The Passive Revolution

Adrienne Buller &
Chris Hayes
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Indifference operates passively, but it operates. - Antonio Gramsci

Introduction

How corporations are owned and governed, and in whose interests, is a structuring force of the global economy. In our previous report, "Under New Management", Common Wealth traced the rise of a new corporate governance regime in the UK economy: asset manager capitalism. Defined by Benjamin Braun as the result of concentration among powerful asset management firms that are universal (with ownership stakes spread across the whole economy), strong (with significant positions in the companies they hold) and fee-based (with fees scaled according to the size of the pool of assets they manage rather than not for profit, like a pension fund), asset manager capitalism marks a new era of ownership and control. Its implications for how corporations are governed - and by extension, how society will respond to major challenges like the climate crisis- remain only partially understood.

Asset manager capitalism did not arise spontaneously. It is the product of a series of important shifts in the structure and distribution of ownership in the economy over the past several decades. The first shift, detailed in our previous report,[1] began with the enactment of neoliberal policy programmes that deregulated finance and privatised large swathes of the UK economy under the premise of generating a "shareholder democracy". More recently, a second major shift has been defined by the rise of a cohort of asset management titans and a corresponding concentration of corporate ownership and control. This shift has in large part been propelled by the growing dominance of "passive" (index-tracking) investment strategies. The deepening of this trend in the UK context is the focus of this report.

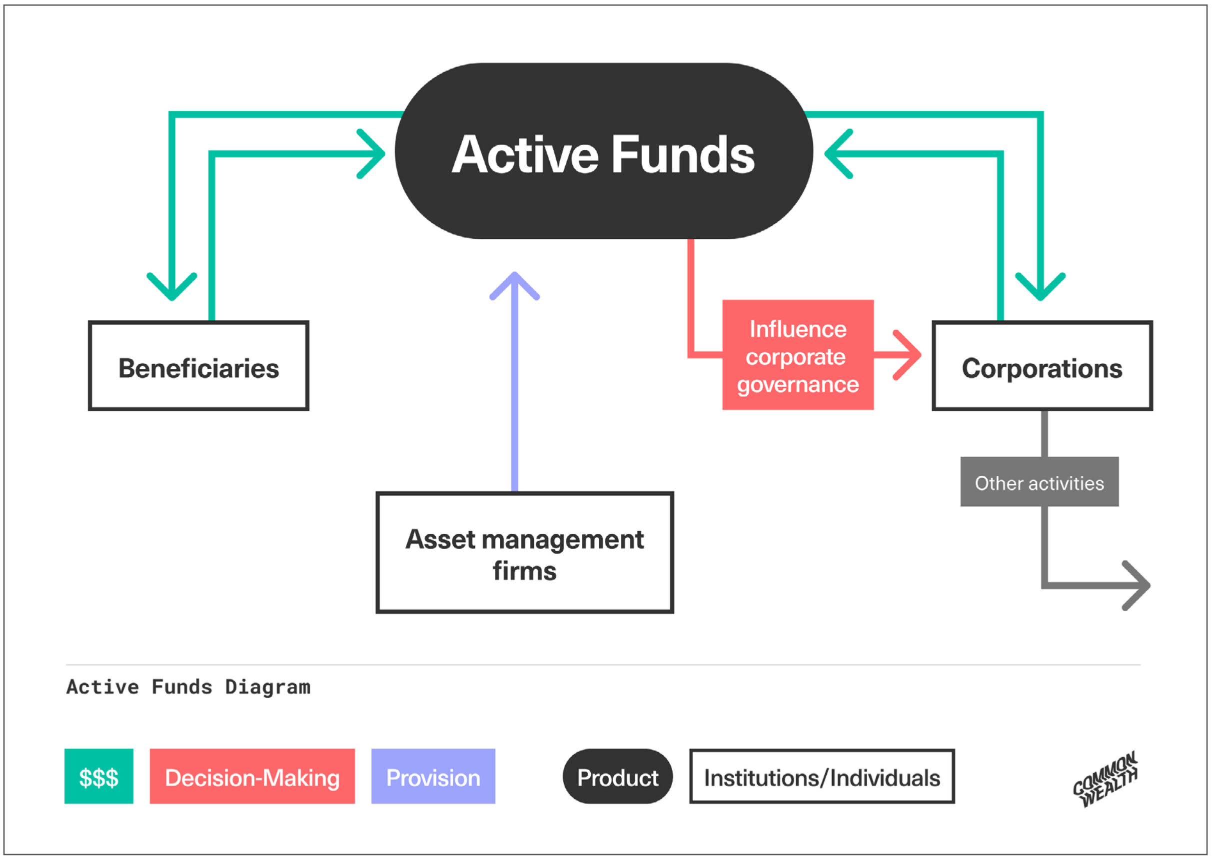
What is passive investing?

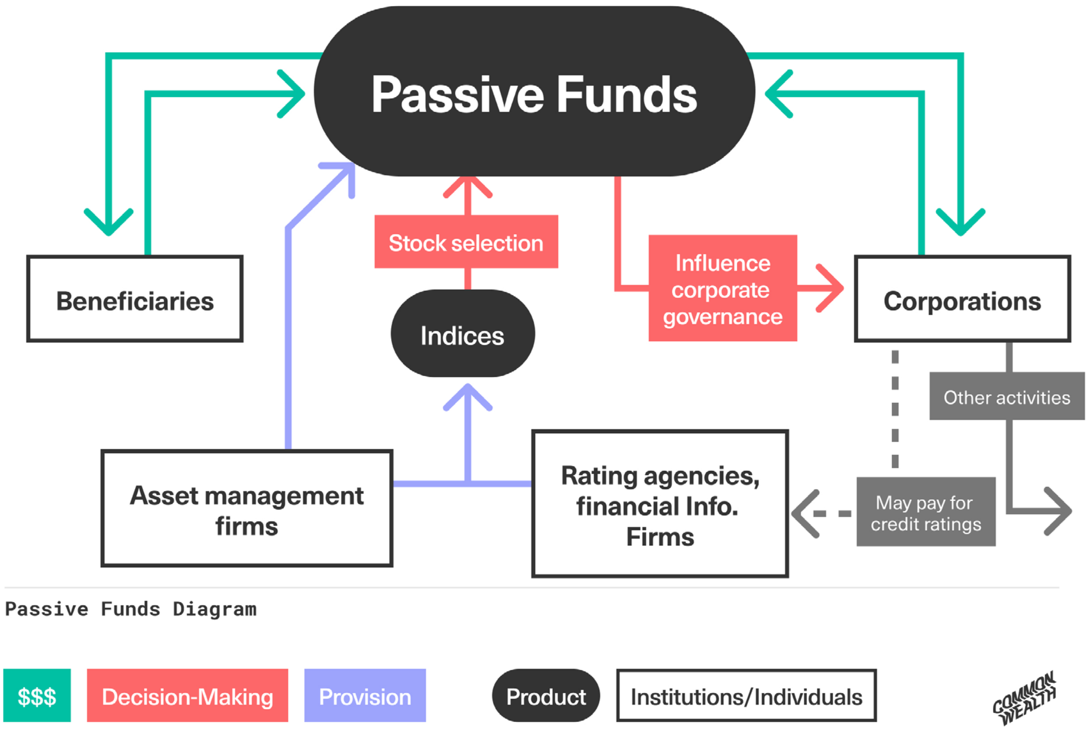
As documented in our recent briefing,[2] "passive" or "index-tracking funds" are pools of money for which investment decisions (how much of which stocks or bonds to purchase) are made based on a pre-determined index. The index, in turn, is list of securities that meet particular criteria, such as market capitalisation (the value of a company as measured by share price multiplied by number of shares) or the size of a bond issue. Indexing strategies vary, from full replication, which implies purchasing the exact securities in proportion to their scale in the index, to simply replicating an index's overall performance using a representative sample of its constituents. Some indices, such as the FTSE 100 (the 100 largest companies on the London Stock Exchange), are highly mainstream or 'off the shelf'. Others may have a more niche theme or focus, such as the S&P Global Clean Energy Index, which covers the largest 'clean energy' companies globally. While the constituents and relative importance or "weighting" of mainstream indices like the FTSE100 or S&P500 are widely known, more bespoke indices tend to use proprietary information controlled either by the fund manager or by a distinct company that constructed the index and sells it as a product to fund managers.

