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MULTI-ASSET SOLUTIONS

STYLES OF RESPONSIBLE INVESTING

Attributes and performance of different RI fund varieties

June 2024

AUTHOR

Stuart Jarvis, DPhil
Managing Director, Portfolio Research
PGIM Multi-Asset Solutions

Investors increasingly incorporate responsible investing (RI) strategies – attention to environmental, social or governance factors – into their asset allocations. Investing in a socially or environmentally responsible manner is far from new. Some investors have long screened out companies involved in processes or products of which they disapprove but development of the Principles of Responsible Investment in 2006 and intensified concern around climate change have made RI an important aspect of many more portfolio construction processes.

Investors' objectives are diverse. An awareness of the potential effect that environmental and social factors can have on performance or reputation can push some investors to ensure that RI considerations are at least included within the investment process. Other investors may be more concerned about climate change specifically, and wish to bring sustainability considerations to the foreground of their investments. Yet others may want to invest so as to actively support efforts towards a green transition.

The RI mutual fund universe is diverse too. Fortunately, investors can navigate it using some common fund labels and descriptions that act as style signifiers. This paper explores some of these styles, examining the extent to which they involve differentiated portfolio construction and performance – have the funds been distinctive in ways investors should have expected and has this driven performance? In this way we aim to help investors determine which fund styles may be best able to meet their own investment objectives.

CIO Takeaways

1. Investors can use style descriptors such as 'Impact', 'Article 9' and 'Paris-aligned', to filter the RI fund universe and find funds whose strategies best meet their objectives
2. All funds tilt away from companies with high emissions levels. Those aiming for emission reductions in line with the Paris treaty deliver the lowest financed emissions.
3. Funds with a core sustainability objective, often with an Article 9 or Impact description, can more easily invest in companies at an earlier stage of decarbonisation and so are more exposed to the risks and returns of the green transition.
4. RI funds outperformed the market in 2020 but more recently have underperformed. The 'RI factor' that has driven RI funds' performance over these periods is aligned with periods in which assets have flowed into and out of RI funds.
5. Investors seeking to enable or profit from decarbonisation should consider forward-looking impact or emissions targets and not just current fund emissions measures.

Fund Styles

Impact investing is one such label. In contrast to screening approaches that seek to avoid financing harmful activities, impact investments can be defined as being made "with the intention to generate positive measurable social and environmental impact alongside a financial return."[1] For example, a fund may have an objective which commits at least 80% of its capital to "companies that contribute to reducing climate change or its consequences." Funds use a range of metrics to track the performance of portfolio companies against measurable social and environmental outcomes, using a selection of the UN's 17 Sustainable Development Goals (SDGs) as a framework for example.[2]

Regulation can also help investors by defining or standardising fund categories. The European Union (EU), through its Sustainable Finance Disclosure Regime (SFDR), has developed a prominent example with funds classified into three buckets. **Article 9 funds** have sustainability as their core objective; these contrast with Article 8 funds which seek to promote social or sustainable characteristics but which have other goals, often alongside sustainability. Finally, Article 6 funds are those which do not have any sustainability objective. An article 9 fund may for example be constructed to maximise a particular measure of environmental or social performance.

While created as a disclosure regulation, SFDR has *de facto* been treated as a labelling regime. Having sustainability as a core objective might be thought likely to attract many impact funds to choose Article 9 – but in fact, most impact funds have chosen Article 8 instead. There is some variation by objective: funds with a social focus are less likely than those with a climate-related objective to choose Article 9. There can be good reasons why Article 9 is not a good fit for an impact fund – *e.g.*, the regulation sets out standardised reporting requirements; and requires that 100% of a fund's investments have to be sustainable. A fund seeking to generate positive outcomes through change at non-sustainable companies may therefore feel better able to do this as an Article 8 fund. The regulation or its interpretation is widely expected to evolve in the future: when the final SFDR requirements were published, it led to a spate of funds reclassifying to from 9 to 8 and last year the EU consulted users on their experience with SFDR implementation. At this stage we note that while Article 9 funds and Impact funds may share similarities in terms of objectives, the regulatory context allows non-Article 9 Impact funds some latitude that Article 9 funds lack.

Stating that a fund is **Paris-aligned** has also emerged as a description that funds use. This refers to the agreement, made at COP21 in Paris in 2015, in which countries aimed to limit global temperature rises to well below 2 degrees Centigrade (and ideally no more than 1.5 degrees). Achieving this goal involves economies moving towards 'Net Zero' emissions in the period up to 2050. While multiple trajectories of emissions reduction are consistent with the goal, a steady fall in each future year is usually envisaged. The EU has for example developed regulations for Paris-aligned *benchmarks* which require a 50% immediate reduction relative to a market index and 7% per annum reduction thereafter.

1 The Global Impact Investing Network https://thegiin.org/impact-investing/need-to-know/#what-is-impact-investing. Other similar definitions exist.

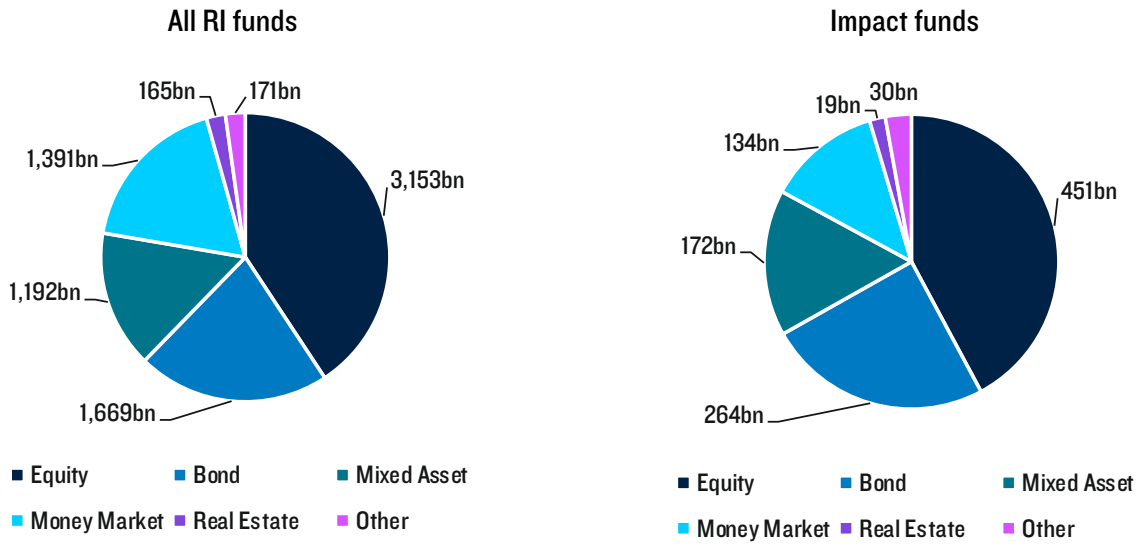
2 https://sdgs.un.org/goals

When describing emissions for an investment fund, the relevant metric is usually *financed emissions*. Essentially, the emissions made by a company are allocated to the (debt and equity) instruments that provide the finance for a company in proportion to their value. In line with current practice, emissions are scope 1 plus scope 2 emissions for the purposes of this paper.[3]

