

ESG Challenges in the Construction of UK Balanced Portfolios for Private Investors: An Analysis of the Availability and Performance of ESG Funds Across Various Asset Classes

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Abstract

Environmental, Social and Governance (ESG) and sustainability investing have become very popular with institutional, family office and more recently, retail investors. In the UK the range of ESG and sustainable funds for retail and high net worth (HNW) investors is still relatively small but growing fast. This paper studies both the supply side and risk-adjusted performance of ESG funds for UK retail investors.

Based on secondary data from the Financial Express (FE) Analytics database the authors find that funds in the equity, bond and multi-asset sector are investable, from qualitative as well as quantitative perspectives, but property, alternative and other asset classes are still underdeveloped. Choosing ESG objectives has provided better risk-adjusted returns over the long-term for the retail investor, but with a tilt towards the quality growth factor as ESG favors these sectors over typical old economy value. These findings are robust with top quartile rankings and the consistently higher Sharpe ratios over a 3-year period for the equity sectors. Due to the scarcity of bond funds and other diversifiers, portfolio construction is constrained. The authors predict that over time, availability of ESG funds in alternative asset classes will grow in line with demand.

JEL classification numbers: D61, G11, G14, G51, M14.

Keywords: Sustainable, Investment, ESG, Asset Management, Wealth, UK, Retail.

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1. Introduction

ESG and Sustainability have become popular terms in the investment world, and in particular in the UK for retail investors. Diab and Martin Adams find that global sustainable invested assets can reach \$37 trillion by year-end 2021 and \$53 trillion by 2025, with a 15% annualized growth rate since 2012, with Europe being the largest market in investable ESG assets, and USA the fastest growing market (Diab and Martin Adams, 2021). According to Boston Consulting Group ESG will continue to attract big inflows (Boston Consulting Group, 2019). Younger investors such as millennials and Generation Z showing interest in social, green and climate change issues increasingly request sustainable investment solutions (Ernst & Young, 2017).

The development in ESG / sustainable funds can be compared to the stellar growth of alternative investment vehicles (hedge funds and absolute return funds) at the beginning of the 21st century. From 2000-2008 the hedge fund industry grew significantly, only to disappoint in terms of performance in the Global Financial Crisis (Schmidt, 2017). Several papers were written on the proliferation of hedge funds and potential for performance disappointment (Schmidt, 2001).

Sustainable funds are investment products (pooled investments) selecting investments according to ESG criteria: Environmental, Social and Governmental. While the term ESG is relatively recent, the concept has been evolving since the early 1980s, formerly known as Social and Responsible Investing, ethical, green funds or religious investing (Sharia). Investors can choose passive investment solutions (trackers and Exchange traded funds (ETF)) or actively managed funds. The two main investment selection styles are negative exclusion-based and positive impact investing. There is a vast range of ESG indices covering the universe according to various exclusionary screening methodologies (Khajenouri and Schmidt, 2021). This leads to confusion and discussion over which indices to use. Active fund managers use criteria including exclusionary and impact investing when building portfolios.

UK retail investors who traditionally invest into regulated onshore unit trust (open-ended investment funds or mutual funds) or offshore funds, have access to a growing number of pooled investment vehicles offered in the UK as well as ETFs. This paper focuses on actively managed funds.