Traditionally, funds have been "actively" managed by a manager or team of managers who select stocks, bonds and other instruments for their portfolio based on their assessment of the financial prospects of the entities issuing the securities (or, more specifically, their view of the risk profile of the combined portfolio). In doing so, fund managers try to maximise their returns relative to the performance of the overall market, charging their clients a fee for the service. The fast-growing passive fund industry thus eschews the challenge of chasing market-beating returns through clever trading, opting instead to match the performance of "the market" as a whole, where "the market" is defined by the index in question. Offering this service at a substantially lower cost relative to the fees charged by active managers and with more consistent returns over time than their active counterparts have been able to deliver, the passive fund sector has grown at scale. The result has been the emergence of a small band of "permanent universal owners", holding large, illiquid positions in a broad swathe of companies.

Figure 1 shows the differences in how passive and active funds are allocated and interact with the securities in their portfolio.

Figure 1: The Mechanics of Active versus Passive Funds





Passive Funds Diagram

Though the first index-tracking fund was first launched by asset management firm Vanguard as early as 1976, the bulk of the industry's growth has occurred since the 2008 financial crisis.[3] Indeed, the total assets invested passively have nearly trebled in the past five years alone.[4] In the United States, where the industry first took off, passively managed assets now exceed those of active funds,[5] and other economies – most saliently the UK – are swiftly following suit.[6] Today, both the largest equity fund and bond fund in the world are index-tracking, and the largest firms operating in the investment management industry primarily offer passive products. BlackRock's "iShares" line of exchange-traded funds, derived from its post-Financial Crisis acquisition of the primarily index-tracking asset management arm of Barclay's bank, now constitutes two thirds of the firm's total $10 trillion in assets under management,[7] while Vanguard, the world's second-largest asset manager at US$7 trillion in assets under management, has an almost exclusively passive line of fund products. By comparison, estimates of the total assets invested passively worldwide (comprising both exchange-traded funds (ETFs) and traditional index-tracking mutual funds) exceed $15 trillion, making BlackRock and Vanguard very significant players in this rapidly expanding industry,[8] and helping to fuel the already substantial concentration of assets and power within the industry itself.

The rise of the index-tracking investment fund has been instrumental in cementing the conditions of asset manager capitalism[9] as well as the relatively newfound structural power of the leading asset management firms. It has also had a significant role in elevating an entirely new cohort of firms to a seat of "infrastructural power": index providers.[10] While some funds rely on indices constructed in-house by resident asset management teams, most either wholly or partially track indices designed by an external firm. Consequently, the companies providing these indices have significant and growing influence over how capital is allocated in the global economy. Just three firms – MSCI, S&P Dow Jones, and FTSE Russell – dominate the index business, taking in over three quarters of all industry revenues, or approximately 26% each.[11] In theory, index-tracking funds are meant to be allocated based on clear objective criteria, such as market capitalisation or its location or industry. In practice, however, the process involves considerably more discretion on the part of the individuals determining the contents of the index. Consequently, investment decisions are delegated to another cohort of companies, with the result that "index providers are the new active managers."[12] For example, recent research by the National Bureau of Economic Research found that inclusion in the S&P500 index – which is meant to be based on the objective metric of market capitalisation – showed a non-trivial relationship to whether companies in question paid for credit ratings from S&P and that purchases of those ratings increased when there were openings in the index.[13] In this sense, rather than a shift toward a more "objective" system of investing, the rise of the passive fund may better be understood as a transfer of discretion to a new cohort of entities: index providers.

The rapid and ongoing growth of passive or index-tracking investing as a strategy marks a potentially revolutionary change in the landscape of ownership and control in the global economy. As such, the role and management of these financial vehicles are highly contested. As the *Financial Times* journalist Robin Wigglesworth documents in his recent book on the subject, the passive fund industry represents an enormous shift of money out of the pockets of asset managers and back into those of ultimate beneficiaries through substantially lower fees. Indeed, ETFs and passive funds have increased the accessibility of the investment system for the public, where previously exorbitant fees excluded the vast majority of the population. The potentially democratising effect of this shift is now a subject of debate,[14] and BlackRock's decision to offer voting powers to investors in their equity ETFs suggests a new potential route for increasing beneficiary representation in corporate governance.[15] For the time being, however, inequalities in financial assets in the US and UK, where passive investment has had the most take-up, remain vast.

The implications of an increasingly concentrated and passively allocated investment system for how decisions are made and governance executed across the economy in the face of systemic challenges like inequality, global justice, and the climate crisis are potentially profound. Using new data on passive fund holdings, this report evaluates the advance of passive investing in the UK economy and asks how it might be influencing action on the climate crisis, in particular, through shifting structures and incentives in the governance of corporations, and new determinants of the allocation of investment.

Literature Review: The contested implications of passive investing

As a result of its rapid growth, passive investing has become the focus of substantial research and criticism, particularly how passive investment's rise affects the financial sector's role in the climate crisis. Academics and civil society groups have raised a number of common concerns about the implications of an increasingly passive investment sector, including:

- **Amplification of Market Volatility and Risk:** Analysis conducted by the Federal Reserve Board suggests certain passive strategies can amplify market swings, exaggerating risks to financial stability.[16] In a similar vein, industry analysts have linked passive investing to the inflation of stock market bubbles by pushing up stock valuations.[17]

- **Absentee Investing:** Some critics suggest that passive investing has eliminated much of the agency of the investment industry, both with respect to how capital allocation decisions are made (via the "shift from 'price-sensitive' active investors to 'value-agnostic' passive ones") and in terms of how shareholders use their positions to influence company behaviour.[18] For instance, critics have suggested that the larger passive investors such as BlackRock and Vanguard have poor stewardship practices,[19] while their increasing scale crowds out smaller more activist investors.[20]

- **Holders of Last Resort:** Because investments in a passively-allocated fund are determined based on an index, investors have been criticized for using index-tracking rules as an excuse for remaining invested in controversial companies or industries such as thermal coal mining.[21] For instance, when BlackRock announced in 2019 that it would divest from coal companies meeting certain criteria, the firm received significant pushback for applying these rules exclusively to its actively-managed funds and citing index-tracking rules as the reason.[22] Observers have raised concerns that by yielding their discretion over investment decisions, the rise of the passive investing industry will create inertia in moving capital out of carbon-intensive sectors, making these funds the "holders of last resort."[23]

Beyond these common criticisms, there remain unsettled questions about both risks and potential benefits of the rise of passive investment. For instance, many campaigners and analysts have pointed out that there is no rule legally preventing passive funds from "exiting" (divesting from) companies in an index based on their failure to meet an investor's demands, though industry practice is not to do so.[24] Moreover, this notion - that decisions over allocation in passive funds are dictated by 'objective' index criteria - obscures the significant degree of agency and the numerous active decisions involved even in constructing passive portfolios – either by the asset manager themselves or via delegation to an external index provider whose decision-making processes are often even more opaque than managers.' As Johannes Petry, Jan Fichtner and Eelke Heemskerk argue, index providers constitute a new "infrastructural power" in the global economy, serving as "gatekeepers" of access to capital.[25]

The exercise of infrastructural power is increasingly suggested by the behaviour of firms in the 'real economy', which is increasingly adjusting to meet the demands and take advantage of the indexing system. For instance, Calgary-based oil firm Encana formally moved its head office to Denver, Colorado to secure inclusion in a US-focused index and take advantage of the passive industry's inflation of its share price.[26] The role played by index providers and the infrastructure of indices is just as critical to the allocation of capital in the global economy as the asset management firms themselves. The confluence of this highly concentrated industry and the degree of concentration within asset management itself constitutes an immense level of overall concentration of control in the economy, with respect to both allocation of capital and of governance rights at corporations.

