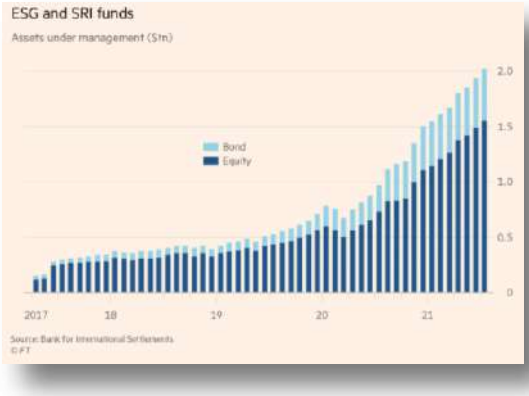
ESG Investing – it's time we 'look up'[1]!

Investor's appetite for ESG-focused strategies has been insatiable in recent years, leading to a boom in assets for ESG-dedicated strategies. ESG has now become mainstream, which is good news, to some extent.

While it started with a gradual but persistent increase in demand from investors, regulators then "cemented" ESG's status with a large array of regulations, making the fundamentals of ESG investing almost mandatory. The EU led the way back in 2014 with the Non-Financial Reporting Directive, but regulators in all corners of the globe have now considered or are considering some degree of mandatory ESG disclosures to help investors build their products.



The recent COP26 generated a lot of attention. With governments, companies, banks, NGOs and other organisations multiplying their commitments, a consensus has emerged that this race to prevent irreversible climate change is here to stay.

The finance industry has been required to adapt rapidly to this new and complex environment. Investors now must consider the social and human rights aspects of each and every investment, conduct environmental impact analysis and assess the ethics or culture of investee companies. The response has been impressive, but we believe it raises (~~poses~~) three questions. Firstly, how exactly did the industry respond to this appetite for a stronger focus on ESG? Secondly, do those responses address the key concerns that initially prompted them? Thirdly, what are these ESG strategies actually achieving, if anything?

The industry's response to the growing demand for ESG

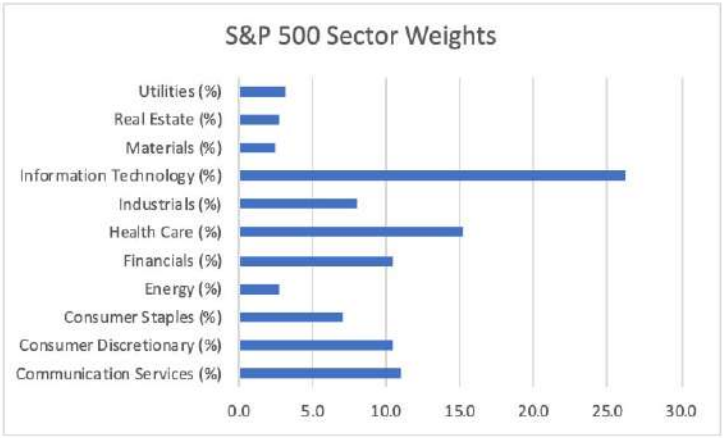
When looking at ESG strategies, whether it is the MSCI ESG index, the holdings of the "low carbon strategies", or the sky-high valuations of a number of highly popular ESG stocks, what strikes us is that not all sectors are treated equally. Indeed, some sectors seem to receive a lot more attention from "ESG strategies", and this is true of both active and passive investments[2]. Two sectors clearly stand out in ESG investing: the tech sector, and the pharmaceutical sector. Intriguingly, these sectors are also the most dominant in the S&P 500 before any ESG filters are applied; this raises the question of

[1] Referring to the apocalyptic black Adam McKay comedy "Don't Look Up"