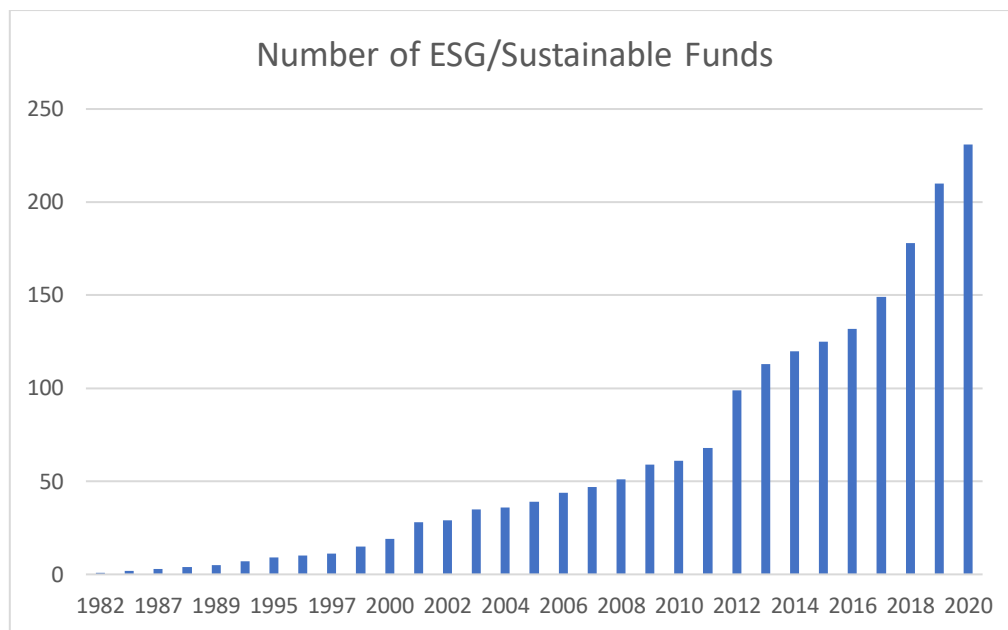


Figure 1: ESG Fund Launches 1982-2020 (Financial Express, 2021)

The number of sustainable funds available to UK retail investors has increased since 2010. In the past 5 years the trend has been accelerated due to a focus on all three ESG components.

This research design allows us to propose the following research question and related hypotheses:

HO1: due to the scarcity of ESG funds it is not possible to construct robust and diversified balanced portfolios of funds.

HA1: there are enough investable funds available to construct robust portfolios.

HO2: ESG funds do not outperform their conventional equivalent.

HA2: ESG funds outperform their conventional equivalents.

This subject has not been covered by the financial and environmental academic community. The researchers' motivations for covering this topic are the lack of current and specific academic coverage on the topic and the professional interest in sustainable investments and its relevant risk-adjusted returns.

2. Literature Review

The literature on ESG and sustainability has been mushrooming over the past 5 years. The asset management industry has been producing ESG surveys, analysis, white papers, market reports and specific research to educate investors, market their offerings and prove the concept, mainly from a performance perspective. Industry bodies and international organizations focus more on values and principles. On the academic side, studies range from value (econometric) and values (ethics and moral aspects) to structural aspects.

The leading investment house for UK retail funds, e.g., Aberdeen Standard

(Aberdeen Standard Investments, 2021), BlackRock (BlackRock, 2020), Invesco (Invesco, 2021), JP Morgan AM (J.P. Morgan Asset Management, 2021), and Jupiter (Jupiter Asset Management, 2021), as well as smaller houses specialising in sustainability, e.g., Edentree (Edentree Investment Management, 2021) have dedicated websites and produce communications for intermediaries and investors. These resources are part educational and part promotional.

A survey of retail investors concluded that French and German retail investing into sustainability is important to them, with a key interest in environmental impact and less priority on outperformance (2 Investing Initiative, 2020). The Organisation for Economic Co-operation and Development (OECD) has been at the forefront of thought leadership with their catalogue of ESG principles. A recent report gives a systematic overview of practices and drivers of ESG investing (Boffo and Patalano, 2020).

In a recent study, individual ESG preferences revealed by retail mutual fund flows in the face of an economic crisis (e.g., Covid-19) showed fragile demand for ESG (Döttling and Kim, 2021). In a White Paper Cerulli Associates explore retail investors interest and demand for ESG and identify four driving forces, namely climate change and Covid-19 (as external factors) and wealth management and technology (secular trends in the industry) (Cerulli, 2021). Several studies discuss the performance attributes of ESG funds: many argue that ESG funds outperform non ESG and produce positive alpha (Di Lorenzo, Iacopino, Molino and Prospero, 2020), while others disagree (Bruno, Esakia and Goltz, 2021).