Other research has found relationships between the prevalence of index fund ownership in an economy and patterns in corporate behaviour. For instance, "indexation" of the asset management industry was found to be correlated with changes in corporate bond management, including higher bond issuance (owing to the captive audience implied by indexed bond funds, which are guaranteed to purchase bonds issued with certain criteria), as well as an increase in the value of individual bonds issued and the lengths of their maturities (both qualities which would enable bonds to meet the criteria for inclusion in various indices).[27] For the case of companies at risk of "asset stranding" – in other words, firms, such as in the fossil fuel industry, with significant assets and business segments that will be inoperable in a future where the global average temperature rise is limited to 1.5 ºC – this tendency toward long-dated maturities could exacerbate the risk of asset stranding in passive portfolios.

Others have identified potentially beneficial implications of the rise of passive investing. As American judicial scholar Leo Strine argues, passive funds are uniquely long-term in their perspective, focused on aggregate growth of market segments or the market as a whole, rather than on seeking alpha to out-compete based on individual stock picking.[28] Echoing this insight, analysis has shown a significant positive impact on corporate governance of increased passive investment in the Chinese economy, finding firms show lower rates of stock turnover, a more stable shareholder structure, and a lower turnover of management, thereby "mitigating managers' myopic behaviour and boosting innovation."[29]

When it comes to "green" or "ethical" investing – generally referred to in the industry as ESG (Environmental, Social, Governance) investing – index providers play an outsize role. Many, such as MSCI, double as prominent ESG ratings agencies, providing scores for companies based on criteria such as carbon footprinting or the makeup of a company's board. While we have articulated several important criticisms of ESG investing in previous research,[30] a critical issue here is the extent to which a handful of index-providing houses have effective control over the definitions of "sustainable" or "green", with little regulatory scrutiny. As it stands, there is no regulation of these ratings; consequently, they are often based on criteria and discretionary judgments that differ wildly between providers. For instance, a 2020 report by the OECD found that among three major ESG ratings providers – MSCI and financial database providers Refinitiv and Bloomberg – there was no correlation between their ratings (Figure 2). Opacity in the incorporation of ESG factors into credit-rating has increasingly attracted the attention of financial regulators, who have raised eyebrows at the "quite striking divergences" in approach across rating agencies,[31] and noted the "potential risk for conflicts of interest"[32].

Figure 2: ESG Ratings from Top Providers

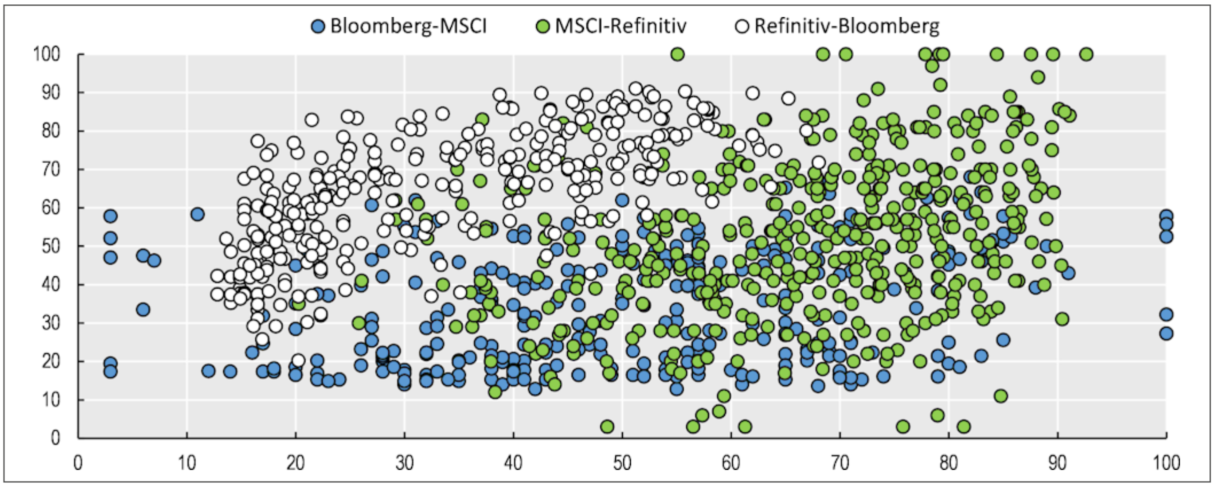


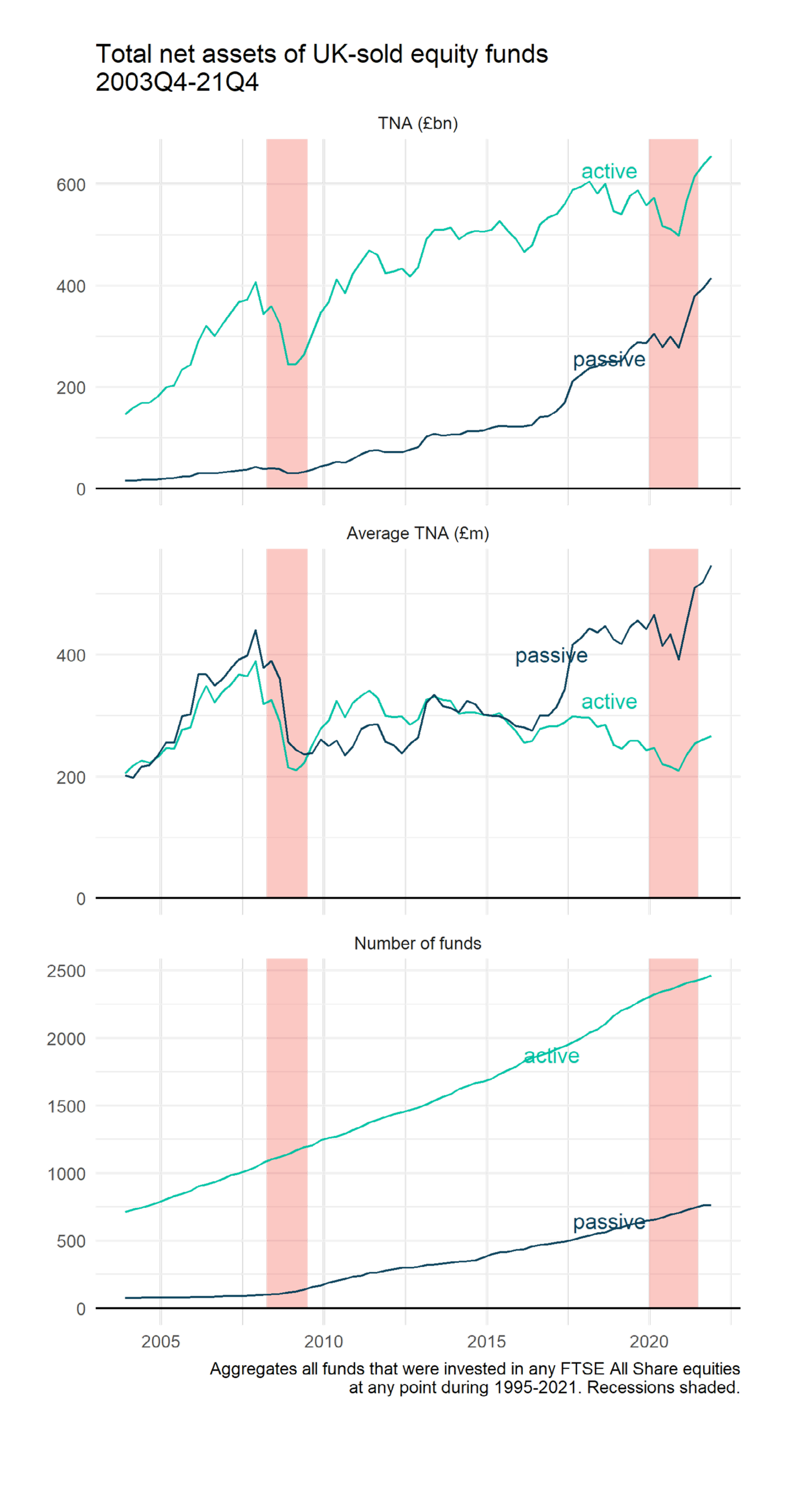
Figure 2: A total lack of correlation between ESG ratings from different providers. If scores were related, they would be clustered around the diagonal y = x. Source: OECD[33]