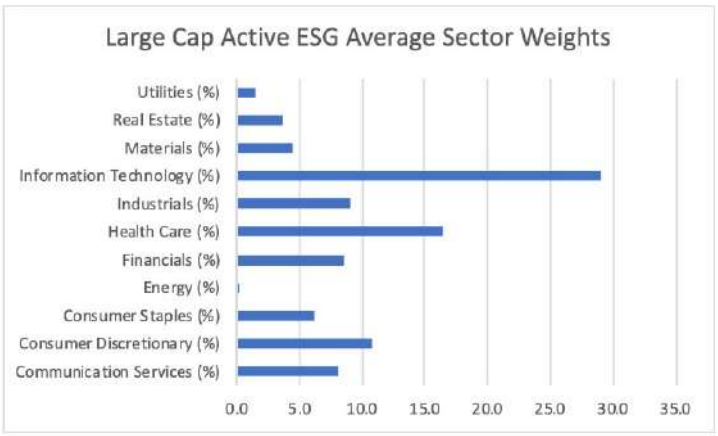
[2] As shown for instance in this analysis conducted Refinitiv Lipper, the leading American financial services firm.

whether ESG funds are really allocating to these sectors for their ESG credentials, or simply seeking to justify existing allocations while claiming ESG branding.

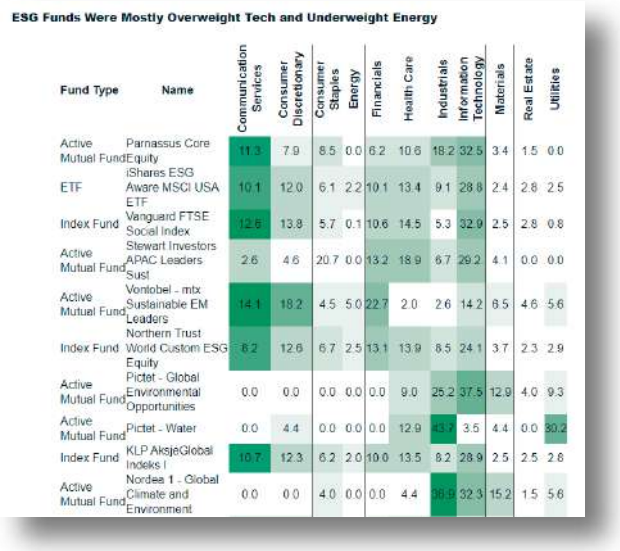
Large-cap active ESG average sector weights and S&P 500 sector weights



Source: Refinitiv Lipper



Source: Refinitiv Lipper



ESG Funds Were Mostly Overweight Tech and Underweight Energy

Fund Type	Name	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Information Technology	Materials	Real Estate	Utilities
Active Mutual Fund	Parnassus Core Equity	11.3	7.9	8.5	0.0	6.2	10.6	18.2	32.5	3.4	1.5	0.0
ETF	iShares ESG Aware MSCI USA ETF	10.1	12.0	6.1	2.2	10.1	13.4	9.1	28.8	2.4	2.8	2.5
Index Fund	Vanguard FTSE Social Index	12.6	13.8	5.7	0.1	10.6	14.5	5.3	32.9	2.5	2.8	0.8
Active Mutual Fund	Stewart Investors APAC Leaders Sust	2.6	4.6	20.7	0.0	13.2	18.9	6.7	29.2	4.1	0.0	0.0
Active Mutual Fund	Vontobel - mtx Sustainable EM Leaders	14.1	18.2	4.5	5.0	22.7	2.0	2.6	14.2	6.5	4.6	5.6
Index Fund	Northern Trust World Custom ESG Equity	8.2	12.6	6.7	2.5	13.1	13.9	8.5	24.1	3.7	2.3	2.9
Active Mutual Fund	Pictet - Global Environmental Opportunities	0.0	0.0	0.0	0.0	0.0	9.0	25.2	37.5	12.9	4.0	9.3
Active Mutual Fund	Pictet - Water	0.0	4.4	0.0	0.0	0.0	12.9	43.7	3.5	4.4	0.0	30.2
Index Fund	KLP AksjeGlobal Indeks I	10.7	12.3	6.2	2.0	10.0	13.5	8.2	28.9	2.5	2.5	2.8
Active Mutual Fund	Nordea 1 - Global Climate and Environment	0.0	0.0	4.0	0.0	0.0	4.4	36.9	32.3	15.2	1.5	5.6

Source: MSCI

At the end of December last year, the stocks most widely held across the world's 20 largest ESG funds, which altogether manage about $340 billion AUM, were: Microsoft, Alphabet (parent company to Google), and Apple[3]. This comes as a little surprise as, from an ESG standpoint, we are caught by the multiple data security legal challenges faced by Facebook, an ownership structure giving Mark Zuckerberg a majority voting power, or its overall weak business ethics. Similarly with Apple, continuously the target of poor working conditions in Chinese factories. Similarly with Amazon, often under the fire for its poor labour practices and monopolistic behaviour. Do those really deserve this "ESG leadership"?

