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The Good Investment Review

#FindingGood

3D investing
Powered by Ethical Money

GOOD WITH MONEY
MORE MONEY, FEWER PROBLEMS

About Good With Money

Good With Money is a money website with a difference: it is all about how your money can do more good, as well as how you can be better at managing it. With blogs, webcasts, podcasts, downloadable guides and a weekly newsletter, you can stay up to date with the latest ways to line your pocket and look after the planet.

About 3D Investing

3D investing is a distinctive investment approach that seeks to maximise the social impact of a portfolio, whilst minimising exposure to ethical controversies and delivering on financial expectations. In short our mantra is “do good, avoid harm and make money”.

Our aim is to help investors, advisors and managers to identify and manage investments to achieve these aims. We also aim to demonstrate the social impact of investments in a transparent and systematic manner so that investors can see exactly how well their social aims are being delivered.

3D Investing is an evidence-based approach that analyses the constituent holdings of each and every investment, so that investors can be confident that their money is being used in a way that really does make a positive difference whilst meeting their financial needs.

The evidence-based approach means not only can investors be assured of successful financial outcomes, they can be equally confident that they will maximise the social impact of their portfolio.

We have analysed every fund registered for sale in the UK that has some form of ethical, sustainability or environmental and social governance (ESG) mandate and this analysis forms the basis of this review.

We attribute a star rating to each fund as a shorthand for identifying the ‘best’ funds according to the 3D Investing criteria. The best funds in each sector form the basis of the 3D Portfolio, a shortlist of funds approved for use in managed portfolios that truly “do good, avoid harm and make money”.

Who's who in the review

This review is a collection of market statistics, commentary and information about some of the best ethical and sustainable funds and fund managers in the UK.

It is supported by sponsors – asset managers and investment platforms who support the work of the review by both contributing valuable insight and helping to promote it.

Sponsors

This publication would not be possible without the generous support of our sponsors and partners.

Contents

Foreword

By John Fleetwood,
founder and director of 3D Investing

Welcome to the fifth edition of the Good Investment Review.

This review provides a unique overview into the sustainable and ethical investment industry as well as insight into specific sectors.

For this issue, we focus on infrastructure - a sector that has not traditionally played a significant part in portfolios, but is a good diversifier and a source of predictable income streams.

This edition also sees the introduction of the Montanaro Better World Fund, one of only a few to be awarded our highest rating.

Triodos Investment Management tell us about why they've taken the investment management in house and what this will mean for the fund; the fund manager behind Rathbones new Global Sustainability Fund explains his approach and we hear from Gravis Capital, an infrastructure specialist that has launched a Clean Energy Fund.

I trust that you will find the review informative and useful.

John Fleetwood,
3D Investing Founder

“The subjectivity of ethics can no longer be an excuse in a world where positive impact is a measurable, tangible thing.”

The rapid-dawning realisation that money = personal power

By Rebecca O’Connor, founder of Good With Money

Welcome to the fourth Good Investment Review from Good With Money and 3D Investing.

Since we founded Good With Money three years ago, ethical and sustainable investing has gone from niche to mainstream.

Buoyed by loud champions and plenty of evidence to show that a more thoughtful approach delivers on financial returns as well as planetary betterment, the penny has well and truly dropped – right down to the very foundations of the industry.

However, with the increase in both demand for and supply of more ethical and sustainable investment choices, comes a greater risk of greenwash.

What does “sustainable” mean anyway? At its loosest, it can mean merely that a fund will last and last for decades - growing in a predictable manner rather than a volatile one. It need not mean in practice what it connotes at all. Fund managers could quite legitimately, although misleadingly, apply it to a fund that intends merely to stand the test of time, rather than one which intends to prevent climate change.

Indeed an intentionally casual use of labelling and wide, poorly understood definitions could result in the majority of the existing fund universe being shoehorned into the “ethical” or “sustainable” sector if one was really trying.

This isn’t an exaggeration. If oil companies can sit in sustainable and ethical funds now, then what’s to stop a sustainable fund manager finding a plethora of legitimate-seeming reasons to invest in mining, gas and intensive farming? All “unsustainable” activities, if we are following the strictest definition, as sustainable suggests that a business need never be stopped as a result of finite resources running out. But when those companies are making all manner of both genuine and tick-box efforts to green themselves up, it’s not hard to find ways to shoe-horn them into a fund with a nicer label.

Clean coal might be like selling a Krispy Kreme as a vegan energy ball, but people are selling it – and presidents are buying it.

Care needs to be taken. The subjectivity of ethics can no longer be an excuse in a world where positive impact is a measurable, tangible thing. We can also all agree on what is important to humanity and the world, thanks to the UNSDGs (although these are not always a good proxy for investment performance).

The work of 3D Investing is that careful eye, cast over funds trying to deliver on a multitude of aims on behalf of investors already, and in this corner of the market, also treading the thorny ground of meeting the requirements of the “ethical”, “sustainable”, “responsible” or “impact” overlay, too.

The results always reveal that the majority of funds fail to live fully up to their labels, but the encouraging thing is that many do. Many improve over time, in direct response, sometimes, to the 3D ratings.

There are funds out there taking their labels – and therefore the expectation of those of us who put our money into them – very seriously, pioneering new ways of bringing investors complete transparency and getting to know companies better than their own Grandmothers in order to deliver as much certainty as is possible in an imperfect world that your money is doing the best that it possibly can.

The penny has dropped, the blinkers have come off, a new dawn for investing has arrived… but there’s still so much work to be done. Whether that’s through engagement, better transparency, changing criteria, better reporting, or divestment. As companies get better, so too will the investment opportunities in this space. It will keep growing. But that growth will only be convincing with disciplined oversight from independent organisations like 3D Investing.

We’re delighted to help promote this valuable work.

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3D Universe market update

£90 billion[1]

Value of assets under management in the 3D universe

226[2]

Ethical and sustainable funds in the 3D universe

11

New fund launches

Change to criteria

We have made a slight change to the conditions for inclusion in the 3D universe of funds, in that we now exclude investment companies not listed in the UK, as these are not denominated in sterling and are often difficult to access for UK retail investors, being traded on stock exchanges outside the UK.

This excludes a number of North American infrastructure and real estate investment trusts which were formerly included, together with two investment companies focused on lending. On review, the latter were omitted because of a lack of an ethical or sustainability basis to lending.

We have added a few existing ESG funds, but the most notable additions have been 11 recent fund launches:

[1]Regular readers might note that this is a lower figure than that in the last issue. This is because we have removed a number of funds from the 3D universe of funds on a re-appraisal of their eligibility for inclusion (see below).

This has a significant impact on the total assets under management, because although they only constitute a relatively small number of funds, they amount to just under £25 billion.

If we discount this figure, the funds under management in the 3D universe have risen by £10 billion.

[2]9 funds have been removed from the universe and 19 have been added, with a net gain of 10 (4.6 per cent) over the period.

New funds

Montanaro (see Q&A) has entered the sector with a £100 million launch of an impact fund that we awarded a five-star rating.

We were particularly impressed with Montanaro's transparency and impact reporting.

Rathbones has also complemented their long-standing Ethical Bond Fund with a Global Sustainability Fund (see Q&A on page 38).

Like other funds in the sector, it seeks to invest in companies contributing to the UN Sustainable Development Goals, whilst also meeting ethical criteria.

Similarly, thematic investing specialists, **RobecoSAM**, recently launched their Global Sustainable Impact Fund. This also invests in companies that are providing social and environmental solutions and that contribute to the UN SDGs.

This is clearly a growing trend further exemplified by the **UBS Global Impact Fund** that also seeks to invest in solutions to significant global challenges and to align these with the SDGs.

There are also a growing number of emerging market funds with clear ESG policies.

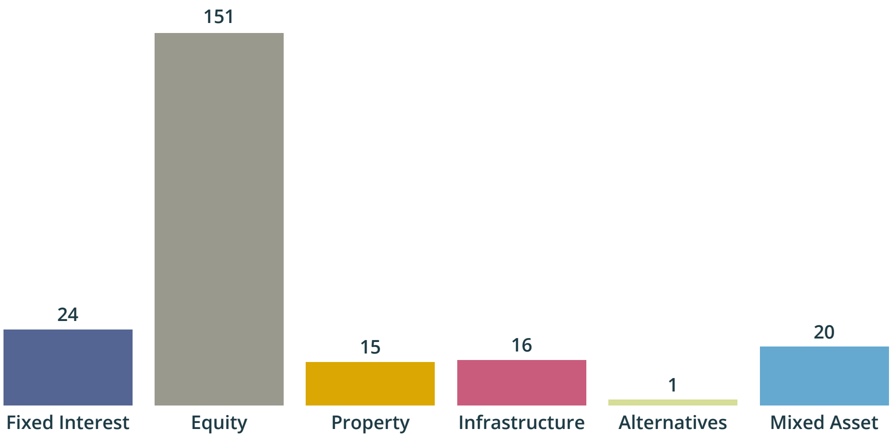
The most recent addition is the **East Capital Sustainable Emerging Markets Fund**. East Capital is a specialist in emerging markets investment and is notable for its leadership in ESG in emerging markets.

Other notable launches include the **VT Gravis Clean Energy Income Fund** (see Q&A on page 41) which predominantly operates as a fund of funds investing in global clean energy infrastructure investment companies. This provides diversity within a single fund, and builds on Gravis Capital's experience in the sector.

First State also launched its' Sustainable Listed Infrastructure Fund, which invests in listed shares of companies that focus on or are otherwise involved in infrastructure with a sustainability focus. Unlike social infrastructure funds, this is an equity fund with an ESG approach.

Finally, the Old Mutual Ethical Fund is now known as the **Quilter Investors Ethical Equity Fund**.

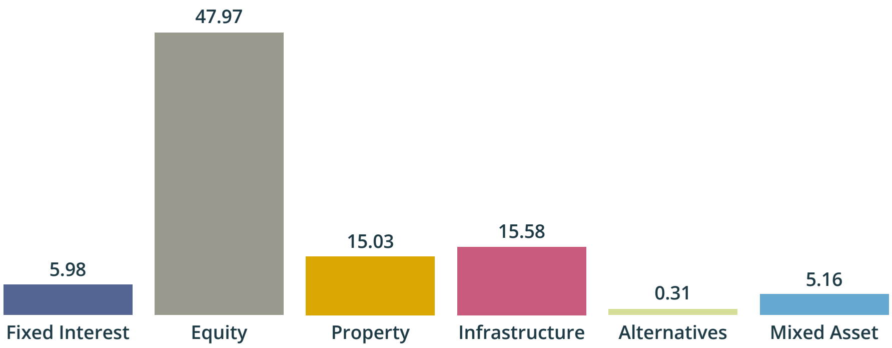
Fund distribution by number of funds in asset class



Fund distribution by no. of funds in asset class

The picture in terms of the distribution of funds by asset class is little changed. About two thirds of the funds remain invested in equity, but there are a significant number of fixed interest, property and infrastructure funds, as well as mixed asset funds. The number of property funds has fallen due to the removal of the North American investment companies from the 3D universe.

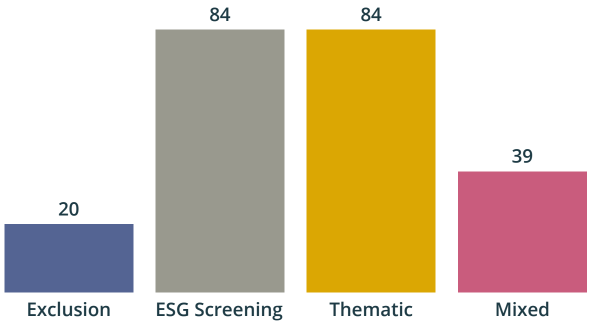
Fund distribution by asset class



Fund distribution by asset class (AUM £billion)

Similarly when looking at the overall approach taken by funds, there is a major difference depending on whether one looks at numbers of funds or assets under management. Judged by number of funds, there is a fairly even spread of approaches.

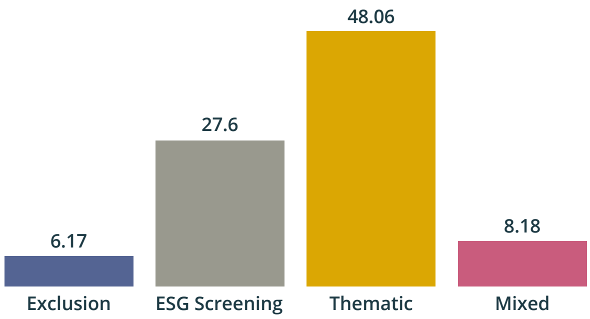
Fund distribution by approach (number of funds)



Fund distribution by approach (no. of funds)*

If one looks at assets under management, thematic approaches dominate, reflecting the growth in specialist infrastructure and real estate trusts as well as thematic equity funds.

Fund distribution by approach (assets under management)



Fund distribution by approach (AUM £billion)

* Approaches:

Exclusion – avoiding companies on the basis of pre-determined ethical criteria.

ESG Screening – Consideration of Environmental and Social Governance in assessing companies.