Responsible Investment Universe

The RI fund universe is large and the different varieties of RI funds cut across asset class boundaries. Figure 1 shows the public asset class breakdown for RI funds and, as an example, for Impact funds. In the Lipper fund database which has been used here, funds are tagged (by Lipper) as "responsible investments" – this has been cross-checked against the wording used in each fund's name or objective.[4]

Figure 1: Breakdown of RI Funds and of Impact Funds, split by Asset Class



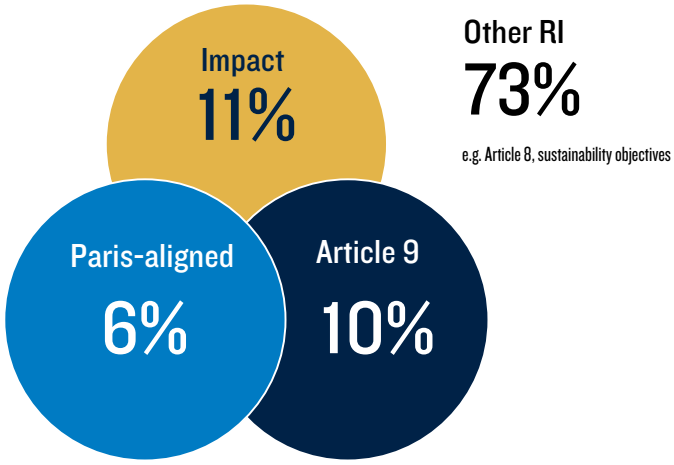
Source: LSEG Refinitiv Eikon – Lipper fund database, PMA calculations. Figures in USD as at 31 December 2023. For illustrative purposes only.

On the left are RI funds within the Lipper database (as of 31 December 2023) and on the right is the subset of RI funds which fall within an "impact investing" category. This impact subset comprises 14% of the total, by market value. Equity funds comprise the largest slice of responsible funds, of whatever style. We use global equity funds to investigate RI funds further below, as these form a large group sharing a common benchmark.

3 In simplified terms, a company can generate emissions by directly consuming fossil fuels (scope 1), indirectly consuming them through the use of electricity (scope 2) or indirectly within their supply chain or through the use of their products (scope 3). The last requires a heavier use of assumptions and produces double counting at a portfolio level – it is currently work-in-progress for many companies.

4 We have used the words climate, sustainable, social, ethical and their cognates and also included funds that classify under Articles 8 or 9 for SFDR purposes. Figure 1 uses the (around 90%) RI-tagged funds which met these tests.

Figure 2: Subsets of the RI universe: Global Equity Funds



Source: LSEG Refinitiv Eikon – Lipper fund database as of 31 Dec 2023, PMA calculations. Figures in USD. Percentages are shown by number of funds; if shown instead as a percentage of asset values the picture is very similar. For illustrative purposes only.

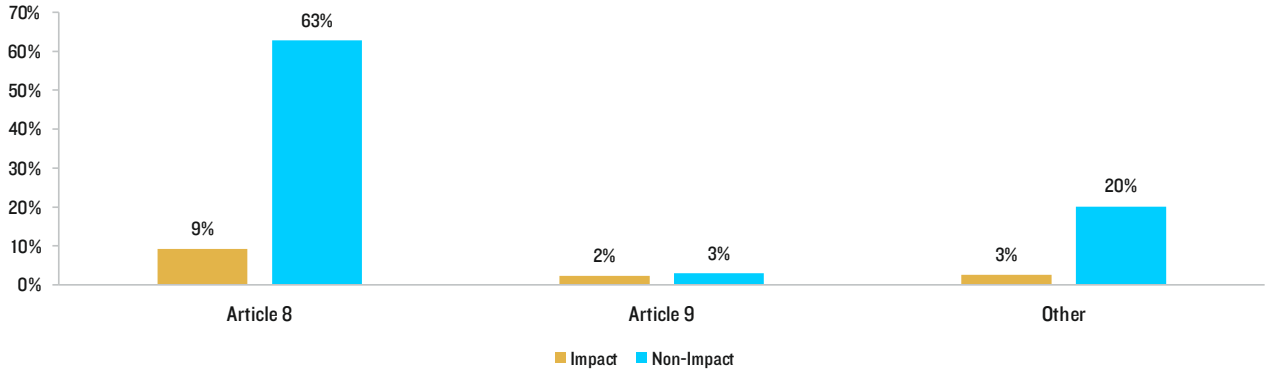
There is overlap between these varieties. To avoid double-counting we break the RI fund universe into 4 distinct groups, with the fourth group being '**Other RI funds**'. The treatment of where we have placed funds that belong to more than one group is shown in Figure 2. In words: we include all overlaps within our Paris-aligned group; exclude all overlaps from our set of impact funds; and the group of article 9 funds we use excludes those that are also Paris-aligned. We would obtain similar results by making alternative selections for the funds within the overlaps. These particular choices maximise the sizes of the smaller groups and so reduce the potential impact of outliers.

The central question explored in this paper is to what extent investing within these three specific varieties of RI fund here has led to a different experience than would investing in a more generic RI fund, or indeed in a non-RI fund. This includes the historical performance, both financial and non-financial, of these different forms of responsible investing. We examine the drivers of performance (sector positioning and secular trends) and consider which fund approaches might best meet different objectives that investors may have.

As discussed earlier, the overlaps between these categories might be expected to be significant. One might imagine that all Paris-aligned or Impact funds would choose disclosure under Article 9. But this is not the case. This can be seen in Figure 3, which shows that the majority (66%) of Impact funds choose to disclose under Article 8 not Article 9. The 'other' group in Figure 3 includes those funds with an Article 6 SFDR designation (available for funds which do not promote environmental and social characteristics) and funds that are only marketed outside Europe and which do not therefore require a choice. Nonetheless, a significant portion (43%) of Article 9 funds are Impact funds – splitting this overlap from other Article 9 funds in Figure 2 could therefore be misleading, which is why they are included within the Article 9 group.

