equally weighted portfolios. The first portfolio (Islamic) is based on the monthly returns of 12 Islamic funds, and the second portfolio (conventional) is based on the monthly returns of 16 non-Islamic funds (7 are dead funds). These funds are listed in Saudi Arabia's stock market and managed by HSBC Saudi Arabia Limited, the fourth largest fund manager in Saudi Arabia. The studied period is from January 2003 to January 2010. The sample covers four economic conditions: the overall sample period (Jan. 2003 to Jan. 2010), bull period (Jan. 2003 to Feb. 2006), the bear period (Mar. 2006 to Jan. 2010), and the financial crisis period (Sept. 2008 to Jan. 2010). Then the Treynor and Mazuy (1966) model was performed where each portfolio is benchmarked against all market indices. Panel A reports the results when both portfolios are benchmarked against the GCC Islamic Index. Panel B reports the results when each portfolio is benchmarked against the MSCI World Islamic Index. Panel C report the results when each portfolio is benchmarked against TASI. Panel D report the results when each portfolios is benchmarked against the MSCI World Index IMI. Both selectivity skills (alpha) and the market timing (gamma) coefficient are reported with their significance. Further the R-square of the model is also reported to assess the goodness of fit. Finally, all standard errors from the model are corrected for heteroscedasticity problems using White's (1980) correction test.

Table 7. Selectivity and Market Timing Skills- The Treynor & Mazuy (1966) model

Panel A: **Portfolios are benchmarked against GCC Islamic Index**

Portfolio	Overall sample		Bull		Bear		Financial Crisis	
	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional	Islamic	Conventional
Selectivity Skills Coefficient	0.03%	0.16%	0.03%	0.45%*	0.59%	0.37%	3.08%***	2.92%***
Market Timing Coefficient	-0.40	-0.38	1.15	-1.01	-0.06	0.06	-1.94***	-1.28***
R-Squared	62.83%	57.02%	33.77%	38.00%	68.97%	59.62%	88.69%	89.28%

*, **, *** significant at 10%, 5%, 1%, respectively.

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Panel B: Portfolios are benchmarked against MSCI World Islamic Index

	Overall sample		Bull		Bear		Financial Crisis	
Portfolio	Islamic	Conve ntional	Islamic	Conven tional	Islamic	Conven tional	Islamic	Conven tional
Selectivity Skills Coefficient	0.55%	0.58%	1.01%**	1.32%***	0.14%	-0.02%	1.51%	0.72%
Market Timing Coefficient	-3.76***	-3.38***	-0.07	-0.91	-2.82**	-2.26	-3.21**	-1.97
R-Squared	52.31%	59.22%	0.37%	3.73%	57.25%	62.67%	87.67%	75.46%

*, **, *** significant at 10%, 5%, 1%, respectively.

Panel C: Portfolios are benchmarked against TASI

	Overall sample		Bull		Bear		Financial Crisis	
Portfolio	Islamic	Conve ntional	Islamic	Conven tional	Islamic	Conven tional	Islamic	Conven tional
Selectivity Skills Coefficient	0.50%	0.48%	-0.31%	0.40%**	1.43%**	0.95%	1.68%**	1.00%*
Market Timing Coefficient	-0.81	-0.65	2.27***	-0.47	-0.89***	-0.56	-1.40***	-0.64***
R-Squared	73.78%	65.54%	50.05%	54.22%	80.09%	66.22%	93.78%	96.19%

*, **, *** significant at 10%, 5%, 1%, respectively.

Panel D: Portfolios are benchmarked against MSCI World Index

	Overall sample		Bull		Bear		Financial Crisis	
Portfolio	Islamic	Conve ntional	Islamic	Conven tional	Islamic	Conven tional	Islamic	Conven tional
Selectivity Skills Coefficient	0.57%	0.55%	1.10%***	1.29%***	0.30%	0.14%	1.67%*	0.81%
Market Timing Coefficient	-2.94***	-2.41**	-0.40	-0.70	-2.27***	-1.65	-2.71***	-1.60
R-Squared	51.23%	62.36%	0.08%	4.25%	56.27%	65.91%	90.80%	81.81%

*, **, *** significant at 10%, 5%, 1%, respectively.

Looking at the R-squared, we can see that the Treynor & Mazuy (1966) model is a better fit in explaining the portfolios returns than the Jensen's alpha model. This is true in all periods and when using all four market benchmarks.

Panels A, B, C, and D, indicate that in the overall periods, HSBC do not possess any selectivity and market timing abilities. This conclusion holds even when using different market indices. However, in the bull period, HSBC seems

to have economically modest selectivity skills when managing conventional funds using all four market indices. This selectively skill is statistically significant and economically modest: 0.45 (panel A), 1.32 (panel B), 0.40 (panel C), and 1.29 percent (panel D). Also during the bull period, HSBC have significant and modest selectivity skills when managing Islamic funds. But this is only true when the globally focused Islamic and conventional Indices are used as market benchmarks. That is, HSBC have selectivity skill that are around 1.01 (1.10) percent when the MSCI World Islamic Index (MSCI World Index IMI) is used as benchmarks, and that selectivity skill is significant at 5 (1) percent level of significance. However, note that the selectivity skills of HSBC are lower for Islamic funds than for conventional funds.

