FINANCE AND BANKING

IJFB VOL 9 NO 1 (2022) P-ISSN 2574-6081 E-ISSN 2574-609X

Available online at https://www.cribfb.com Journal homepage: https://www.cribfb.com/journal/index.php/ijfb Published by CRIBFB, USA

MAKING A COMPELLING CASE FOR ESG & ISLAMIC FUNDS: AN EMPIRICAL INVESTIGATION IN COMPARISON WITH CONVENTIONAL FUNDS

🔟 Aasim Abdullah (a) 🔟 Ullas Rao (b)1

^(a) Bachelor of Business Administration, Edinburgh Business School, Heriot-Watt University Dubai, United Arab Emirates; E-mail: aa141@hw.ac.uk ^(b) Assistant Professor of Finance, Edinburgh Business School, Heriot-Watt University Dubai, United Arab Emirates; E-mail: u.rao@hw.ac.uk

ARTICLE INFO

Article History:

Received: 28 January 2022 Accepted: 27 March 2022 Online Publication: 31 March 2022

Keywords:

ESG Investing, Fama-French Factor Model Islamic Mutual Funds, Mutual Funds Socially Responsible Funds

JEL Classification Codes:

B26, G11, G15, G23, M14

ABSTRACT

The purpose of this research is to analyze and evaluate the performance of ESG funds and Islamic funds vis-à-vis conventional mutual funds, whereby ESG funds and Islamic funds take into account environmental, social, governance and Shariah-based factors into account during portfolio structuring. To conduct this study, the approach primarily employed the publicly available data of thirty funds from each aforementioned category, calculated their logarithmic returns based on closing prices and subsequently ranked the funds according to the returns. Ten of the top-ranking funds were then selected (owing to some limitations of market data availability) for the methodology to calculate performance using descriptive statistics, one-sample t-tests, portfolio performance measures (Sharpe ratio, Treynor ratio, Jensen's Alpha) and the well renowned Fama-French three-factor model. The results show that much of the excess returns across a majority of the funds (in all categories) are largely explained by the market premium, while the fund manager skill, SMB and HML factors do not lend much weight in explaining the excess returns attributable to the funds. Furthermore, a considerable finding of this study is that ESG and Islamic funds are not underperforming, but exhibit resilience, and has the potential to evolve and become mainstream options for investments.

 \odot 2022 by the authors. Licensee CRIBFB, USA. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).

INTRODUCTION

The Chief Executive Officer of the CFA Institute, Smith (2019), delivers a holistic outlook on the future of ESG investments. He finds that "The client of the future cares passionately about ESG. Much more passionately than we appear to do as investment professionals."

Given the above from the perspective of a practitioner of investments, it can be seen that the interest and passion for the likes of social inclusion, social impact and even the minimizing of negative environmental impacts is a growing concern for the investors of the future. The future of investing hence is being geared towards the emphasis on ESG and other ethical investments. Given that the demand for such investment vehicles is set to increase, it would only be reasonable that the mutual funds of today begin to shift focus to the environmental, social and governance factors of their investment philosophy.

Background to Mutual Funds

There has been significant growth in mutual fund investment vehicles, especially on a global scale. These types of investments are very attractive to many investors, and also have the potential to make an impact on a country's economic development. Moreover, today's age of investing strategies are complex and versatile, with many investors integrating the use of technology and other sophisticated trading disciplines to get a better edge on the competition to extract competitive

¹Corresponding author: ORCID ID: 0000-0002-5524-805X

https://doi.org/10.46281/ijfb.v9i1.1683

^{© 2022} by the authors. Hosting by CRIBFB. Peer review under responsibility of CRIBFB, USA.

To cite this article: Abdullah, A., & Rao, U. (2022). MAKING A COMPELLING CASE FOR ESG & ISLAMIC FUNDS: AN EMPIRICAL INVESTIGATION IN COMPARISON WITH CONVENTIONAL FUNDS. *Indian Journal of Finance and Banking*, 9(1), 230-239. https://doi.org/10.46281/ijfb.v9i1.1683

returns on investments. Some of the strategies can include and are not limited to goal-based strategies, faith-oriented strategies and ethical strategies. Considering that there are many more strategies mutual funds employ and with many varied and different types of mutual funds in existence, especially with the growth of fund-of-funds and real-estate investment trusts (REITs), it has only led to a rise in the interest of a large number of researchers and academics to examine fund returns and behavior. Much of this research has covered ground using basic econometric models, performance measures using single-factor and multi-factor variations, meta-analyses and more.

Mutual funds are some of the fastest-growing players in the financial industry (In et al., 2014). The mutual fund assets under management have grown at a rate of 16% per year between 1980 and 2008, with the total net assets of the worldwide regulated funds reaching over \$49 trillion. Along with this growth, the ESG and Islamic funds have also been growing at a very quick pace, having about \$60 trillion of assets under management by the signatories of the PRI (Principles for Responsible Investment) (Friede et al., 2015). Islamic funds are also a fast-growing sector representing \$1033 billion of Islamic assets under management (Abdelsalam et al., 2014). When taking into account the larger world of finance, investment allocation into Islamic equity is a recent phenomenon that began in 1994, when new legislation was issued that allowed the Muslim investors to trade in international equity under specific restrictions (Hayat & Kraeussl, 2011). Having absorbed this development, many conventional fund entities embraced the world of Islamic investments by offering various Islamic instruments in their portfolio offerings and compiling indices that include Islamic investment vehicles, namely the Dow Jones Islamic Market Index, FTSE Shariah index, MSCI Islamic, and S&P 500 Shariah indices.

Many investors have gravitated towards the ESG funds and Islamic funds mainly due to the recent scandals in ethics literature, and with much focus, due to the financial crisis and the subsequent negative impact on conventional funds. This also led to the rise in the price of oil, leaving a good number of Islamic investors with high liquidity to invest. Regarding this trend, the Muslim investors were hence left with investment options in Islamic funds, thereby increasing the demand for these fund types. In addition to this, the Muslim population is growing at a steady pace which can imply continuing growth in demand, and subsequently continued growth and appeal of Islamic funds towards the future. For instance, the global population of Muslims is expected to grow to 2.2 billion in 2030, from the 2010 figure of 1.6 billion. This figure is approximated to be 26.4% of the total projected global population of 8.3 billion people in 2030 (Pew Research Centre, 2011). Furthermore, the Islamic investment vehicles displayed considerable strength and resilience in the face of the global financial crisis, hence adding to the popularity of the Islamic fund type.

With terms to a practitioner's perspective on the grounds of ESG investments, most investors choose to integrate the governance factor into their investment process, while the environmental and social factors are relatively slow in adoption rates, hence the need for more focus on these factors (Orsagh et al., 2019). Furthermore, ESG integration is observed significantly more in the equity sector as opposed to the fixed income sector, and portfolio managers are more frequently incorporating factors of ESG within their investment techniques and processes (Orsagh et al., 2019).

LITERATURE REVIEW

Some academics have conducted empirical investigations and yielded promising results on ESG and Islamic funds. Sauer (1997) assesses the impact of socially responsible stocks on investment performance by analyzing restrictions present in socially responsible stocks. The tests observed that social screening did not impact the investment performance adversely and that investors need not be concerned about any sacrifice in investment performance because of the restrictions.

Chang and Doug Witte (2010) analyse the characteristics of socially responsible funds and observe that fixed income-based socially responsible investments give a better performance with lower risk and higher return.

Tripathi and Bhandari (2016) analyze if ESG based companies can portray better performance compared to conventional investment based companies. They find that the ESG compliant companies outperformed the conventional companies, with much higher alpha values when assessed against the Fama-French three-factor model.

In regards to Islamic funds, Mansor and Bhatti (2011) conducted an in-depth study of the funds and observed that the Islamic mutual funds were performing better on average as compared to the Kuala Lumpur Stock Exchange Composite Index. Furthermore, the Islamic mutual funds exhibited higher statistically significant returns in comparison to their conventional fund counterparts.

Dah et al. (2015) analyzed Shariah impacts with reference to the Dow Jones Islamic Index (DJIM-US). The authors find that the Islamic funds, primarily in the Saudi Arabian market, Malaysian market and the Kuwaiti market do not necessarily underperform compared to the market benchmarks, rather they outperformed the DJIM-US and also the Dow Jones Sustainability Index of the US.

Finally, the study by El-Masry et al. (2016) used a test to assess the performance of Islamic mutual funds in the GCC and the Middle East and North African region. They found that the funds outperform the conventional funds in the GCC region, and they are less risky and more resistant to certain forms of economic crises.

OBJECTIVE OF THE STUDY

Based on the above, the purpose of this research paper is to analyze and evaluate the performance of ESG funds and Islamic mutual funds vis-à-vis conventional mutual funds. This purpose will entail the use of preliminary analysis via descriptive statistics, one-sample t-tests and portfolio performance measures such as the Sharpe ratio (Sharpe, 1966), Treynor ratio (Treynor, 1965) and the Jensen's Alpha (Jensen, 1968), along with the renowned econometric Fama-French three-factor model (Fama & French, 1993) to assess the factors affecting the fund performance and excess returns attributable to the funds.

The main objectives, therefore, of this paper will be as follows:

- Analyzing the fund manager's efforts in explaining the excess returns of a fund.
- Analyzing the impact of the market premium in explaining the excess returns of the fund.
- Analyzing if the SMB (size factor) is significant in explaining the excess return attributable to the fund.
- Analyzing if the HML (value factor) is significant in explaining the excess return attributable to the fund.

Having introduced the research study and set forth the objectives, this paper will now move to discuss the methodology and the empirical material of the study.

METHOD

The data used for the analysis included thirty funds from each category (see appendices A, B and C), and the returns of the funds were analyzed based on four specific tests. The tests were the preliminary descriptive statistics (see appendices D, E, F, G, H and I), one-sample t-test (Tables 1, 2 and 3), portfolio performance measures (see appendix J) and the Fama-French three-factor model (Tables 4, 5 and 6).

Using the preliminary descriptive statistics, the Jarque-Bera values (Jarque & Bera, 1980) were assessed across all the funds; the highest significance was seen in the Islamic sample, followed by the ESG fund sample, with the majority of the insignificance observed in the conventional fund sample (see appendices E, G and I).

The one-sample t-test was conducted to assess preliminary significance levels that can give an initial inference into the return behaviour of the funds, which will be later assessed by the Fama- French three-factor model. The one-sample t-test showed insignificance in the conventional fund portfolio, while the significance was observable for the ESG and Islamic fund portfolios (Tables 1, 2 and 3).