With these categorisation choices, the Article 9 and Impact groups do exhibit important differences. For example, funds in the Article 9 group are much more likely to mention the environment or climate in their fund objectives; whereas funds in the Impact group are more likely to mentioned social goals. This is not a clear-cut distinction but can be helpful to bear in mind when comparing groups below.

Figure 3: Breakdown of RI Universe by SFDR Classification



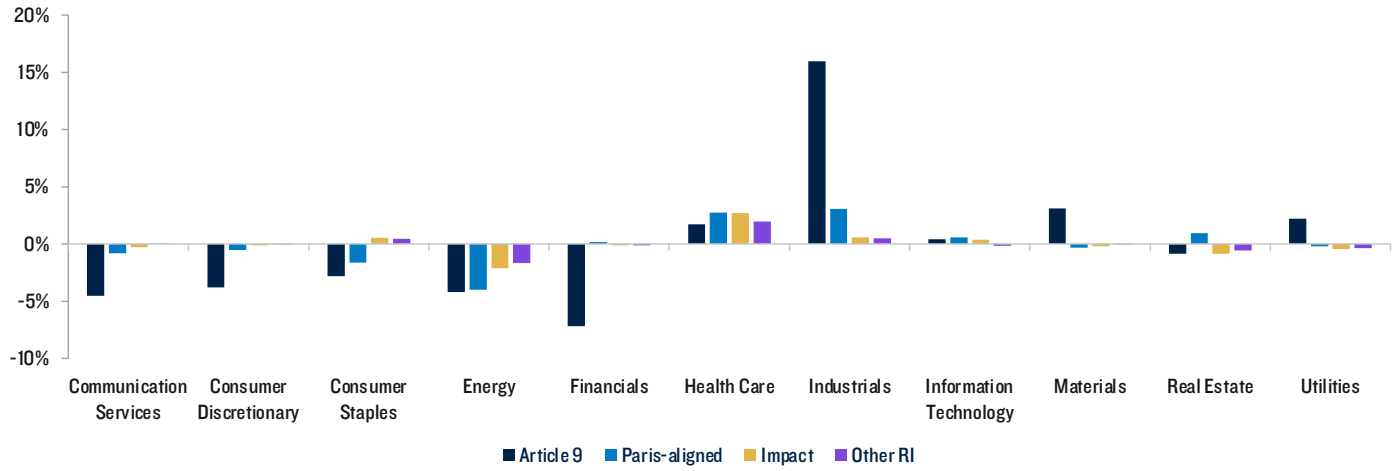
Source: LSEG Refinitiv Eikon – Lipper fund database, PMA calculations, all asset classes. For illustrative purposes only.

Looking at Paris-aligned funds also shows a disconnect from what we might expect. These funds might also seem to be prime candidates for Article 9, but in fact roughly half of Paris-aligned funds are classified as Article 8 and half as Article 9. This may reflect the ongoing uncertainty about how Article 9 should be interpreted.

Sector Characteristics

Focusing on individual asset classes enables a closer look at what the various RI subcategories deliver to investors. As was observed above (Figure 1), the largest cluster of RI funds is in equities, and within that, the largest group is those operating in the global equity space. A further analytical benefit of this large group is that almost all these funds use the MSCI World index as their primary benchmark or comparator, removing a potentially significant source of noise in performance comparison.

Figure 4: Sector Tilts for Different Varieties of Responsible Investing Global Equity Funds



Note: GICS sector tilts are shown as a percentage of the total weight relative to the MSCI World index, for the four non-overlapping fund groups shown in Figure 2 above. A geometric median measure (a multivariate version of the median) has been used, as a result of which, total tilts sum to zero. Source: LSEG Refinitiv Eikon – Lipper fund database, PMA calculations.

Splitting fund holdings according to GICS sectors provides a simple but informative lens for looking at how RI funds invest. Figure 4 shows median tilts for the four different groups of funds described above, and illustrated in Figure 2. There are both similarities and differences across the different groups.

First we examine the Paris-aligned group. These funds have tilts that are broadly in line with what we might expect from their objectives. Paris-alignment entails an uncompromising schedule of reductions in emissions financed by a portfolio. Amongst the 11 GICS sectors, those with the highest levels of greenhouse gas emissions are Utilities, Materials, Energy and Industrials (in that order). Paris-aligned funds - in common with Impact funds and other RI funds - are underweight the first three of these but the most significant underweight is in the Energy sector. Oil and gas energy production offers few opportunities for an investor seeking companies with a low level of emissions whereas the other sectors have more diversity (renewable electricity providers sit within Utilities for example). Indeed, over 70% of Paris-aligned funds divest entirely from the Energy sector (*i.e.* have a zero allocation). In contrast Paris-aligned funds are able to increase their allocation to Industrials, and other sectors with lower average levels of emissions, selecting low-emitting companies for investment within these sectors.

We now turn to Article 9 funds. These form an interesting comparison to the Paris-aligned group. A glance at Figure 4 shows that Article 9 funds exhibit much larger sector tilts than the other groups. Whereas Paris-aligned funds exhibit median sector tilts that are 2.6 times as large as the 'Other RI' fund group, Article 9 funds have sector tilts that are 8 times as large. The focus on sustainability as an objective could in principle have resulted in similar behaviour to Paris-aligned funds, but there is clearly another force at work. The tilts that Article 9 funds have hint at what this is. Whereas Article 9 funds have a larger negative tilt towards Energy (indeed, over 85% of Article 9 funds have a zero allocation to Energy), they generally have positive tilts towards the other three high-emitting sectors, and these are the most significant positive tilts within these funds. It is surprising that funds focused on sustainability would tilt towards a sector with high emissions. Without so aggressive a constraint of having to reduce emissions (as is faced by Paris-aligned funds), these funds have more scope to invest in companies that may be at an earlier stage in their decarbonisation journey.

Before looking at the Impact group, we reiterate the point made earlier (see Figure 3) that a significant subset of the Article 9 funds are also Impact funds. The Impact funds group we are looking at excludes those that are also Article 9 – and therefore many funds with an overriding sustainability impact objective. Funds in our Impact group will often seek to deliver social outcomes perhaps alongside

environmental outcomes. The sector positioning displayed by this group are intermediate between the Other RI group and the Paris-aligned group: the tilts are all similar in nature, with reduced holdings in the high-emitting sectors and positive tilts towards Health Care and Industrials.

At this stage, then, we can tentatively identify two main strands of RI funds: firstly, those which are structured to reduce the level of emissions that the fund owners finance. Paris-aligned funds are the most acute versions of this strand, but many RI funds including those Impact funds with a range of sustainability aims are included here. The second strand is funds which are more willing to overweight sectors normally associated with high emissions, but which have environmental sustainability as a core mission and are therefore likely to be doing so in order to select or encourage companies at an earlier stage in their decarbonisation pathway. The Article 9 funds are our primary example here.