The CFA Institute investigates the background and distinguishes six methods for ESG classifications (CFA Institute, 2021). The Investment Association in the UK identifies as the main drivers for ESG inflows climate change in 2019 and social impacts of business activities due to the pandemic (Covid-19) in 2020 (The Investment Association, 2020).

The UK Government wants an increase in the availability of sustainable investment product for the public (HM Government, 2019).

There is no research on the supply side of retail funds in ESG for UK investors. We intend to fill this gap with this paper.

3. Data

The industry body, the UK Investment Association looks after £7 trillion in assets (institutional and retail), over 4,800 funds and divides the industry into over 50 sectors. The sectors are a combination of asset-based (equities, bonds), geography-focused and investment style targeted (The Investment Association, 2021). The Financial Express Analytics Database (FE) provides data on 4,833 onshore and offshore funds in 52 sectors (for UK retail investors with quantitative (performance) and qualitative data (FE Fundinfo, 2021). Advisors, managers, investors and other stakeholders (researchers, regulators et al) use the FE database – one of several - for analysis and investments.

Monthly performance data based on closing prices in pound sterling, US dollars or Euro, for a common period of three years to July 2021 are used for all ESG and non-ESG funds. Funds with a shorter track record are excluded.

4. Research Method

The research design is based on the authors' experience as academic researchers and professional analysts. The qualitative and quantitative data are used in the calculations of descriptive analytics, quartiles, Sharpe ratios and asset under management, style and other analyses. Sharpe ratios are calculated using a risk-free rate of zero due to interest rates having been at the zero bound for an extended period of time now. As the funds in FE have different inception dates and assets-under-management, funds with a minimum track record of three years and assets of at least £20 million are filtered and used for this analysis. Most ESG funds have assets under management north of £100 m, with several in the multi-billion bracket. While ethical consideration should always be a focus in any research activity, due to the secondary data project there are such concerns applicable.

5. Main Results

5.1 AUM of Funds in ESG Sectors

As of data from 2021 from the Financial Express Analytics Database, there are 231 sustainable funds across 32 sectors in FE. Sustainable assets currently stand at £190 billion representing 5.5% of assets of the UK retail fund market of £3.482 trillion. The equity sector is the largest with Global, Specialist, Emerging Markets and UK, follow by multi-assets (IA Mixed Investment 40-85% Shares) and Sterling bonds. Absolute assets and property in ESG are small, but in some sectors the relative number (percentage of ESG vs total assets) appears to be larger, e.g., 40% ESG funds in money markets. This can be explained by the asset class (money markets more likely to qualify as ESG) and the small number of total money market funds in the retail market. Contrary to institutional investors, such as banks, insurance and pension funds, retail investors prefer equity and other active funds over cash funds which yield zero to very low interest rates and are hence a performance drag.

Table 1: ESG Sectors and AUM sorted by size as of July 2021

Row Labels	Sum of Fund Size(m)
FO Equity - Ethical	£ 818
IA Asia Pacific Excluding Japan	£ 1,236
IA Asia Pacific Including Japan	£ 484
IA Europe Excluding UK	£ 1,783
IA Europe Including UK	£ 1,566
IA European Smaller Companies	£ 672
IA Flexible Investment	£ 1,499
IA Global	£ 62,155
IA Global Corporate Bond	£ 1,469
IA Global Emerging Markets	£ 12,356
IA Global Equity Income	£ 383
IA Global Government Bond	£ 4,385
IA Global Mixed Bond	£ 3,084
IA Japan	£ 1,266
IA Mixed Investment 0-35% Shares	£ 1,203
IA Mixed Investment 20-60% Shares	£ 5,305
IA Mixed Investment 40-85% Shares	£ 7,493
IA North America	£ 3,862
IA Property Other	£ 87
IA Short Term Money Market	£ 3,125
IA Specialist	£ 14,056
IA Specialist Bond	£ 1,014
IA Sterling Corporate Bond	£ 7,242
IA Sterling High Yield	£ 1,445
IA Sterling Strategic Bond	£ 1,956
IA Targeted Absolute Return	£ 881
IA UK All Companies	£ 8,877
IA UK Direct Property	£ 129
IA UK Equity Income	£ 906
IA UK Smaller Companies	£ 28
IA Unclassified	£ 37,876
IA Volatility Managed	£ 738
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Grand Total ESG Sectors	£ 189,375
Grand Total all Sectors	£ 3,482,468
% of ESG AUM	5.44%