Table 1. Test values for conventional fund portfolio

	VANGUARD HORIZON FD. VANGD.CAP. OPPOR.FD.	BROWN CAP.MAN.S ML.CO. INV.SHS.	CLEARBRID GE LARGE CAP GROWTH FD.CL.A	COL.SELIG MAN GLB.TECH. FD.CL.C	DODGE & COX BAL.FD.	HARTFORD SMALL CAP GROWTH FUND A	VANGUARD PRIMECAP FD.	AB EQUITY INCOME FUND A	AB SMALL CAP GROWTH PORTFOLI O A	AMERICA N FUNDS GLOBAL GROWTH FUND 2
t-Statistic	(0.1853)	(0.8355)	(0.2275)	(0.7495)	(-0.0801)	(0.3802)	(0.2465)	(0.9411)	(0.7213)	(0.5641)
Source: Authors' calculations										

Table 2. Test values for ESG fund portfolio

	DWS INVEST ESG EURO BONDS (SHORT) FC	DWS ESG EURO BONDS (LONG) LC	DWS ESG EURO BONDS (MEDIUM) LC	PAX ESG BETA QUALITY FUND INDIVIDUAL INVESTOR	PRISMA ESG WORLD CONVERTIBLE BONDS	SBI MAGNUM EQUITY ESG FUND- DIVIDEND	FIERA ACTIVE FIXED INCOME ETHICAL ESG FUND	DAIWA DC SRI FUND	NOMURA GLOBAL SRI 100	NOMURA GLOBAL SRI INDEX FUND DC
t-Statistic	(5.1787)***	(2.6196)**	(2.7291)***	(0.2317)	(0.1107)	(0.7527)	(0.4521)	(-0.3285)	(-0.2517)	(-0.1914)

Source: Authors' calculations

Table 3. Test values for Islamic fund portfolio

	JS ISLAMIC FUND	MEEZAN ISLAMIC FUND	CIMB ISLAMIC SUKUK	AM BON ISLAM	HSBC ISLAMIC GLOBAL EQUITY INDEX AD USD	CIMB ISLAMIC DALI EQUITY	RHB ISLAMIC BOND	DOW JONES ISLAMIC FD. CL.K	CIMB ISLAMIC DALI EQUITY GROWTH	HSBC US DOLLAR MURABAHA FUND
t-	(-0.6805)	(-0.2260)	(4.9153)***	(1.9712)*	(0.5539)	(0.6989)	(1.1880)	(0.3947)	(1.3111)	(11.2857)***
Statistic										

Source: Authors' calculations

The portfolio performance measures were conducted to ascertain the performance behaviour of the portfolio. Regarding the Sharpe and Treynor ratio, the higher value would indicate better performance; for Jensen's Alpha, a positive value for the alpha would indicate a better fund performance as opposed to a negative alpha value. The tests showed an equal number of high and positive values (six funds) across the conventional funds, while there were nine ESG and Islamic funds with a high Sharpe ratio, ten ESG and Islamic funds with a high Treynor ratio and seven ESG and Islamic funds with a positive alpha (see appendix J).

The Fama-French three-factor model is conducted in tables 4, 5 and 6, showing varied observations. With reference to the conventional sample (Table 4), all of the t-stat values were significant with terms to the market risk coefficient, indicating that the excess returns attributable to the funds are explained by the market premiums alone.

Table 4. Fama-French three-factor model analysis for conventional funds

		VANGUARD HORIZON FD. VANGD.CAP .OPPOR.FD.	BROWN CAP.MAN. SML.CO. INV.SHS.	CLEARBRID GE LARGE CAP GROWTH FD.CL.A	COL.SELIGM AN GLB.TECH.FD .CL.C	DODGE & COX BAL.FD.	HARTFO RD SMALL CAP GROWTH	VANGUAR D PRIMECAP FD.	AB EQUITY INCOME FUND A	AB SMALL CAP GROWTH PORTFOLI O A	AMERICAN FUNDS GLOBAL GROWTH FUND 2
							FUND A				
	α	-0.00292	0.0015	-0.0025	0.0006	-0.0042	-0.0014	-0.0024	0.0007	0.0011	-0.0006
		(-0.4732)	(0.2335)	(-0.4399)	(0.0939)	(-0.9085)	(-0.1895)	(-0.4409)	(0.1510)	(0.1569)	(-0.0989)
1	RM-RF	0.0038	0.0033	0.0031	0.0041	0.0032	0.0035	0.0028	0.0026	0.0036	0.0037

Abdullah & Rao, Indian Journal of Finance and Banking 9(1) (2022), 230-239

	(2.4438)**	(2.0339)**	(2.2025)**	(2.6589)***	(2.7391)***	(1.9348)*	(2.0691)**	(2.1991)**	(1.9517)*	(2.5917)**
SMB	-0.0007	-0.0006	-0.0013	-0.0014	-0.0009	0.00002	-0.0008	-0.0004	0.0003	-0.0023
	(-0.2383)	(-0.1836)	(-0.4604)	(-0.4666)	(-0.3958)	(0.0042)	(-0.2791)	(-0.1627)	(0.0829)	(-0.8222)
HML	0.0008	-0.0009	-0.0001	-0.0014	-0.0003	-0.0004	0.0011	-0.0010	-0.0006	-0.0004
	(0.3436)	(-0.3568)	(-0.0597)	(-0.5919)	(-0.1692)	(-0.1405)	(0.5319)	(-0.5278)	(-0.1957)	(-0.1895)
Adj. R2	0.0556	0.0193	0.0280	0.0475	0.0596	0.0205	0.0373	0.0270	0.022	0.0441

Source: Authors' calculations

Regarding the ESG funds (Table 5), there are several statistical significances in regards to the alpha, SMB and HML factors, some of which are negative as well. This observation is also similar to the Islamic fund portfolio (Table 6). The inference behind these results will be discussed in the next section.

Table 5.	Fama-Frenc	h three-factor	r model analys	is for ESG funds
			2	

	DWS INVEST ESG EURO BONDS (SHOR T) FC	DWS ESG EURO BONDS (LONG) LC	DWS ESG EURO BONDS (MEDIUM) LC	PAX ESG BETA QUALITY FUND INDIVIDUAL INVESTOR	PRISMA ESG WORLD CONVERTIBLE BONDS	SBI MAGNUM EQUITY ESG FUND- DIVIDEND	FIERA ACTIVE FIXED INCOME ETHICAL ESG FUND	DAIWA DC SRI FUND	NOMURA GLOBAL SRI 100	NOMURA GLOBAL SRI INDEX FUND DC
α	-0.0002	0.0004	-0.0004	-0.0045	-0.0020	-0.0054	-0.0023	-0.0027	-0.0009	-0.0005
	(0.4348)	(0.3429)	(-0.4941)	(-0.9994)	(-0.5353)	(-0.6917)	(-1.7999)*	(-0.5571)	(-0.1644)	(-0.0919)
RM-RF	0.0001	-0.0001	0.0004	0.0086	0.0015	0.0061	0.0002	0.0099	0.0081	0.0081
	(0.5505)	(-0.4447)	(2.3484)**	(7.5044)***	(2.0049)**	(5.0986)***	(0.6188)	(9.0178)***	(6.2672)***	(6.2670)***
SMB	0.0006	-0.0001	0.0010	0.0008	0.0055	0.0025	0.0001	-0.0012	0.0061	-0.0060
	(2.2429)**	(-0.1050)	(2.1323)**	(0.3381)	(2.9063)***	(0.8843)	(0.1218)	(-0.6367)	(-2.7150)***	(-2.6782)***
HML	0.0002	0.0002	-0.0001	-0.0038	0.0006	0.0008	-0.0002	-0.0013	-0.0040	-0.0039
	(0.6896)	(0.2281)	(-0.1507)	(-2.1144)**	(0.3040)	(0.2643)	(-0.2519)	(-0.6196)	(-1.5821)	(-1.5726)
Adj. R2	0.0387	-0.0302	0.0928	0.4195	0.1212	0.2424	-0.0253	0.4853	0.3758	0.3745
	Source: Authors' calculations									

	JS ISLAMIC	MEEZAN	CIMB	AM	HSBC	CIMB	RHB	DOW JONES	CIMB	HSBC US
	FUND	FUND	SUKUK	ISLAM	GLOBAL	DALI	BOND	CL.K	DALI EQUITY CROWTH	MURABAHA
					INDEX AD USD	LQUIII			GROWIN	Tend
α	-0.0194	-0.0118	-0.0003	-0.0014	-0.0027	-0.0053	-0.0010	-0.0040	-0.0013	-0.0009
	(-1.6842)*	(-1.1897)	(-0.5360)	(-1.4164)	(-0.6802)	(-1.7814)*	(-0.5339)	(-0.9151)	(-0.4114)	(-7.4589)***
RM-	0.0028	0.0027	0.00001	0.00003	0.0073	0.0056	-0.0002	0.0122	0.0039	0.00001
RF	(1.6188)	(1.7985)*	(0.1658)	(0.2208)	(9.1957)***	(12.1547)***	(-0.6949)	(11.1381)***	(7.9844)***	(-0.5319)
SMB	0.0021	0.0039	0.0001	0.0004	0.0013	0.0036	0.0001	-0.0029	0.0034	-0.0001
	(0.5165)	(1.1013)	(0.2335)	(1.2081)	(0.6520)	(3.3484)***	(0.1363)	(-1.3238)	(2.9966)***	(-1.0384)
HML	-0.0006	-0.0072	0.0004	0.0006	-0.0034	0.0031	0.0002	-0.0049	0.0020	0.00003
	(-0.1333)	(-1.7612)*	(1.4954)	(1.4504)	(-1.5219)	(2.5461)**	(0.2975)	(-2.9051)***	(1.5451)	(0.4126)
Adj.	0.0111	0.0863	-0.0078	0.0046	0.5281	0.6749	-0.0248	0.5890	0.4927	-0.0138
RŽ										

Source: Authors' calculations

RESULTS

This section will develop a discussion based on the observations that emerged from the empirical analysis of the data. Beginning with the preliminary analysis conducted via the descriptive statistics of the funds – with a focus on the Jarque-Bera values – it was observed that the significance level was most prominent for the Islamic sample of funds, which was followed by the ESG fund sample, and the conventional sample showing the majority of insignificance (see appendices D, E, F, G, H and I).

These results indicate that the mean returns from the Islamic funds tend to dominate the ESG funds, which in turn dominates the conventional fund sample; the mean returns are observed to be statistically insignificant and therefore indifferent from zero. With terms to the grand mean assessment (see appendices E, G and I), it was seen that the conventional funds tend to be the most significant, which was followed by the Islamic funds, with the lowest significance for the ESG funds; this inference however is not a point of contention, as it shows that the Islamic funds are not underperforming their conventional counterparts grossly, which serves as a competitive standpoint in the investing universe.

In reference to the one-sample t-tests, the preliminary descriptive analysis was corroborated further, as the tests showed considerable significance levels in Islamic funds and ESG funds, and zero significance concerning the conventional funds (Tables 1, 2 and 3). The significance levels show that there are factors beyond the market premium that explain the excess returns to the funds in the Islamic and ESG portfolio, whereas for the conventional portfolio, the insignificance shows that the excess returns attributable to the funds are purely explained by the market premium. This was corroborated by the Fama-French three-factor model, where the significance levels was present mainly for the market risk coefficient of the funds.

The portfolio performance measures, which are the Sharpe ratio, Treynor ratio and the Jensen's Alpha, when applied to the sample portfolio, showed a relatively mixed observation (see appendix J). These observations do not indicate any form of gross underperformance on part of the ESG and Islamic funds, and this test was also treated as a form of the preliminary analysis in advance of the Fama- French three-factor model.