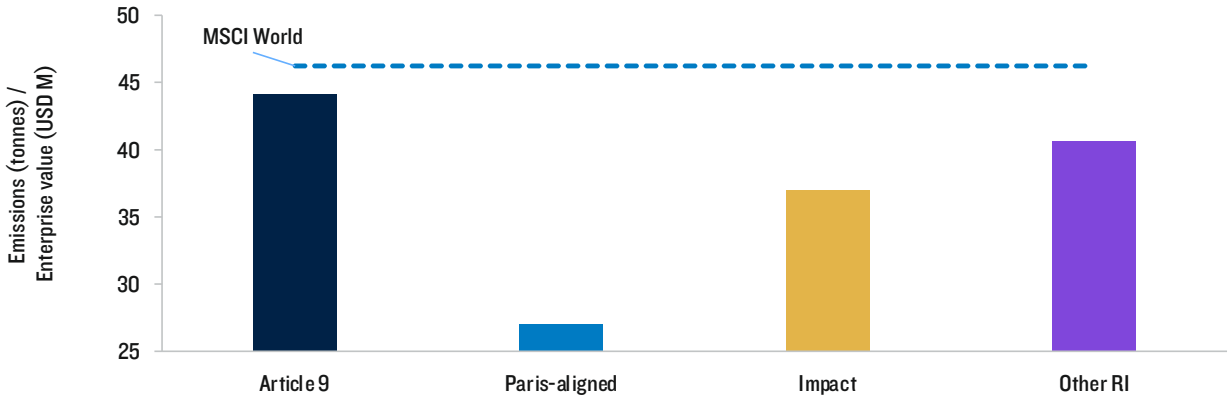
The next section digs deeper into the greenhouse gas emissions of these funds in order to test these hypotheses.

Greenhouse gas (GHG) Emissions Characteristics

The preceding section advanced the proposition that financed emissions are a likely driver and explanation for the sector tilts that the different fund groups present. We now use stock-level emissions data aggregated to the level of sectors and funds to shed more light on this dynamic.

As a reminder, *financed emissions* are a key measure of the emissions intensity of a portfolio. Where a company's activities entail emissions of greenhouse gases (GHG), the measure allows providers of capital to that company to account for these emissions when assessing their portfolio. For public companies, the fraction of emissions that should be allocated to a given investor is on paper relatively straightforward: it is the value of the investment (equity or debt) held by the portfolio divided by the total value of equity and debt issued by the company. This fraction can then be applied to a number of emissions metrics – here we use scope 1 and scope 2 emissions, *i.e.* those which arise from a company's activities including its use of electricity, rather than scope 3 emissions which occur elsewhere in products' value chains. In many ways this is not ideal but scope 3 emissions data is more patchy (it is much harder to measure) and its inclusion incurs double counting when aggregating across a portfolio.

Figure 5: Median Financed Greenhouse Gas Emissions for Different Groups of Responsible Funds



Note: Median values of scope 1 and 2 CO2-equivalent emissions in tonnes divided by EVIC (enterprise value including cash) in USD millions, for MSCI world index and different groups of responsible funds (see Figure 2). Company-level data gaps are filled with sector averages. Source: LSEG Refinitiv Eikon – Lipper fund database, PMA calculations, as of 31 December 2023.

Figure 5 gives an initial high-level view of RI fund emissions. As expected, RI funds typically exhibit lower levels of financed emissions than the market benchmark. Paris-aligned funds have a notably lower level than the other groups, which is consistent with their having the most explicit targets for reducing financed emissions. The funds that have a primary sustainability objective (Article 9 funds) are however the *least* aggressive in reducing financed emissions; while other RI funds and those that put more weight on social impact objectives are intermediate.

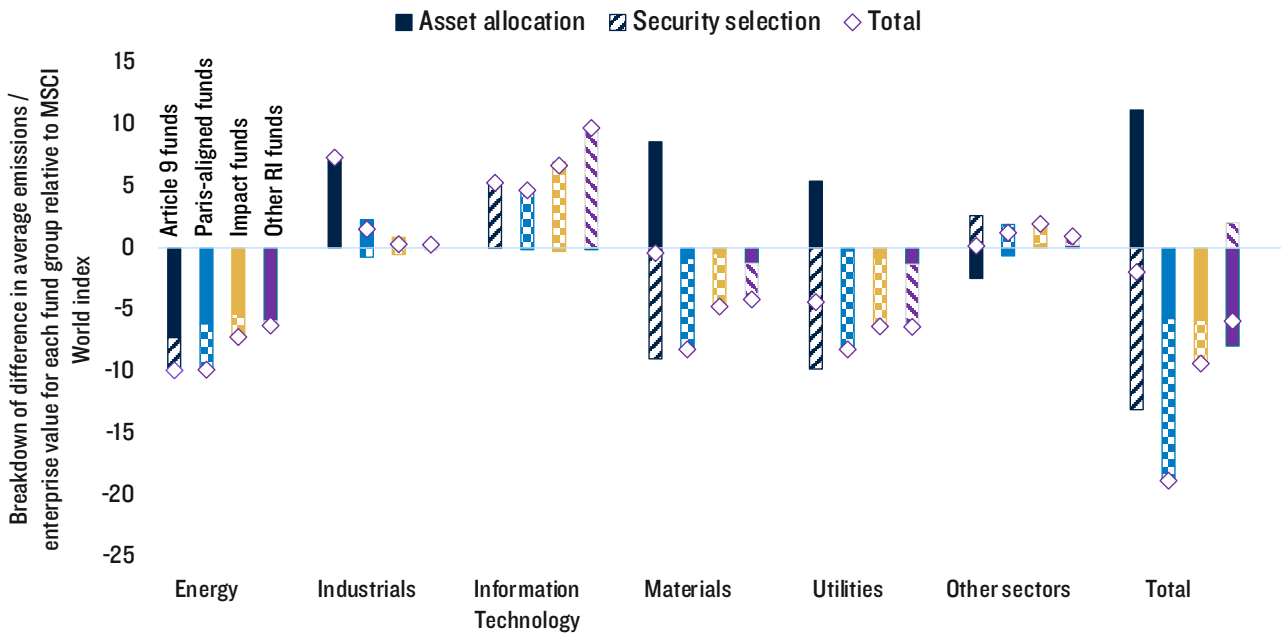
Just as the portfolio holdings can be divided into sectors (thus producing the sector tilts shown in Figure 4), so the portfolio-level emissions data in Figure 5 can be broken down into sectors. In fact, we can go further. A fund's financed emissions could differ from the market benchmark for two reasons:

- Asset allocation, *i.e.* it could be due to differences in the sector allocations of the fund, such as tilting toward lower rather than higher emissions sectors, or

- Security selection, *i.e.* even if the sector allocations are the same, differences will arise from choosing higher or lower companies within each sector.