Their significant role in defining not only indices but also ratings which increasingly inform financial flows and capital allocation in the global economy makes an understanding of the passive investment industry and index providers essential for designing just and effective climate policy. As one *Financial Times* editorial argued: “Indices no longer merely measure markets. They move them.”[34] With this in mind, we examine the implications of the rise of the passive investment industry for the intersection of ownership, decision-making within corporations, and the response to the climate crisis in the UK. We analysed distributions of ownership of shares in UK-listed corporations, comparing the relative prominence of passive and active fund ownership. Additionally, we examined any sector-specific divergences between passive and active investment strategies for those sectors most pertinent to the challenge of decarbonization, including gas and electric utilities, fossil fuel extractive firms, mining firms and others within the FTSE All Share Index, which covers approximately 98% of all UK-listed market capitalisation.

Findings: The Passive Takeover

While in the United States, index-tracking funds now represent more than half of assets under management in the fund industry, this trend in the UK has been somewhat slower. Our previous briefing explored the growth of the UK fund industry by looking specifically at those funds legally registered for sale within the UK. Within this cohort, an important distinction emerged. As Figure 3 shows, while both the passive and active fund segments grew significantly over the period under consideration (Q4 2003 to Q4 2021), growth in the active segment is driven primarily by a proliferation in the number of active funds, while the average total net assets (TNA) of a given active fund declined over the period. By contrast, while the number of passive funds for sale in the UK also rose, the passive segment showed considerable growth in the size of the average fund, overtaking the average actively-managed fund by a substantial margin within the past few years.

Figure 3: Passive UK Equity Funds on the Rise



What the data in Figure 3 imply is that even as passive funds remain, for the time being, a smaller shareholder category than their active counterparts, their continued rise is likely to be accompanied by a further concentration of shareholding and market share, as fewer but larger funds become increasingly dominant. In our previous report, "Under New Management", we elaborated the potential implications for corporate governance of this concentration of shareholding, which has in large part been driven by growth in the passive investment industry, which is dominated by a handful of largely US firms including BlackRock and Vanguard. The trend toward larger funds within the passive sector underscores this tendency toward concentration, with potential implications for increasingly concentrated power within UK corporations.

Importantly, our previous briefing limited its analysis to solely those funds registered for sale in the UK, meaning it presented only a partial picture of the extent to which the shift from active to passive ownership may be taking hold in UK-based firms. For the current report, we therefore established a new cohort of funds, based on all fund ownership of companies in the FTSE All Share Index over the past two decades (comparing holdings data from Q4 2001 to Q4 2021). While both active and passive funds have significantly increased their ownership of these firms over this period (for further elaboration of this trend, see "Under New Management"), our results showed particularly impressive growth in the index-tracking segment, from just over half a per cent of total market capitalisation in 2001 to over 11% by the end of 2021. Together, passive and active ETFs and mutual funds now represent over a full third of ownership of the FTSE All Share – substantially more than direct pension fund ownership, and nearly double what they controlled just a decade ago.

Table 1

	Aggregate % of Total Market Cap Held		
	2001	**2011**	**2021**
Active	9.6%	17%	23%
Passive	0.7%	2%	12%

This growth in the aggregate ownership of companies was mirrored in the proliferation of the number of passive funds and the scale of their total net assets relative to actively managed funds over the same period. Around the start of the millennium in Q4 2001, just 131 passive funds held shares in UK-listed companies; by the close of 2021, this had risen to more than 2,000. Active funds similarly exploded in number over this period, from over 2,000 to more than 11,000 actively managed funds holding shares in UK-listed firms. Interestingly, where the passive segment has shown substantially greater growth relative to the active segment is not in the number of funds investing in UK firms, but in the size of these funds, as measured by aggregate total net assets.

Table 2

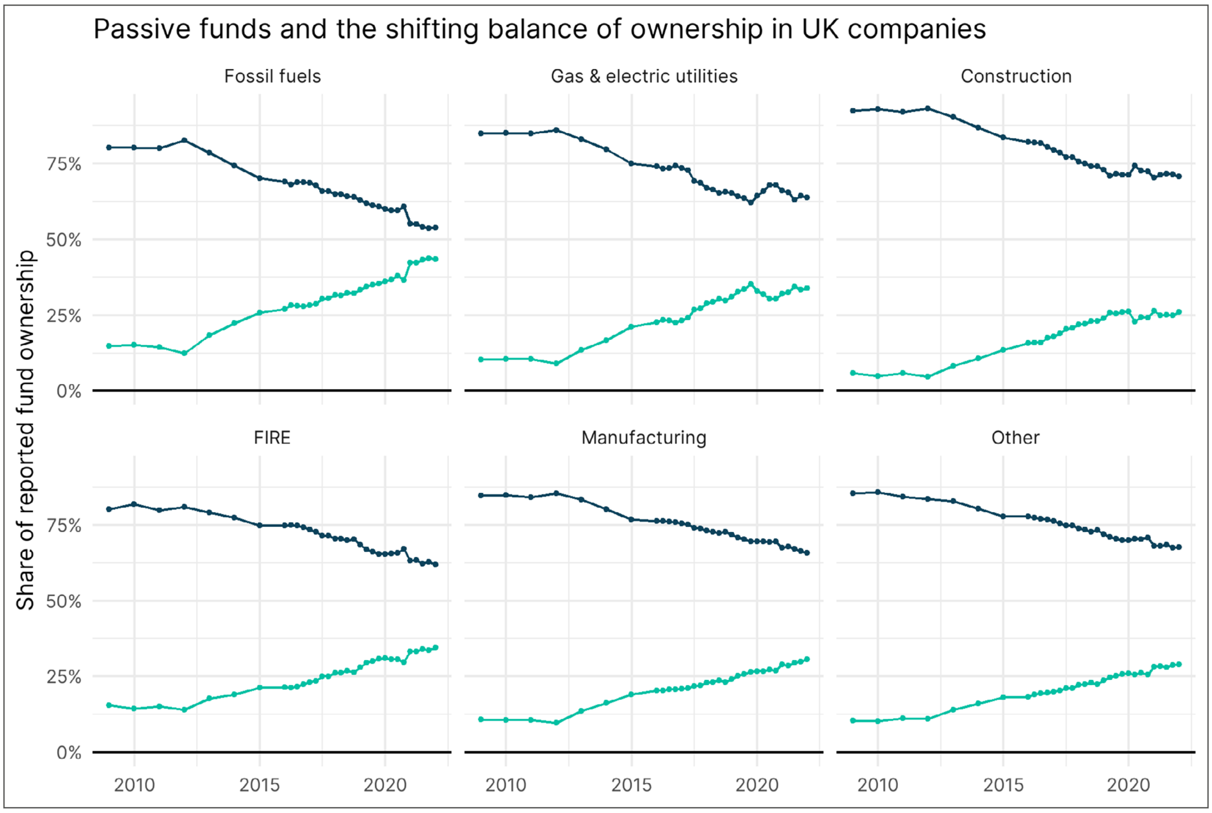
Proportion of Aggregate Total Net Assets In Cohort				
Strategy		**2001**		**2021**
Active	86%	(£1.3 trillion)	62%	(£7.3 trillion)
Passive	14%	(£212 billion)	38%	(£4.5 trillion)
Total		(£1.52 trillion)		(£11.9 trillion)