Thematic – focus on investment in environmental or social themes

3D star ratings

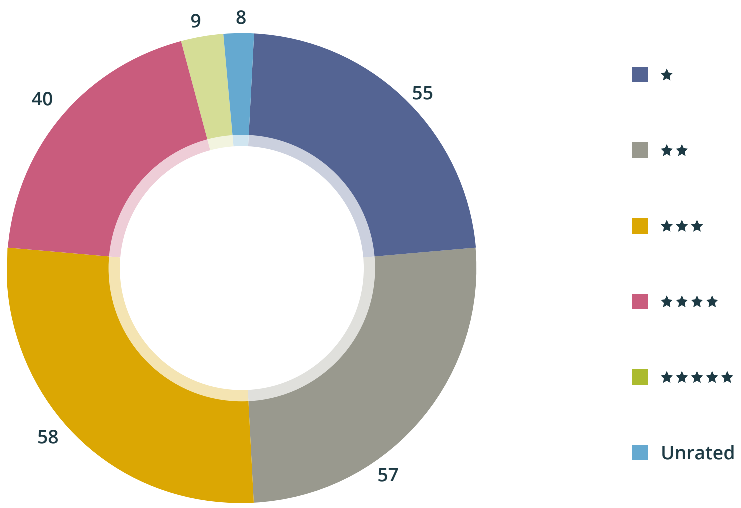
Given the increasing complexity and extent of the ethical/sustainable investment market, 3D Investing has developed the 3D Star Ratings to facilitate quick and easy identification of the best funds that make a positive social impact, avoid ethical controversies and deliver decent financial returns.

These ratings are designed to be demanding, so a three-star rating is far from average and in fact means the fund is likely to be amongst the best in its sector. A five-star rating is reserved for the very best funds and is an aspirational standard.

2.50

The average 3D star rating

The distribution of funds has changed very little, with around half of all funds in the universe being rated two stars or less, with positives outweighing negatives for the remainder, and four or five-star funds being restricted to the top 25 per cent.



Star Rating distribution (no. of funds)

There have been several changes to the ratings of existing funds.

We were pleased to see that the Eden Tree International Fund has changed manager and strategy and clearly has a policy that is more aligned with the stated objectives. This is evident in the holdings and we've therefore upgraded the fund to a 3-star rating.

All of the Alquity funds have been upgraded to two Stars from one Star – a reflection of the quality of the ESG process.

The Schroders Climate Change fund has likewise been upgraded to two stars in recognition of its ESG process.

What the ratings mean

The fund is a real pioneer in the industry. It has delivered financial returns in line with expectations, excellent levels of transparency, a high social impact and is not exposed to ethically controversial.

The fund carries a high level of conviction for the same reasons as five star funds, but with a relative weakness in impact, transparency, or sustainability management.

The fund is positively rated where the advantages outweigh the disadvantages, and where the fund might be considered for inclusion in the 3D Portfolio.

The fund may be worth considering, but there are significant weaknesses in terms of financial track record, social impact or avoidance of ethical controversy.

The fund is negatively rated because of major concerns over its financial track record or stock selection that fundamentally undermines our confidence in the fund.

For more information on the star ratings visit www.3dinvesting.com/3d-star-ratings

3D-licenced funds

Although we rate funds without prejudice, a number of the better rated funds have paid to licence the marketing of the star ratings. These funds are listed below together with the rating.

Fund	Star rating	Summary
Foresight Solar		A closed end fund investing solely in ground mounted solar assets
Hermes Global Equity Impact Opportunities		8 core impact themes with incorporation of ESG and active engagement
Impax Environmental Markets PLC		A specialist, small & mid cap global environmental solutions fund
Liontrust SF Absolute Growth		A growth fund with freedom to invest without reference to asset allocation benchmarks
Liontrust SF Cautious Managed		A mixed asset fund with a 60% allocation to global equities that benefits from good ESG management
Liontrust SF Defensive Managed		A mixed asset fund with a 45% allocation to global equities that benefits from good ESG management
Liontrust SF European Growth		A leader amongst European equity funds
Liontrust SF Global Growth		A global equity fund which balances thematic investment with an ESG approach
Liontrust SF Managed		A mixed asset fund with a 20% allocation to fixed interest and the remainder in equities
Liontrust SF UK Growth		Some themes evident as well as a best of sector approach
Liontrust UK Ethical		Similar to the SF UK Growth fund but avoids animal testing
Montanaro Better World		A global equity fund with 6 core themes and a focus on impact
Pictet Global Environmental Opportunities		An environmental fund that seeks to keep within sustainable limits
Rathbone Ethical Corporate Bond		A UK corporate bond fund with rigorous exclusion criteria and a small amount in charity bonds
Sarasin Responsible Corporate Bond		A UK corporate bond fund with a clear thematic approach
Sarasin Sustainable Equity - Real Estate Global		An open ended fund investing in global property shares with good ESG management

3D-licenced funds cont.

Fund	Star rating	Summary
Standard Life Global Equity Impact	★★★★☆	Mixes ESG with a clear focus on positive impact in line with the UN Sustainable Development Goals.
Triodos Sustainable Equity	★★★★☆	A global equity fund investing in large cap stocks with a 'best of sector' approach
Triodos Sustainable Pioneer	★★★★★	A thematic fund investing in multiple social & environmental themes
VT Gravis Clean Energy	★★★★☆	A clean energy fund largely investing in clean energy infrastructure
WHEB Sustainability	★★★★★	A thematic equity fund investing in sustainability themes with excellent impact reporting

The full rankings of funds assessed by 3D Investing is available for financial professionals through our partner Worthstone.

Fund Performance

The performance of funds of ethically screened and sustainable funds overall continues to demonstrate that adopting a sustainable or ethical policy need not be at the expense of financial returns, although as for the wider market, there is considerable discrepancy between funds. We've said this in previous Reviews and it might be getting a bit repetitive, but it's probably worth repeating as it's such an important point. The findings have remained consistent over several years and there has been no change in this.

We believe that it's important to compare like with like, so we've analysed funds within their respective sectors, looking at the three of the most commonly used sectors – namely Global Equity, UK All Companies and Sterling Corporate Bonds. We look at discrete annual periods to give a better picture of the consistency of performance, as well as the cumulative five year performance. Green shading indicates outperformance of the sector average.

We've also compared the performance of those funds rated 3 Stars or higher to see how higher rated funds perform relative to conventional funds, and to ethical and sustainable funds as a whole.

The evidence continues to show that positive impact need not come at the expense of financial returns, and if anything, investing for positive impact can improve returns.

There's most variability amongst UK equity funds where the overall average is in line with the sector: about half the funds underperform and half outperform.

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Financial performance of ethical and sustainable funds versus sector average

UK All Companies

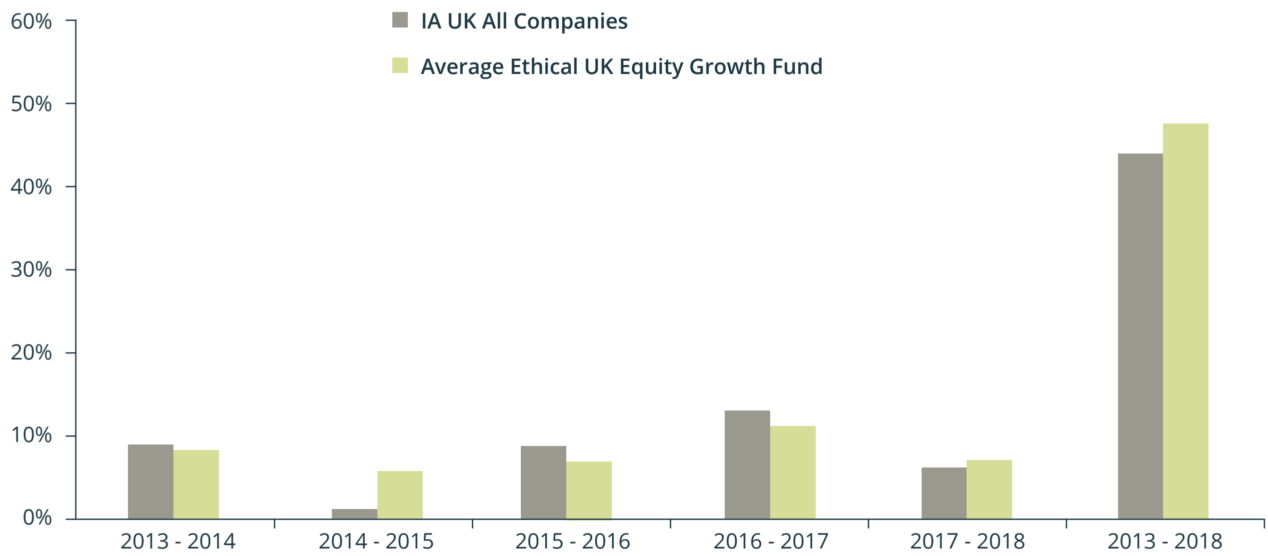
Fund	2013 - 2014	2014 - 2015	2015 - 2016	2016 - 2017	2017 - 2018	2013 - 2018
Aberdeen Responsible UK Equity	4.54%	-6.59%	16.04%	11.81%	11.11%	40.79%
Castlefield BEST UK Opportunities	7.40%	4.21%	6.67%	7.39%	11.35%	42.77%
Edentree Amity UK	7.32%	7.35%	5.08%	8.31%	7.23%	40.60%
F&C Responsible UK Equity Growth	10.99%	3.27%	10.05%	13.95%	10.09%	58.23%
Janus Henderson UK Responsible Income	12.05%	7.65%	9.19%	6.44%	3.21%	44.70%
Jupiter Responsible Income	8.09%	-0.36%	4.22%	9.16%	1.12%	23.89%
Kames Capital Ethical Equity	10.61%	9.02%	4.70%	6.87%	5.58%	42.45%
Legal & General Ethical Trust	9.50%	5.76%	4.04%	7.72%	4.89%	36.14%
Liontrust SF UK Growth	7.60%	10.67%	9.97%	17.90%	12.74%	74.07%
Liontrust UK Ethical	7.25%	11.54%	6.06%	19.23%	12.29%	69.86%
Premier Ethical	17.07%	8.62%	3.04%	17.22%	3.75%	59.35%
Royal London Sustainable Leaders Trust	10.45%	4.93%	14.01%	11.37%	11.53%	64.13%
Standard Life Investments UK Ethical	6.17%	13.05%	-0.07%	21.76%	8.27%	58.11%
Threadneedle Ethical UK Equity				11.73%	5.21%	
UBS MSCI UK IMI Socially Responsible			12.45%	12.00%	2.50%	
IA UK All Companies	9.61%	1.24%	9.11%	13.90%	6.66%	47.10%
Average Ethical UK Equity Growth fund	9.16%	6.09%	7.53%	12.19%	7.39%	50.39%
Average 3 Star+ Fund	7.39%	9.85%	7.04%	14.29%	9.37%	61.51%
Average outperformance of ethical fund	-0.45%	4.85%	-1.58%	-1.71%	0.73%	3.29%
Average Outperformance of 3 Star+ Fund	-2.22%	8.61%	-2.07%	0.39%	2.71%	14.41%

GREEN = OUTPERFORM SECTOR AVERAGE

The last year has been a strong one for ethical UK equity funds which has also strengthened the 5-year returns.

In only one of the discrete calendar periods have ethical funds significantly underperformed the wider market, with outperformance in the other four years.

The effect is even more pronounced for funds with a 3D rating of 3 stars or more, demonstrating that focusing on a positive social impact can actually enhance returns.