Top stocks held by the 20 largest ESG funds skew towards technology and healthcare

Company	Sector
Microsoft	Technology
Alphabet	Technology
Apple	Technology
Ecolab	Materials
Thermo Fisher Scientific	Healthcare
Danaher	Healthcare
Linde	Materials
Waste Management Inc	Industrial services
Roper Technologies	Technology
Agilent Technologies	Healthcare

Source: Rumi Mahmood/MSCI

According to *Emre Tiftik*, director of sustainability research at the Institute of International Finance: a "bias towards tech stocks was to be expected, because they accounted for a rising share of the market and ESG fund managers 'don't want to be too extreme' in their selections"[4].

We agree with *Emre Tiftik* and do believe that the technology and healthcare sectors were readily favoured by ESG-focused investors on the basis that they were on the one hand seen as great financial beneficiaries from the pandemic and could on the other hand be quickly characterised as "low-carbon sectors with strong net zero targets". In other words, investors may have been happy to adopt ESG frameworks that conveniently allowed them to continue investing in the sectors they would have favoured in any case, while other sectors seen as being 'bad' from an ESG stand-point, such as Energy, Mining or Utilities, were already out of favour, in particular during COVID-19 crisis where the energy sector was hit hard, and therefore likely considered as acceptable collateral damage.

[3] https://www.ft.com/content/415bcf2a-c9d5-4a1a-90bb-80ac8d3bc43c - From FT 18th January 2022 and according to Vice-President of ESG research at MSCI.

[4] https://www.ft.com/content/ea295d51-d5c2-4916-8c63-017c352ea577

Is this the correct response?

We question the extent to which sweeping generalisations of different sector groups should form the basis of ESG investing. Furthermore, we question the underpinnings of these generalisations - are the tech and pharma sectors really as "clean" and "low carbon" as people assume them to be?

Consider first the technology sector.

As computer hardware and software becomes ever-more powerful, their demand for energy is also rising. Therefore, we question the basis for the widely-held view that the technology sector is inately 'low carbon' simply because the production process does not generate significant emissions.

Specifically, the three categories of emissions established by the Greenhouse Gas (GHG) Protocol are as follows:

- Scope 1 refers to direct emissions from a company's own activities, such as the refrigerants used to cool data centres.
- Scope 2 refers to emissions from the production of purchased energy, for instance the energy consumed by hardware inside the data centres.
- Scope 3 refers to emissions from all activities along the value chain - in other words, all the emissions from raw material extraction to the use of the end product, including the emissions generated to manufacture the server hardware and then build and install the data centre itself[5].

Officially, the tech sector is responsible for 4% of greenhouse gas emissions (GHG)[6], and the energy required to support this is increasing by 9% each year. Estimates show that the communications industry could be responsible for up to 20% of the world's electricity consumption by 2025[7].

The more powerful our personal devices like smartphones, desktops and laptops, become (i.e. more memory, bandwidth, storage capacity), the more the carbon footprint of the manufacturing process increases. As such, an increasing percentage of emissions are being derived from the manufacture of hardware, and this trend looks unlikely to reverse[8] .

The same trend is observed for data centres. According to recent analysis from the EU Commission, the energy consumption of EU datacentres has grown by 42% between 2010 and 2018. Today, EU datacentres are thought to consume close to 416 terawatts per year, which is much more, for example, than all of the electricity used by the United Kingdom[9]. Taken individually, one of the world's biggest data centres requires more than 100 megawatts of power, which is equivalent to powering 80,000 homes, according to thinktank Energy Innovation[10].