Table 2: All assets sorted by asset classes (as of July 2021)

All IA Sector Funds

Asset Classes	AUM in £ m	%
Cash	45,743	1.31%
Property	32,356	0.93%
Bonds	796,469	22.87%
Equities	2,371,943	68.11%
Absolute return	64,795	1.86%
Multi-asset	171,162	4.91%
Total - all	3,482,468	100.00%

ESG IA Sector Funds

Asset Classes	AUM in £ m	%
Cash	3,125	1.65%
Property	217	0.11%
Bonds	20,595	10.88%
Equities	150,558	79.50%
Absolute return	881	0.47%
Multi-asset	14,001	7.39%
Total - ESG only	189,375	100.00%

The table shows that most ESG funds are in the equity sector followed by bonds and multi asset funds. Data as of June 2021. For balanced investors who need an equity to bonds ratio of 50/50 or 60/40 this poses problems for diversification and volatility reduction options.

Table 3: Asset Class & Fund Availability (as of July 2021)

	Sector	ESG Sum of Fund Size(m)	Number of ESG Funds in Sector	Total IA Sector Fund Size (m)	Total Number of Funds in IA Sector
Equities	FO Equity - Ethical	818	1	N/A	N/A
	IA Asia Pacific Excluding Japan	1,236	2	74,252	124
	IA Asia Pacific Including Japan	484	1	3,429	9
	IA China/Greater China			25,026	56
	IA Europe Excluding UK	1,783	8	107,594	144
	IA Europe Including UK	1,566	6	77,199	86
	IA European Smaller Companies	672	1	9,122	25
	IA Global	62,155	61	515,820	458
	IA Global Emerging Markets	12,356	8	137,885	149
	IA Global Equity Income	383	2	20,719	57
	IA Japan	1,266	2	58,656	91
	IA Japanese Smaller Companies			2,260	8
	IA North America	3,862	3	317,779	216
	IA North American Smaller Companies			13,970	25
	IA Technology & Telecommunications			44,058	21
	IA UK All Companies	8,877	18	202,277	254
	IA UK Equity Income	906	5	47,346	86
IA UK Smaller Companies	28	1	20,753	50	
Bonds	IA EUR Corporate Bond			51,003	31
	IA EUR Government Bond			27,620	31
	IA EUR High Yield Bond			11,608	11
	IA EUR Mixed Bond			9,039	11
	IA Global Corporate Bond	1,469	1	45,960	25
	IA Global EM Bonds - Blended			10,246	20
	IA Global EM Bonds - Hard Currency			53,318	45
	IA Global EM Bonds - Local Currency			29,240	35
	IA Global Government Bond	4,385	1	16,610	20
	IA Global High Yield Bond			29,543	26
	IA Global Inflation Linked Bond			16,276	18
	IA Global Mixed Bond	3,084	2	164,402	85
	IA Specialist Bond	1,014	2	64,881	69
	IA Sterling Corporate Bond	7,242	10	75,450	103
	IA Sterling High Yield	1,445	3	18,773	34
	IA Sterling Strategic Bond	1,956	3	52,972	89
	IA UK Gilts			26,033	35
	IA UK Index Linked Gilts			9,037	14
	IA USD Corporate Bond			18,757	23
	IA USD Government Bond			27,841	22
	IA USD High Yield Bond			21,574	19
	IA USD Mixed Bond			16,288	15
Multi-Asset	IA Flexible Investment	1,499	5	58,452	159
	IA Mixed Investment 0-35% Shares	1,203	1	15,866	70
	IA Mixed Investment 20-60% Shares	5,305	8	64,731	183
	IA Mixed Investment 40-85% Shares	7,493	8	90,564	204
Cash	IA Targeted Absolute Return	881	3	64,795	108
	IA Short Term Money Market	3,125	1	44,298	7
Property	IA Standard Money Market			1,445	4
	IA Property Other	87	1	22,434	45
Other	IA UK Direct Property	129	1	9,922	17
	IA Not yet assigned			141	1
	IA Specialist	14,056	16	174,895	310
	IA Unclassified	37,876	39	400,410	911
	IA Volatility Managed	738	7	59,904	174
	(blank)				1
	TOTAL:	189,375	231	3,482,468	4,834