Of course both effects are present in practice. The difference in emissions between each group and the MSCI World index in Figure 5 can therefore be broken into 22 pieces: an asset allocation and a security selection component for each of the 11 GICS sectors. The emissions for most sectors are negligible so only the five sectors with material contributions are shown in Figure 6. For each of the four fund groups, asset allocation components are shown as solid-filled blocks with security selection as patterned blocks for each GICS sector.

Figure 6: Contributions of Asset Allocation and Security Selection across Sectors to Portfolio Emission Levels



Note: Breakdown of portfolio emissions intensity, for different groups of responsible funds relative to MSCI World index. See note to Figure 5 for more detail of the metric used. Impact of asset allocation and security selection (see mai text) assessed using averages from each fund group excluding outliers. Source: LSEG Refinitiv Eikon – Lipper fund database, PMA calculations, as of 31 December 2023.

Figure 6 contains a lot of information. First notice (leftmost group in Figure 6) that the consistent underweight to the Energy sector observed earlier emerges here as a negative contribution from asset allocation in the Energy sector. There is some selection of lower-emitting companies within Energy but the impact of this is small by comparison. The Energy sector contributions might have been expected to be most marked for Paris-aligned funds since Paris-aligned benchmarks must exclude certain fossil-fuel companies, but as observed previously, divestment from the Energy sector is a much broader common feature across RI funds.

In contrast, for the next two highest-emitting sectors, Materials and Utilities, there is evidently much more room for choosing less GHG-intensive companies – the security selection here dominates the sector tilts. Earlier (Figure 4) we observed that Article 9 funds tilted *towards* these two sectors even though they typically have high emissions. Figure 6 shows that the security selection explains that surprising result: even though the tilts towards these two sectors are positive for Article 9 funds, the net impact of investments in these sectors is, as for the other 3 groups, a reduction in emissions compared to the MSCI World index.

Only two other sectors are significant for the financed emissions statistics: Industrials and Information Technology. These both contribute to an increase in emissions for the average fund, but for different reasons: primarily due to the sector tilt towards Industrials in the first case; and primarily due to security selection within the IT sector in the second case. There is essentially no overall tilt towards or away from the IT sector (Figure 4). Rather, the IT contributions seem to be due to RI funds generally favouring software and component manufacturers (*e.g.* semiconductors) over producers of consumer hardware – not an immediately obvious driver of portfolio emissions. IT's position as an important sector from a performance perspective may explain why the higher emissions of some of these companies are acceptable for these funds.

In all cases, as we saw already in Figure 5, the total effect (rightmost group in Figure 6) is a reduction in emissions. But the deeper examination has now made clear that the low level of emissions for Paris-aligned funds is only partly due to the sector tilts – the security selection within sectors is more important. These funds have chosen stocks that drive down the level of financed emissions within the funds. In contrast, the sustainability focus of Article 9 funds finds a different expression: yes, financed emissions are reduced compared to the MSCI World index but this is not the singular focus – investing in high-emissions sectors can be borne where this can be offset by careful choice of companies that are emitting less than their peers. Funds with a social impact focus are like a scaled-back version of the Paris-aligned funds – the environment shares priority with other fund aims but emissions are still reduced through both

asset allocation and security selection. In contrast the final group, other RI funds, allows the sector tilts to do the heavy lifting. Solely for this group, security selection acts as a brake on the emissions reductions arising from sector choices whereas elsewhere it is additive.

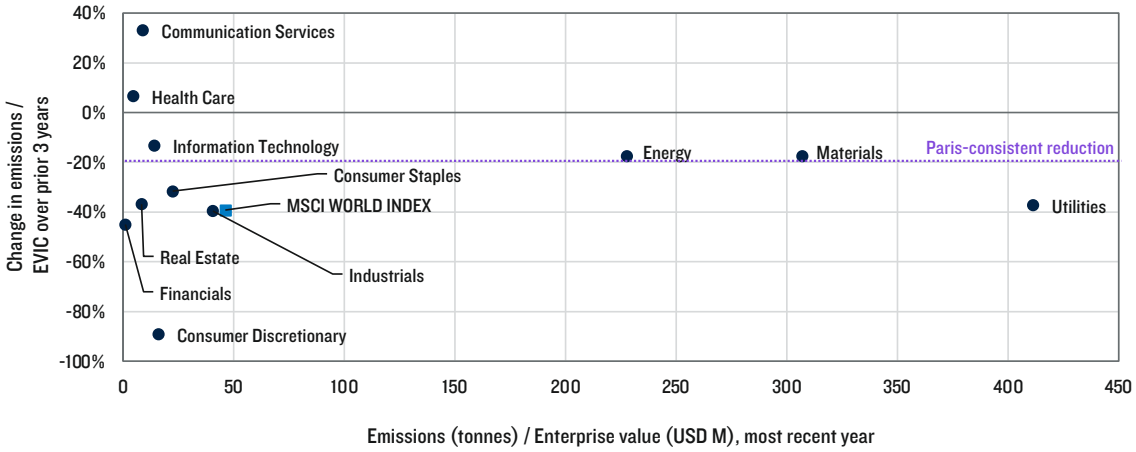
Looking at how greenhouse gas emissions vary over time provides another important perspective. Supporting decarbonisation of the economy is the underlying goal behind many a green objective, so it makes sense to examine how the companies in which RI funds invest stack up against this goal. Using the history of emissions for each holding, we calculate what the 3y change in emissions for each RI fund would have been if the holding weights had remained fixed over that period.

Figure 7 provides context here – it shows, for each of the 11 GICS sectors, the current level of emissions intensity (emissions / EVIC) and how this has moved over the last 3y. The highest-emitting sectors, Energy, Utilities and Materials, have reduced emissions less rapidly than the index as a whole (only slightly so in the case of Utilities). Moreover, Energy and Materials have reduced at a slightly slower rate than that required by the Paris Agreement (7% per annum, equating to about a 20% reduction over 3y).

Figure 8 shows both the emissions (on the horizontal axis) and the 3y change in emissions (vertical axis), assuming fixed portfolio weights, for the four groups of RI funds. It can be seen that whereas Paris-aligned funds have achieved their steeper reduction in financed emissions by selecting companies that have decarbonised faster than the MSCI World parent index, the other fund groups have reduced emissions by holding companies that have reduced emissions more slowly.