Global Equity Growth

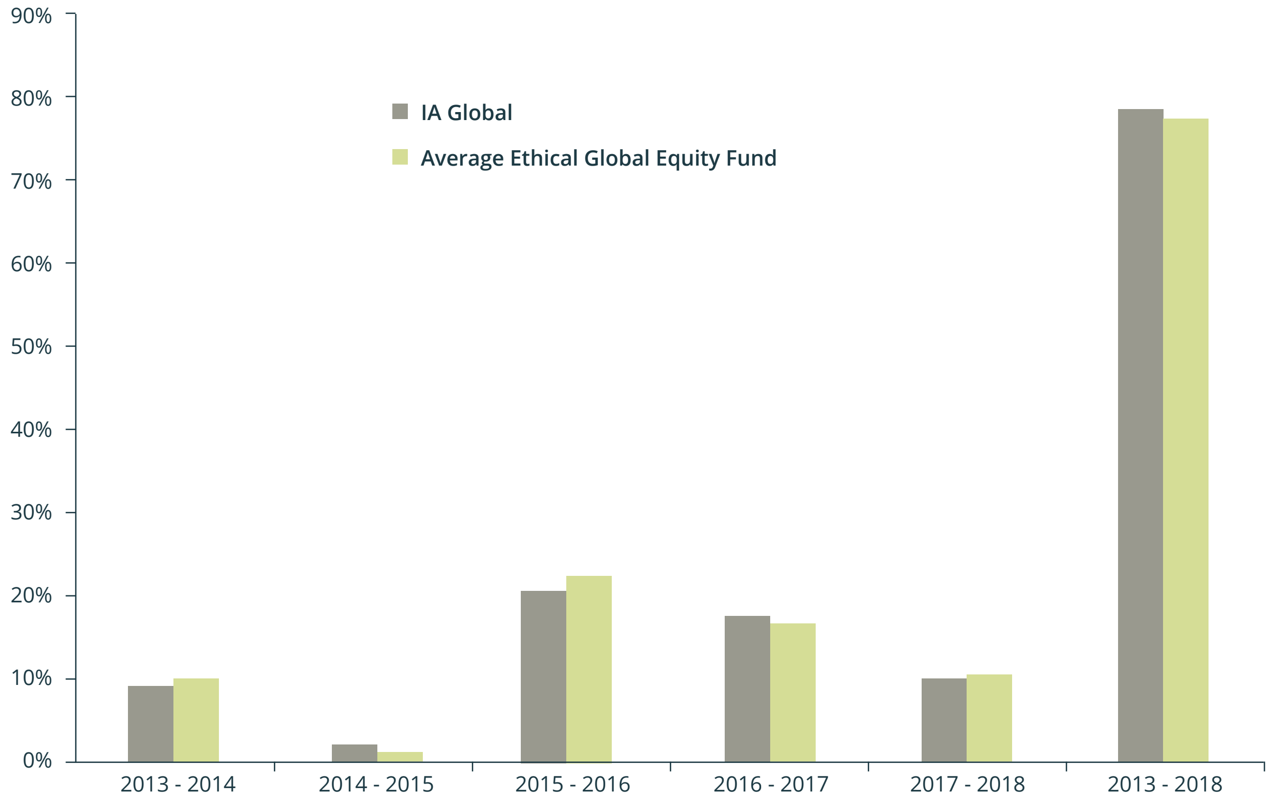
Fund	2013 - 2014	2014 - 2015	2015 - 2016	2016 - 2017	2017 - 2018	2013 - 2018
Aberdeen Ethical World Equity	9.32%	-12.30%	22.76%	13.93%	7.82%	44.58%
Baillie Gifford Positive Change					31.69%	
Davy Asset Management Ethical Equity				13.58%	13.90%	
EdenTree Amity International	11.05%	-10.03%	22.57%	15.94%	6.19%	50.78%
F&C Responsible Global Equity	7.12%	9.54%	20.72%	19.12%	15.11%	94.23%
Hermes Global Equity ESG		5.70%	22.63%	21.25%	10.07%	
Impax Environmental Leaders				18.72%	5.57%	
Impax Environmental Markets	11.78%	-2.96%	33.83%	17.06%	6.93%	81.73%
Janus Henderson Global Sustainable Equity	14.65%	7.54%	20.92%	18.51%	15.15%	103.45%
Jupiter Ecology	7.70%	-1.21%	21.76%	15.16%	3.26%	54.05%
Kames Capital Global Sustainability				22.43%	12.29%	
Liontrust SF Global Growth	10.42%	4.31%	20.43%	19.47%	16.26%	92.66%
Quilter Investors Investors Ethical Equity	6.77%	-2.19%	32.25%	10.96%	4.30%	59.82%
Pictet Global Environmental Opportunities	12.05%	2.76%	32.79%	19.37%	7.93%	96.97%
Sarasin Responsible Global Equity	13.47%	1.52%	2.40%	13.10%	11.33%	48.53%
Stewart Investors Worldwide Sustainability	4.86%	5.32%	32.67%	15.14%	6.48%	79.65%
Triodos Sustainable Equity	10.42%	11.45%	16.46%	14.91%	6.94%	76.12%
Triodos Sustainable Pioneer	25.28%	1.84%	20.26%	12.17%	7.65%	85.28%
UBS MSCI World Socially Responsible	10.61%	1.92%	26.63%	16.92%	12.66%	88.05%
Vanguard SRI Global Stock	12.07%	3.11%	24.31%	17.61%	11.42%	88.25%
WHEB Sustainability	11.79%	4.79%	25.36%	15.57%	13.57%	92.73%
IA Global	9.95%	2.79%	21.42%	17.89%	10.62%	78.96%
Average Ethical Global Equity fund	11.21%	1.83%	23.46%	16.55%	10.79%	77.31%
Average 3 Star+ fund	11.17%	3.74%	25.22%	16.81%	10.94%	83.34%
Outperformance of average ethical global fund	1.26%	-0.96%	2.04%	-1.34%	0.17%	-1.66%
Outperformance of average 3 Star+ Fund	1.22%	0.95%	3.80%	-1.08%	0.32%	4.38%

GREEN = OUTPERFORM SECTOR AVERAGE

A similar picture emerges for global equity funds, but this is skewed by a few funds that have significantly underperformed the index.

In fact, the median ethical fund has outperformed the sector average.

In particular, there is a clear positive relationship between a higher 3D Star Rating and financial performance.

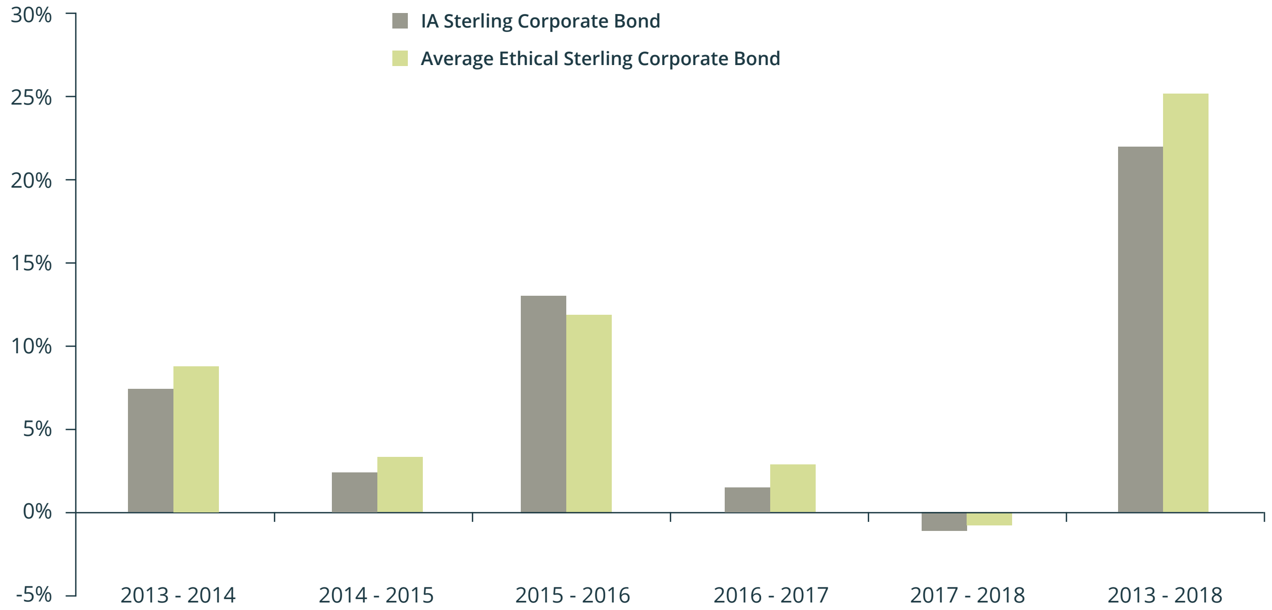


Sterling Corporate Bonds

Fund	2013 - 2014	2014 - 2015	2015 - 2016	2016 - 2017	2017 - 2018	2013 - 2018
EdenTree Amity Sterling Bond	10.31%	1.70%	6.23%	4.30%	0.29%	24.67%
F&C Responsible Sterling Bond	7.19%	2.47%	12.89%	-0.21%	-1.56%	21.81%
Kames Capital Ethical Corporate Bond	7.35%	3.90%	11.10%	0.61%	-1.31%	23.04%
Liontrust SF Corporate Bond	8.99%	2.86%	13.99%	3.38%	-0.71%	31.18%
Rathbone Ethical Bond	11.27%	3.79%	9.20%	7.13%	0.54%	35.83%
Royal London Ethical Bond	9.97%	3.95%	12.44%	2.69%	0.67%	34.27%
Royal London Sustainable Managed Income	7.78%	3.89%	12.47%	2.14%	0.16%	28.81%
Sarasin Responsible Corporate Bond					-1.40%	
Standard Life Investments Ethical Corporate Bond	8.35%	1.93%	13.22%	0.65%	-1.65%	23.78%
Threadneedle UK Social Bond		3.71%	13.27%	0.47%	-0.25%	
IA Sterling Corporate Bond	7.90%	2.36%	12.53%	1.31%	-0.71%	25.03%
Average Ethical Sterling Corporate Bond Fund	8.90%	3.13%	11.65%	2.35%	-0.52%	27.92%
Average 3 Star+ Fund	8.85%	3.63%	12.01%	2.75%	-0.50%	29.72%
Outperformance of average Ethical Bond Fund	1.00%	0.77%	-0.88%	1.04%	0.19%	2.89%
Outperformance of average 3 Star+ Fund	0.95%	1.27%	-0.52%	1.44%	0.22%	4.69%

GREEN = OUTPERFORM SECTOR AVERAGE

The results for UK ethical corporate bond funds are more consistent, with the average ethical fund having outperformed the sector in each of the last five years.



Data to 31 August 2018. Total return with net income re-invested. Source: Fundslibrary, Liontrust, Triodos

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Sector Spotlight – Infrastructure

Sector Spotlight – Infrastructure

Infrastructure has historically not been a significant part of ethical portfolios, yet it offers much for the impact investor. It can act as a true diversifier, can benefit from predictable, long-term revenue streams and can provide a meaningful social and environmental impact.

So what exactly is infrastructure?

We take it to mean essential physical assets that are needed in any well-functioning economy.

This can embrace things like toll roads which are demand-based and assets like schools, which are not.

Funds included in the 3D universe are focused on social or environmental infrastructure, which deliver clear social and/or environmental benefits.

This might include hospitals, educational establishments, wind farms, law courts, solar installations and fire stations.

Investment has long been made via private equity, but it wasn't until 2006 that the first public infrastructure fund was launched in the UK.

We monitor 15 funds in the 3D universe. This may not sound a very significant number, but they tend to be large with an average market capitalisation of almost £1billion.

15
funds

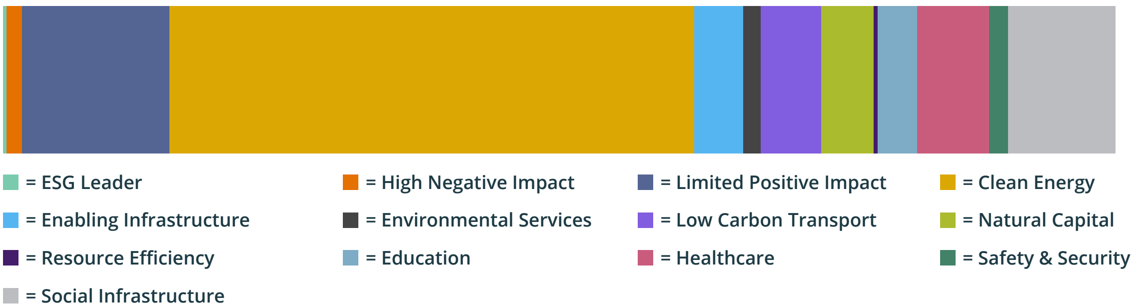
£14.44bn
assets under management

3.56
average star rating

The positive impact of social infrastructure is self-evident. Funds enable renewable energy to be generated; hospitals to be built, fit-for-purpose medical surgeries to be constructed; cables laid for offshore wind; rail networks to be developed and improvements made to energy transmission, amongst others. Not that it's without controversy. Public-private partnerships have been criticised for profiteering from public infrastructure, the charge being that these companies charge too much to the benefit of shareholders and the detriment of everyone else. Indeed, the Labour party has pledged to intervene and effectively re-nationalise these assets. Others tell a different story and believe that the cost is reasonable and that such funds enable public infrastructure that might otherwise not be possible.

The biggest exposure amongst funds in the 3D universe is to clean energy – mainly solar and wind – with a significant allocation to water, healthcare, education, rail networks and other social infrastructure. Some of the diversified infrastructure funds also invest in projects that have limited positive impacts, notably military accommodation and toll roads. There is little evidence of ESG with exceptions including the Foresight Solar Fund and the First State Listed Infrastructure Fund. Funds make little reference to environmental building techniques and energy management and reporting of extra-financial impacts is extremely limited.

Impact distribution of infrastructure funds in the 3D Universe



The financial attractions of social and environmental infrastructure chiefly lie in their predictable and long-term revenue streams that underpin attractive dividends, often at levels of between 4.5% and 6%. These also have a high degree of inflation protection and are therefore favoured by pension funds and other long-term investors. Most of the portfolios are invested in operational assets which benefit from reliable income sources like local government, the NHS or energy companies. Debt is typically structured so that it ties in with the term of contracts, reducing the risk of a mismatch between interest paid on debt and income from revenues. So what's not to like? The attraction of infrastructure has pushed up the price of funds so that they trade well above their net asset value, meaning that should sentiment change, there could be a significant loss. Assets are also valued on a discounted cash flow basis, meaning that if assumptions should change, then the calculated value of future revenue streams could also change, and with it the share price. And of course those funds that engage in public-private partnerships are subject to political risk were these assets to be re-nationalised. The reality thus far, is that infrastructure funds have delivered on their promises, generating generous dividends that have risen in line with inflation, whilst there has also been growth in the share price.

Most of the funds are closed end investment companies which raise money in an IPO and then subsequently with placings or additional offers. As mentioned in the introduction to this review, we've not included North American funds, nor have we included REITs which are better categorised as real estate. There are three open ended funds which invest in other listed securities including the other infrastructure funds in the 3D universe. These include the aforementioned First State Sustainable Listed Infrastructure which integrates ESG into the investment process, something which many of the other infrastructure funds fail to do. It also includes the VT Gravis Clean energy Fund profiled elsewhere in this Review.

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Environmental markets: from slim-pickings, to spoiled for choice

Environmental markets: from slim-pickings, to spoiled for choice

By Bruce Jenkyn-Jones, Impax Asset Management

In 1999, Impax launched the Environmental Technology 50 Index (the ET50), defined as the top 50 listed companies deriving at least 50 per cent of their revenues from at least one of three themes: clean energy; waste and water management; and pollution control.

At that time, there were around 250 companies globally that qualified for the universe from which the index was selected.

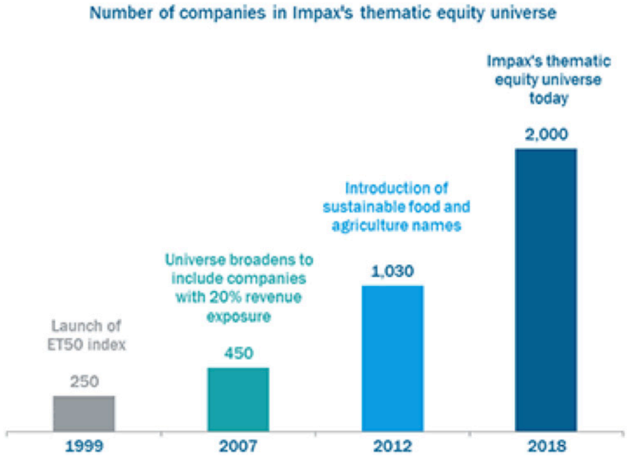
We see the growth of the Impax Environmental Markets investment universe as clear evidence of the increasing influence of drivers such as resource scarcity, environmental and social regulation and, of course, consumer preferences for more transparent, authentic and healthy products.