We understand why Professor *Ian Bitterlin,* in an interview back in 2016, had warned against the "unsustainability" of the growth of data centres over the next 10-15 years if nothing was done to address how much power those facilities require. The Professor also claimed that the impending

[5] https://www.sciencedaily.com/releases/2021/11/211118203514.htm
[6] https://www.unep.org/news-and-stories/story/new-pact-tech-companies-take-climate-change
[7] https://escp.eu/news/reduce-your-digital-carbon-footprint-shape-greener-future
[8] https://tech.fb.com/sustainable-computing/
[9] https://www.nextinpact.com/article/44577/leurope-face-a-consommation-croissante-datacenters-et-lexplosion-services-cloud
[10] https://www.egi.co.uk/news/data-centres-feel-the-heat-over-energy-consumption/#:~:text=Data%20centres%20use%20a%20lot,of%20carbon%20dioxide%20a%20year.

growth of this industry will mean that three times as much energy will be needed to power these facilities over the next decade[11].

If the tech giants were to utilise renewable energies to power their facilities, the scale of the effort would be immense. To put things into perspective, it is estimated that 412 wind turbines can produce one gigawatt per year, whereas a company like Digital Realty that owns 267 data centres across the world requires about 1.2 gigawatts of power per year to operate[12].

In terms of reporting all of the above concerns, it was found that almost 50% of the largest software and hardware manufacturers in fact fail to report emissions that are generated from the full life cycle and supply chain of the products they produce and their required infrastructure. This could include, for instance, the energy required in the manufacturing of products and equipment; the carbon costs associated with all the different components; the energy consumed when using this equipment; and the disposal of the products after they have fulfilled their purpose[13]. Taking all of those into account (i.e., all Scope 1, Scope 2, and Scope 3 emissions), we find that the sector would in fact for instance be responsible for twice that of the much-maligned aviation industry, itself the target of all our criticisms – also called the "flight shame movement" - but in reality, today accounting for around 2% of global emissions[14].

Our conclusion is therefore that the tech sector is neither carbon-free, nor particularly "clean". It is clearly highly dependent on two other sectors: the mining sector, which is responsible for the extraction of the necessary materials, and the energy sector, which creates the power needed for the production of those hardware items, and allows our data centres operate and cool down.

Let's now turn to the pharmaceutical sector.

Of course, the sector has played a significant role during the COVID-19 pandemic through the development and distribution of vaccines. We can therefore see how the sector has contributed to SDG pillars of "Good Health and Well-Being" (SDG3) and "Decent Work and Economic Growth" (SDG8) - helping people to stay healthy and to then continue working. On the other hand, the sector has not so successfully fulfilled SDG10 pillar: "Reduced Inequalities", as the distribution of vaccines was often dependant on countries' means, which may have reinforced existing inequalities. Similarly, this inequal distribution is likely to have increased poverty further in developing countries, meaning that the sector's contribution to SDG1: "No Poverty" must also be in doubt.

We may also wonder about the link between the pharmaceutical sector and the desire to invest in "low carbon" strategies. How does the pharmaceutical industry provide a solution to our climate change concerns? Our contention is that the sector has, in fact, little direct role in addressing climate change and shouldn't therefore be viewed as a 'low carbon' sector.

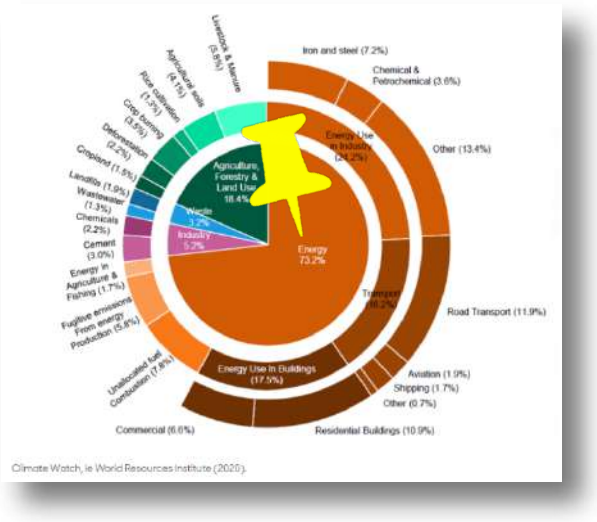
While investors seemingly focus on pharma or technology allegedly because of their apparently low carbon emissions, we believe that this approach is flawed. As outlined above, the pharmaceutical sector has no true link or impact on climate change, while the tech sector is a larger consumer of energy than we may think and requires a significant amount of raw material to be mined.