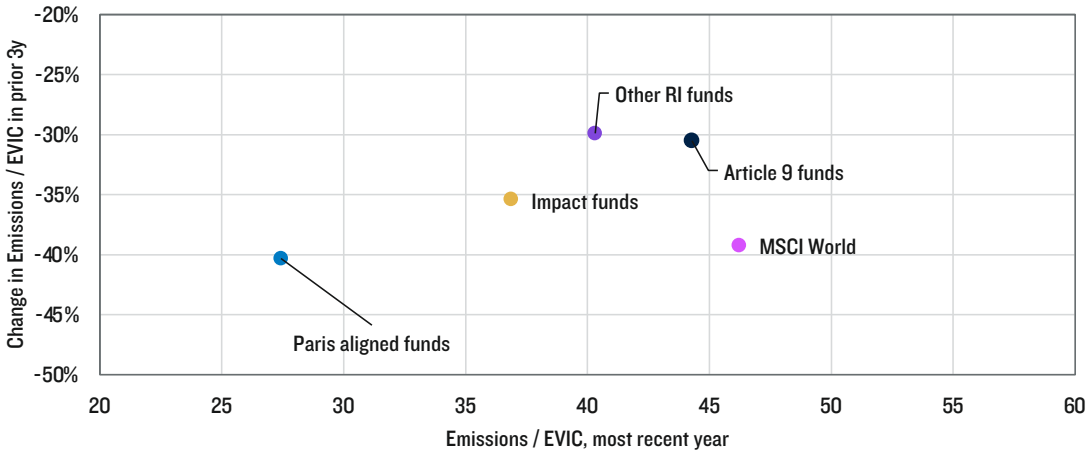
When looking at the current level of emissions (Figures 5 and 6), it was these three high-emissions sectors that had the greatest importance, while choices about what stocks to hold in low-emissions sectors were more marginal. But once high-emitting stocks are removed then a portfolio's emissions are no longer dominated by just these sectors. When looking at *changes* in rather than *levels* of emissions, a much broader swathe of the portfolio therefore becomes material. The impact of holding a company or sector with low emissions may be a rounding error when high-emitting stocks are present, but its behaviour becomes important when they are not.

Figure 7: Variation in Emissions Intensity across Sectors and across Time



Note: Portfolio emissions intensity for different sectors of MSCI World index, using current index constituents. Source: LSEG Refinitiv Eikon – Lipper fund database, PMA calculations, as of 31 December 2023.

Figure 8: Variation in Emissions Intensity across Fund Groups



Note: Median portfolio emissions intensity for different groups of RI funds (see Figure 1). Growth calculated using average emissions change for each group after excluding outliers. Source: LSEG Refinitiv Eikon – Lipper fund database, PMA calculations, as of 31 December 2023.

As noted earlier, a fund's choices in the highest emitting sectors, Energy, Materials and Utilities, are crucial for determining its current level of financed emissions. But reducing the allocation to Energy, or even divesting completely from that sector, will not just reduce a portfolio's emissions, it will also reduce exposure to a sector whose emissions have not been falling as fast as the rest of the index. The effect of this choice is therefore that fund's emissions will have fallen faster than the index. Yet Figure 8 shows that the aggregate effect is generally that RI funds hold companies where emissions have fallen more slowly.

RI fund positioning in Materials, Utilities or even Industrials (where we observed large tilts) have a negligible effect on the changes in emissions. The dominant effects instead come from security selection in the Consumer Discretionary, Financials and IT sectors.

Information Technology and Financials are the largest sectors and allocations made here are decisive. RI funds often hold stocks in the IT and Financials sectors that have higher emissions than average and where emissions have been falling more slowly than average. These stock selection choices are the dominant contributors to falls in emissions being slower than the index for RI funds as a whole. Allocations within the Consumer Discretionary sector also cause emissions to fall more slowly, but for different reasons: this is a sector where emissions have been falling fast and small underweights make a large difference. Overall these three sectors more than outweigh the contribution from the Energy sector underweight.

It may initially be surprising to see that emissions at companies in which RI funds invest have not fallen faster than the index. RI funds invest in companies with low levels of financed emissions compared to the index; so we might expect these companies to have been in the forefront of emissions reduction and a backward-looking view would show that they have reduced emissions faster than their peers. This explanation for changes in emissions is consistent with the data for the Paris-aligned fund group, but another force is at work elsewhere.

RI funds are also holding companies that have not yet embarked upon a determined path of decarbonisation. In some cases this will be because their business models already incur lower levels of emissions than their peers. But sustainability-focused funds should also be expected to take a forward-looking view, and select companies that are in the early stages of a decarbonisation journey. Holding companies that have relatively low levels of emissions, but perhaps which lag some of their peers in how steeply they have reduced them to date, is consistent with such an approach.

This illustrates the potential tension between two competing objectives: investing in companies with a low level of emissions today on the one hand and investing in companies who are on a path of future decarbonisation on the other. This tension works in two directions: not only will companies that are yet to decarbonise have a (relatively) high level of current emissions, but conversely companies which already have a very low level of current emissions will be unlikely to deliver a high rate of emissions reduction in the future. This has implications for a 'Paris-aligned' fund - required to meet a 7% p.a. emissions reduction target, when the overall economy is failing to achieve this – this must mean ever larger tilts away from the MSCI World parent index.

Sustainability-focused funds on the other hand – our Article 9 and Impact groups – do not need to worry as much about a steady ratchetting up of sector tilts over time: their RI goals enable them to fish in a wider pool and potentially participate more fully in a green transition, but their reported level of financed emissions today may set alarm bells ringing in the ears of some investors.

The debate around divestment illustrates the tension here. Stakeholder pressure may often take the form of calling for divestment from particular companies or industries who score badly on a metric such as GHG emissions. Divesting from companies with high emissions and increasing exposure to companies with low emissions is of course very effective for a portfolio's level of financed emissions. But it has a zero immediate real-world impact: the previously-held stock or debt of a company is just held by a different party, with no direct impact on the company itself. Responsible investors do not just target a warm inner glow from not being the ones providing capital to finance emissions: they usually want overall emissions to fall. Otherwise, the planet will warm - the result would just be a warm outer glow too! Yet even if the immediate impact is nil, it is usually expected that second-order investment and divestment impacts will occur in a number of ways, for example through:

- **Moral pressure,** *i.e.*, making failure to deliver emissions reductions transparent through reporting, and having this be socially unacceptable;
- **Financial pressure,** *e.g.*, increasing the cost or even availability of capital for companies whose activities incur environmental or social harms, thus encouraging greener behaviour; or
- **Active ownership,** *i.e.*, making demands on investee companies, either through shareholder voting or via direct engagement with company management.