Fast forward eight years to 2007 and a clear trend was emerging; larger cap companies were either organically growing or acquiring smaller specialists to capture the environmental opportunities.

In response the Impax universe broadened to around 450 companies whose revenue exposure to those themes represented at least 20 per cent of their revenue.

Jump ahead to 2012 and it was time to include a fourth theme - sustainable food and agriculture - bringing a further 580 companies to the universe.

Today, Impax's thematic equity universe comprises almost 2,000 companies, an eight-fold increase on the 250 that it comprised of in 1999.



Source: Impax Asset Management September 2018

We see the growth of the Impax Environmental Markets investment universe as clear evidence of the increasing influence of drivers such as resource scarcity, environmental and social regulation and, of course, consumer preferences for more transparent, authentic and healthy products.

The growth in the universe has been mirrored by growth in the market capitalisation of its constituents. Looking back at the early years from 1999 and the universe as dominated by unprofitable early stage companies. Over 50 per cent of the ET50 was under £500m market cap.

Since then, pure-play companies have successfully expanded and large incumbents in mainstream sectors have developed or acquired environmental technology businesses.

Today the average market cap of companies in the Impax thematic equities universe is £2.9 billion.

Asia has had a key role to play in the universes expansion. Between 2009 and 2018, the number of companies in our Asia-Pacific universe almost doubled, rising from 342 to 630 companies. This was largely a result of the need to tackle local pollution, which became a health priority and in turn resulted in opportunities for companies that offered solutions.

About the author

Bruce Jenkyn-Jones is co-manager of the Impax Environmental Leaders (Ireland) Fund. He is also co-head of listed equities and an executive director. Bruce joined Impax in 1999 where he worked initially on venture capital investments before developing the listed equity business. Before joining Impax, Bruce worked as a utilities analyst at Bankers Trust and as an environmental consultant for Environmental Resources Management (ERM). Bruce has an MBA from IESE (Barcelona), an MSc in Environmental Technology from Imperial College and a degree in Chemistry from Oxford.

Going mainstream

A larger investment universe, with a wider range of companies – in terms of market-cap, purity and geography – provides more opportunities for active investment management.

At Impax the investment thesis was always clear, as long-term investors sustainability offered an analytical screen that provided a clear direction of a company's growth potential, inclusive of both opportunities and risks.

Twenty years ago, climate change was unlikely to be considered a key risk to an organisations profitability. Today, supported in no small way by empirical evidence, this is changing. There is further to go of course, but when 9 in 10 people say that they would make changes to their standard of living to prevent future climate catastrophe*, the move to mainstream is clear.

We believe the transition to a more sustainable economy will continue to disrupt an ever-larger proportion of the global economy and that portfolios which focus on well-positioned companies, while avoiding those unable or unwilling to adapt, should outperform.

*Source: Thomson Reuters Foundation May 2017

Source for all other data listed in this article – Impax Asset Management, 20th September 2018.

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Impact investing for a better future

Impact investing for a better future

By Euan Stirling, Global Head of Stewardship and ESG, Aberdeen Standard Investments

The world faces numerous challenges, from climate change and poverty, to inequality and pollution. As asset managers, we believe we can play a vital role in helping to address these issues. One way to do so is through equity impact investing.

This involves investing in listed companies or organisations that are attractive from a financial position, but whose activities, technologies or products are specifically designed to address the planet's long-term problems.

Examples of such companies include Safaricom, which promotes financial inclusion in Kenya through its mobile money platform, M-PESA; Clinigen Group, which is committed to providing ethical access to medicine globally; and Costa Group, which is committed to advancing sustainable agriculture practices.

Burgeoning opportunities for retail investors

The success of these and others companies can create substantial value for long-term investors, both financially and socially. Asset managers can harness the power of these opportunities by purchasing company shares and creating an equity impact fund. Such funds can have specific goals, such as concentrating on job creation and employee wellbeing, or can be more broad-based, addressing a range of social and environmental issues.

A measure of success

While this is an exciting area of the market, there are challenges. Chief among them is how to ascertain whether a company is having a genuine impact or if it is just piggy-backing on a burgeoning investment trend.

In our view, impact investing must have two characteristics: first, the company must have the strategic intention to deliver a positive impact (i.e. its business model must be designed to achieve a specific positive societal and/or environmental goal); and second, this impact must be measurable.

On the latter point, while measuring financial returns is fairly straightforward, the science of quantifying positive environmental or social impact is more difficult.

United in impact

One universal framework for helping to identify the world's challenges and to consider a corporate's contribution to progress against these challenges is the United Nation's Sustainable Development Goals (SDGs).

These are a set of 17 global goals aimed at tackling climate change, rising inequalities, and unsustainable production and consumption.

The UN has identified 232 indicators to measure progress against the goals, and asset managers can use these indicators to analyse the positive outcomes that companies are supporting.

For example, a business's contribution to sustainable energy can be gauged against factors such as the proportion of its customers that now have access to clean energy or the amount the company invests in developing clean energy.

For companies, the UN SDGs can provide a framework to identify new markets and direct their efforts to the areas of greatest need. We believe that supporting the SDGs creates tangible opportunities for companies to contribute positively to society and the environment, while simultaneously enhancing the long-term financial value of the business.

It's all in the report

Aside from intention and measurement, it is also important that companies report accurately and meaningfully on their activities.

This can help demonstrate transparency and accountability, and should help build investor confidence in impact investing.

It also allows investors to make comparisons between companies and robustly analyse the businesses in which they invest.

A bright future

The outlook for mainstream equity impact investing is bright, as investors increasingly look for financially attractive investment solutions that make a difference to the world. Indeed, according to JP Morgan, impact investing could reach $1 trillion by 2020.

In addition, as more capital and expertise enter the market, we will no doubt see a wider range of investment solutions emerge that will seek to address the numerous challenges highlighted by the SDGs.

Importantly, impact funds will slowly build performance track records during this time, which will help demonstrate the benefits of these type of investment solutions and cement their place in the vanguard of values-based investing.

The value of an investment is not guaranteed and can go down as well as up. An investor may get back less than they invested. Past performance is not a guide to the future.

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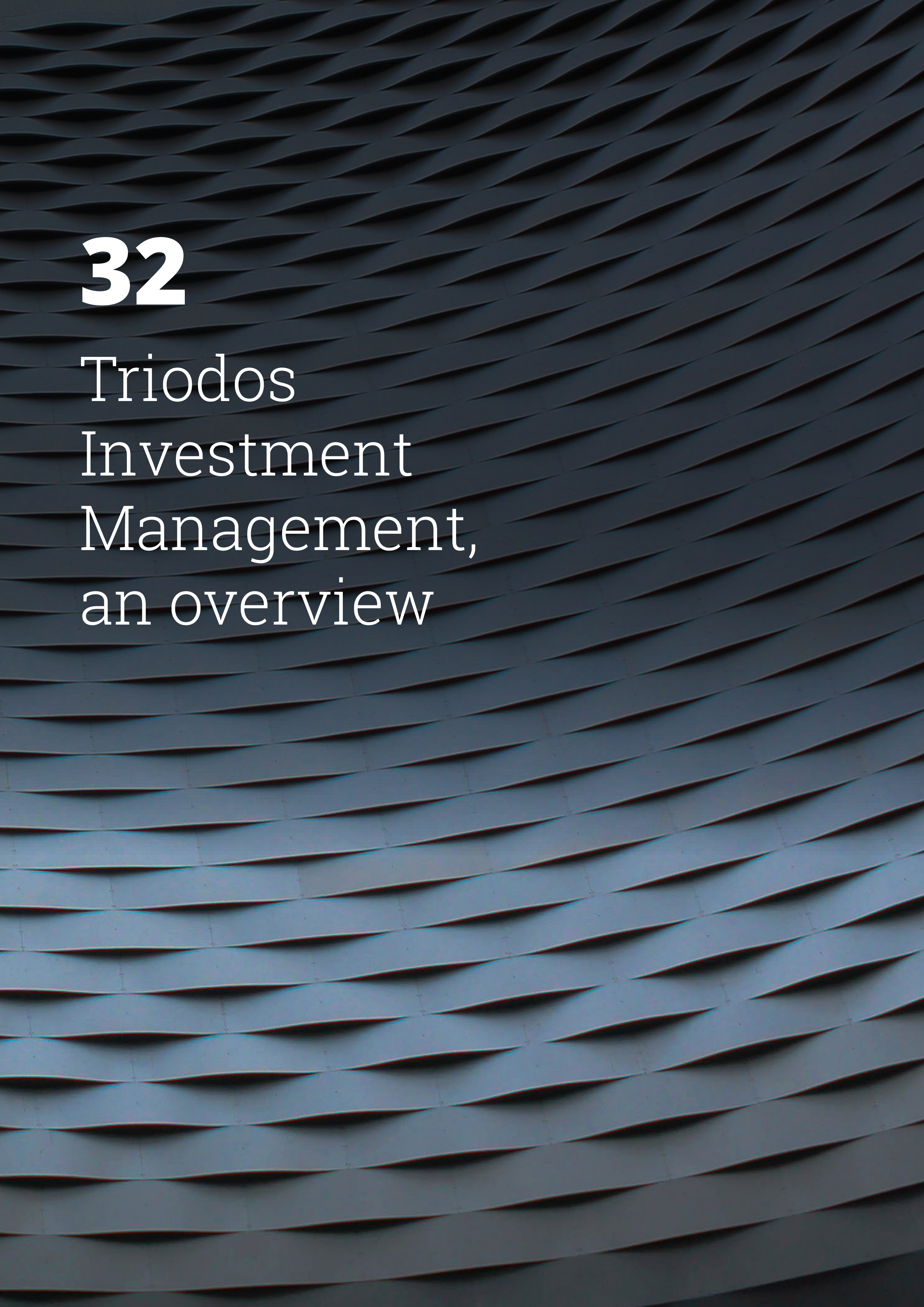


32 Triodos Investment Management, an overview

Triodos Investment Management

Triodos Investment Management, an overview.

With Erik Breen, director of Triodos SRI and fund manager, Triodos Sustainable Mixed Fund and Adam Robbins, senior relationship manager, UK

Tell us a bit about the company

Triodos Investment Management is a globally active impact investor.

We are driven by the ambition to address the challenges that our interdependent and interconnected world is facing through the conscious use of money and via entrepreneurs acting on those challenges.

We connect the sense of urgency for change with the conviction that investing can make a lasting difference.

There is a critical role to play for the financial sector to realise a set of ambitious goals to end poverty, protect our planet and ensure prosperity for all.

At Triodos we have been committed to take up this role since inception already and will continue to do so.

Positive change in society + Financial return = Impact!

Our mission is to make money work for positive change, while generating a balanced return.

Triodos Investment Management manages direct investments ranging from renewable energy infrastructure and organic food companies to cultural activities and microfinance institutions.

In over 25 years our business has grown based on deep sector insights and long-term relationships with clients with whom we have a shared vision of the future.

6	€4.3bn	180+
Investment strategies	**Assets under Management**	**Co-workers**

Impact investing has developed considerably in terms of the range of available investment options across asset classes. Impact investors already have the opportunity to build a portfolio across all asset classes, where 100 per cent of the assets can be committed to positive social and/or environmental impact.

Why have you taken the investment management in house?

Until April 1 2018, the asset management of Triodos funds was outsourced to NN Investment Partners BV (As successor of Delta Lloyd Asset Management NV).

As of April 1 2018, the asset management activities of the fund have been in-sourced. From that date, the sustainable research and financial analysis of the Triodos funds have been fully integrated at Triodos Investment Management. The main reason for this is to increase the positive impact in Socially Responsible Investing (SRI).

You are adopting seven transition themes across the portfolios. Could you tell us a bit more about this?

Triodos Investment Management invests exclusively for positive change. For SRI, the investment process starts with forming a long-term vision on sustainability and the transition towards a more sustainable economy: the global trends, resulting challenges and the sustainability solutions needed to meet these challenges.

The seven challenges identified are:

1. How to feed the world sustainably
2. How to be mobile, live and work in a sustainable way
3. How to replace the use of finite resources
4. How to make use of resources as efficiently and long as possible
5. How to create a society in which all people can fully participate
6. How to innovate for a sustainable future
7. How to become and stay healthy and happy

A company that derives over 50 per cent of its revenues from such sustainable activities, or that is expected to derive over 50 per cent of revenues from exposure to one or more of these themes within the next three years, qualifies for investment.

Companies can also be selected for their leading role in corporate social responsibility within their industry. These are the Corporate Social Responsibility (CSR) Pioneers. A company that qualifies as a CSR Pioneer is considered a real sector leader in terms of corporate social responsibility, with either best-in-class behaviour in its approach to stakeholder management or demonstrating clear leadership in its products or production process, showing its industry the path of transition to a sustainable society.

These global challenges result in seven sustainable transition themes to guide the SRI portfolio construction. All investments contribute positively to these themes, thus ensuring a positive impact approach.

Although the UN Sustainable Development Goals (SDGs) are not used as a starting point to identify the seven challenges mentioned above, it is possible to map the SDGs to the challenges.

The challenges map to the goals as can be seen in the table below as far as that they can be translated to investments.

1. Sustainable food and agriculture

Companies that preserve soil, water systems, nature and biodiversity, and those that promote sustainable food products and healthy diets.