As the data in Table 2 highlight, passive funds' fraction of the total cohort rose from 14% of the total assets to closer to 40% by Q4 2021, representing a nearly 22-fold increase in assets in absolute terms to total £4.5 trillion by the end of last year. Active funds' asset growth, meanwhile, was a more moderate sixfold increase. Once again, within this cohort, the data suggest that on average, the passive segment is characterised by fewer, higher-value funds, while the active fund segment is becoming more diffuse. For instance, as a rough measure, in our cohort, the average active fund has net assets of approximately £459 million (n=11,639), the average passive fund would control closer to £1.03 billion (n=2,776). Indeed, among the ten largest funds in the cohort as of Q4 2021, seven are passive. Perhaps even more interestingly, though in keeping with our prior research, seven are controlled by the big American asset management titans: BlackRock, Vanguard, State Street, and Fidelity. Moreover, of the funds with the largest stakes in the FTSE All Share, eight are passive, and five are not for sale to UK investors. Seven belong to Vanguard and Blackrock alone. The largest single holder is the Government Pension Fund of Norway.

Holders of last resort?

Beneath the aggregate trend toward growth in the fund sector, the data suggest important distinctions are beginning to emerge between active and passive investment funds with respect to the scale of their investment in different industries. Figure 4 shows the relative fraction of fund ownership (all mutual and ETFs) in various industries by either passive or active funds. As the figure shows, across all industries there has been a convergence, to some degree, between passive and active ownership, as the rate of passive fund growth significantly outstrips that of the active industry. Importantly, however, for no sector is this more pronounced than for fossil fuels (defined as oil, gas, and coal extraction and related operations such as refining and pipeline transport). Indeed, the fossil fuel sector is the only major sector for which passive funds constitute more than 40% of fund ownership.

Figure 4

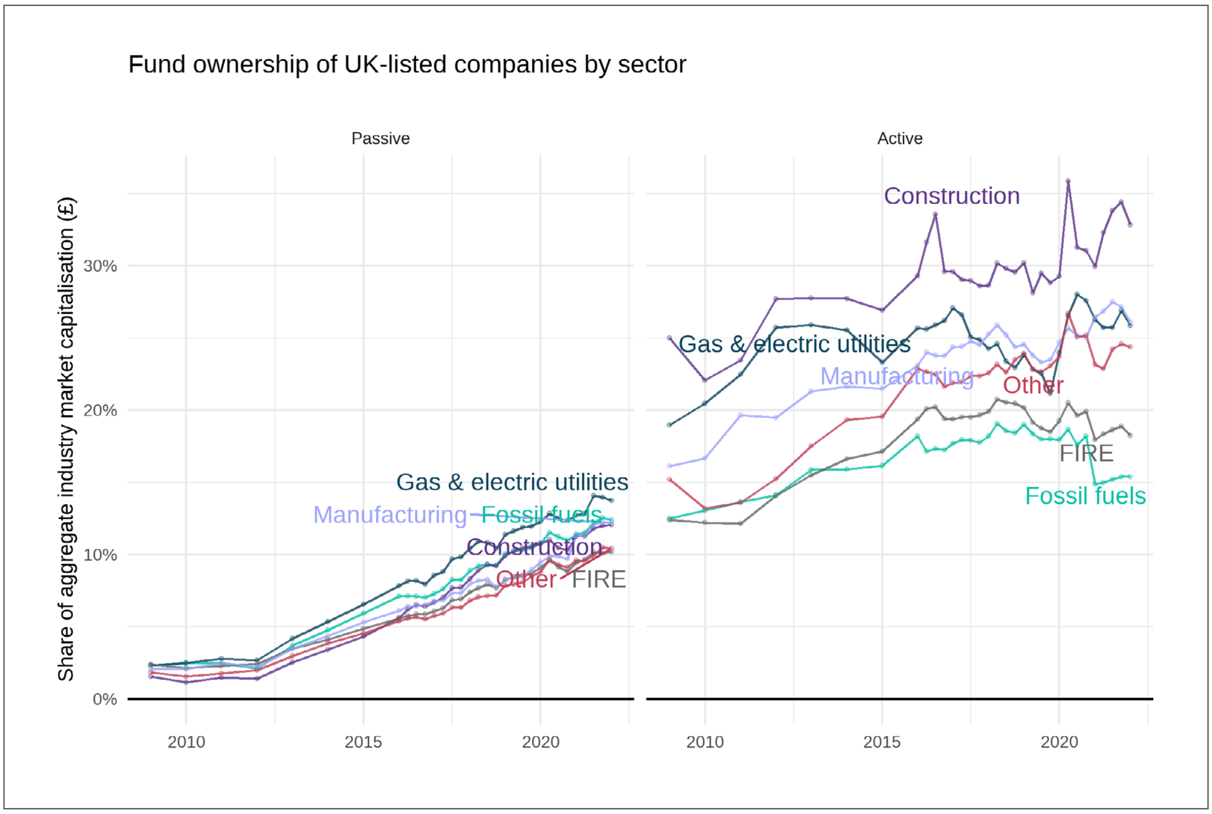


Note: in this figure, the “Other” category combines several smaller sectors including mining and extraction, ICT, retail and wholesale, and professional and technical services, among others (see Figure 6 for a full list of industries). Additionally, note that figures do not sum to 100% as any funds not categorised as a mutual fund or ETF were not shown. FIRE is shorthand for Finance, Insurance and Real Estate.

Thus, according to the analysis, the concentration of ownership within the passive fund sector is the most advanced within the fossil fuel industry. This raises the question as to whether this strong convergence is primarily the result of outsized passive allocation to fossil fuels because of the indices they track, or that the active sector has begun to move out of fossil fuels (or indeed, whether both these trends exist). To unpick this further, Figure 5 expresses the same data, but this time the fraction of holdings shown is in absolute terms, expressed as the total fraction of aggregate market capitalisation held in each industry. Some observations:

Firstly, although the passive sector is growing far more quickly, active funds are continuing to grow their fraction of ownership across many industries, while pulling moderately away from others (as measured by the fraction of total market capitalisation they control). This reflects an aggregate shift in the types of entities holding shares toward mutual funds and ETFs more broadly (both active and passive). Secondly, as would be expected, active funds show substantially more variation than passive funds in the profile of their exposure to different industries, both over time and in the cross-section. That is, over a given period, active funds show far more dispersed ownership of different industries, leaning into construction while showing proportionally little appetite for fossil fuel firms. Passive funds, by contrast, show little preference between industries. Passive funds also show far less variation in industry ownership over time, whereas the active sector is given to sporadic episodes during which they load up on certain industries before subsequently unloading (see, for example, the volatility of active ownership in construction firms). The fact that so much ownership of these companies resides outside the primary architecture of the asset management sector is a reminder of the critique commonly levelled at divestment or ESG strategies that reduce exposure, insofar as they may simply vacate a space for less scrupulous investors [35], including private equity firms whose incentives for long-term responsible stewardship and swift decarbonisation may be considerably weaker.[36]

Figure 5



Overall, the findings suggest passive funds are uniquely overrepresented in their ownership of the oil & gas industry, lending support to the idea that these funds are on track to becoming “holders of last resort” in carbon intensive sectors. As the Sunrise Project describes, the backward-looking nature of mainstream index construction could create mean passive investments remain exposed to these firms, helping to maintain their share value, while other actors increasingly divest from them. However, it is possible for other factors such as major economic shifts or campaigns to change this; for instance, it’s notable that no pure-play coal mining companies are currently represented in the FTSE All Share Index, though these firms were present a decade ago.