The Fama-French three-factor model gave a very descriptive result, especially considering the ESG and Islamic funds (Tables 4, 5 and 6). This analysis gave a confirmation of the preliminary descriptive statistics and the one-sample t-test concerning the significant values for excess returns. The conventional funds were largely experiencing only market premium advantages when achieving the excess returns, and hence had no link to the size factor, value factor or the skill of

the fund manager. This is in effect a rather conventional result that yields no abnormal explanation for the excess returns.

The ESG and Islamic funds, however, exhibited several interesting observations, particularly about the SMB, HML and the alpha values. It was seen that some of the respective funds showed a deviation from the conventional theory of the SMB and HML factors whereby big stocks were dominating the small stocks (lower SMB stocks giving higher return), and that the growth stocks were dominating the value stocks (low book-market stocks giving higher return). Furthermore, the fund manager's efforts were also analyzed, as certain funds displayed a negative and significant value; indicating that the fund manager could be experiencing bad luck due to the potential investment philosophy of the fund that restricts the fund manager to a smaller investment universe. This would indicate that although the fund manager is picking the stocks in line with the investment philosophy of the fund, the stocks may not necessarily be the winner stocks that can help in achieving a higher return.

DISCUSSION

The main inferences that could be established via the results are that the market premium is the main factor that explains the excess returns that are attributable to the funds. As a majority of the funds in the portfolio samples showed significance in the market risk coefficients, it shows that the remaining SMB and HML factors are not significant in explaining the excess returns.

Although certain funds showed a significance level about the SMB and the HML, especially in the case of negative coefficients, by and large, these factors are not viable enough to postulate any explanations based on these factors. Finally, the luck and skill of fund managers do not tend to influence the excess returns to the fund. Two funds in the portfolios indicated negative and significant alphas, yet these observations are not viable evidence to conclude that the fund manager skill is required to achieve excess returns.

The limitations of this study involved the inability to procure data for ESG and Islamic funds before the year 2005. Conventional fund data can, however, easily date back to the year 1990 and earlier due to these funds being going concerns for ages. This incongruence in data availability limits the analysis of all the categories together in the same period under study, therefore, to maintain time-period congruency amongst the fund categories, the monthly returns were used for the 8 years of 2005 - 2012. Furthermore, to assess market premium returns, certain markets primarily in the GCC region do not have publicly available sovereign interest rates to use as a proxy for risk-free return measures. Although the Islamic fund market can be present in these locations, the unavailability of the risk-free rates poses a limitation to calculating the risk premiums. This forced the portfolio allocation to exclude some otherwise higher ranked funds due to the unavailability of the market data to compare against.

Through these inferences, although the ESG and Islamic funds are not outperforming their conventional mutual fund counterparts, there exists no significant evidence of underperformance. This indicates that the funds are still evolving with time and that their full potential shall be seen as the funds evolve; the ESG and Islamic funds are here to stay and can be looked upon as resilient investment vehicles. This inference is largely in line with the words of Smith (2019), as the ESG funds are going to be the future for investors.

CONCLUSION

This study analyzed the performance of ESG funds and Islamic funds together in comparison to their conventional counterparts; the likes of which has not been conducted all-inclusively within the existing literature. Numerous studies primarily compare ESG funds with conventional funds, relatively fewer studies with regards to Islamic funds and conventional funds, and even fewer with regards to the comparison of all three fund categories together. Therefore, to contribute to this gap in the literature, this analysis was undertaken. The objective of this study was therefore to analyze the three-way inclusion of the fund categories using portfolio performance measures and the econometric Fama-French three-factor model. Using these tools, an explanation for fund returns was sought based on fund manager skill, market premium, size and value factors (SMB & HML).

The limitations that were experienced, were by and large based on the non-availability of specific data about the ESG and Islamic funds. Since these fund categories are relatively new to the financial world as opposed to the conventional funds that have been present since the ages, better testing and analysis can only be performed as the former funds continue to evolve into the future.

Concerning the above results and the discussion, it can be inferred that although much of the abnormal returns are explained mainly via the market premiums, it cannot be left unsaid that investor bias can also play a significant role in affecting the excess returns. This is a limiting factor in this analysis. By and large, when the choice of fund selection is left to the investor's interest, then the means of how the decision is made is not entirely measurable to dictate how far the inherent investor bias can affect fund returns; as there is no conceivable scientific evidence to highlight any proof of the same, hence warranting a scope for further study in this regard.

On this note, the point that can be taken away is that ESG and Islamic investments will remain attractive investment vehicles for many investors due to various reasons. In addition, the funds do not underperform their conventional counterparts; the absence of underperformance is a viable factor that can enable the ESG and Islamic funds to maintain their popularity amongst investors and other stakeholders alike. In addition, the events of the global financial crisis displayed weaknesses in the conventional funds' investment philosophies, while the Islamic investments stood resilient. These pieces of evidence indicate that the ESG funds and Islamic funds are in for the long haul, and will maintain their allure to investors with sentiment towards ethics and religion.

Author Contributions: Conceptualization, A.A. and U.R.; Data Curation, U.R.; Methodology, U.R.; Validation, U.R.; Visualization, A.A.; Formal Analysis, U.R.; Investigation, A.A. and U.R.; Resources, A.A. and U.R.; Writing – Original Draft, A.A.; Writing – Review & Editing, A.A. and U.R.; Supervision, U.R.; Software, A.A. and U.R.; Project Administration, U.R.; Funding Acquisition, U.R. Authors have read and agreed to the published version of the manuscript.

Institutional Review Board Statement: Ethical review and approval were waived for this study, due to that the research does not deal with vulnerable groups or sensitive issues.

Funding: The authors received no direct funding for this research.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to restrictions.

Conflicts of Interest: The authors declare no conflict of interest.

REFERENCES

- Abdelsalam, O., Fethi, M. D., Matallin, J. C., & Tortosa-Ausina, E. (2014). On the comparative performance of socially responsible and Islamic mutual funds. *Journal of Economic Behavior & Organization*, 103(S), S108-S128. https://doi.org/10.1016/j.jebo.2013.06.011
- Chang, C. E., & Doug Witte, H. (2010). Performance Evaluation of U.S. Socially Responsible Mutual Funds: Revisiting Doing Good and Doing Well. *American Journal of Business*, 25(1), 9-24. https://doi.org/10.1108/19355181201000001
- Dah, M., Hoque, M., & Wang, S. (2015). Constrained investments and opportunity cost evidence from Islamic funds. *Managerial Finance*, 41(4), 348-367. https://doi.org/10.1108/MF-06-2014-0179
- El-Masry, A. A., de Mingo-Lopez, D. V., Matallin-Saez, J. C., & Tortosa-Ausina, E. (2016). Environmental conditions, fund characteristics, and Islamic orientation: An analysis of mutual fund performance for the MENA region. *Journal of Economic Behavior & Organization*, 132(S), 174-197. https://doi.org/10.1016/j.jebo.2016.10.015
- Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. Journal of Financial Economics, 33(1), 3-56. https://doi.org/10.1016/0304-405X(93)90023-5
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5(4), 210-233. https://doi.org/10.1080/20430795.2015.1118917
- Hayat, R., & Kraeussl, R. (2011). Risk and return characteristics of Islamic equity funds. *Emerging Markets Review*, 12(2), 189-203. https://doi.org/10.1016/j.ememar.2011.02.002
- In, F., Kim, M., Park, R. J., Kim, S., & Kim, T. S. (2014). Competition of socially responsible and conventional mutual funds and its impact on fund performance. *Journal of Banking & Finance*, 44, 160-176. https://doi.org/10.1016/j.jbankfin.2014.03.030
- Jarque, C. M., & Bera, A. K. (1980). Efficient tests for normality, homoscedasticity and serial independence of regression residuals. *Economics Letters*, 6(3), 255-259. https://doi.org/10.1016/0165-1765(80)90024-5
- Jensen, M. C. (1968). THE PERFORMANCE OF MUTUAL FUNDS IN THE PERIOD 1945-1964. *The Journal of Finance*, 23(2), 389 416. https://doi.org/10.1111/j.1540-6261.1968.tb00815.x
- Mansor, F., & Bhatti, I. (2011). Risk and return analysis on performance of the Islamic mutual funds: Evidence from Malaysia. *Global Economy and Finance Journal*, 4(1), 19-31. Retrieved from https://www.isfin.net/sites/isfin.com/files/risk_and_return_analysis_on_performance_of_the_islamic_mutual_fu nds-_evidence_from_malaysia.pdf
- Orsagh, M., Allen, J., Sloggett, J., Bartholdy, S., Georgieva, A., Dehman, N. A., & Sofronova, Y. (2019). *ESG integration in Europe, the Middle East, and Africa: Markets, practices and data*. Principles for Responsible Investment. Retrieved from https://www.unpri.org/download?ac=6036
- Pew Research Centre. (2011). *The Future of The Global Muslim Population*. http://www.pewforum.org/The-Future-of-the-Global-Muslim-Population.aspx
- Sauer, D. A. (1997). The impact of social-responsibility screens on investment performance: Evidence from the Domini 400 social index and the Domini Equity Mutual Fund. *Review of Financial Economics*, 6(2), 137-149. https://doi.org/10.1016/S1058-3300(97)90002-1
- Sharpe, W. F. (1966). Mutual fund performance. *The Journal of Business*, 39(1), 119-138. https://dx.doi.org/10.1086/294846
- Smith, P. (2019). The client of the future cares passionately about ESG, and it needs to be incorporated into the investmentprocess#cfapresident[Video].LinkedInRetrievedfromhttps://www.linkedin.com/feed/update/urn:li:activity:6516283481318842368
- Treynor, J. (1965). How to rate management of investment funds. Harvard Business Review, 43(1), 63-75.
- Tripathi, V., & Bhandari, V. (2016). Performance of socially responsible stocks portfolios The impact of Global Financial Crisis. *Journal of Economics and Business Research*, *XXII*(1), 42-68. Retrieved from https://ssrn.com/abstract=2843113

APPENDICES

Appendix A: List of the Conventional Fund Sample with Datastream Codes (Thomson Reuters)