2. Sustainable mobility and infrastructure

Companies that offer solutions for sustainable mobility and infrastructure such as urban mobility, sustainable buildings and electric vehicles.

3. Renewable resources

Companies that provide an alternative to fossil fuel-based resources, like renewable energy, produce bio-based materials as alternatives to finite resources and those that contribute to efficient water infrastructure.

4. Circular economy

Companies that follow the principles of circular economics, including efficient waste management and recycling, product-as-a-service business models and eco-efficiency combined with product life extensions.

5. Social inclusion and empowerment

Companies that provide education, inclusive financial services and access to media and information, as well as companies that excel as a role model in advancement of social inclusion and equality.

6. Innovation for sustainability

Companies that are front-runners in sustainable innovation and technology including cybersecurity, telecommunications, robotics and information technology.

7. Prosperous and healthy people

Companies that advance health solutions such as medical technology, health care, personal hygiene and fitness, as well as companies that help maintain health by preserving the environment.

How will you measure the impact of the portfolios in relation to these themes?

Triodos SRI funds actively engage with companies to drive sustainability at board level. Through dialogue and active use of shareholder responsibilities, we aim to maximise the positive impact of our investee companies by strengthening their insight into material sustainability issues, thus adding to their ability to deliver long-term value.

What changes might we expect to see in the portfolios?

The equity portfolios will be more aligned with regards to geographical, industry and style exposure. Thematic fitting is key while introducing new names in the portfolio. Best-in-class names will be gradually phased out in case there is no specific/clear thematic fit. The SRI-investment team will probably put more emphasis on business model robustness, quality of management, balance sheet strength and cash flow generation in relation to return on invested capital metrics.

Highly geared companies, or companies with very weak cash-flow, return or growth metrics will be double-checked and have a higher probability of being replaced. More focus will be placed on so-called “compounding” companies.

Geographically we will increase our presence in Asia, especially Japan. The Japanese equity market offers good value, improved corporate governance and strongly improving ESG momentum.

Sector-wise we would like to increase our diversification as well. Weightings in IT/tech/healthcare and real estate sectors will probably be reduced.

To illustrate: Triodos Sustainable Equity Fund has sold or reduced weightings in Aptiv, Bookings Holdings, Boston Properties, Delphi, Dentsply Sirona, Comcast, Great Portland, Intuit, PayPall, RedHat, Svenska Handelsbanken, Tesla and Zimmer Biomed during April/May.

Will you be using the same benchmarks?

No, there are two changes regarding the use of benchmarks:

1. For the Triodos Sustainable Pioneer Fund, the benchmark has changed from a composite benchmark to the MSCI small & mid cap index.
2. The benchmark currency of Triodos Sustainable Equity Fund has been adjusted from USD to EUR.

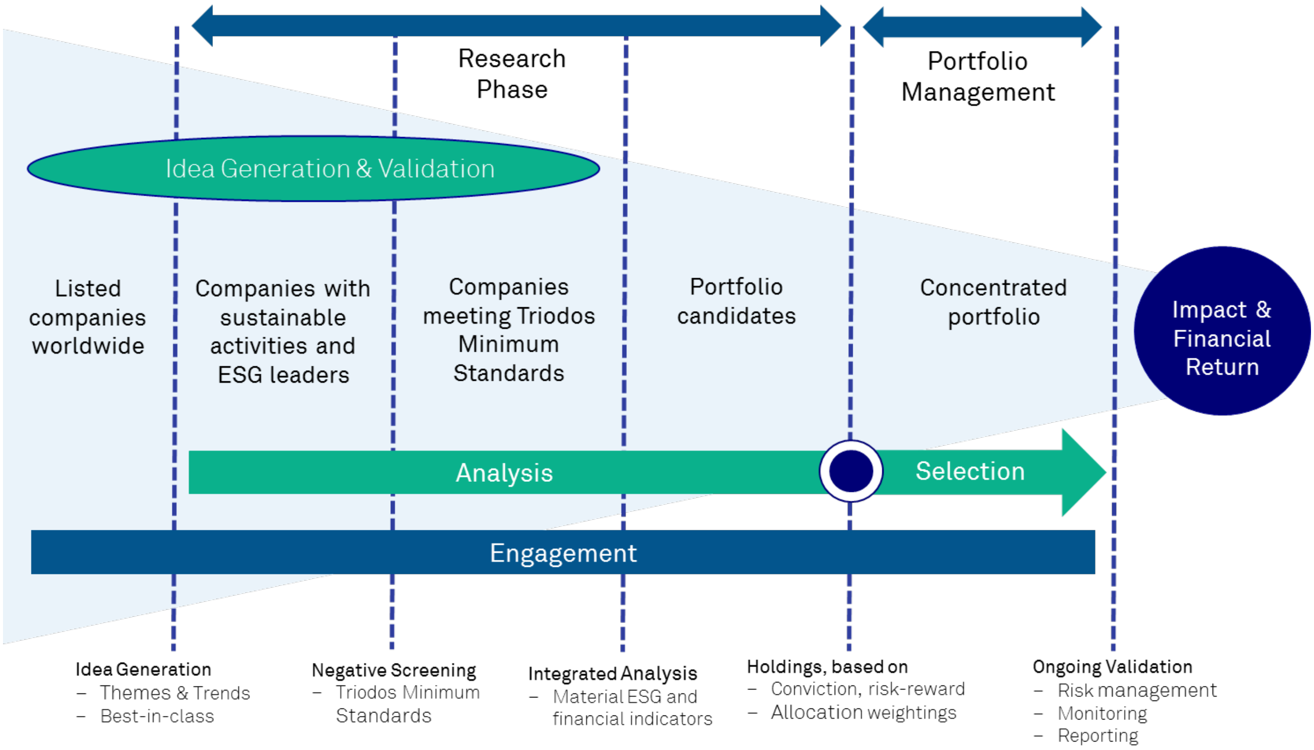
How will the investment management be integrated with your sustainability research?

In addition to the very experienced team of sustainability researchers, we have almost doubled the number of analysts.

The analysis is integrated: after a first check of the theme fit of a company we simultaneously check the company against our minimum standards (available on triodos.co.uk/SRI), perform the financial analysis (valuation etc), check for material ESG-factors (which differ according to the sector) and assess the total company business model. Each analyst is responsible for a theme, with a back-up. As always has been the case with the check on minimum standards, there is a verification check by another researcher.

The results of the integrated (financial and sustainability) analysis (the dashboard) is discussed in a meeting with the responsible analysts, fund managers and head of research.

Although part of the procedure to check, the (negative) screening on Triodos Minimum Standards is the same as it has been for years, the outcome and use of the results differ: the materiality of the ESG-factors for the business model are integrated in the assessment of the valuation of the company.



What is the typical holding period for stocks in the portfolios and will this change?

Triodos IM is a long-term investor. Consequently, a typical holding period will be around five years, more or less in line with historical holding periods.

What risk controls do you have in place?

Triodos IM has implemented an integral risk management framework that applies to the entire organisation. The objective is to monitor and manage risks on the company level and on the level of individual funds in the business lines.

This risk management framework is based on the COSO framework for integral risk management, guidelines and procedures developed in accordance with the European regulations and current market practice and is a permanent independent risk management function.

Is there anything else investors might want to know about Triodos Investment Management?

We have a 25-year track record in impact investing, across six Impact themes – Inclusive Finance, Energy & Climate, Arts & Culture, Sustainability Food & Agriculture, Sustainable Real Estate and Socially Responsible Investments.

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Introducing the Rathbone Global Sustainability Fund

Rathbones
Look forward

Introducing the Rathbone Global Sustainability Fund

Q&A David Harrison, Global Equity Analyst

"The top priority for most long-term investors is to grow capital for the future. This is my responsibility as a fund manager and steward of your clients' investments. However, what if our ambitions can be even broader? You can aim to not only invest profitably over the years, but to do so in a way that minimises costs to the planet and society. I believe we can succeed in both these goals."
David Harrison

About the fund manager..

Fund Manager David Harrison has more than 18 years' experience in equity analysis and fund management.

He has worked at a number of firms including Hermes Investment Management where he was portfolio manager for a European small-mid cap strategy on behalf of the BT pension scheme and was actively involved in the integration of ESG analysis.

At Merrill Lynch, he was portfolio manager for an Environmental Social Governance (ESG) global equity mandate and focused on investing in companies engaged in positive environmental, social or governance impacts.

Combined with Rathbones' established record of global equity investment and strong credentials in ethical investing/screening from Rathbone Greenbank Investments and you get a very compelling proposition.

Rathbones has run an ethical fund for many years. What led you to launch a sustainability fund now?

The launch of the fund was the next logical step for Rathbones, building on the success and strong growth of the Rathbone Ethical Bond Fund. There is a growing cohort of clients who want to make a positive impact with their investments, and the launch of this equity fund will help meet this demand.

A high-conviction fund, it combines ethical exclusions with a thematic focus on the UN Sustainable Development Goals (SDGs) and a high level of corporate governance.

To us sustainable investing is based upon three fundamental principles…

1. We look for businesses that have a durable franchise. We spend a lot of time trying to judge how strong the business really is and how it is perceived by the market.
2. Secondly we invest in companies that deliver a tangible environmental or social impact. We incorporate the SDGs into our investment framework to help measure how significant any company's impact may be.
3. Lastly, we avoid unsustainable industries and businesses with weak governance (examples of which are numerous). We don't invest in industries that cause fundamental harm to the environment and society but this does not overly restrict us, or we believe impact investment returns. We always actively engage with companies to help drive positive change.

Companies that demonstrate a tangible commitment to managing their business in a responsible manner are effectively strengthening their 'economic moat', which is important for long term value creation and to opening up new revenue streams. The SDGs are particularly relevant, as they help us judge how committed a management team really is to sustainability.

Momentum is building, as more companies understand the importance of sustainability and how it will shape their business. Nonetheless, we are still at the early stage of what we believe will be a long journey.

Tell us a bit about Rathbone Greenbank's analysis?

Rathbone Greenbank's ethical research team has over 20 years' experience in assessing the social, environmental and ethical performance of companies. The first step is to avoid those which are causing harm. The fund has a detailed set of exclusion criteria which consider not only what a company does, but also how it operates.

After this initial screen they then look for companies that are benefitting people and the planet, either through responsible behaviour or the products and services they provide. The positive screen is based on a set of eight sustainability themes - these are aligned with the aims of the SDGs, but focus on the areas most relevant to companies and the private sector.

It is important it is to be able to tell "greenwash" apart from a genuine commitment to sustainability, so you and your clients can expect openness and transparency about the fund's process and holdings.

Stewardship and engagement is key

Rathbones' funds business is a Stewardship Code signatory and takes its responsibilities in this area seriously. Suitability for inclusion in the fund isn't a one-off event, but something monitored continuously over time throughout the entire investment life-cycle - not only at the screening phase.

Rathbones is an active owner and integrates sustainability analysis into its ownership activities with the use of a detailed sustainability voting policy, drawing on internationally-recognized sustainability-related initiatives.

This means Rathbones will support shareholder resolutions calling for better sustainability reporting as standard and will also support any call for companies to better manage climate risk for example.

Finally, they are committed to reporting, and will produce an annual summary of voting and engagement on behalf of the fund each year.

"The fund is a natural extension of our significant investment heritage in the ethical and sustainable space. It is built on a robust investment process, focused on owning high quality companies with a clear commitment to sustainability and can look anywhere in the world for the best ideas.

The fund gives investors the ability to create long-term value, whilst delivering a positive environmental and social impact."

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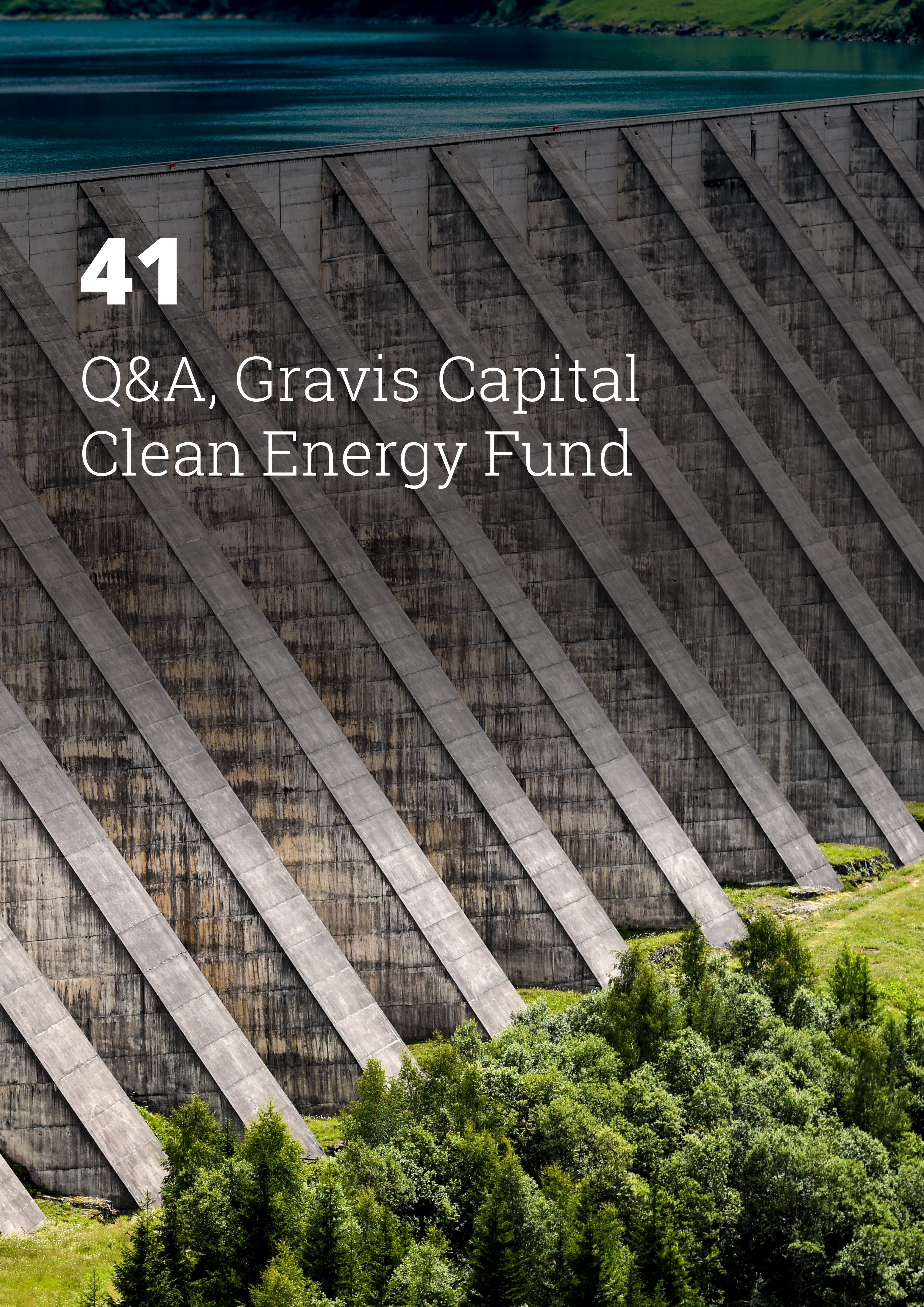
Q&A, Gravis Capital Clean Energy Fund



Q&A

William Argent, fund manager of Gravis Capital Clean Energy Fund

Tell us a bit about the company and your background

Gravis Advisory Limited is owned and managed by Gravis Capital Management Ltd (“Gravis”). It was established in May 2008 as a specialist investor in infrastructure and now manages c.£2.5bn of assets in this sector in the UK.