Divestment has a long history. The history of the campaign to remove the sources of funding from apartheid-era South Africa is commonly held up as an example of the strategy's success. This is arguably a simplistic characterisation of a complex story – so perhaps mythology rather than history - but at a minimum, divestment did help to mobilise first popular opinion and then action by state actors, ultimately making political change difficult to avoid. The effectiveness is debated and in any case occurred over a longer timescale than is available for halting global warming.

In the RI context, there is some evidence that, in the short term, increasing cost of capital may result in companies being unable to afford the investments required to make their activities greener.[5] In shaping their objectives in the RI space, investors must therefore form their own view on how to rank reducing financed emissions versus using their investments to encourage companies in a transition towards Net Zero.

Financial Performance

The average performance of funds over the last 5y within the four RI groups is shown in Figures 9 and 10, relative to the MSCI World index. In general, performance was strong in 2020 but all the fund groups have trailed the index on average in subsequent years. Fees weigh on the performance of all active funds, which explains some of the downward trend over time, but it is the variation in the performance over time that merits a closer look.

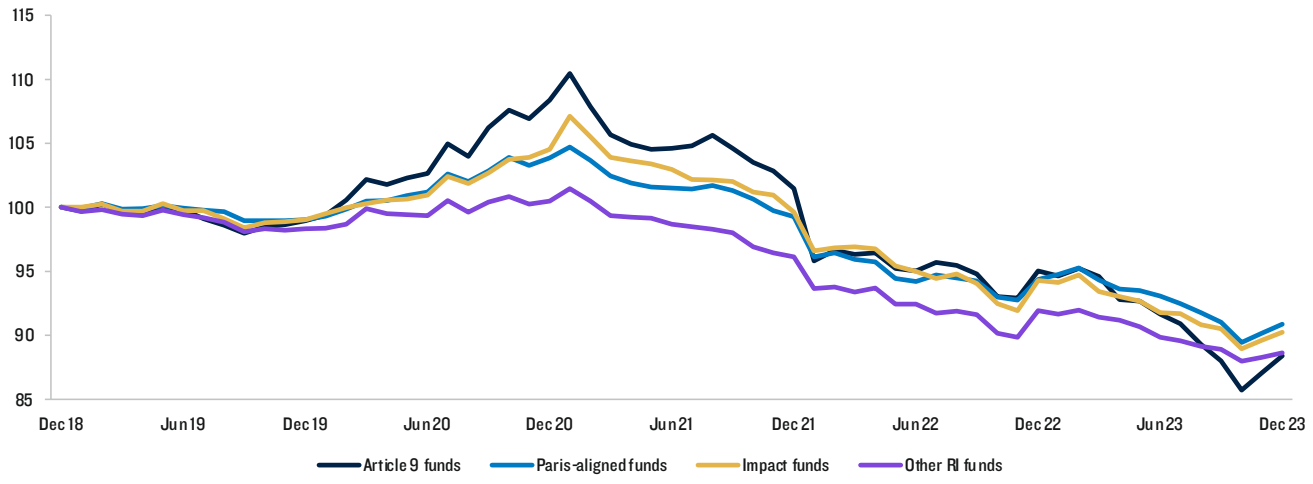
The four fund groups contain distinct sets of funds (Figure 2) and Figure 9 suggests that there is a common driver of these different funds' performance. Indeed, the average correlation between the excess returns here is 88%. Applying principal component analysis to the correlations between the four fund groups, we can interpret the eigenvector corresponding to largest eigenvalue as a common 'RI factor'. This factor explains between 90% and 93% of the variation in returns over time across the four groups. The Article 9 funds have the highest beta to this factor, followed by the Impact fund group. Average excess returns for non-RI funds, by contrast, are only 51% explained by this factor.

The earlier analysis showed that RI funds share some sector preferences (Figure 4) but that a more significant component of funds' portfolio construction takes place within sectors. The sector tilts are just a more visible reflection of funds' deeper stock preferences. The funds' financial performance supports this interpretation. The relative returns due to each group's average sector tilts are highly correlated with the other groups (average: 87%), despite apparent differences between the groups. Moreover, the sector-tilt-driven return has a correlation of around 50% with the total relative return of the groups – Figure 11 shows an example.

The sector component of RI fund performance over the period is readily understandable. Oil and gas stocks were heavily knocked in the wake of coronavirus lockdowns in early 2020 but performed well as economies reopened in 2021 and then again after Russia's invasion of Ukraine in February 2022. The same focus on emissions that leads RI funds to tilt to particular sectors also encourages investment in the same industries or companies: preferences for low-emissions can be more finely expressed than simply in sector rotations. The non-sector effects of this 'RI factor' are directionally the same as the sector effect: contributing to outperformance in 2020 and then to underperformance in each of the following three years.

Finally, Figure 12 shows how these performance differentials are related to fund flows: periods in which money flowed into RI funds tend to coincide with periods where RI funds outperformed the broader market; similarly flows out are broadly aligned with periods of underperformance. The 50% correlation could reflect outperformance causing investor flows or conversely investor demand bidding up the prices of RI-fund-favoured securities; or even that both of these are being driven by a third element such as media coverage.

Figure 9: Average Performance across Fund Groups



Source: Median cumulative performance relative to a MSCI World index tracker fund. LSEG Refinitiv Eikon – Lipper fund database, PMA calculations, as of 31 December 2023.