AB DISCOVERY GROWTH FUND A912676(P)AB E DUITY INCOME FUND A360530(P)AB SMALL CAP GROWTH PORTFOLIO A517893(P)AB SMALL CAP GROWTH PORTFOLIO A280609(P)ABDN.GLOBAL EQUITY FD.CLASS C14057(P)ABDN.GLOBAL EQUITY FD.CLASS C14057(P)ABDN.GLOBAL EQUITY FD.CLASS C14057(P)ALGER SML.CAP GW.FD CLA280607(P)ALGER SML.CAP GW.FD CLA280607(P)AMER.CEN.GLB.GDFD.A CL.14764Q(P)AMER.CEN.SML.CAP GW.FD CLA280607(P)AMER.CEN.SML.CAP GW.FD CLA287537(P)AMER.CEN.SML.CAP GW.FD.CLA267537(P)AMER.CEN.SML.CAP GW.FD.CLA267537(P)AMER.CEN.SML.CAP GW.FD.CLA267537(P)AMER.CEN.SML.CAP GW.FD.CLA267537(P)AMER.CEN.SML.CAP GW.FD.CLA266544(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A6966544(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A6966544(P)BLACKROCK HASIL CO. INV.SHS.154127(P)COLLAVIPOPOR.FD.CLA286534(P)COLJENUMAN GLAR.CEN.PLOLA15427(P)COLLANDANGLERCH.FD.CLA164011(P)DEL GLE VALEPCLA1464114(P)DEL GLE VALEPCLA1464114(P)DEL GLE VALEPCLA1464114(P)DEL GLE VALEPCLA11464114(P)DEL GLE VALEPCLA11464114(P)DEL GLE VALEPCLA11464114(P)DEL GLE VALEPCLA11464114(P)DEL GLE VALEPCLA11464114(P)DEL GLE VALEPCLA11464114(P)DEL GLE VALEPCLA11464114(P)DOGE & COX BALL,PD.113427(CONVENTIONAL FUNDS	CODE
AB EQUITY INCOME FUND A360530(P)AB EQUITY INCOME FUND A517893(P)ABDN.GLOBAL EQUITY PD.CLASS A280609(P)ABDN.GLOBAL EQUITY FD.CLASS C14057F(P)ABDN.GLOBAL EQUITY FD.CLASS C14057F(P)ABDN.GLOBAL EQUITY FD.CLASS C14057F(P)ABDN.GLOBAL EQUITY FD.CLASS C14057F(P)AGRE SML.CAP GW.FD CLA894459(P)ALGRE SML.CAP GW.FD CLA894459(P)AMER.CEN GLB.GD.FD.A CL.147640(P)AMER.CEN GLB.GD.FD.A CL.147640(P)AMER.CEN GLB.GD.FD.A CL.147640(P)AMER.CEN SML.CAP GW.FD.CLA26753V(P)AMERICAN FDS TAX EX FD OF CALIFORNIA F39016RC(P)AMERICAN FUNDS GLOBAL GROWTH FUND 2865413(P)BLACKROCK BASIC VALI966644(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A696620(P)BROWN CAP.MAN.SML.CO. INV.SHS.151417(P)COLLEV OPPOR.FD.CL.A878407(P)COLLEV OPPOR.FD.CL.A1464114(P)DEL GLE ROC CLA GROWTH FD.CLA286534(P)COLLARD RUDA GLE LARGE CAP VALUE FUND A895259(P)DEL GLE NAL.FD.CLC286534(P)COLSELIGANG ALE FCL. FD.CLC286534(P)COLLAN EDCLA1464114(P)DEL GLE NAL.FD.CLA11464114(P)DEL GLE NAL.FD.CL11464114(P)DEL GLE NAL.FD	AB DISCOVERY GROWTH FUND A	912676(P)
AB SMALL CAP GROWTH PORTFOLIO A\$17893(P)ABDN GLOBAL EQUITY FD CLASS A280609(P)ABDN GLOBAL EQUITY FD CLASS C14057R(P)ABDN GLOBAL EQUITY FUND INSTL.SER.CL.280607(P)ALGRE SML.CAP GW FD CLA894459(P)AMER CEN GLB.GD, FD.A CL.147654(P)AMER CEN GLB.GW, FD.A CL.147654(P)AMER CEN GLB.GW, FD.A CL.147654(P)AMER CEN SML.CAP.GW FD. CLA26753V(P)AMER CEN SML.CAP.GW FD. CLA26753V(P)AMER CEN SML.CAP.GW FD. CLA9016RC(P)AMERICAN FUNDS GLOBAL GROWTH FUND 288541.3(P)BLACKROCK BASIC VAL1966644(P)BLACKROCK BASIC VAL1966644(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A696620(P)BROWN CAP, MANSML.CO. INV SHS.151412(P)CILEARBRIDGE LARGE CAP GROWTH FD.CLA515043(P)COLDIV.OPPOR.FD.CLA515043(P)COLLIV.OPPOR.FD.CLA146411(P)DEL.GLE VAL.FD.CL146411(P)DEL.GLE VAL.FD.CLA146411(P)DEL.GLE VAL.FD.CLA146411(P)DEL.GLE VAL.FD.CLA146411(P)DEL.GLE VAL.FD.CLA146411(P)DEL.GLE VAL.FD.CLA146411(P)DEL.GLE VAL.FD.CLA146411(P)DEL.GLE VAL.FD.CLA1146411(P)DEL.GLE VAL.FD.CLA1146411(P)DEL.GLE VAL.FD.CLA1146411(P)DEL.GLE VAL.FD.CLA1146411(P)DEL.GLE VAL.FD.CLA1146411(P)DEL.GLE VAL.FD.CLA1146411(P)DEL.GLE VAL.FD.CLA1146411(P)DEL.GLE VAL.FD.CLA11422(P)VA	AB EQUITY INCOME FUND A	360530(P)
ABDN.GLOBAL EQUITY FD.CLASS A280609(P)ABDN.GLOBAL EQUITY FD.CLASS C14057F(P)ABDN.GLOBAL EQUITY FD.CLASS C280607(P)ALGER SML.CAP GW.FD CLA280607(P)ALGER SML.CAP GW.FD CLA894459(P)AMER.CEN.GLB.GD.FD.A CL.14764Q(P)AMER.CEN.GLB.GD.FD.A CL.14765H(P)AMER.CEN.SML.CAP.GW.FD. CLA26753V(P)AMERICAN FDS TAX EX FD OF CALIFORNIA F39016RC(P)AMERICAN FDS TAX EX FD OF CALIFORNIA F39016RC(P)BLACKROCK HOST GUAR STOR OF DATA CL906644(P)BLACKROCK HOST GUAR STOR A666630(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A666640(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A696630(P)CLEARBRIDGE LARGE CAP GROWTH FD.CLA154127(P)CLEARBRIDGE LARGE CAP GROWTH FD.CLA515432(P)COLJUNOPOR.FD.CLA51503(P)COLSELIGMAN GLB.TECH. FD.CLC895259(P)DEL.GLB.VALFD.CLA14641H(P)DEL.GLB.VALFD.CLA14641H(P)DEL.GLB.VALFD.CLA14641H(P)DEL.GLB.VALFD.CLA14641H(P)DEL.GLB.VALFD.CLA11461H(P)DEL.GLB.VALFD.CLA114641H(P)DEL.GLB.VALFD.CLA114641H(P)DEL.GLB.VALFD.CLA114641H(P)DEL.GLB.VALFD.CLA114641H(P)DEL.GLB.VALFD.CLA114641H(P)DEL.GLB.VALFD.CLA114641H(P)DEL.GLB.VALFD.CLA114641H(P)DEL.GLB.VALFD.CLA114641H(P)DEL.GLB.VALFD.CLA114641H(P)DEL.GLB.VALFD.CLA114421P(P)DEL.GLB.VALFD.CLA11	AB SMALL CAP GROWTH PORTFOLIO A	517893(P)
ABDN.GLOBAL EQUITY FD.CLASS C14057F(P)ABDN.GLOBAL EQUITY FUND INSTL.SER.CL.280607(P)ALGER SML.CAP GW.FD CLA894459(P)AMER.CEN GLB.GD.FD.A CL.14764Q(P)AMER.CEN.GLB.GW.FD.A CL.14765H(P)AMER.CEN.SML.CAP.GW.FD. CLA26753V(P)AMERICAN FUNDS GLOBAL GROWTH FUND 280541.3(P)BLACKROCK BIGTUTY INCOME FUND INVESTOR A9016RC(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A666644(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A666640(P)COLDIV.OPPOR.FD.CL.A154127(P)CLEARBRIDGE LARGE CAP GROWTH FD.CLA515432(P)COLDIV.OPPOR.FD.CLA515432(P)COLDIV.OPPOR.FD.CLA515432(P)COLDIV.OPPOR.FD.CLA14641H(P)DEL.GLB.VAL.FD.CLA14641H(P)DEL.GLB.VAL.FD.CLA14641H(P)DEL.GLB.VAL.FD.CLA14641H(P)DEL.GLB.VAL.FD.CLA15136(P)FIDELITY MAGELLAN15136(P)FIDELITY MAGELLAN513165(P)FIDELITY MAGELLAN513721(P)HARTFORD SMALL CAP GROWTH FUND A513721(P)HARTFORD SMALL CAP GROWTH FUND A513721(P)PARCEL LARGE CAP GROWTH FUND A513721(P)PARCEL LARGE CAP GROWTH FUND A513721(P)VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF.519793(P)VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF.519793(P)VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF.517699(P)VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF.517699(P)VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF.517699(P)VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF.5176	ABDN.GLOBAL EQUITY FD.CLASS A	280609(P)
ABDN.GLOBAL EQUITY FUND INSTL.SER.CL.280607(P)ALGER SML.CAP GW.FD CL.A894459(P)AMER.CEN.GLB.GD.FD.A CL.14764Q(P)AMER.CEN.GLB.GW.FD.A CL.14765H(P)AMER.CEN.GLB.GW.FD.A CL.14765H(P)AMER.CEN.SML.CAP.GW.FD.A CL.26753V(P)AMERICAN FDS TAX EX FD OF CALIFORNIA F39016RC(P)AMERICAN FUNDS GLOBAL GROWTH FUND 28654L3(P)BLACKROCK BASIC VALI966644(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A696620(P)BCLARKOCK HIGH EQUITY INCOME FUND INVESTOR A154127(P)CULEARBRIDGE LARGE CAP GROWTH FD.CL.A878407(P)CULEARBRIDGE LARGE CAP GROWTH FD.CL.A878407(P)COL.DIV.OPPOR.FD.CL.A515043(P)COLUBIA SELECT LARGE CAP VALUE FUND A885259(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A1513165(P)TIELLTY MAGELLAN513721(P)HARTFORD SMALL CAP GROWTH FUND A151342(P)VANGUARD BD.IDX.FD.TL. BD.MKT.PRTF.311245(P)VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF.31242(P)VANGUARD DRINZON FD. VANGD.CAP.OPOR.FD.36243(P)VANGUARD DRINZON FD. VANGD.CAP.OPOR.FD.36243(P)VANGUARD DRINZON FD. VANGD.CAP.OPOR.FD.36243(ABDN.GLOBAL EQUITY FD.CLASS C	14057F(P)
ALGER SMLCAP GW.FD CL.A894459(P)AMER.CEN.GLB.GD.FD.A CL.14764Q(P)AMER.CEN.GLB.GD.FD.A CL.14765H(P)AMER.CEN.SMLCAP.GW.FD. CL.A22753V(P)AMERICAN FDS TAX EX FD OF CALIFORNIA F39016RC(P)AMERICAN FUNDS GLOBAL GROWTH FUND 28854L3(P)BLACKROCK HAGH EQUITY INCOME FUND INVESTOR A966644(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A666642(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A66662(P)CLEARBIDGE LARGE CAP GROWTH FD.CL.A154127(P)CLEARBIDGE LARGE CAP GROWTH FD.CLA878407(P)COL.SELIGMAN GLB.TECH. FD.CL.C885259(P)DEL.GLB.VAL.FD.CL.A885259(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A1513165(P)THELGLB.VAL.FD.CL.J144641H(P)DEL.GLB.VAL.FD.CL.J14641H(P)DEL.GLB.VAL.FD.CL.J14641H(P)DEL.GLB.VAL.FD.CL.J1513165(P)THELTY MAGELLAN513721(P)HARTFORD SMALL CAP GROWTH FUND A513721(P)HARTFORD SMALL CAP GROWTH FUND A15194W(P)PACE LGE.CO.GW.EQ.INVS.CL.P311245(P)VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF.519793(P)VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF.519793(P)VANGUARD DR.JDX.FD.TTL. BD.MKT.PRTF.519793(P)VANGUARD DR.JDX.FD.TTL.BD.MKT.PRTF.519793(P)VANGUARD DR.JDX.FD.TTL.BD.MKT.PRTF.519793(P)VANGUARD DR.JDX.FD.TTL.BD.MKT.PRTF.519793(P)VANGUARD DR.JDX.FD.	ABDN.GLOBAL EQUITY FUND INSTL.SER.CL.	280607(P)
AMER.CEN.GLB.GD.FD.A CL.14764Q(P)AMER.CEN.GLB.GW.FD.A CL.14765H(P)AMER.CEN.SML.CAP.GW.FD. CLA26753V(P)AMER.CEN.SML.CAP.GW.FD. CLA26753V(P)AMERICAN FDS TAX EX FD OF CALIFORNIA F39016RC(P)AMERICAN FUNDS GLOBAL GROWTH FUND 28654L3(P)BLACKROCK BASIC VAL1966644(P)BLACKROCK BASIC VAL1966644(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A696620(P)BROWN CAP.MAN.SMLCO. INV.SHS.154127(P)CLEARBRIDGE LARGE CAP GROWTH FD.CL.A878407(P)COL.DIV.OPPOR.FD.CL.A515043(P)COLUMINA SELECT LARGE CAP VALUE FUND A895259(P)DEL.GLB.VAL.FD.CLC14641H(P)DEL.GLB.VAL.FD.CL.C14641H(P)DEL.GLB.VAL.FD.CL.C14641H(P)DEL.GLB.VAL.FD.CL.C513165(P)TIDELITY MAGELLAN513721(P)HARTFORD SMALL CAP GROWTH FUND A513721(P)HARTFORD SMALL CAP GROWTH FUND A151427(P)VANGUARD BIDX.FD.TH. BD.MKT.PRTF.513793(P)VANGUARD DIDX.FD.TH. BD.MKT.PRTF.519793(P)VANGUARD PRIMECAP FD.5117993(P)VANGUARD PRIMECAP FD.5117993(P)VANGUARD PRIMECAP FD.5117999(P)	ALGER SML.CAP GW.FD CL.A	894459(P)
AMER.CEN.GLB.GW.FD.A CL.14765H(P)AMER.CEN.SML.CAP.GW.FD. CL.A26753V(P)AMERICAN FDS TAX EX FD OF CALIFORNIA F39016RC(P)AMERICAN FUNDS GLOBAL GROWTH FUND 28654L3(P)BLACKROCK BASIC VALI966644(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A696620(P)BCOWN CAP.MAN.SML.CO. INV.SHS.154127(P)CLEARBRIDGE LARGE CAP GROWTH FD.CLA878407(P)COL.DIV.OPPOR.FD.CL.A515043(P)COL.SELIGMAN GLB.TECH.FD.CLC286534(P)COLUMBIA SELECT LARGE CAP VALUE FUND A895259(P)DEL.GLB.VAL.FD.CL.A14641H(P)DDELG.GLB.VAL.FD.CLA14641H(P)DDEL.GLB.VAL.FD.CLA14641H(P)DDELG.GLB.VAL.FD.CLA513165(P)FIDELITY MAGELLAN513721(P)HARTFORD SMALL CAP GROWTH FUND A513721(P)HARTFORD SMALL CAP GROWTH FUND A151948(P)TWEEDY BROWNE VAL.FD.134272(P)VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF.519793(P)VANGUARD BD.IDX.FD.TL. BD.MKT.PRTF.519793(P)VANGUARD BR.JDC.AP.OPPOR.FD.517699(P)	AMER.CEN.GLB.GD.FD.A CL.	14764Q(P)