Funds under management include the FTSE 250 company GCP Infrastructure Investments Limited, which has invested over £1bn in UK infrastructure and GCP Student Living Plc, which has invested over £600m in UK student accommodation.

Gravis has won numerous awards for their alternative approach to long term, secure, income-generative investments. Gravis Advisory Limited is Investment Adviser to the c.£268m VT Gravis UK Infrastructure Income Fund, which is the only OEIC focusing on investment in the UK’s infrastructure sector.

The investment adviser to the VT Gravis Clean Energy Income Fund is Gravis Advisory Ltd.

The Gravis team can call on a wealth of experience and expertise in infrastructure investing across a broad range of sectors.

I’m a fund manager at Gravis and I’m jointly responsible for the oversight of the VT UK Infrastructure Income Fund and VT Gravis Clean Energy Income Fund.

I joined Gravis in 2017 having spent 12 years working as an analyst within the private wealth management sector. My responsibilities have included the analysis and recommendation of direct equities and closed-end investment vehicles for client portfolios, setting asset allocation and strategy, and the management of in-house OEICs.

I graduated with a degree in Mathematics from the University of Exeter and I passed all three levels of the CFA Program and was awarded the CFA charter in 2009.

You already run a number of infrastructure funds. Why did you decide to launch the Clean Energy Fund?

The sector is growing. It’s supported by government initiatives, improved technology and a shift in social awareness of climate change and sustainability, clean energy has evolved to become a huge, reliable and dependable industry since the turn of the decade and now forms an important component of the global energy generation mix today. It makes absolute sense for Gravis to offer this type of fund to investors. We have a solid knowledge and understanding of the global sector.

The fund holds both clean energy equities and yield cos (companies which generate a regular, dependable cash flow). How do you balance the two?

YieldCos, including UK closed-end funds, underpin the portfolio and account for the majority by weight. These companies own renewable energy assets, which generate visible long-term cash flows from the energy they produce. Equities within the portfolio tend to be thematic, providing exposure to interesting opportunities in the clean energy sector. These companies tend to be more exposed to cyclical factors and the portfolio will have far more modest positions individually and at overall fund level.

Given that much of the fund is invested in infrastructure funds with their own management charges, what added value do you bring?

Diversification benefits from spreading exposure across a range of different renewables companies and a very large number of individual assets on a global view.

A significant proportion of the portfolio is invested in North American stocks. How do you manage the currency risk?

The portfolio is unhedged and therefore exposed to currency fluctuations.

Investments include power producers that derive some of their power from fossil fuels and nuclear sources. What's your policy on this?

The Fund is tilted towards clean energy investments such as wind, hydro and solar projects. The Sustainable Energy Association defines clean energy as 'energy derived from renewable, zero-emissions sources ("renewables"), as well as energy saved through energy efficiency ("EE") measures'.

In some parts of the world renewables have become cheaper and more efficient than coal. So there is a global move towards making renewables mainstream.

However, there's still a legacy industry of nuclear and fossil fuels. These energy sources are classified differently according to how they are produced, stored and deployed.

Energy companies may produce both types of energy during transition towards being 100% clean.

Do you integrate Environmental and Social Governance into the investment process and if so, how is this achieved?

The Fund is being managed to meet the expectations of investors concerned about:

- Socially Responsible Investing
- Environmental, Social and Governance portfolio management
- Sustainability
- Climate Change

The manager understands the importance of the integration of the principles above and when investing in new companies he conducts a process of due diligence reviewing the company and its' operations.

How can investors access the fund?

We offer a single share class for income and accumulation shares in GBP, EUR and USD.
You can invest as little as £100 and trade through Valu-Trac Dealing (cleanenergy@valu-trac.com, 01343 880344)

What are the main reasons for investing?

Long dated and dependable income
Income streams generated by Renewable Energy assets, in the form of subsidy payments and revenue from power sales, tend to be reliable and predictable. Renewable Energy assets have long useful lives and have very long-dated expected income streams

Income diversification
Portfolio overlap is negligible with other, traditional, sources of income

Inflation linkage
25% of the initial portfolio has inflation linkage

Capital growth
An exposure to Greener Energy companies offers the potential for capital growth.

The Fund is being managed to meet the expectations of investors concerned about:

- Socially Responsible Investing
- Environmental, Social and Governance portfolio management
- Sustainability
- Climate Change

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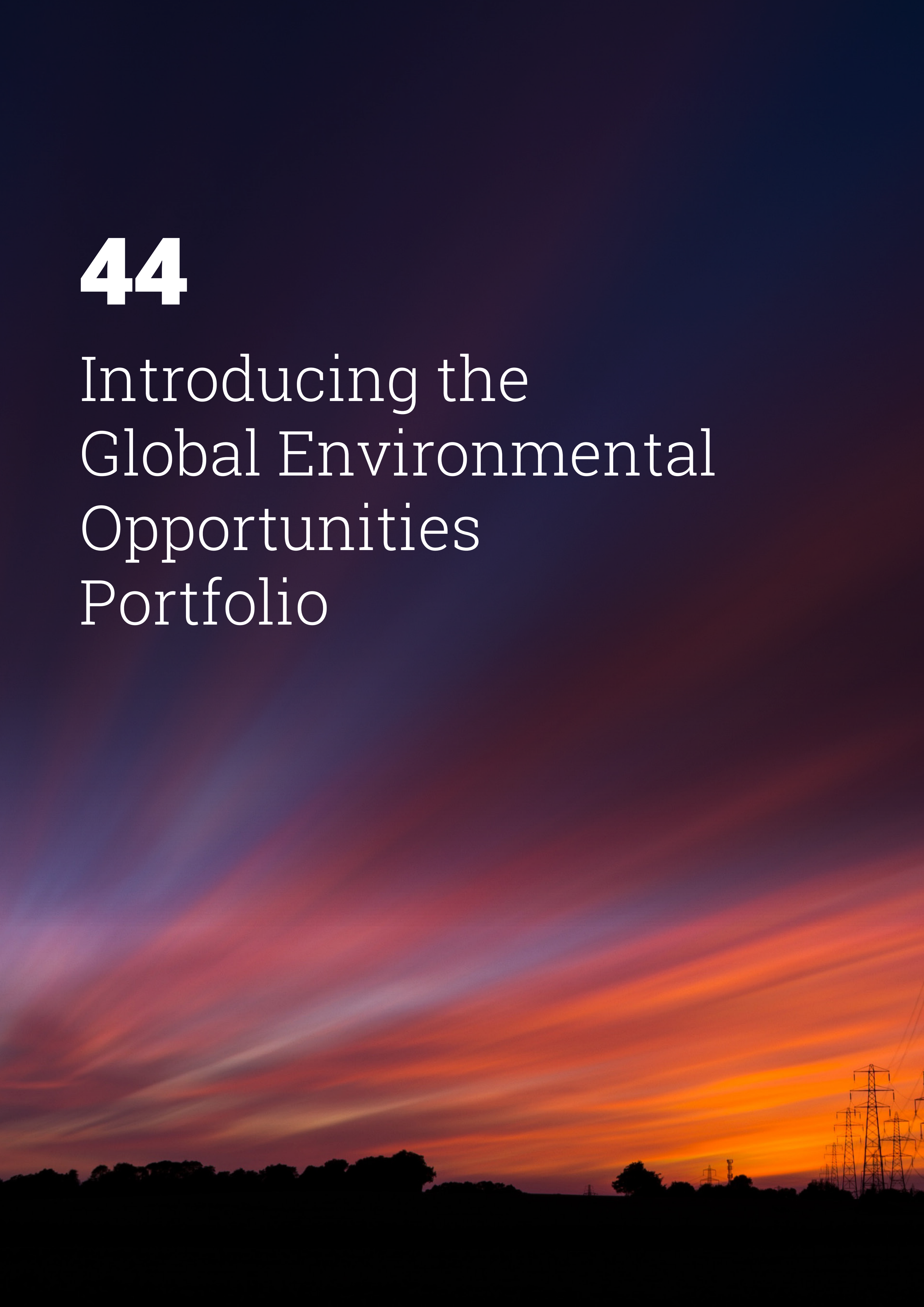
Introducing the Global Environmental Opportunities Portfolio



Introducing the Global Environmental Opportunities Portfolio

"For investors, the opportunity to bring about change has never been greater."

By Luciano Diana, Pictet Asset Management

Kanpur in northern India is known as the Manchester of the East. Located on the banks of the Ganges river, it is home to various heavy industries, including leather, chemicals and fertilisers. But, unlike its English twin, the Indian city's economic heft brings enormous side-effects. Kanpur has gained notoriety as the most polluted urban centre in the world. In May 2018, the World Health Organisation placed the city on top of a list of 4,300 places it monitors for air toxicity. Kanpur's 3 million inhabitants are breathing the air that is up to five times more polluted than the WHO's recommended safe limit.

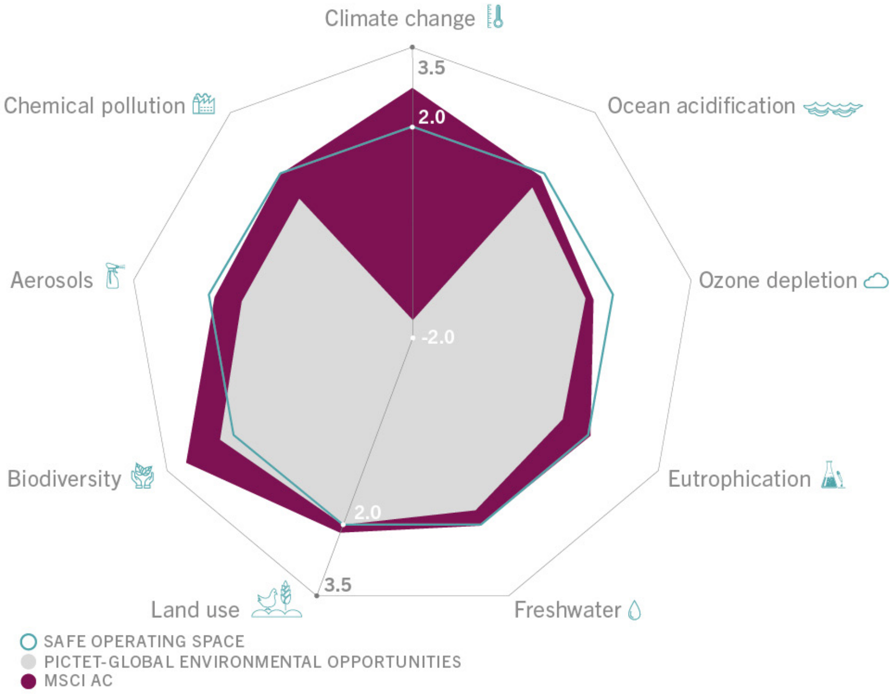
Heavy smog often reduces visibility to a few hundred metres, causing traffic jams and prompting residents to wear face masks.

Kanpur is not an isolated case. According to the WHO, toxic air is estimated to kill at least 9 million and cause economic losses of USD4.6 trillion, equivalent to more than 6 per cent of global GDP.
Nor is air pollution the only man-made phenomenon damaging our environment and the economy. Ocean acidification, water scarcity, and soil contamination also present threats to our daily lives.

Reversing these trends will take a monumental effort. Consumers will have to change their habits and governments their priorities. Investors will also have a crucial role to play. As stewards of global capital, their decisions will be pivotal in building a sustainable economy.

For investors, the opportunity to bring about change has never been greater.

That's because, with governments and businesses responding to growing public pressure to contain ecological degradation, a distinct and attractive group of environmental equity investments has emerged. These are companies that combine strong environmental credentials with innovative products and services designed to safeguard the world's natural resources.



The environmental product industry is in fact becoming one of the world's most dynamic: it is expected to grow to USD 3 trillion by 2020 from USD2 trillion just a few years ago.

At Pictet Asset Management, we have developed an investment strategy that focuses exclusively on this sector.