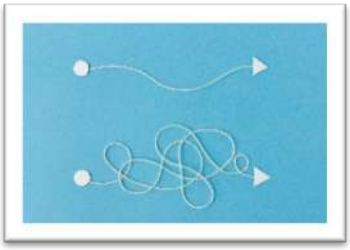
[11] https://www.egi.co.uk/news/data-centres-feel-the-heat-over-energy-consumption/#:~:text=Data%20centres%20use%20a%20lot,of%20carbon%20dioxide%20a%20year.
[12] https://www.egi.co.uk/news/data-centres-feel-the-heat-over-energy-consumption/#:~:text=Data%20centres%20use%20a%20lot,of%20carbon%20dioxide%20a%20year.
[13] https://www.sciencedaily.com/releases/2021/09/210910121715.htm
[14] https://www.sciencedaily.com/releases/2021/09/210910121715.htm

Looking at ESG investing through the concept of "double materiality" introduced by the EU Commission: an ESG investor should look at the impact of climate change will have on companies, taking into account upcoming climate change risks to offer a "safer portfolio", but also, looking at the impact companies *have on* climate change, this time evaluating what companies are effectively doing to offer solutions to our transition challenge, we believe that neither the tech and today's most popular stocks such as Microsoft, Alphabet or Apple, nor the pharma sectors, is meeting this double materiality test. They are neither immune from climate change risks, nor do they offer solutions to our climate change transition's needs. .

Could we do things differently?

We posit that, to truly fight climate change, investors should not be focusing exclusively on some specific sectors. Accepting that our world is interconnected, and nothing operates in a vacuum is also to accept that no ESG strategy can be meaningful if sectors are only being looked at individually. If you want to change something you need to go to the root of the problem, rather than just scratching the surface.





Not only do we consider that over-representing the tech and pharma sector in ESG portfolios is merely scratching at the surface of the problem, but we also consider that selectively investing in *some* companies within the traditionally "high emitting sectors" is required in order to truly get to grips with the problem. In our view, this is essential if we really wish to play a role in driving today's energy transition.

Let us start with the mining sector.

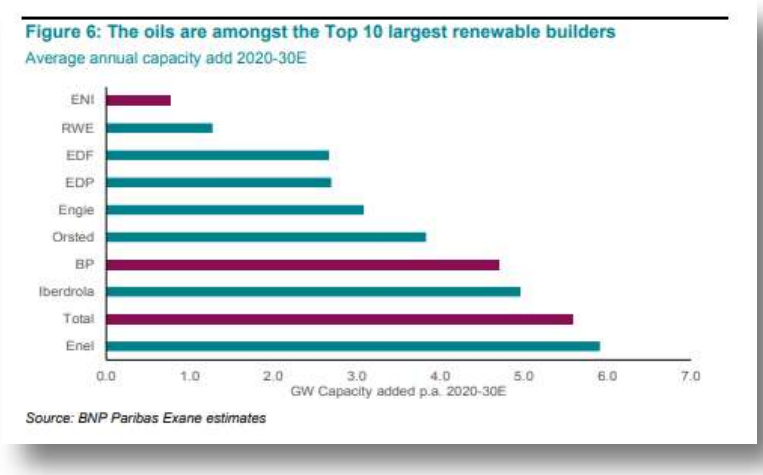
We are not saying that all mining companies are in fact a force for good and are therefore all deserving ESG-driven capital flows. What we say is that the work of an active investor, through their research and forward-looking analysis, is to identify the companies that want to continue doing business as usual without looking at alternatives, and which are the ones that instead try to, for instance, increasingly focus on the materials that are essential to our energy transition: steel or copper, for which demand has soared for the past years, used for solar, hydro, thermal and wind energy; cobalt or nickel, used for the lithium batteries that power electric vehicles and energy storage systems; or zinc, used for rechargeable batteries.

We believe the industry is faced with a crucial challenge. Do we continue to effectively prohibit ESG-focused investors from investing in metal and mining companies, or do we start to take ownership of the emissions across the full value chain and support those companies that can drive the process of energy transition?

It is similar for companies operating in the Oil & Gas sector.