AMER.CEN.SML.CAP.GW.FD. CL.A26753V(P)AMERICAN FDS TAX EX FD OF CALIFORNIA F39016RC(P)AMERICAN FUNDS GLOBAL GROWTH FUND 28654L3(P)BLACKROCK BASIC VAL.I86644(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A966644(P)BROWN CAP.MAN.SML.CO. INV.SHS.154127(P)CLEARBRIDGE LARGE CAP GROWTH FD.CLA878407(P)COL.DIV.OPPOR.FD.CLA515043(P)COL.DIV.OPPOR.FD.CLA286534(P)COLUMBIA SELECT LARGE CAP VALUE FUND A14641H(P)DEL.GLB.VAL.FD.CL.C286534(P)COLUMBIA SELECT LARGE CAP VALUE FUND A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.C513165(P)FIDELITY MAGELLAN513721(P)HARTFORD SMALL CAP GROWTH FUND A513721(P)HARTFORD SMALL CAP GROWTH FUND A131245(P)VANGUARD BOLDX.FD.TTL. BD.MKT.PRTF.134272(P)VANGUARD BOLDX.FD.TTL. BD.MKT.PRTF.362943(P)VANGUARD PRIMECAP FD.519793(P)VANGUARD PRIMECAP FD.519799(P)	AMER.CEN.GLB.GW. FD.A CL.	14765H(P)
AMERICAN FDS TAX EX FD OF CALIFORNIA F39016RC(P)AMERICAN FUNDS GLOBAL GROWTH FUND 28654L3(P)BLACKROCK BASIC VAL1966644(P)BLACKROCK BASIC VAL1966644(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A696620(P)BROWN CAP.MAN.SML.CO. INV.SHS.154127(P)CLEARBRIDGE LARGE CAP GROWTH FD.CL.A878407(P)COL.DIV.OPPOR.FD.CL.A515043(P)COLSELIGMAN GLE.TECH. FD.CL.C286534(P)COLUMBIA SELECT LARGE CAP VALUE FUND A895259(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.C14641K(P)DODGE & COX BAL.FD.1513165(P)FIDELITY MAGELLAN513721(P)HARTFORD SMALL CAP GROWTH FUND A513721(P)PACE LGE.CO.GW.EQ.INVS. CL.P311245(P)TWEEDY BROWNE VAL.FD.134272(P)VANGUARD BOIDX.FD.TL. BD.MKT.PRTF.519793(P)VANGUARD DRIZON FD. VANGU.CAP.OPPOR.FD.517699(P)	AMER.CEN.SML.CAP.GW.FD. CL.A	26753V(P)
AMERICAN FUNDS GLOBAL GROWTH FUND 28654L3(P)BLACKROCK BASIC VALI966644(P)BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A696620(P)BROWN CAP.MAN.SML.CO.INV.SHS.154127(P)CLEARBRIDGE LARGE CAP GROWTH FD.CL.A878407(P)COL.DIV.OPPOR.FD.CL.A515043(P)COLSELIGMAN GLB.TECH. FD.CLC286534(P)COLUMBIA SELECT LARGE CAP VALUE FUND A895259(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CLC14641H(P)DEL.GLB.VAL.FD.CLC14641H(P)DEL.GLB.VAL.FD.CLC14641H(P)DEL.GLB.VAL.FD.CLC14641H(P)DEL.GLB.VAL.FD.CLC14641H(P)DEL.GLB.VAL.FD.CLC14641H(P)DEL.GLB.VAL.FD.CLC14641H(P)DEL.GLB.VAL.FD.CLC14641H(P)DUGGE & COX BAL.FD.513165(P)HARTFORD SMALL CAP GROWTH FUND A513721(P)HARTFORD SMALL CAP GROWTH FUND A1514245(P)TWEEDY BROWNE VAL.FD.134272(P)VANGUARD BOLDX.FD.TL. BD.MKT.PRTF.519793(P)VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD.517699(P)VANGUARD PRIMECAP FD.517699(P)	AMERICAN FDS TAX EX FD OF CALIFORNIA F3	9016RC(P)
BLACKROCK BASIC VAL.I 966644(P) BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A 696620(P) BROWN CAP.MAN.SML.CO. INV.SHS. 154127(P) CLEARBRIDGE LARGE CAP GROWTH FD.CL.A 154127(P) COL.DIV.OPPOR.FD.CL.A 878407(P) COL.DIV.OPPOR.FD.CL.A 515043(P) COL.SELIGMAN GLB.TECH. FD.CLC 286534(P) COLUMBIA SELECT LARGE CAP VALUE FUND A 895259(P) DEL.GLB.VAL.FD.CL.A 895259(P) DEL.GLB.VAL.FD.CL.A 146411(P) DEL.GLB.VAL.FD.CL.G 146411(P) DDIDEL GLE.VAL.FD.CL.G 146411(P) DEL.GLB.VAL.FD.CL.G 13125(P) HARTFORD SMALL CAP GROWTH FUND A 513721(P) HARTFORD SMALL CAP GROWTH FUND A 11425(P) TWEEDY BROWNE VAL.FD. 134272(P)	AMERICAN FUNDS GLOBAL GROWTH FUND 2	8654L3(P)
BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A696620(P)BROWN CAP.MAN.SML.CO. INV.SHS.154127(P)CLEARBRIDGE LARGE CAP GROWTH FD.CL.A878407(P)COL.DIV.OPPOR.FD.CL.A515043(P)COL.SELIGMAN GLB.TECH. FD.CL.C286534(P)COLUMBIA SELECT LARGE CAP VALUE FUND A895259(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.C14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.G14641H(P)DEL.GLB.VAL.FD.CL.G14641H(P)DEL.GLE.VAL.FD.CL.G14641H(P)DDGE & COX BAL.FD.513165(P)FIDELITY MAGELLAN513721(P)HARTFORD SMALL CAP GROWTH FUND A513721(P)HARTFORD SMALL CAP GROWTH FUND A11245(P)TWEEDY BROWNE VAL.FD.134272(P)VANGUARD BOLDX.FD.TTL, BD.MKT.PRTF.519793(P)VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD.5127934(P)VANGUARD PRIMECAP FD.512799(P)	BLACKROCK BASIC VAL.I	966644(P)
BROWN CAP.MAN.SML.CO. INV.SHS. 154127(P) CLEARBRIDGE LARGE CAP GROWTH FD.CL.A 878407(P) COL.DIV.OPPOR.FD.CL.A 515043(P) COL.SELIGMAN GLB.TECH. FD.CL.C 286534(P) COLUMBIA SELECT LARGE CAP VALUE FUND A 895259(P) DEL.GLB.VAL.FD.CL.A 1464114(P) DEL.GLB.VAL.FD.CL.C 1464114(P) DEL.GLB.VAL.FD.CL.C 1464114(P) DEL.GLB.VAL.FD.CL.I 1464114(P) DODGE & COX BAL.FD. 1464114(P) DODGE & COX BAL.FD. 1513165(P) HIDELITY MAGELLAN 513721(P) HARTFORD SMALL CAP GROWTH FUND A 513721(P) PACE LGE.CO.GW.EQ.INVS. CL.P 311245(P) TWEEDY BROWNE VAL.FD. 134272(P) VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 516924(P)	BLACKROCK HIGH EQUITY INCOME FUND INVESTOR A	696620(P)
CLEARBRIDGE LARGE CAP GROWTH FD.CL.A878407(P)COL.DIV.OPPOR.FD.CL.A515043(P)COLSELIGMAN GLE.TECH. FD.CL.C286534(P)COLUMBIA SELECT LARGE CAP VALUE FUND A895259(P)DEL.GLB.VAL.FD.CL.A14641H(P)DEL.GLB.VAL.FD.CL.C14641K(P)DEL.GLB.VAL.FD.CL.I14641K(P)DODGE & COX BAL.FD.513165(P)FIDELITY MAGELLAN513721(P)HARTFORD SMALL CAP GROWTH FUND A513721(P)PACE LGE.CO.GW.EQ.INVS. CL.P311245(P)TWEEDY BROWNE VAL.FD.134272(P)VANGUARD BOLDX.FD.TTL. BD.MKT.PRTF.519793(P)VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD.517699(P)	BROWN CAP.MAN.SML.CO. INV.SHS.	154127(P)
COL.DIV.OPPOR.FD.CL.A 515043(P) COL.SELIGMAN GLB.TECH. FD.CL.C 286534(P) COLUMBLA SELECT LARGE CAP VALUE FUND A 895259(P) DEL.GLB.VAL.FD.CL.A 14641H(P) DEL.GLB.VAL.FD.CL.C 14641H(P) DEL.GLB.VAL.FD.CL.G 513165(P) FIDELITY MAGELLAN 513721(P) HARTFORD SMALL CAP GROWTH FUND A 513721(P) HARTFORD SMALL CAP GROWTH FUND A 513721(P) PACE LGE CO.GWE.QLINVS. CL.P 311245(P) TWEEDY BROWNE VAL.FD. 134272(P) VANGUARD B.ID.X.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD B.ID.X.PD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD PRIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIZON FD. VANGD.CAP.OPPOR.FD. 517699(P)	CLEARBRIDGE LARGE CAP GROWTH FD.CL.A	878407(P)
COL.SELIGMAN GLB.TECH. FD.CL.C 286534(P) COLUMBIA SELECT LARGE CAP VALUE FUND A 895259(P) DEL.GLB.VAL.FD.CL.A 1464114(P) DEL.GLB.VAL.FD.CL.C 1464114(P) DODGE & COX BAL.FD. 1464114(P) DODGE & COX BAL.FD. 513165(P) FIDELITY MAGELLAN 513721(P) HARTFORD SMALL CAP GROWTH FUND A 15194W(P) PACE LGE.CO.GW.EQ.INVS. CL.P 311245(P) TWEEDY BROWNE VAL.FD. 134272(P) VANGUARD B.IDX.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD DRJIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 51769(P)	COL.DIV.OPPOR.FD.CL.A	515043(P)
COLUMBIA SELECT LARGE CAP VALUE FUND A 895259(P) DEL.GLB.VAL.FD.CL.A 14641H(P) DEL.GLB.VAL.FD.CL.G 14641H(P) DEL.GLB.VAL.FD.CL.I 14641K(P) DODGE & COX BAL.FD. 14641K(P) DODGE & COX BAL.FD. 14641K(P) PODGE & COX BAL.FD. 14641K(P) DODGE & COX BAL.FD. 14641K(P) PACE LGE.CO.GW.EQ.INVS. CLP 513721(P) TWEEDY BROWNE VAL.FD. 311245(P) VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 517699(P)	COL.SELIGMAN GLB.TECH. FD.CL.C	286534(P)
DEL.GLB.VAL.FD.CL.A 14641H(P) DEL.GLB.VAL.FD.CLC 14641K(P) DEL.GLB.VAL.FD.CLG 14641K(P) DODGE & COX BAL.FD. 14641K(P) DODGE & COX BAL.FD. 513165(P) FIDELITY MAGELLAN 513721(P) HARTFORD SMALL CAP GROWTH FUND A 513721(P) PACE LGE.CO.GW.EQ.INVS. CL.P 311245(P) TWEEDY BROWNE VAL.FD. 134272(P) VANGUARD B.DIDX.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 517699(P)	COLUMBIA SELECT LARGE CAP VALUE FUND A	895259(P)
DEL.GLB.VAL.FD.CL.C 14641K(P) DEL.GLB.VAL.FD.CLI 14641L(P) DODGE & COX BAL.FD. 1513165(P) FIDELITY MAGELLAN 513721(P) HARTFORD SMALL CAP GROWTH FUND A 513721(P) PACE LGE.CO.GW.EQ.INVS. CL.P 311245(P) TWEEDY BROWNE VAL.FD. 134272(P) VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 517699(P)	DEL.GLB.VAL.FD.CL.A	14641H(P)
DEL.GLB.VAL.FD.CL.I 14641L(P) DODGE & COX BAL.FD. 513165(P) FIDELITY MAGELLAN 513721(P) HARTFORD SMALL CAP GROWTH FUND A 15194W(P) PACE LGE.CO.GW.EQ.INVS. CL.P 311245(P) TWEEDY BROWNE VAL.FD. 134272(P) VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 51769(P)	DEL.GLB.VAL.FD.CL.C	14641K(P)
DODGE & COX BAL.FD. 513165(P) FIDELITY MAGELLAN 513721(P) HARTFORD SMALL CAP GROWTH FUND A 15194W(P) PACE LGE.CO.GW.EQ.INVS. CL.P 311245(P) TWEEDY BROWNE VAL.FD. 134272(P) VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 517699(P)	DEL.GLB.VAL.FD.CL.I	14641L(P)
FIDELITY MAGELLAN 513721(P) HARTFORD SMALL CAP GROWTH FUND A 15194W(P) PACE LGE CO.GWEQLINVS, CL.P 311245(P) TWEEDY BROWNE VAL.FD. 134272(P) VANGUARD BD.IDX.FD.TTL, BD.MKT.PRTF. 519793(P) VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 517699(P)	DODGE & COX BAL.FD.	513165(P)
HARTFORD SMALL CAP GROWTH FUND A 15194W(P) PACE LGE.CO.GW.EQ.INVS. CL.P 311245(P) TWEEDY BROWNE VAL.FD. 134272(P) VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 517699(P)	FIDELITY MAGELLAN	513721(P)
PACE LGE.CO.GW.EQ.INVS. CL.P 311245(P) TWEEDY BROWNE VAL.FD. 134272(P) VANGUARD BJ.DX.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 517699(P)	HARTFORD SMALL CAP GROWTH FUND A	15194W(P)
TWEEDY BROWNE VAL.FD. 134272(P) VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 517699(P)	PACE LGE.CO.GW.EQ.INVS. CL.P	311245(P)
VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF. 519793(P) VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 517699(P)	TWEEDY BROWNE VAL.FD.	134272(P)
VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD. 362943(P) VANGUARD PRIMECAP FD. 517699(P)	VANGUARD BD.IDX.FD.TTL. BD.MKT.PRTF.	519793(P)
VANGUARD PRIMECAP FD. 517699(P)	VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD.	362943(P)
	VANGUARD PRIMECAP FD.	517699(P)