Figure 6 depicts the same information broken out into a more granular set of industries, highlighting the difference in size of the various industries and limiting our focus to a snapshot of 2021 year-end. The x-axis shows the proportion of a given industry's market cap owned by passive and active funds respectively – hence again the relative flatness on the left-hand (passive) side compared with the greater variation on the right-hand (active) side. The thickness of the bars thus corresponds to the aggregate market capitalisation for the industry, with industries ranked in order of the scale of passive ownership relative to active ownership. The area of each bar, therefore, represents the absolute size of a fund segment’s total stake in an industry – so while construction firms are heavily owned by active funds, for example, the small size of these firms means they remain a very small portion of active funds' UK equity portfolios compared to fossil fuels.

Figure 6

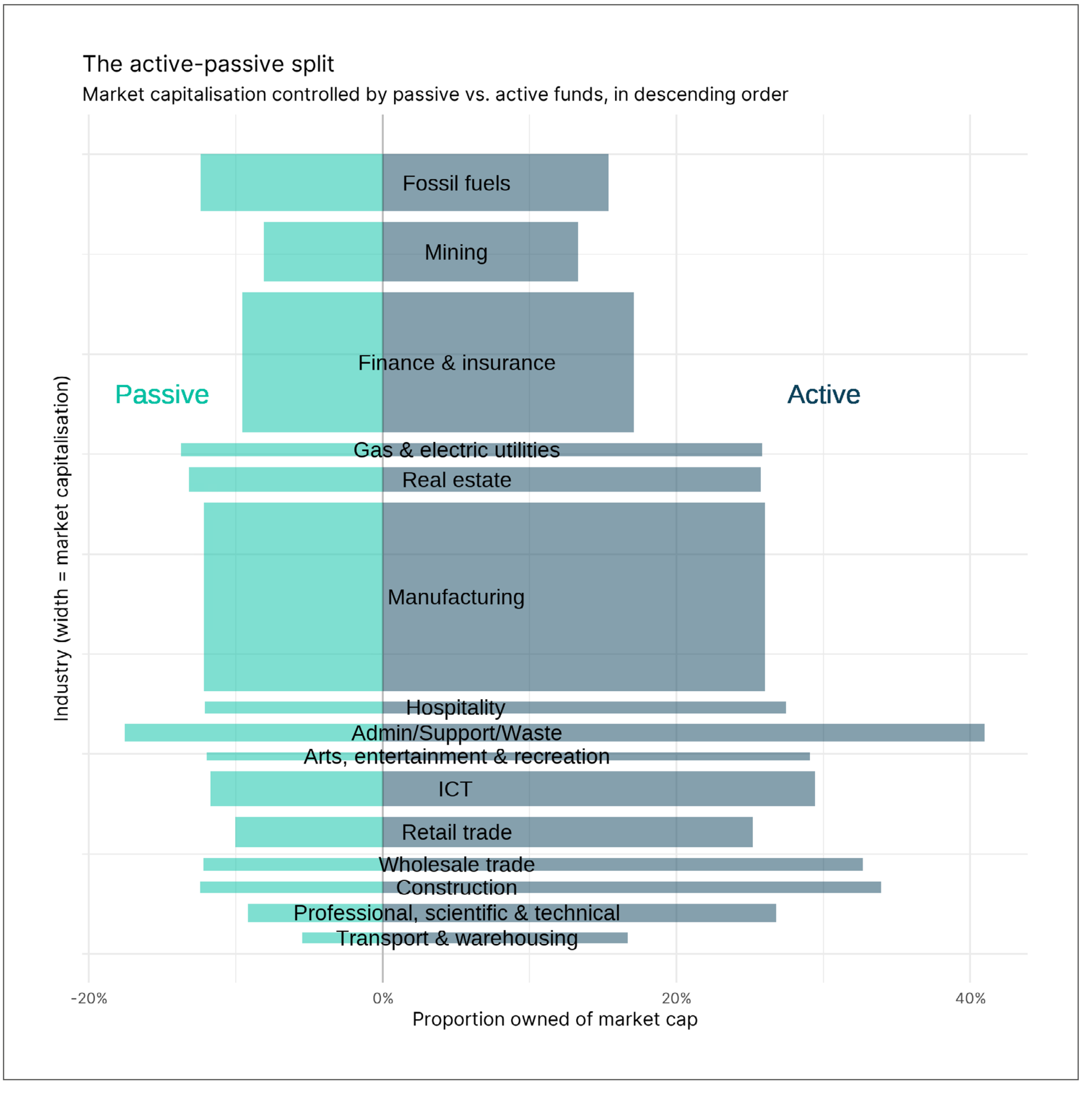
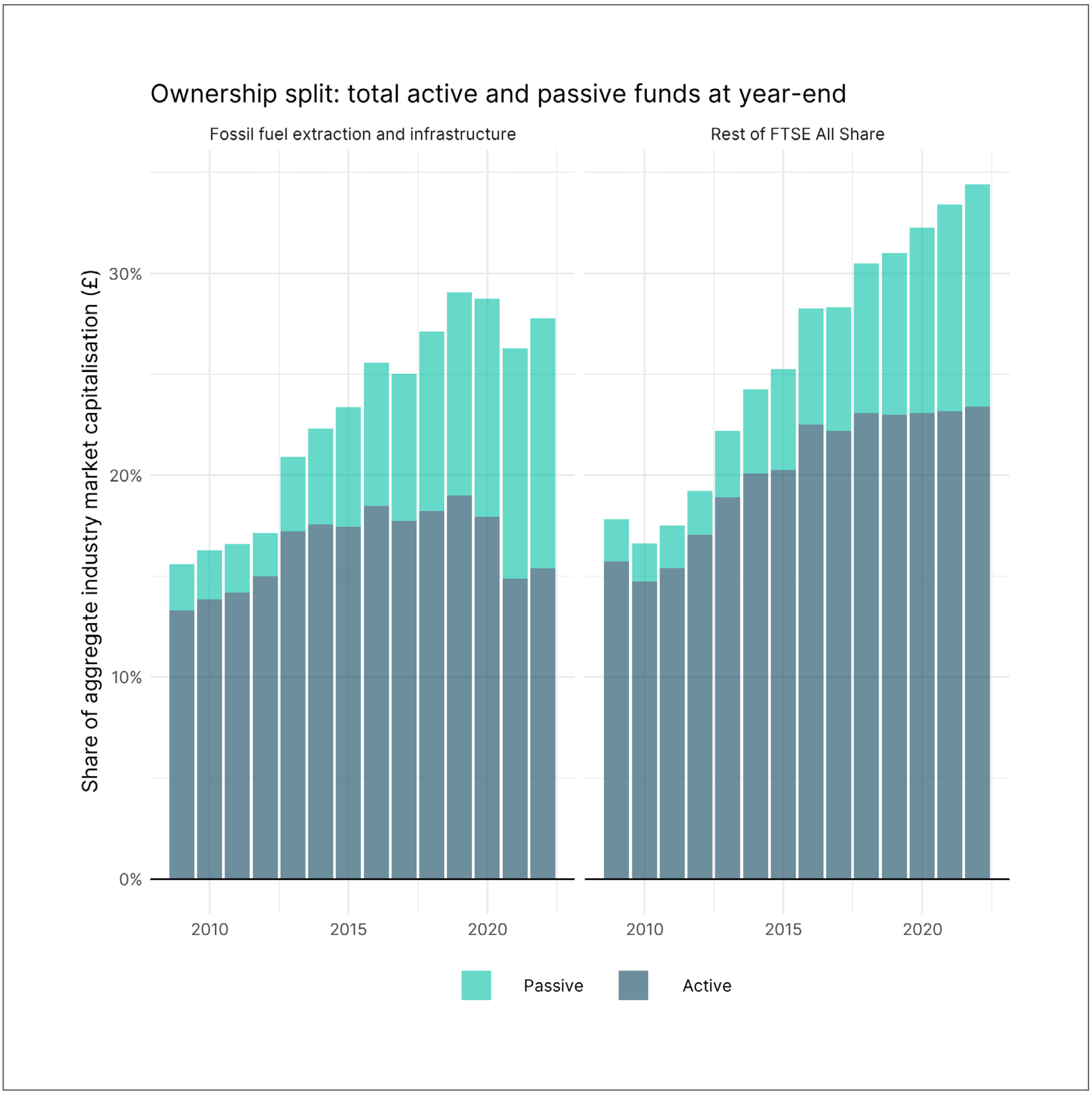


Figure 7 shows the combined ownership stake of active and passive funds together, comparing the consolidated fossil fuel industry to the rest of the firms in our sample. As the chart shows, passive funds' growth in fossil fuels as well as across the entire FTSE All Share Index has been substantial over the past decade, outpacing active funds. However, while the combined holdings of both segments have stagnated, there has been a clear compositional shift in this ownership toward passive funds, as the active segment appears to have begun a modest but clear retreat from the fossil fuel sector in the past three years, while the passive segment has continued to expand its stake. An additional point to note is the difference in the absolute scale of ownership rather than the trend over time: active and passive funds combined now own over a third of the firms in our sample, but still less than 28% of the fossil fuel industry.