The portfolio – which we call Global Environmental Opportunities - is constructed using a scientific, rule-based framework and traditional company-by-company research.

At the core of our investment process are two novel tools, the Planetary Boundaries (PB) framework and Life Cycle Assessment (LCA).

"The result is a concentrated portfolio of investments that not only have a small ecological footprint but also offer an attractive risk-return profile."

The PB is a model that defines the ecological "safe operating space" within which human activities should take place. Developed by a team of leading scientists and economists, the PB framework sets ecological thresholds for nine of the most damaging man-made environmental phenomena (see chart). The model quantifies a set of boundaries, which, if breached, would endanger the environmental conditions that have been instrumental to human prosperity over thousands of years. For example, if the world's supplies of freshwater are to remain stable, humanity's total consumption of water must remain below 5,000 to 6,000 cubic kilometres per year.

The LCA, meanwhile, is a framework that is used to calculate the waste emissions and resource usage of the 400 or so industries that makes up the global economy. The model analyses every activity in the production of a good or service: the extraction of raw materials, manufacturing processes, distribution and transport, product use, and disposal and recycling.

In our process, we combine the LCA with the PB to construct a lens that can pinpoint industries with the smallest environmental footprint.

Here is an example of how the process works:

The planetary boundary states that the ozone layer should be 276 millimetres thick. For the ozone hole to begin to close, the world's total emissions of ozone-depleting substances should remain below 6.6 billion tonnes per year. At the corporate level, this means that the threshold for the emission of such substances is set at 1.05 kg per USD1 million of revenue per year. Only companies whose entire LCA-based emissions stay within the PB are eligible for inclusion in our investment universe.

The PB-LCA narrows down our investment universe to around 400 stocks. We then conduct detailed company by company research to identify 50 or so stocks with the most promising investment potential.

The result is a concentrated portfolio of investments that not only have a small ecological footprint but also offer an attractive risk-return profile.

Many investors have long appreciated the need to protect the planet. But they have not always been convinced sustainable investment was financially viable. Thanks to the emergence of thriving environmental products industry, the calculus is now changing. Investing to safeguard the natural world does not mean sacrificing returns. It can enhance them.

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Positive Progress

Positive Progress

By George Critchley, Senior Partner, Pennine Wealth Solutions

The Positive Pennine, risk-controlled impact portfolios were launched two years ago.

The universe of potential investments was created by John Fleetwood at 3D Investing. The day-to-day fund management is run by Ari Towley at Smart IM. Both John and Ari are renowned for their attention to detail. All of this is overseen by North-West Discretionary Fund Manager Pennine Wealth Solutions.

The aim was to produce investments that appealed to the IFA community as well as their clients. Compliance Partner at PWS, Helen Lupton ensures that full due diligence is done on a regular basis. IFA partners can obtain copies which assist their own compliance teams.

"I believe that less than 10 per cent of IFAs are involved in any form of sustainable, positive, ethical type of investing. To change this, we have to work with and support our UK IFA community. If they were all involved, I truly believe a third or more of all retail investments would head in this direction. The public have had enough of pollution, bad environmental practices, poor and often greedy corporate practices."

Unique features of Positive Pennine include:

Regular North West IFA and Investor Seminars. The last was one held at Brockholes Nature Reserve near Preston, in June. 90 IFAs and Investors attended.

Impact Scoring: An investment has impact if its objective is aligned with UN Sustainable Goals. 3D produce a score for each portfolio. Positive Pennine has a very high level of impact. Few investment houses are able to provide the IFA and Investor with this re assurance.

IFA client survey model and data. Pennine, via three of its IFA members, surveyed more than 160 investors. All investors had previously invested in general investments. None had indicated a wish to invest to DO GOOD and AVOID HARM. The results were eye opening.

So how is the progress positive?

200 separate investments have been made over the 2-year period. Nothing special about that, you say. Well, the key point here is that virtually ALL of these were made by clients who wouldn't have made them, unless their IFA had discussed the merits, and had a ready made solution they had researched and had confidence in.

Senior Partner at Pennine Wealth Solutions, George Critchley say's "the issue here is moving both the client and IFA to a position of awareness, confidence, and trust. Our client survey showed a very high level of concern and interest amongst the general investing public. However, most general IFAs were unaware of their client's views. IFAs were and still are part of the problem."

So Pennine Wealth Solutions has concentrated its efforts towards helping the IFA. Full training is provided. Seminars and workshops are organised. Back up material compares Positive Pennine with its peers. A new website www.positivepennine.co.uk constantly gives the latest in this type of investing.

I believe that less than 10 per cent of IFAs are involved in any form of sustainable, positive, ethical type of investing. To change this, we have to work with and support our UK IFA community. If they were all involved, I truly believe a third or more of all retail investments would head in this direction. The public have had enough of pollution, bad environmental practices, poor and often greedy corporate practices.

The IFA's and their investor clients can force change for the good, simply by adapting a minor change in their investment strategy. Once our investors understood the power was in their hands, then they have invested with enthusiasm.

Many studies support the position that neither general investing, or sustainable investing out performs the other in higher monetary returns. Some experts believe that with the rapid growth in new technologies positive investing may support some outstanding investment stories of the next decade to come.

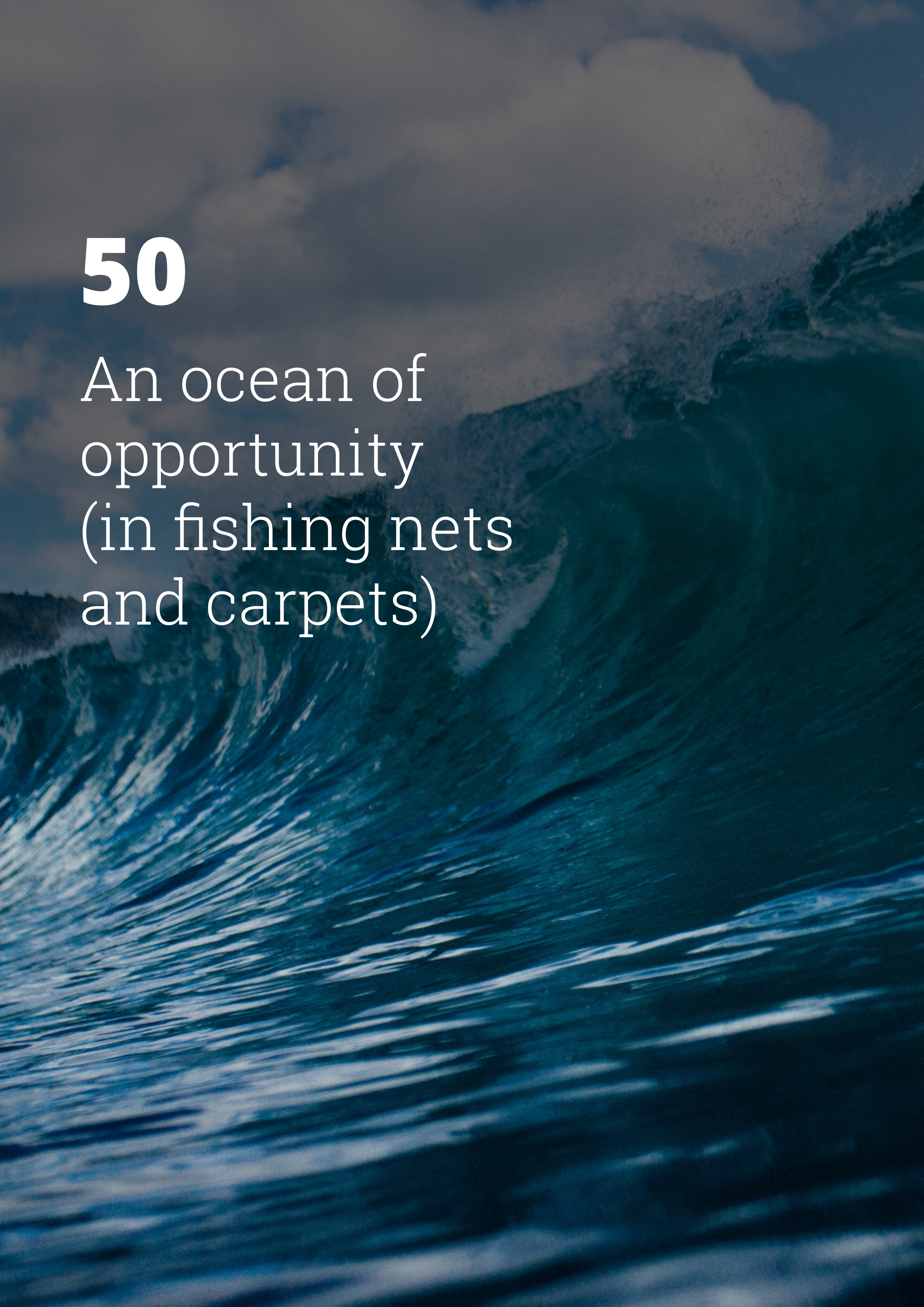
In 2018 the Positive Pennine Portfolios were awarded a "Good Egg" mark by leading consumer website Good with Money. Pennine Wealth Solutions are shortlisted for Best Micro Business, and Best Professional Business at the 2018 BIBA Awards, run by the NW Chamber of Commerce.

It looks like this small acorn may yet become a mighty oak.

Our motto:

DO GOOD, AVOID HARM, MAKE MONEY

Pennine Wealth Solutions LLP is authorised and regulated by the Financial Conduct Authority and is only accessible via your Financial Adviser. For more information, please call 0844 770 7721 or contact Sean Fisher on 07583 241668 or e-mail sean.fisher@penninewealthsolutions.co.uk



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An ocean of opportunity (in fishing nets and carpets)

An ocean of opportunity (in fishing nets and carpets)

By Neil Brown, Liontrust Sustainable Investment Team

The 'Blue Planet effect' has had a profound impact on public attitudes toward plastic waste. Broadcast on the BBC last year, Sir David Attenborough's Blue Planet 2 laid bare the damage caused by plastic pollution, with the programme revealing that we dump eight million tonnes into the sea every year, accompanied by shocking images of poisoned marine life.

There is an estimated 150 million tonnes of plastic in oceans today and, at current rates, we are on track to have one tonne for every three tonnes of fish by 2025 and more plastic than fish in our waters by weight by 2050 (according to World Economic Forum figures).

Given such alarming predictions, plastic pollution has quickly become a mainstream issue and urgent action is needed from consumers, companies and governments: we need a global effort to eliminate single-use plastics and significantly reduce use, and improve recovery, of the rest. As investors, we see the environmental and social impacts, the financial value of tackling this issue and, therefore, the potential benefit to our clients in supporting companies that can deliver solutions.

Only 14 per cent of plastic packaging is currently collected for recycling and just 5 per cent retained for subsequent use, for example, highlighting the opportunity for companies working to improve this.

One area of investment opportunity is through the development of 'regenerated' plastics. These are made from recycled plastic waste, avoiding the creation of new virgin material from oil-based petrochemicals and helping to close the loop in the plastic lifecycle.

Regenerated plastics are highlighted in our investment theme of Increasing waste treatment and recycling, which benefits from long-term structural drivers including increasingly scarce resources, escalating environmental regulations and the rise of conscious consumerism.

"One area of investment opportunity is through the development of 'regenerated' plastics. These are made from recycled plastic waste, avoiding the creation of new virgin material from oil-based petrochemicals and helping to close the loop in the plastic lifecycle."

One company we have identified and invested in as part of this theme is Italian textile manufacturer Aquafil. The company's main product is Polyamide 6, better known as nylon, which is tough and durable, as well as being lightweight, quick-drying, shrink and fire resistant. As a crude oil derivative, however, nylon has a number of sustainability challenges. Recognising this around 20 years ago, Aquafil decided to tackle this issue by trying to improve the sustainability of nylon production.

The company set about researching the process of depolymerisation, taking nylon from old fishing nets and carpets, breaking down the long chain polymers and turning this back into the monomer building block Caprolactam. This can then be re-polymerised into new nylon over and over again in a regenerable fashion. After years of trial and error and investment, this was realised as Aquafil developed a commercially viable process to recycle used nylon, branded Econyl.

Another investment theme across our portfolios is Improving industrial and agricultural processes and, as part of this, we look for companies offering sustainable alternatives to current food production and packaging.

Dutch company Corbion is another recent addition to our funds, a natural preservative business that has spent decades finding ways to keep food fresh and stable for as long as possible. It is now branching out into bioplastics, which are gaining traction as an alternative to traditional plastics made from non-renewable petroleum reserves.

In contrast, bioplastics – with many made from Polylactic Acid (PLA) – are derived from renewable resources like corn starch or sugar cane, which means product designers can have an end in mind at the outset. It is important not to see bioplastics as an ultimate solution to marine littering however – PLA is biodegradable only in industrial conditions at present – but they represent a significant move in the right direction.

While we continue to invest in such solutions providers, very few of us can say we are not part of the plastics problem. Plastic is therefore a priority engagement issue for us in 2018 and we are working with our investee companies to drive change.

Our clients want to invest in companies that can earn sustainable financial returns by delivering positive environmental impacts: after all, there is little point in saving for a retirement by the beach if we have no beaches worth going to.

Key Risks:
Past performance is not a guide to future performance. Do remember that the value of an investment and the income generated from them can fall as well as rise and is not guaranteed, therefore, you may not get back the amount originally invested and potentially risk total loss of capital.

The issue of units/shares in Liontrust Funds may be subject to an initial charge, which will have an impact on the realisable value of the investment, particularly in the short term. Investments should always be considered as long term. Some of the Funds managed by the Sustainable Future Equities team involve foreign currencies and may be subject to fluctuations in value due to movements in exchange rates.

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Q&A, Montanaro

Q&A with Charles Montanaro, fund manager, Montanaro

Montanaro may be a new name to many of the readers. Could you tell us more about your history in this area and what led to the launch of this fund?