Appendix B: List of the ESG Fund Sample with Data stream Codes (Thomson Reuters)

1.1		
	ESG FUNDS	CODE
	ASAHI LIFE SRI SOCIETY CONTRIBUTION FUND	92862T(P)
1	C-QUADRAT ABSOLUTE RETURN ESG FUND A	27299L(P)
1	C-QUADRAT ABSOLUTE RETURN ESG FUND T	27299M(P)
1	DAIWA DC SRI FUND	92790E(P)
1	DAVY ESG MULTI-ASSET FUND	8841K3(P)
1	DNB FUND GLOBAL EMERGING MARKETS ESG A CAP	671454(P)
1	DNB FUND GLOBAL ESG RETAIL A	882866(P)
1	DWS ESG EURO BONDS (LONG) LC	309229(P)
1	DWS ESG EURO BONDS (MEDIUM) LC	308044(P)
1	DWS ESG EUROPEAN EQUITIES LC	13998H(P)
1	DWS INVEST ESG EURO BONDS (SHORT) FC	25676F(P)
1	DWS INVEST ESG EURO BONDS (SHORT) LC	25594X(P)
1	DWS INVEST ESG EURO BONDS (SHORT) LD	25595J(P)
1	DWS INVEST ESG EURO BONDS (SHORT) NC	25676E(P)
	FIERA ACTIVE FIXED INCOME ETHICAL ESG FUND	7774QX(P)
	GOLDMAN SACHS INTL EQ ESG FD A	327325(P)
	GOLDMAN SACHS INTL EQ ESG FD C	895997(P)
1	GOLDMAN SACHS INTL EQ ESG FD INST	875730(P)
	GOLDMAN SACHS INTL EQ ESG FD SVC	877961(P)
	MUKAM SRI FUND	92723C(P)
1	NOMURA GLOBAL SRI 100	92697Q(P)
1	NOMURA GLOBAL SRI INDEX FUND DC	92708V(P)
1	PAX ESG BETA QUALITY FUND INDIVIDUAL INVESTOR	674675(P)
	PIMCO LOW DURATION ESG FUND INSTITUTIONAL	894809(P)
	PIMCO TOTAL RETURN ESG FUND ADMN	879575(P)
	PIMCO TOTAL RETURN ESG FUND INSTITUTIONAL	545394(P)
	PRISMA ESG WORLD CONVERTIBLE BONDS	27639F(P)
	SBI MAGNUM EQUITY ESG FUND-DIVIDEND	8706QF(P)
	SHINKIN FUKOKU SRI FUND	92638K(P)
	SMT SRI JAPAN OPEN	92690V(P)

Appendix C: List of the Islamic Fund Sample with Datastream Codes (Thomson Reuters)