Table 3 gives a detailed view of the supply side as per the assets and number of funds in ESG and total assets and shows the scarcity of funds.

Table 4: Asset Classes and Funds as of July 2021

	Equities	Bonds	Multi-Asset	Cash	Property	Other
Number of ESG Funds	119	22	25	1	2	62
Total Number of Funds	1859	781	724	11	62	1397
Total Number of Sectors	18	22	5	2	2	5
Number of Sectors Without ESG Representation	4	15	0	1	0	2

Table 4 shows the number of funds and sectors in ESG and total universe.

Table 5: Largest ESG sectors (assets of > £ 5 b) (as of July 2021)

ESG IA Sectors with AUM > £ 5 b

Name of ESG Sector	AUM in millions	% of ESG Sector of Total	Asset Class
IA Global	62,155	32.82%	Equities
IA Unclassified	37,876	20.00%	Equities
IA Specialist	14,056	7.42%	Equities
IA Global Emerging Markets	12,356	6.52%	Equities
IA UK All Companies	8,877	4.69%	Equities
IA Mixed Investment 40-85% Shares	7,493	3.96%	Multi-asset
IA Sterling Corporate Bond	7,242	3.82%	Bonds
IA Mixed Investment 20-60% Shares	5,305	2.80%	Multi-asset

All other 24 smaller sectors	34,016	18.00%	misc.
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Total	189,375	100%	
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The table highlights the dominance of five equity sectors (Global, Unclassified, Specialist, EM and UK All Companies). Multi-asset funds and bonds are available but relatively small in comparison. Notably the assets in UK funds are small compared to the total market, due to the market composition (e.g., FTSE 100 consisting of many banks, miners, energy which do not meet ESG criteria). There is also a lack of North American Funds as US investors are lagging behind Europe in terms of ESG adoption.

Out of 231 ESG funds only 120 have a track record of at least three years. In addition, many funds are quite small. This limits the choice of funds further.

5.2 Descriptive Statistics of 8 major sectors in ESG vs entire sectors

The four momenta of a normal distribution are calculated as well as the test for normality (the Jarque-Bera Test), Sharpe ratios and a t-test for the Sharpe ratios. Normality can be rejected in most cases at the 99% level. Sharpe ratios are significant at the 99% confidence interval.