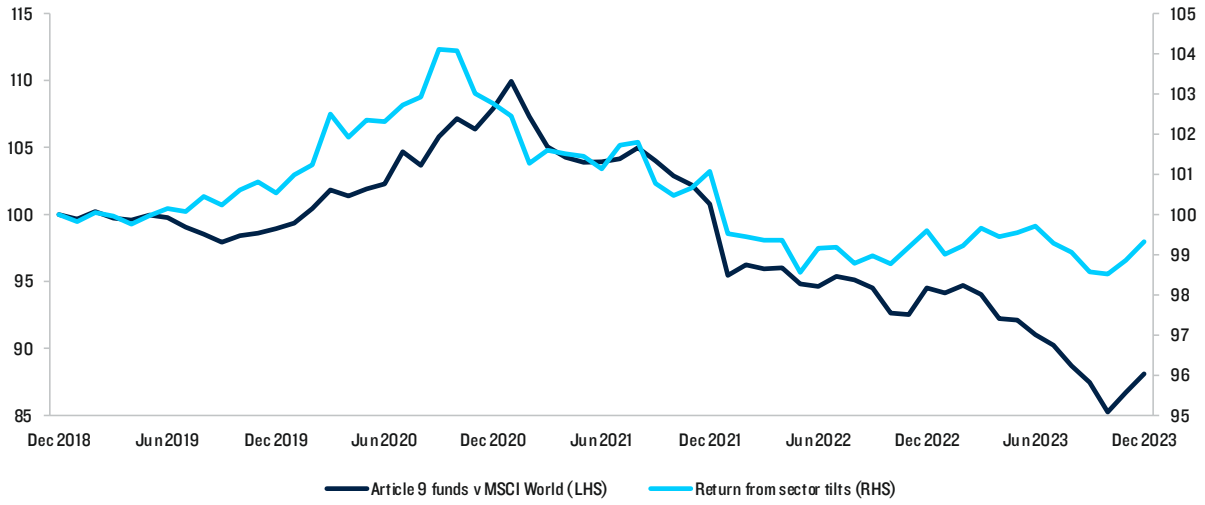
5 See Hartzmark, Samuel M. and Shue, Kelly, Counterproductive Sustainable Investing: The Impact Elasticity of Brown and Green Firms (November 1, 2022). Available at SSRN: https://ssrn.com/abstract=4359282 or http://dx.doi.org/10.2139/ssrn.4359282

Figure 10: Average Performance Relative to Index in Recent Years

	2019	2020	2021	2022	2023
Paris-aligned funds	-1.3%	5.5%	-5.2%	-3.5%	-4.6%
Impact funds	-1.2%	5.4%	-4.8%	-3.7%	-4.9%
Article 9 funds	-1.3%	10.8%	-7.6%	-4.8%	-8.7%
Other responsible funds	-2.1%	2.3%	-5.1%	-3.1%	-4.5%

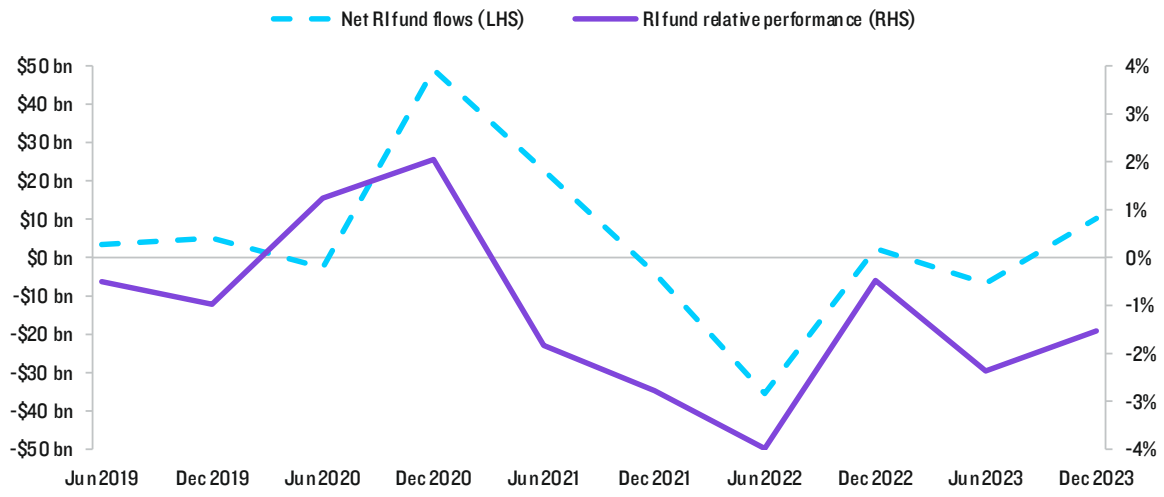
Note: average performance of each fund group relative to MSCI world index. Source: LSEG Refinitiv Eikon – Lipper fund database, PMA calculations, as of 31 December 2023.

Figure 11: The Factors Driving RI Performance are Closely Related to Sector Tilts



Source: LSEG Refinitiv Eikon – Lipper fund database, PMA calculations, as of 31 December 2023.

Figure 12: Performance of RI funds and RI Fund Flows



Note: Average 6-monthly performance of RI funds relative to the MSCI world index over a 5y period. Net fund flows derived from histories of fund sizes and fund NAVs. Source: LSEG Refinitiv Eikon – Lipper fund database, PMA calculations, as of 31 December 2023.

Final Thoughts

This paper has looked at RI funds in aggregate, using large subgroups of the RI universe to identify similarities and differences in the approaches taken and outcomes achieved. There is of course just as much individual variation between funds too, but the high-level view provides an initial guide for investors navigating this space.

Constructing portfolios with a low level of financed emissions may be a common aim or constraint, due to its relative simplicity and comparability across funds, but we have seen that different groups of funds diverge from this as a primary objective in important ways. A desire for aligning portfolio emissions with the Paris Treaty leads to significant portfolio positioning, often observed as divesting from high-emission sectors. Companies that have decarbonised, or that operate in sectors with low emissions, are rewarded with inclusion in these funds. It can be less clear to what extent these funds can drive real-world emissions reductions.

Funds that frame their sustainability objectives differently, represented here by the Article 9 and Impact groups, have demonstrated their ability to invest in companies at an earlier stage of their path towards Net Zero, as well as including non-environmental objectives. These funds both aim to support, and expect to benefit financially from, the green transition – but the last several years have been hard for them from a performance perspective.

Ultimately we have seen that, whatever the emphasis in objectives, the performance of all these funds is very interlinked – the different fund styles then allow investors not just to find a fund that supports their own objectives but also to have the financial impact of the world's transition towards Net Zero be a larger or smaller component of the overall portfolio performance.

Summary

Fund Group	Comments
Paris-aligned funds	• These funds achieve a low level of portfolio emissions, not just through a combination of significant divestment from sectors but also by selecting companies with low emissions levels • The resulting companies have decarbonised significantly in recent years, suggesting that further portfolio repositioning is likely to be required to maintain their target decarbonisation trajectory
Impact funds	• The funds have demonstrated willingness to invest in sectors with currently-high emissions, and ability to select companies with low emissions that are a relatively early stage of decarbonisation • Performance for these funds has been the most challenged in recent years but conversely they are also best positioned for a return to positive performance from RI themes
Article 9 funds	• These funds are in many ways intermediate between Paris-aligned funds and Article 9 funds, exhibiting significant security selection
Other responsible funds	• These funds achieve a lower emissions level relative to the market (MSCI World index here), not as low as some other fund groups but with smaller sector tilts • In general these funds have more reliance sector tilts and less on selecting individual securities, enabling them to meet emissions targets an investor may have with only modest tracking error

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20231127-3239520