ISLAMIC FUNDS	CODE
AM BON ISLAM	88894X(P)
AM ISLAMIC BALANCED	88910N(P)
AM ISLAMIC GROWTH	88910L(P)
CIMB ISLAMIC BALANCED	88893N(P)
CIMB ISLAMIC BALANCED GROWTH	88902D(P)
CIMB ISLAMIC DALI ASIA PACIFIC EQUITY GROWTH	88910Q(P)
CIMB ISLAMIC DALI EQUITY	88899U(P)
CIMB ISLAMIC DALI EQUITY GROWTH	88885U(P)
CIMB ISLAMIC EQUITY AGGRESSIVE	88886U(P)
CIMB ISLAMIC SMALL CAP	88899R(P)
CIMB ISLAMIC SUKUK	88910T(P)
DOW JONES ISLAMIC FD. CL.K	263758(P)
FAISAL ISLAMIC BANK OF EGYPT MUTUAL FUND	8937TE(P)
GLOBAL AL-DURRA ISLAMIC	8937NE(P)
HSBC ISLAMIC GLOBAL EQUITY INDEX AD USD	299364(P)
HSBC US DOLLAR MURABAHA FUND	8937EV(P)
JS ISLAMIC FUND	90599M(P)
KENANGA ISLAMIC	88896P(P)
KENANGA ISLAMIC BALANCED	88911F(P)
	ISLAMIC FUNDS AM BON ISLAM AM ISLAMIC BALANCED AM ISLAMIC BALANCED (IMB ISLAMIC BALANCED CIMB ISLAMIC BALANCED GROWTH CIMB ISLAMIC BALANCED GROWTH CIMB ISLAMIC DALI EQUITY GROWTH CIMB ISLAMIC SALAL CAP CIMB ISLAMIC SALAL CAP CIMB ISLAMIC FD. CL.K FAISAL ISLAMIC FD. CL.K FAISAL ISLAMIC BALANCED

Abdullah & Rao	, Indian Journal o	of Finance and	l Banking	9(1) (2022),	230-239
----------------	--------------------	----------------	-----------	--------------	---------

KENANGA OA INV-KENANGA BON ISLAM	88908W(P)
KENANGA OA INV-KENANGA EKUITI ISLAM	889089(P)
MARKAZ ISLAMIC FUND	8937MV(P)
MEEZAN ISLAMIC FUND	90592Q(P)
MFC ISLAMIC	91484Z(P)
MIDF AMANAH ISLAMIC	88891V(P)
PUBLIC ISLAMIC BOND	88894L(P)
PUBLIC ISLAMIC EQUITY	88901X(P)
RHB DANA ISLAM	88894V(P)
RHB ISLAMIC BOND	88893L(P)
TA ISLAMIC	88893V(P)

Appendix D: Descriptive Statistics (of logarithmic returns) – Conventional Funds

Code	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Probability	Sum	Sum Sq. Dev.	Observations
912676(P)	0.0009	0.0055	0.1843	-0.2436	0.0763	-0.7289	4.6136	18.9158	0.0001	0.0905	0.5533	96
360530(P)	0.0044	0.0134	0.0896	-0.1504	0.0457	-1.0647	4.7278	30.0776	0.0000	0.4217	0.1987	96
517893(P)	0.0053	0.0016	0.1906	-0.2516	0.0719	-0.4803	4.5000	12.6913	0.0018	0.5083	0.4914	96
280609(P)	0.0043	0.0142	0.1783	-0.1823	0.0605	-0.4498	4.0873	7.9666	0.0186	0.4133	0.3474	96
14057F(P)	0.0041	0.0142	0.1801	-0.1828	0.0606	-0.4409	4.1051	7.9948	0.0184	0.3888	0.3487	96
280607(P)	0.0042	0.0000	0.4221	-0.1828	0.0660	2.2634	19.4529	1164.7607	0.0000	0.4038	0.4134	96
894459(P)	0.0055	0.0117	0.1913	-0.2259	0.0679	-0.6257	4.6516	17.1748	0.0002	0.5301	0.4376	96
14764Q(P)	0.0038	0.0068	0.2310	-0.2368	0.0983	-0.1919	2.7381	0.8638	0.6493	0.3659	0.9177	96
14765H(P)	0.0024	0.0130	0.1338	-0.2136	0.0607	-0.8629	4.5726	21.8066	0.0000	0.2306	0.3498	96
26753V(P)	0.0026	0.0159	0.1728	-0.2117	0.0715	-0.2769	3.3577	1.7387	0.4192	0.2465	0.4860	96
9016RC(P)	0.0008	0.0006	0.0562	-0.0618	0.0167	-0.3969	6.0893	40.6969	0.0000	0.0769	0.0265	96
8654L3(P)	0.0033	0.0121	0.1538	-0.1697	0.0565	-0.5437	4.1996	10.4856	0.0053	0.3124	0.3036	96
966644(P)	-0.0018	0.0065	0.1681	-0.2074	0.0613	-0.4930	4.5658	13.6949	0.0011	-0.1714	0.3564	96
696620(P)	0.0047	0.0138	0.1673	-0.1998	0.0628	-0.4322	4.3072	9.8237	0.0074	0.4513	0.3741	96
154127(P)	0.0054	0.0139	0.1686	-0.1799	0.0637	-0.3473	3.5128	2.9819	0.2252	0.5219	0.3860	96
878407(P)	0.0013	0.0027	0.1717	-0.1742	0.0557	-0.2865	4.0654	5.8534	0.0536	0.1242	0.2949	96
515043(P)	0.0021	0.0088	0.1535	-0.1763	0.0533	-0.5820	4.8124	18.5577	0.0001	0.2057	0.2694	96
286534(P)	0.0046	0.0106	0.1736	-0.2050	0.0605	-0.4561	4.8041	16.3467	0.0003	0.4439	0.3472	96
895259(P)	0.0036	0.0097	0.2482	-0.2237	0.0671	-0.3533	6.0026	38.0590	0.0000	0.3484	0.4276	96
14641H(P)	-0.0020	0.0116	0.1623	-0.1523	0.0631	-0.4212	3.4252	3.5615	0.1685	-0.1950	0.3777	96
14641K(P)	-0.0022	0.0125	0.1600	-0.1515	0.0631	-0.4023	3.4100	3.2624	0.1957	-0.2086	0.3780	96
14641L(P)	-0.0020	0.0110	0.1620	-0.1533	0.0631	-0.4267	3.4170	3.6082	0.1646	-0.1933	0.3779	96
513165(P)	-0.0004	0.0048	0.1153	-0.1481	0.0470	-0.5704	4.5925	15.3505	0.0005	-0.0368	0.2095	96
513721(P)	-0.0035	0.0042	0.2313	-0.2568	0.0700	-0.6873	6.2849	50.7216	0.0000	-0.3366	0.4651	96
15194W(P)	0.0027	0.0120	0.1668	-0.2167	0.0702	-0.5665	4.2571	11.4564	0.0033	0.2617	0.4688	96
311245(P)	0.0030	0.0063	0.1455	-0.1805	0.0544	-0.3652	4.2444	8.3281	0.0155	0.2920	0.2813	96
134272(P)	-0.0023	0.0045	0.1284	-0.1552	0.0470	-0.5771	4.2056	11.1423	0.0038	-0.2202	0.2103	96
519793(P)	0.0009	0.0018	0.0286	-0.0214	0.0096	0.0020	2.8233	0.1249	0.9395	0.0877	0.0088	96
362943(P)	0.0012	0.0068	0.1902	-0.2048	0.0621	-0.4964	4.7235	15.8244	0.0004	0.1127	0.3659	96
517699(P)	0.0014	0.0062	0.1733	-0.1919	0.0542	-0.3844	5.0849	19.7515	0.0001	0.1308	0.2786	96

Appendix E: Grand Mean Computation – Conventional Fund

Mean	0.0019
Median	0.0025
Maximum	0.0055
Minimum	-0.0035
Std. Dev.	0.0026
Skewness	-0.5173
Kurtosis	2.1188
Jarque-Bera	2.3084
Probability	0.3153
Sum	0.0584
Sum Sq. Dev.	0.0002
Observations	30

Appendix F: Descriptive Statistics (of logarithmic returns) – ESG Funds

Code	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Probability	Sum	Sum Sq. Dev.	Observations
92862T(P)	-0.0017	0.0067	0.0999	-0.2515	0.0591	-1.1849	5.4849	47.1636	0.0000	-0.1673	0.3315	96
27299L(P)	0.0025	0.0027	0.0291	-0.0352	0.0105	-0.6234	5.4125	29.4976	0.0000	0.2402	0.0104	96
27299M(P)	0.0002	0.0023	0.0295	-0.0521	0.0146	-1.3478	5.4341	52.7652	0.0000	0.0166	0.0203	96
92790E(P)	-0.0021	0.0064	0.1180	-0.2275	0.0636	-0.8804	4.0949	17.1983	0.0002	-0.2048	0.3849	96
8841K3(P)	0.0004	0.0054	0.0551	-0.0807	0.0253	-0.7840	4.0120	13.9322	0.0009	0.0360	0.0607	96
671454(P)	0.0068	0.0210	0.1683	-0.3412	0.0774	-1.2213	6.7774	80.9398	0.0000	0.6551	0.5695	96
882866(P)	0.0035	0.0124	0.1405	-0.2301	0.0515	-1.2129	6.6876	77.9313	0.0000	0.3347	0.2520	96
309229(P)	0.0031	0.0041	0.0307	-0.0296	0.0117	-0.4291	3.3066	3.3214	0.1900	0.3010	0.0131	96
308044(P)	0.0025	0.0029	0.0237	-0.0351	0.0090	-0.5925	5.2973	26.7286	0.0000	0.2419	0.0078	96
13998H(P)	0.0011	0.0079	0.1424	-0.2316	0.0561	-0.9950	5.3264	37.4913	0.0000	0.1073	0.2987	96
25676F(P)	0.0023	0.0021	0.0150	-0.0114	0.0049	0.1744	3.3917	1.1002	0.5769	0.2226	0.0023	96
25594X(P)	-0.0002	0.0018	0.0150	-0.0367	0.0100	-1.9577	6.9858	124.8717	0.0000	-0.0213	0.0095	96
25595J(P)	0.0019	0.0017	0.0145	-0.0119	0.0049	0.1584	3.3719	0.9546	0.6205	0.1832	0.0023	96
25676E(P)	0.0026	0.0024	0.0152	-0.0112	0.0049	0.1476	3.3741	0.9083	0.6350	0.2478	0.0023	96
7774QX(P)	0.0006	0.0009	0.0277	-0.0343	0.0123	-0.4937	3.1759	4.0240	0.1337	0.0545	0.0144	96
327325(P)	-0.0005	0.0104	0.1078	-0.2024	0.0600	-0.7743	3.5151	10.6539	0.0049	-0.0524	0.3422	96
895997(P)	-0.0004	0.0090	0.1088	-0.2017	0.0599	-0.7605	3.4984	10.2480	0.0060	-0.0414	0.3408	96
875730(P)	-0.0004	0.0093	0.1083	-0.2024	0.0599	-0.7722	3.5204	10.6253	0.0049	-0.0406	0.3412	96
877961(P)	-0.0004	0.0088	0.1091	-0.2020	0.0600	-0.7658	3.5062	10.4073	0.0055	-0.0372	0.3415	96
92723C(P)	-0.0048	0.0010	0.1343	-0.2255	0.0669	-0.8419	4.1058	16.2317	0.0003	-0.4575	0.4257	96
92697Q(P)	-0.0018	0.0120	0.1386	-0.2599	0.0683	-0.9748	4.5126	24.3565	0.0000	-0.1683	0.4426	96
92708V(P)	-0.0013	0.0122	0.1388	-0.2597	0.0682	-0.9858	4.5359	24.9847	0.0000	-0.1280	0.4422	96
674675(P)	0.0014	0.0095	0.1148	-0.2589	0.0582	-1.5499	7.1407	107.0188	0.0000	0.1323	0.3223	96
894809(P)	0.0000	0.0010	0.0337	-0.0577	0.0116	-1.2411	9.7691	207.9306	0.0000	-0.0030	0.0127	96
879575(P)	0.0005	0.0030	0.0348	-0.0740	0.0145	-1.5179	9.4266	202.0706	0.0000	0.0526	0.0200	96
545394(P)	0.0005	0.0030	0.0348	-0.0740	0.0145	-1.5179	9.4266	202.0706	0.0000	0.0526	0.0200	96
27639F(P)	0.0004	0.0061	0.1265	-0.1823	0.0394	-1.2134	7.8462	117.4996	0.0000	0.0427	0.1472	96
8706QF(P)	0.0066	0.0188	0.2229	-0.2798	0.0856	-0.6518	4.3252	13.8222	0.0010	0.6313	0.6962	96