Figure 7


Ownership split: total active and passive funds at year-end
Fossil fuel extraction and infrastructure
Rest of FTSE All Share
Share of aggregate industry market capitalisation (£)
30%
20%
10%
0%
2010
2015
2020
2010
2015
2020
Passive
Active

Discussion

The explosion of passively-managed investments over the past two decades – and in particular in the wake of the 2008 Financial Crisis – marks a major shift in two defining forces in the global economy: corporate governance and control over investment allocation. A small cohort of increasingly vast asset management giants – chief among them BlackRock, Vanguard, State Street and Fidelity – has ridden a wave of enthusiasm for passive investing to positions of dominance within the UK shareholder structure. Already, these firms occupy the top positions in the largest firms of the UK economy, a phenomenon that will only increase with the continued growth of the passive segment.

Indeed, as of the end of 2021, one third of our reported fund holdings in FTSE All Share companies were attributable to US-domiciled funds, and 45% to funds that are only for sale *outside* the UK. Among passive holdings, these figures rise to 39% and 47% respectively. The growth of an ever more concentrated asset management sector is therefore a vehicle through which ownership of UK-listed companies is becoming ever increasingly internationalised. For these funds in turn, UK firms are only a smaller part of much larger portfolios. If we look at the aggregate TNA of our fund universe (£8.2 trillion), then US-domiciled funds account for two thirds, while funds not for sale in the UK account for 85%. For our passive universe (£2.9 trillion in aggregate), these figures are 72% and 84% respectively.

Within this context, the role of index providers remains comparatively under-scrutinised and, critically, under-regulated. Within our passive cohort, for instance, funds bearing the S&P label accounted for £1.1tn of all fund TNA at the close of 2021 or 24% of the total. Were S&P a fund manager, this would place it among the largest in our cohort. MSCI, meanwhile, was labelled as the index provider from some £610 billion worth of fund assets (approximately 13%). By way of comparison, BlackRock's highly popular iShares line of funds represents approximately £430 billion, or just over 9% of the total assets in the cohort.

If these index providers and the funds that track their products occupy a position in the allocation of both capital and decision-making power within the UK economy that (quantitatively) cannot be ignored, our analysis shows that this is especially the case for several of the industries most pivotal to the question of what kind of economy we want to live in, particularly in the transition to a decarbonised future. The extent to which passive funds are increasing their exposure to fossil fuel firms even as the actively managed sector has begun to retreat corroborates activists' concerns that these funds are becoming "holders of last resort" – extending the lives of fossil fuel firms by helping sustain a higher share price and lower cost of capital despite active market moves out of the sector. Policymakers urgently need to turn their attention to how we can create a financial system that delivers benefits to people beyond the narrow sliver of those with financial wealth, and which can escape the logic of both ecological and financial extraction that has characterised corporate governance until now. The third report in Common Wealth's asset management series will set out a series of policy proposals to begin this essential task.

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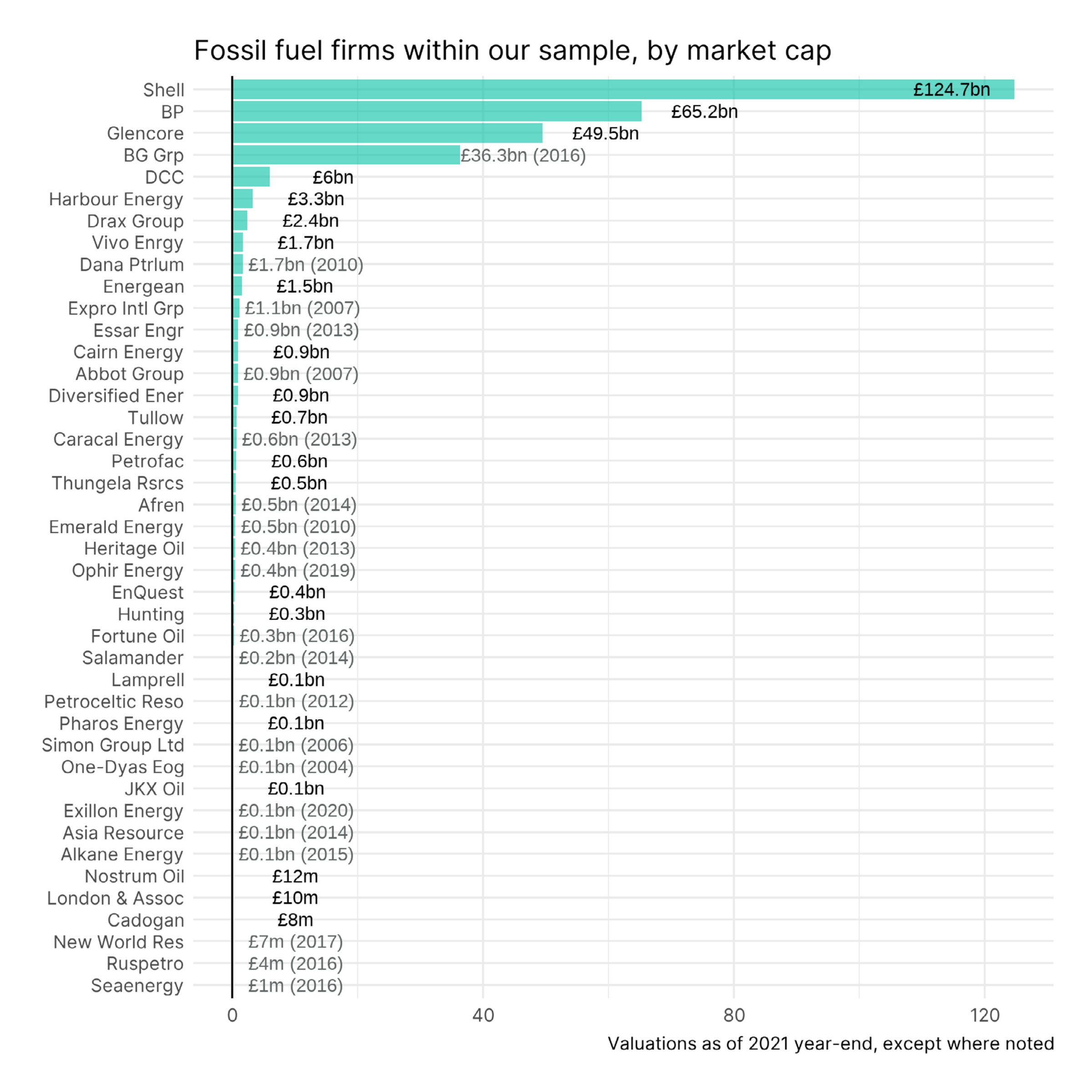
Appendix