However, during the bear periods, HSCB seem to have significant (at 5 percent) selectivity skills when managing Islamic funds and when TASI is used as the market index. As discussed before, TASI is the market index, among all other market indices, that have the highest correlation coefficients with the Islamic portfolio as well as the conventional portfolio returns. Also, the R-squared (80.09 percent) from the bear period regression (panel C) indicates that the model is a better fit than Jensen's alpha model (table 6, panel C).

Finally, during the recent financial crisis period, the HSBC selectivity skills are also significant and economically modest for both portfolios using the GCC Islamic Index (panel A), TASI (panel C), and MSCI World Index IMI (panel D). However, in contrast to the results obtained from the bull period, the results from the recent financial crisis period show that HSBC seem to have higher selectivity skills when managing the Islamic funds than when managing conventional ones.

In sum, the Treynor & Mazuy (1966) model is a better fit in explaining the variation in returns for both Islamic and conventional portfolios than Jensen's alpha model. Further, in contrast to the results obtained from the Jensen's alpha model, the Treynor & Mazuy (1966) model shows that HSBC does have significant and economically modest selectivity skills during the bullish and the recent financial crisis periods. Moreover, these selectivity skills are higher for conventional funds than for Islamic funds during the bullish period and lower during the recent financial crisis period.

However, consistent with previous studies, we do not find any evidence for market timing during all periods and when using all four market indices as market benchmarks. One exception is that during the bull period, HSBC seem to have the ability to time the market when managing Islamic funds. However, that market timing ability (2.27) is statistically significant when only TASI is used as the market index (panel C).

VIII. Conclusion

This paper examined 28 mutual funds managed by the fourth largest fund manager, HSBC Saudi Arabia Limited. The risk-return profile and performance of these funds have been investigated during different economic conditions to assess any differences between Islamic and conventional funds.

The non risk adjusted measures suggest that there is no significant performance difference between Islamic and conventional funds. However, both funds, Islamic and conventional, significantly (at 1 percent) underperform the GCC Islamic Index and TASI during the bull periods. This underperformance is around 4 percent.

However, the results of the risk-adjusted performance measures were consistent with Abdullah, Hassan, & Mohamad (2007) and Kräussl & Hayat (2008) results. These results suggest that, in general, the conventional funds outperform Islamic funds during the overall and bull periods using all four market indices. However, in the financial crisis period, the Islamic funds perform better than conventional ones, in the sense that they punish investor less than conventional funds. Further, regardless of the benchmark used, the systematic risk for Islamic funds is always lower than their counterpart conventional funds during the financial crisis period. Thus, investors can include Islamic HSBC managed funds in their portfolios during a bear or a crisis period to help hedge the downside risk in such adverse economic conditions.

Finally, we found that HSBC do indeed possess significant and economically modest selectivity skills during the bullish and the financial crisis periods. However, such skills are higher when HSBC is managing conventional funds during the bullish periods. In the bearish period, these skills are higher for Islamic funds than for conventional funds.

To augment the research in this study, we plan to expand the data coverage over longer periods of time and introduce new statistical performance measures. Our limited research budget and resources limits our ability to augment this case study now.

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أداء الصناديق الاستثمارية الإسلامية
مقارنة بأداء الصناديق الاستثمارية التقليدية
في المملكة العربية السعودية: دراسة عملية

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الولايات المتحدة الأمريكية

المستخلص. باستعمال عينة من الصناديق الإسلامية والتقليدية المدارة من قبل (HSBC)، رابع أكبر مدير صناديق استثمارية في المملكة العربية السعودية، في الفترة الواقعة بين كانون الأول ٢٠٠٣م وكانون الأول ٢٠١٠م، قمنا بفحص خصائص العائد والمخاطرة لهذه الصناديق باستعمال عدد من مقاييس الأداء مثل نسبة شارب (Sharpe Ratio)، ومعامل ترينر (Treynor)، ومعامل جنسن (Jensen Alpha) بصيغها المختلفة. قمنا بتقسيم فترة الدراسة لأربع فترات تشمل: ١– كامل الفترة المدروسة ٢– فترة الصعود ٣– فترة الهبوط و٤– فترة الأزمة المالية وذلك لتحليل ومقارنة أداء الصناديق المدروسة في كل منها. قمنا أيضا بدراسة توقيت السوق والقدرة الاختيارية لمدراء المحافظ في (HSBC). وجدنا أن الصناديق الإسلامية لا تجاري الصناديق التقليدية في الأداء عند أخذ كامل الفترة المدروسة بعين الاعتبار وكذلك عند التركيز على فترة الصعود. بالمقابل وجدنا أن الصناديق الإسلامية تتفوق في الأداء على نظيرتها التقليدية في فترات الهبوط وفي فترة الأزمة المالية. هذه النتائج بشكل عام تأتي مؤكدة لنتائج دراسات سابقة في هذا المجال. كما تظهر النتائج أن مدراء المحافظ الإسلامية في (HSBC) يملكون قدرة جيدة على توقيت السوق واختيار الأصول في فترات الهبوط بينما مدراء المحافظ التقليدية يملكون قدرة جيدة على توقيت السوق واختيار الأصول في فترات الصعود. أهم الدروس المستفادة من الدراسة العملية هذه أن الصناديق الإسلامية تقدم للمستثمرين تحوطاً جيداً في فترات الركود الاقتصادي بسبب القواعد التي يفرضها الاستثمار الإسلامي على اختيار الأصول.