92638K(P)	-0.0023	0.0048	0.1193	-0.2156	0.0635	-0.9346	4.2070	19.8038	0.0001	-0.2215	0.3831	96
92690V(P)	-0.0081	0.0008	0.1252	-0.3575	0.0764	-1.4768	6.9543	97.4422	0.0000	-0.7742	0.5549	96

Appendix G: Grand Mean Computation – ESG Funds

Mean	0.0004
Median	0.0004
Maximum	0.0068
Minimum	-0.0081
Std. Dev.	0.0029
Skewness	-0.3388
Kurtosis	4.6869
Jarque-Bera	4.1309
Probability	0.1268
Sum	0.0129
Sum Sq. Dev.	0.0002
Observations	30

Appendix H: Descriptive Statistics (of logarithmic returns) – Islamic Funds

Code	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Probability	Sum	Sum Sq. Dev.	Observations
88894X(P)	0.0019	0.0033	0.0306	-0.0311	0.0097	-0.4726	4.6007	13.8222	0.0010	0.1866	0.0089	96
88910N(P)	0.0061	0.0079	0.0683	-0.0822	0.0265	-0.6896	4.5690	17.4560	0.0002	0.5860	0.0668	96
88910L(P)	0.0069	0.0109	0.1054	-0.1152	0.0379	-0.6413	4.3765	14.1591	0.0008	0.6614	0.1363	96
88893N(P)	0.0000	0.0066	0.0864	-0.1425	0.0342	-1.0952	5.8111	50.7987	0.0000	0.0000	0.1113	96
88902D(P)	0.0021	0.0068	0.0633	-0.1138	0.0317	-0.7694	4.0783	14.1211	0.0009	0.2024	0.0957	96
88910Q(P)	0.0042	0.0125	0.1180	-0.2950	0.0531	-1.9671	12.2167	401.6977	0.0000	0.4034	0.2675	96
88899U(P)	0.0057	0.0092	0.0949	-0.1266	0.0424	-0.8649	4.4361	20.2172	0.0000	0.5441	0.1704	96
88885U(P)	0.0036	0.0082	0.1052	-0.1956	0.0501	-1.3306	6.3156	72.3026	0.0000	0.3431	0.2384	96
88886U(P)	0.0032	0.0057	0.1213	-0.1851	0.0497	-0.5960	4.7531	17.9761	0.0001	0.3111	0.2349	96
88899R(P)	0.0044	0.0089	0.1407	-0.2520	0.0549	-0.9412	6.9276	75.8780	0.0000	0.4226	0.2861	96
88910T(P)	0.0030	0.0028	0.0217	-0.0332	0.0060	-2.0477	16.1563	759.4388	0.0000	0.2912	0.0035	96
263758(P)	0.0027	0.0154	0.0879	-0.4594	0.0659	-3.8191	26.4864	2439.8124	0.0000	0.2549	0.4126	96
8937TE(P)	-0.0029	0.0027	0.1846	-0.3368	0.0742	-1.0235	6.3277	61.0575	0.0000	-0.2741	0.5233	96
8937NE(P)	0.0002	0.0051	0.1555	-0.4791	0.0791	-2.5650	16.1263	794.4662	0.0000	0.0174	0.5943	96
299364(P)	0.0032	0.0101	0.0968	-0.3345	0.0568	-2.4662	14.8153	655.7253	0.0000	0.3081	0.3061	96
8937EV(P)	0.0020	0.0022	0.0049	0.0000	0.0017	0.1898	1.4933	9.6570	0.0080	0.1894	0.0003	96
90599M(P)	-0.0077	0.0174	0.1065	-0.7096	0.1102	-3.4190	19.9874	1341.3234	0.0000	-0.7350	1.1546	96
88896P(P)	0.0005	0.0037	0.1496	-0.1984	0.0535	-0.1918	4.6271	11.1786	0.0037	0.0494	0.2721	96
88911F(P)	-0.0014	0.0051	0.0742	-0.1571	0.0386	-1.2280	5.7947	55.3686	0.0000	-0.1316	0.1416	96
88908W(P)	0.0031	0.0030	0.0131	-0.0152	0.0043	-0.6920	5.8582	40.3397	0.0000	0.2930	0.0017	96
889089(P)	-0.0035	0.0101	0.1082	-0.8993	0.1013	-7.3197	65.1122	16288.9519	0.0000	-0.3386	0.9754	96
8937MV(P)	0.0003	0.0015	0.1563	-0.2569	0.0612	-0.9477	6.2427	56.4325	0.0000	0.0253	0.3560	96
90592Q(P)	-0.0023	0.0177	0.2159	-0.4785	0.0092	-1.7857	8.2918	163.0319	0.0000	-0.2196	0.9344	96
91484Z(P)	0.0034	0.0136	0.1139	-0.2396	0.0643	-1.3721	5.5124	55.3702	0.0000	0.3270	0.3924	96
88891V(P)	-0.0021	0.0000	0.1331	-0.1475	0.0431	-0.2175	4.4480	9.1438	0.0103	-0.1990	0.1762	96
88894L(P)	0.0013	0.0048	0.0231	-0.0570	0.0141	-2.3679	8.5653	213.6037	0.0000	0.1241	0.0189	96
88901X(P)	0.0018	0.0084	0.0833	-0.1060	0.0396	-0.6365	3.3337	6.9274	0.0313	0.1751	0.1492	96
88894V(P)	0.0049	0.0054	0.1147	-0.1095	0.0411	-0.2055	3.5587	1.9244	0.3820	0.4750	0.1601	96
88893L(P)	0.0021	0.0050	0.0895	-0.1014	0.0175	-1.3684	20.9532	1319.2295	0.0000	0.2038	0.0291	96
88893V(P)	-0.0003	0.0049	0.1170	-0.1452	0.0453	-0.5456	3.9979	8.7452	0.0126	-0.0310	0.1947	96

Appendix I: Grand Mean Computation – Islamic Funds

Mean	0.0016
Median	0.0020
Maximum	0.0069
Minimum	-0.0077
Std. Dev.	0.0032
Skewness	-0.7909
Kurtosis	3.7709
Jarque-Bera	3.8704
Probability	0.1444
Sum	0.0465
Sum Sq. Dev.	0.0003
Observations	30

Appendix J. Portfolio Performance Measures – Conventional, ESG and Islamic Portfolios

CONVENTIONAL FUNDS	CODE	SHARPE	TREYNOR	JENSEN
AB EQUITY INCOME FUND A	360530(P)	0.0490	0.0091	0.0024
AB SMALL CAP GROWTH PORTFOLIO A	517893(P)	0.0437	0.0211	0.0032
AMERICAN FUNDS GLOBAL GROWTH FUND 2	8654L3(P)	0.0196	0.0050	0.0012
BROWN CAP.MAN.SML.CO. INV.SHS.	154127(P)	0.0516	0.0202	0.0034
CLEARBRIDGE LARGE CAP GROWTH FD.CL.A	878407(P)	-0.0154	-0.0042	-0.0008
COL.SELIGMAN GLB.TECH. FD.CL.C	286534(P)	0.0409	0.0119	0.0026
DODGE & COX BAL.FD.	513165(P)	-0.0539	-0.0084	-0.0024
HARTFORD SMALL CAP GROWTH FUND A	15194W(P)	0.0082	0.0038	0.0006
VANGUARD HORIZON FD. VANGD.CAP.OPPOR.FD.	362943(P)	-0.0157	-0.0044	-0.0009
VANGUARD PRIMECAP FD.	517699(P)	-0.0145	-0.0035	-0.0007
ESG FUNDS	CODE	SHARPE	TREYNOR	JENSEN
DAIWA DC SRI FUND	92790E(P)	-0.0329	-0.0030	0.0000
DWS ESG EURO BONDS (LONG) LC	309229(P)	0.2489	-0.0061	0.0027
DWS ESG EURO BONDS (MEDIUM) LC	308044(P)	0.2546	0.0010	0.0032
DWS INVEST ESG EURO BONDS (SHORT) FC	25676F(P)	0.4842	0.0033	0.0026
FIERA ACTIVE FIXED INCOME ETHICAL ESG FUND	7774QX(P)	-0.0695	-0.0019	-0.0016
NOMURA GLOBAL SRI 100	92697Q(P)	-0.0251	-0.0030	0.0000
NOMURA GLOBAL SRI INDEX FUND DC	92708V(P)	-0.0189	-0.0022	0.0004
PAX ESG BETA QUALITY FUND INDIVIDUAL INVESTOR	674675(P)	-0.0132	-0.0015	-0.0005

PRISMA ESG WORLD CONVERTIBLE BONDS	27639F(P)	0.0191	0.0021	-0.0001
SBI MAGNUM EQUITY ESG FUND-DIVIDEND	8706QF(P)	0.0073	0.0012	-0.0015
ISLAMIC FUNDS	CODE	SHARPE	TREYNOR	JENSEN
AM BON ISLAM	88894X(P)	-0.1251	-0.0015	-0.0038
CIMB ISLAMIC DALI EQUITY	88899U(P)	0.0084	0.0006	-0.0018
CIMB ISLAMIC DALI EQUITY GROWTH	88885U(P)	0.0594	0.0032	-0.0001
CIMB ISLAMIC SUKUK	88910T(P)	-0.0196	-0.0001	-0.0033
DOW JONES ISLAMIC FD. CL.K	263758(P)	0.0077	0.0009	0.0007
HSBC ISLAMIC GLOBAL EQUITY INDEX AD USD	299364(P)	0.0527	0.0027	0.0034
HSBC US DOLLAR MURABAHA FUND	8937EV(P)	-0.4040	0.0002	-0.0188
JS ISLAMIC FUND	90599M(P)	-0.1631	-0.0517	-0.0180
MEEZAN ISLAMIC FUND	90592Q(P)	-0.1272	-0.0279	-0.0127
RHB ISLAMIC BOND	88893L(P)	-0.0588	0.1256	-0.0010

Publisher's Note: CRIBFB stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

© 2022 by the authors. Licensee CRIBFB, USA. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).

Indian Journal of Finance and Banking (P-ISSN 2574-6081 E-ISSN 2574-609X) by CRIBFB is licensed under a Creative Commons Attribution 4.0 International License.