Shouldn't we stop turning our back to the industry and instead encourage the companies that are looking for alternatives to oil? Do we not realise that the oil industry is in fact only responding to the energy demand of all the other sectors: consumer goods, transport, industrials...? We use oil to drive our cars, to receive our food in shops, to warm our homes, to build new homes, or to produce most of our daily products. Is the solution really to ignore this industry, and invest in "ESG" tech or pharma strategies, thereby ignoring that our economy is in fact today still very much depending on fossil fuels to function?

Today and with the rising global energy prices, the ESG world is indeed facing its first test, and it seems that global demand is suddenly peaking for oil, or gas, or coal, or whatever can effectively help keep our homes warm and maintain affordable prices. Did we underestimate how quickly we can switch to clean energy, and what it takes to actually make this switch happen?



Not everything is to be blamed within the energy sector, and it appears that some of the companies in the sector have in fact made major commitments to g*radually* make this shift happen, little by little committing to abandon new oil & gas exploration projects whilst investing billions in research for renewable energies and other green energy projects.

Data from the International Energy Agency shows that renewables account close to two-thirds of the *new* net power capacity around the world. It is expected that the share of renewable-based power output could reach more than 20% across the EU, the US and China by 2035[15], with some of the oil majors becoming increasingly active in shaping those new strategies.

The more we encourage them to do so, as investors, the more they will push further their commitments and ambitions. Countless renewable projects have already been launched by some companies in the industry, from the acquisition large solar power projects in Europe, investments in fast-charging batteries, the implementation of massive networks of charging points or the production of millions of electric vehicle batteries. A number of energy stocks are actively 'greening' and will likely be among the most important renewable players of the next decade. Shouldn't these companies be on the receiving end of ESG-driven flows instead of focusing on those in the technology or pharmaceutical sectors?

We don't believe in following the crowd when it comes to effective ESG investing. Indeed, we believe the crowd is missing that ESG investing should not be about dividing whole sectors into groups of 'good' and 'bad' while focusing only on direct emissions; as we have seen, this leads to investor funds flowing to sectors with limited Scope 1 or 2 emissions but overlooking the full impact. This is only the

[15] https://www.sciencedirect.com/science/article/pii/S2211467X19300574

tip of the iceberg. In contrast, we believe that ESG investing should be about doing deep fundamental research on climate innovation, understanding the pathways that can lead to decarbonisation, and anticipating how the future can be shaped, from both an environmental and social perspective.

Our concluding thoughts

As Mark Carney, the former director of the bank of England, said, this should all be about financing the transition, as the transition needs financing. Indeed, the International Energy Agency estimates that a low-carbon transition requires $3.5 trillion in energy sector investment every year for decades, which is at least twice the current rate. Brussels is also asking Member States to increase their share of renewables to 40% by 2050[16]. The transition gap between what we already do and what is needed is huge and efforts need to be made between Europeans, country by country as well as by companies in *all* sectors.

Under this scenario and to be carbon-neutral by 2050, nearly 95 percent of the electricity supply will have to be generated from low-carbon sources, 70 percent of new cars will have to be electric, and the carbon dioxide intensity of the building sector will for instance have to fall by 80 percent[17]. There is a lot to do, and more than ever investors need to play an active role in helping the companies willing to drive the energy transition access the capital they require. Active ESG investors shall become specialists of climate change and learn how to identify the most disruptive environmental technologies; they need to identify the world's most pressing social concerns while making sure modern standards of corporate governance are met; they need to combine robust metrics with a thorough investment discipline. ESG investing should enable us to secure our planet's health for both the near and long term, providing real solutions on a global scale and facilitating the energy transition together with a more sustainable way of living for many[18]. To succeed, we need diversity in ESG investing, with different solutions to different problems and strategies of all different flavours. We need to avoid groupthink and instead think differently to reimagine a world with lower emissions and more positive social outcomes.

[16] https://www.lemonde.fr/planete/article/2021/07/14/transports-chauffage-importations-bruxelles-presente-12-propositions-de-loi-pour-le-climat_6088244_3244.html
[17] https://www.iea.org/reports/net-zero-by-2050
[18] https://www.privateequityinternational.com/impact-investments-role-in-the-fight-against-climate-change/