**Tables 6: Descriptive Statistics of ESG and Non-ESG
(for a 3-year period to July 2021)**

	Number of Funds	CAGR	Volatility	Sharpe Ratio (SR)	t-statistic	Sign. of SR	Skew	Kurt	Jarque-Bera (JB) Test Statistic	JB p-value	Sign. of JB
IA Global	383	13.32%	15.90%	0.87	3.92	**	- 0.45	1.09	7.74	0.020893	**
IA Global - ESG	45	16.47%	15.49%	1.07	6.43	**	- 0.49	0.99	7.54	0.02308	*
IA Unclassified	627	4.83%	9.86%	0.55	3.79	**	- 1.99	9.09	193.49	9.64E-43	**
IA Unclassified - ESG	21	7.88%	11.59%	0.74	4.45	**	- 1.00	3.96	71.38	3.17E-16	**
IA Specialist	287	6.83%	18.23%	0.44	3.00	**	- 1.48	5.75	87.43	1.03E-19	**
IA Specialist - ESG	16	9.17%	17.27%	0.61	3.67	**	- 0.88	3.03	37.04	9.05E-09	**
IA Global Emerging Markets	127	8.49%	16.59%	0.51	2.64	**	- 0.83	2.18	16.82	0.000222	**
IA Global Emerging Markets - ESG	6	7.40%	15.28%	0.48	2.88	**	- 0.62	1.10	5.08	0.078947	
IA UK All Companies	238	5.92%	19.25%	0.31	2.53	**	- 0.68	3.89	30.16	2.83E-07	**
IA UK All Companies	16	8.41%	18.10%	0.47	2.80	**	- 0.71	3.57	25.01	3.7E-06	**
IA Mixed Investment 40-85% Shares	167	6.97%	11.75%	0.61	3.03	**	- 0.97	3.69	38.69	3.96E-09	**
IA Mixed Investment 40-85% Shares	8	11.83%	11.07%	1.05	6.32	**	- 0.71	1.98	14.08	0.000875	**
IA Sterling Corporate Bond	98	5.40%	6.07%	0.89	5.45	**	- 1.69	8.33	160.09	1.73E-35	**
IA Sterling Corporate Bond	10	4.86%	5.14%	0.95	5.71	**	- 2.01	9.43	177.55	2.79E-39	**
IA Mixed Investment 40-85% Shares	167	6.81%	11.77%	0.60	3.03	**	- 1.07	3.93	84.91	3.65E-19	**
IA Mixed Investment 20-60% Shares	6	0.08%	0.09%	0.88	5.28	**	- 0.72	2.88	19.34	6.31E-05	**

Significance Levels * 95%
** 99%

The Sharpe ratios for ESG funds are better than for non-ESG funds across all sectors, except for the IA Emerging Markets Sector which has a small number of funds with the required 3-year track record. Because there are very few ESG funds with a 5-year history available to UK retail investors we did not include them in our analysis. Over a 1-year period ESG funds tended to outperform, despite the rotation into value sectors which are typically not held by ESG managers, such as oil & gas.

5.3 Quartiles

The analysis of performance quartiles is used to show how ESG funds were performing versus the entire sector. While 3-year numbers are in general more reliable due to the larger number of data points (36 monthly observations), the 1-year number (12 monthly data points) are relevant for our analysis as there was an equity markets sector and style rotation from quality growth to value stocks in the middle of this 1-year period. Quality growth stocks performed well from May – November 2020 while value stocks took off with the news of approved vaccines in November 2020.

Table 7: Quartiles of ESG Sector Funds over 1 year to the end of July 2021

Quartiles 1 year					
IA Global			IA Global Emerging Markets		
Total 471; 61 ESG; 61 ESG with 1 year			Total 152; 8 ESG; 8 ESG with 1 year		
Quartiles	Count		Quartiles	Count	
1	18	29.5%	1	3	37.5%
2	14	23.0%	2	1	12.5%
3	17	27.9%	3	2	25.0%
4	12	19.7%	4	2	25.0%
TOTAL:	61	100.0%	TOTAL:	8	100.0%
IA UK All Companies			IA Sterling Corporate Bond		
Total 253; 18 ESG; 17 ESG with 1 year			Total 103; 10 ESG; 10 ESG with 1 year		
Quartiles	Count		Quartiles	Count	
1	7	41.2%	1	2	20.0%
2	4	23.5%	2	1	10.0%
3	0	0.0%	3	3	30.0%
4	6	35.3%	4	4	40.0%
TOTAL:	17	100.0%	TOTAL:	10	100.0%
IA Mixed Investment 40-85% Shares			IA Mixed Investment 20-60% Shares		
Total 203; 8 ESG; 8 ESG with 1 year			Total 183; 8 ESG; 8 ESG with 1 year		
Quartiles	Count		Quartiles	Count	
1	6	75.0%	1	6	75.0%
2	2	25.0%	2	0	0.0%
3	0	0.0%	3	1	12.5%
4	0	0.0%	4	1	12.5%
TOTAL:	8	100.0%	TOTAL:	8	100.0%