Montanaro was established in 1991 to invest in quoted UK smaller companies. With a team of 29, we have become the largest SmallCap specialist in Europe looking after over £2.5 billion. We work with leading financial institutions such as pension funds, insurance companies, family offices, wealth managers and charities.

We invest in the highest quality, best managed, growth companies for the long-term. ESG considerations are an integral part of our investment process.

The Better World Fund is a natural evolution for us. More and more, our clients not only want to avoid companies that are doing "bad" but also actively support those that are delivering a positive impact to the world.

What themes run through the fund and why did you choose these particular themes?

We invest in six core themes: Environmental Protection; Low Carbon Economy; Healthcare; Innovative Technologies; Nutrition; and Well-being. To be eligible for investment, at least 50% of revenues must fall into one or more of these areas.

These themes support the aims of the United Nations Sustainable Development Goals (UN SDGs).

What makes your fund distinctive?

The Fund will only invest in the highest quality and best managed Small & MidCap companies where we have particular expertise. This is an area of the market where returns have historically been highest.

With one of the largest research teams, we can do our own due diligence and have the resources to meet and engage with companies. We travel all around the world to make sure our companies are acting responsibly and making a positive impact.

We are an independent boutique so our clients are particularly important to us. We believe in being transparent - reporting is a key focus – and have published our first Impact Report. We are excited by our Impact Calculator which allows investors to measure the impact of their investment against the UN SDGs.

Independent oversight is provided by an experienced Advisory Committee, chaired by Michael Sheren, a Senior Advisor to the Bank of England.

The Fund was launched on 10 April 2018. It is already over £120 million in size and seems to have struck a chord. We have invested £10 million of our own money in the fund - we like to invest alongside our clients.

Finally, Montanaro will donate part of its management fee to charity.

Can you give us an example of a company that you considered but rejected on ESG grounds?

One such example was MTU Aero Engines, a German aircraft engine manufacturer. The "Better World" case was that their engines increase fuel efficiency by almost 20 per cent and are quieter. As a result, MTU supported the Low Carbon Economy theme and the UN SDG target of "doubling the global rate of improvement in energy efficiency by 2030". However, like most major aircraft engine manufacturers, there was a small exposure to defence, so we decided we couldn't invest in the company.

Are you targeting a specific type of investor?

The fund is open to anyone seeking long-term capital growth who wants to make a positive impact in the world. Both institutional and retail investors can buy the fund through a number of platforms.

Clearly the fund makes an impact through the type of companies in which it invests, but you also engage with companies. What impact has this engagement made?

Engagement is key to positive impact investing and helps to improve the way companies manage and think about their operations. We describe our approach as pro-active rather than activist. Every engagement case is different, requiring patience and persistence. Over time we think our engagement activity will help lead to more sustainable forms of business practice.

ESG is integrated into all of Montanaro's investments. Could you explain how this is done?

We firmly believe ESG analysis should be part and parcel of company analysis. It is an integral part of due diligence. To us, it should not be outsourced to external third parties and box tickers (especially in SmallCap where it is less easy to get good data).
As well as building detailed financial models for each company, analysts complete dedicated ESG Checklists to determine an ESG score. We do not invest in a company if it fails these checklists.

Montanaro may be an unfamiliar name to some, so how can investors have confidence in your ability to generate the targeted returns?

Montanaro has been around for over a quarter of a century and has delivered returns after fees of 10% - 13% p.a. over the past 10 years. We have a strong track record over long time periods over several economic and stock market cycles.

But we can make no promises about the future. The Better World Fund offers the opportunities of global SmallCap, Quality and Positive Impact, which feels pretty compelling.

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Future mobility: Umicore gears up for an electric future

Future mobility: Umicore gears up for an electric future

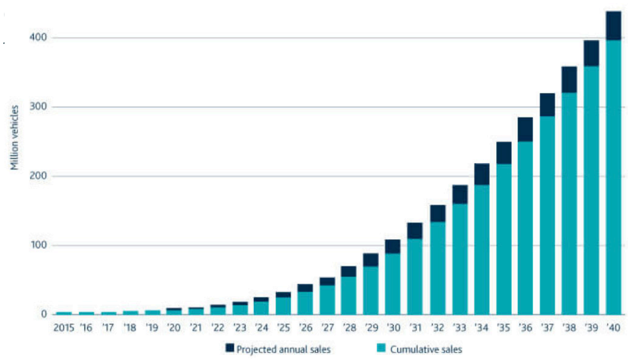
Q&A Tim Crockford, Lead Manager, Hermes Impact Opportunity Fund

Change is afoot in the global automotive industry. Some of the world's biggest economies have promised to ban cars that run without electric power by 2040 – and others are expected to follow suit.

Future mobility: cleaner vehicles

At Hermes, our investments in the Hermes Impact Opportunities Fund are aligned with impact themes, which are in turn aligned with the United Nations Sustainability Development Goals. One such theme is future mobility – that is, improving the efficiency of vehicles and increasing the use of low-carbon transportation.

Global carbon dioxide emissions have almost doubled since 1990 – and transportation is responsible for 25% of this volume. As global goals on reducing sales of internal-combustion engines are implemented, the adoption of electric vehicles (EVs) should accelerate significantly, especially in urban centres, where the appetite for EVs and supporting infrastructure are strongest.



Source: Bloomberg New Energy Finance as at February 2016

powering EVs will keep pace with this trend, fuelling a surge in the consumption of battery materials and thereby benefiting companies that manufacture components for EV batteries. One such company is current holding Umicore.

Umicore: powering a future in EVs

The Belgian company has a dominant position in the battery-materials market. One in five lithium-ion batteries ever produced for portable electronics contains materials from Umicore[2], which focuses on developing technology for cathodes – the component that is the key determinant of a battery's performance characteristics.

Umicore should benefit from the proliferation of lower-end mobile phones in emerging markets and the rise of electric bicycles. What's more, the company's management team is aware of the significant potential market in domestic energy storage units that capture energy generated by renewable energy sources within households.

What excites us most about Umicore are its cathode materials technologies for NMC batteries: the ultra-modern nickel, manganese and cobalt devices that are now seen as crucial for the viability of EVs. It is targeting this emerging-growth opportunity in the following ways:

Recycling: Technological advancements are key to retrieving more waste metal from batteries. Last year, Umicore announced plans to scale up its technology to recycle used lithium-ion batteries, which could cut down the energy footprint of mining raw materials, thereby driving sustainable prosperity for the planet. Using this technology, it also recycles electronic devices to retrieve gold and palladium content, which is becoming increasingly important as demand for EVs increase.

Emissions-control technolgies: Umicore's catalysis division manufactures emissions-control technologies enabling petrol- and diesel-fuelled vehicles to release the toxicity of their exhaust fumes.

Cathode technologies: The widespread adoption of EVs will ultimately tackle emissions and air quality problems. But concerns about driving range and battery life currently hamper the adoption of EVs. Umicore's cathode technologies can play an integral role in providing a solution. The quality and reliability of the company's NMC cathodes both surpass those of competitors, allowing it to seize opportunities that lie ahead. But continued research and development in car-battery chemistry is necessary to make EVs a viable choice for consumers – and allay their fears that such vehicles have insufficient range.

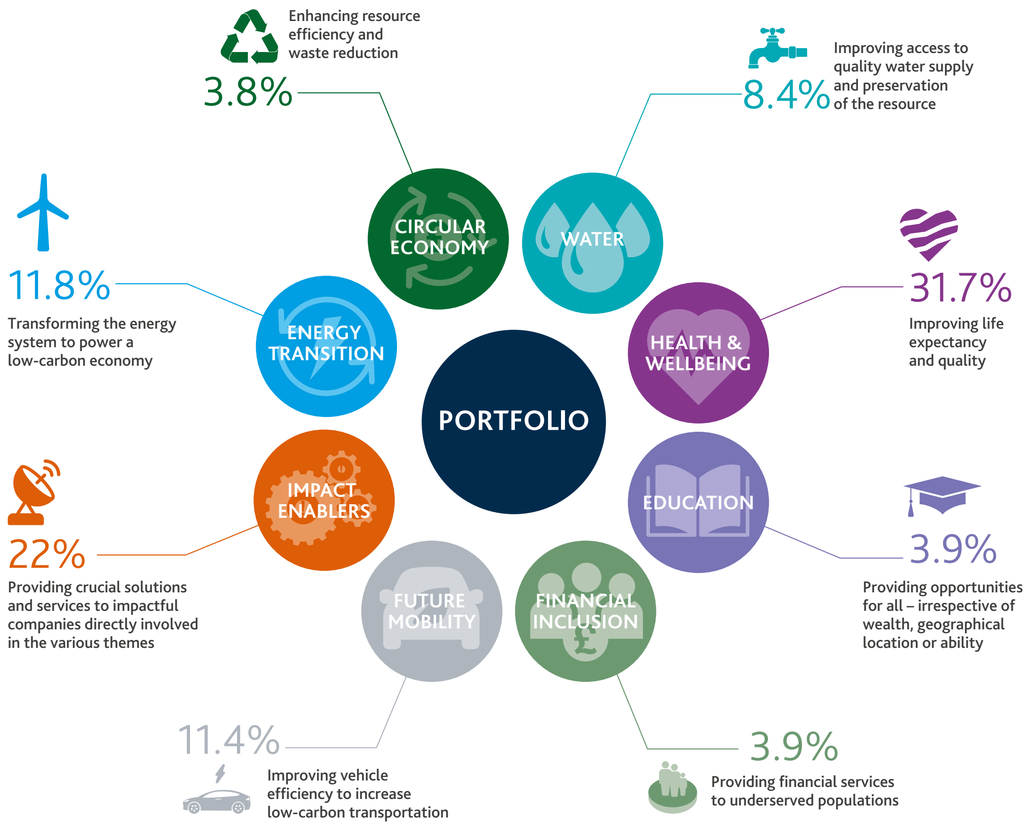
Wheels in motion for low-carbon economy

The Hermes Impact Opportunities Fund seeks strong long-term returns from purposeful companies with innovative solutions to society's underserved needs. Umicore is a business that is positioned on the right side of a fundamental change in the needs of society and the environment: it is pioneering technologies that will power cleaner vehicles.

Umicore's innovative solutions to tackling emissions and air quality are making our roads cleaner, and contributing to efforts to transition to a low-carbon economy.

The above information does not constitute a solicitation or offer to any person to buy or sell any related securities or financial instruments.

EXPOSURE BY IMPACT THEME



Source: Hermes as at 31 March 2018.

THEMATIC FOCUS: FUTURE MOBILITY

7 AFFORDABLE AND CLEAN ENERGY | 13 CLIMATE ACTION

Powering a low-carbon economy through energy efficiency, innovation and resilient infrastructure

CLEANER

CO_2 **Global CO_2 emissions have almost risen 2x since 1990, with transportation causing 25% of emissions.**

Electric vehicles (EVs) provide a viable alternative to petrol vehicles.
The cost of lithium-ion batteries, which power EVs, has dropped 65% since 2010, and the cost of batteries is expected to fall below $100kwh in the next decade[8]

Lower battery costs should help drive EV usage to about 700gwh by 2030, enabling EVs to help prevent further climate change and air pollution.

OUR EXPOSURE

Umicore, one of our holdings, provides cathode material – a critical component for EV batteries – and manufactures emissions-control technologies which help reduce the environmental impact of internal-combustion engines.

INTELLIGENT

The number of sensors found in vehicles has increased significantly, covering three aspects:

Efficiency:
Powertrain and engine management, including oil and petrol-tank pressure, throttle and torque

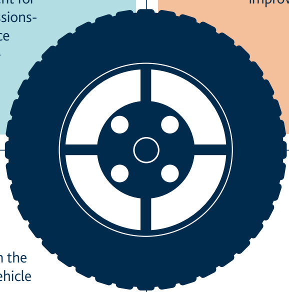
Safety:
Dynamic braking, side airbags and roll-over sensors

Comfort:
Including particle filtration, GPS mapping and parking assistance

OUR EXPOSURE

Valeo, a portfolio company, manufactures sensors that improve vehicle safety and comfort, such as:

Ultrasonic sensors, radars and cameras to detect obstacles
Rain, light and humidity sensors
Multi-camera systems to replace rear and side mirrors
Blind-spot sensors



SHARED

By 2040, shared mobility is expected to account for about 80% of miles driven in the US[9]. The primary long-term drivers for vehicle sharing are:

Urbanisation and the need for environmentally friendly transport

Flexibility for consumers and lower costs than car ownership

In China, 95% of the estimated 30,000 shared vehicles now being used are either electric or plug-in hybrid cars[10]

Vehicle-sharing will reshape cities: with fewer private vehicles, land currently used for parking will be available for other uses, such as housing.

CONNECTED

Technology is accelerating the development of connected vehicles, enabling them to:

Understand their global position and communicate with the surrounding environment

Provide information about road, traffic and weather conditions

Drive without drivers

In a world with autonomous vehicles, technological innovation will be key in avoiding accidents and preventing passenger and pedestrian injuries as semiconductors and sensors replace eyes and ears.

OUR EXPOSURE

Hella, a company we invest in, develops innovative smart lighting systems for vehicles, helping them to process and communicate information, thereby improving safety and reducing energy consumption. It also develops innovative camera and radar products, helping to increase the safety of autonomous vehicles.

[8]Source: Bloomberg New Energy Finance as at 2018. [9]Source: Deloitte University Press as at 2018. [10]"Car sharing business: Development trends, business model and solutions," by Bill Peng, Fang Yan and Allan Bai. Published in Strategy&, by PwC, in March 2017.

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[1] "Metal recycles prepare for electric car revolution," published by Reuters on 17 November 2017
[2] "Rechargeable battery materials," published on Umicore's website as at May 2018

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