Table 8: Quartiles of ESG Sector Funds over 3 years

Quartiles 3 years					
IA Global			IA Global Emerging Markets		
Total 471; 61 ESG; 45 ESG with 3 years			Total 152; 8 ESG; 3 ESG with 3 years		
Quartiles	Count		Quartiles	Count	
1	21	46.7%	1	1	12.5%
2	15	33.3%	2	1	12.5%
3	5	11.1%	3	1	12.5%
4	4	8.9%	4	0	0.0%
TOTAL:	45	100.0%	TOTAL:	3	100.0%
IA UK All Companies			IA Sterling Corporate Bond		
Total 253; 18 ESG; 16 ESG with 3 years			Total 103; 10 ESG; 10 ESG with 3 years		
Quartiles	Count		Quartiles	Count	
1	7	43.8%	1	1	10.0%
2	5	31.3%	2	5	50.0%
3	2	12.5%	3	1	10.0%
4	2	12.5%	4	3	30.0%
TOTAL:	16	100.0%	TOTAL:	10	100.0%
IA Mixed Investment 40-85% Shares			IA Mixed Investment 20-60% Shares		
Total 203; 8 ESG; 8 ESG with 3 years			Total 183; 8 ESG; 6 ESG with 3 years		
Quartiles	Count		Quartiles	Count	
1	6	75.0%	1	4	66.7%
2	1	12.5%	2	2	33.3%
3	1	12.5%	3	0	0.0%
4	0	0.0%	4	0	0.0%
TOTAL:	8	100.0%	TOTAL:	6	100.0%

The majority of ESG equity funds (IA Global, IA Global Emerging markets, IA UK All Companies) are in the 1st and 2nd Quartiles for both 1 year and three years data. Bond funds in the Sterling Corporate sector are small in absolute number and total assets. These bond funds with less than a three-year track record are mainly in the 3rd and 4th quartile, while those with a three-year track record are also not significantly outperforming. Very interesting to see that a majority of the multi asset funds (mixed 20-60% and 40-85%) are in the 1st Quartile over both one-year and three-year periods. The authors did not find justification for including the IA Specialist sector in this analysis as no quartiles are calculated due to the wide definition of funds in the sector. In conclusion: while equity and multi-asset funds are performing well against their non-ESG peers, bond funds are finding it more difficult to outperform.

As seen above, regardless of the ESG investment style, funds in these sectors consistently exhibit higher Sharpe ratios. This reinforces to reject hypothesis HO2 that ESG funds do not outperform their conventional equivalents.

6. Conclusion

The results lead to a rejection of the hypotheses that ESG funds are underperforming. While the number of investable funds is low relative to the whole of market, the Sharpe ratios and quartile analyses underline the strong outperformance of ESG equity and multi-asset funds. It is important to note the space is still very much in its infancy, with few ESG funds having a track record past five years. As a result, the analysis was conducted over a three-year period. The period from June 2018 until November 2020 was a particularly favourable time for growth sectors such as IT and healthcare, which tend to feature heavily in ESG portfolios, versus value sectors such as oil & gas and mining, which are almost always excluded from them. This timeframe also coincided with a general move into ESG investing from institutions, wealth managers and retail clients alike, and as such stocks which were considered to be ESG leaders saw material share price momentum. However, since the November 2020 vaccine announcements, there has been a rotation into value-dominated sectors and away from quality growth. Despite that, the ESG equity and multi-asset funds included in our analysis mostly sit in the first and second quartiles over a one year period. The authors did not find enough evidence to reject the first hypothesis regarding the scarcity of available funds to construct a robust, balanced portfolio. The issue of a small number of bonds and their weaker performance makes it more difficult to construct balanced, more defensive or cautious portfolios. However, many young investors are long-term investors and often more open to volatility (as a measure of risk) and have larger allocations into equities than the 60/40 traditional balanced portfolio asset allocation. We conclude that as the ESG fund universe will continue to grow and produce more investable funds in all sectors, the construction of diversified portfolios will become easier. Future research will focus on ESG investment considerations in the context of portfolio construction as well as institutional and family office investors who have different risk profiles and appetites.

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