Fossil fuel firms within our sample, by market cap
Shell £124.7bn
BP £65.2bn
Glencore £49.5bn
BG Grp £36.3bn (2016)
DCC £6bn
Harbour Energy £3.3bn
Drax Group £2.4bn
Vivo Enrgy £1.7bn
Dana Ptrlum £1.7bn (2010)
Energean £1.5bn
Expro Intl Grp £1.1bn (2007)
Essar Engr £0.9bn (2013)
Cairn Energy £0.9bn
Abbot Group £0.9bn (2007)
Diversified Ener £0.9bn
Tullow £0.7bn
Caracal Energy £0.6bn (2013)
Petrofac £0.6bn
Thungela Rsrcs £0.5bn
Afren £0.5bn (2014)
Emerald Energy £0.5bn (2010)
Heritage Oil £0.4bn (2013)
Ophir Energy £0.4bn (2019)
EnQuest £0.4bn
Hunting £0.3bn
Fortune Oil £0.3bn (2016)
Salamander £0.2bn (2014)
Lamprell £0.1bn
Petroceltic Reso £0.1bn (2012)
Pharos Energy £0.1bn
Simon Group Ltd £0.1bn (2006)
One-Dyas Eog £0.1bn (2004)
JKX Oil £0.1bn
Exillon Energy £0.1bn (2020)
Asia Resource £0.1bn (2014)
Alkane Energy £0.1bn (2015)
Nostrum Oil £12m
London & Assoc £10m
Cadogan £8m
New World Res £7m (2017)
Ruspetro £4m (2016)
Seaenergy £1m (2016)
0
40
80
120
Valuations as of 2021 year-end, except where noted

Endnotes

1 Adrienne Buller and Benjamin Braun, 'Under new management: Share ownership and the rise of UK asset manager capitalism', Common Wealth, (2021) https://www.common-wealth.co.uk/reports/under-new-management-share-ownership-and-the-growth-of-uk-asset-manager-capitalism.

2 Chris Hayes (2021) 'Passive attack: Charting the rise of passive index trackers', Common Wealth https://www.common-wealth.co.uk/reports/passive-attack

3 Several factors likely contribute to this effect, including a newfound aversion to the risk level of active management following the crisis alongside increasingly unjustifiable fees, coupled with across-the-board asset price inflation that resulted from post-crisis quantitative easing. See e.g., https://www.ftadviser.com/investments/2022/01/07/rise-of-passive-investing-caused-by-lack-of-investor-trust/

4 Robin Wigglesworth, 'Global passive assets hit $15 trillion as ETF boom heats up', The Financial Times, 10 May 2021. https://www.ft.com/content/7d5c2468-619c-4c4b-b3e7-b0da015e939d

5 'End of era: passive equity funds surpass active in epic shift', Bloomberg (2019) https://www.bloomberg.com/news/articles/2019-09-11/passive-u-s-equity-funds-eclipse-active-in-epic-industry-shift

6 Siobhan Riding and Chris Flood, 'US's passive investment juggernauts break new ground in Britain', The Financial Times, 18 February 2020.

7 'Review: Index funds are (still) changing the world', Reuters 15 October 2021, https://www.reuters.com/breakingviews/review-index-funds-are-still-changing-world-2021-10-15/

8 'Global passive assets hit $15tn as ETF boom heats up', Financial Times (2021) https://www.ft.com/content/7d5c2468-619c-4c4b-b3e7-b0da015e939d

9 Adrienne Buller & Benjamin Braun (2021) 'Under new management: Share ownership and the rise of UK asset manager capitalism', Common Wealth. https://www.common-wealth.co.uk/reports/under-new-management-share-ownership-and-the-growth-of-uk-asset-manager-capitalism

10 Fichtner et al., 'Infrastructural Power'

11 Jan Fichtner, Eelke Heemskerk and Johannes Petry (2021) 'The new gatekeepers of financial claims: States, passive markets, and the growing power of index providers'. https://osf.io/preprints/socarxiv/x45j3

12 'Review: Index funds are (still) changing the world', Reuters (2021) https://www.reuters.com/breakingviews/review-index-funds-are-still-changing-world-2021-10-15/

13 Kun Li et al. (2021) 'Is Stock Index Membership for Sale?', National Bureau of Economic Research. Working Paper 29365. https://www.nber.org/system/files/working_papers/w29365/w29365.pdf

14 See e.g., Robin Wigglesworth (2021) Trillions: How a Band of Wall Street Renegades Invented the Index Fund and Change Wall Street Forever. Penguin.

15 Michael McKenzie and Attracta Mooney (2021) 'BlackRock to give clients the right to vote', Financial Times.

16 Kenechuckwu Anadu et al. (2018) 'The Shift from Active to Passive Investing: Risks to Financial Stability?', Federal Reserve Board.

17 'Passive investment blamed for inflating stock market bubble', Financial Times (2021) https://www.ft.com/content/994bdda8-b704-4e4c-9b19-4e0021f0b309

18 Ibid.

19 'Asset Managers and Climate Change: How the sector performs on portfolios, engagement and resolutions', Influence Map (2021) https://influencemap.org/report/FinanceMap-Launch-Report-f80b653f6a631cec947a07e44ae4a4a7; 'Doubling Down on Deforestation', Friends of the Earth (2020) https://foe.org/resources/doubling-down-on-deforestation/; 'Index funds and the future of corporate governance: Theory, evidence and policy', Bebchuk & Hirst (2019) https://columbialawreview.org/content/index-funds-and-the-future-of-corporate-governance-theory-evidence-and-policy/

20 'The Passives Problem and Paris Goals: How Index Investing Trends Threaten Climate Action', The Sunrise Project (2020) https://sunriseproject.org/wp-content/uploads/2020/01/Sunrise-Project-Report-The-Passives-Problem-and-Paris-Goals.pdf

21 'BlackRock's new policy affects less than 20% of the coal industry', Urgewald (2020) https://urgewald.org/medien/blackrocks-new-policy-affects-less-20-coal-industry

22 Ibid.

23 'Holders of Last Resort: The Role of Index Funds and Index Providers in Divestment and Climate Change', Jahnke (2019) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3314906

24 'An inconvenient truth: How passive investing is blocking climate progress', ESG Clarity (2021) https://esgclarity.com/an-inconvenient-truth-how-passive-investing-is-blocking-climate-progress/

25 Johannes Petry, Jan Fichtner and Eelke Heemskerk (2021) 'Steering capital: the growing private authority of index providers in the age of passive asset management', Review of International Political Economy.

26 'How passive investment dulls the green wave', Financial Times (2020) https://www.ft.com/content/abd2a946-48d5-11ea-aee2-9ddbdc86190d

27 Michael Dathan and Sergei Davydenko (2020) 'Debt issuance in the era of passive investment'. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3152612

28 'Judge argues for fiduciary duty from index funds', Citywire (2017) https://citywireusa.com/professional-buyer/news/judge-argues-for-fiduciary-duty-from-index-funds/a1011718

29 Lili Fu et al. (2021) 'Does passive investment have a positive governance effect? Evidence from index funds ownership and corporate innovation.' International Review of Economics and Finance.

30 Adrienne Buller (2020) 'Doing well by doing good? Examining the rise of ESG investing', Common Wealth.

31 'Text mining ESG disclosures in rating agency press releases', European Securities and Markets Authority, p.12 https://www.esma.europa.eu/sites/default/files/library/esma80-195-1352_cra_esg_disclosures.pdf

32 'Staff report on nationally recognized statistical rating organizations', Securities and Exchange Commission Office of Credit Ratings, p.8, https://www.sec.gov/files/2022-ocr-staff-report.pdf

33 OECD (2020) 'Environmental, Social and Governance (ESG) Investing' in OECD Business and Finance Outlook 2020. https://www.oecd-ilibrary.org/sites/e9ed300b-en/index.html?itemId=/content/component/e9ed300b-en&__cf_chl_jschl_tk__=pmd_P6BLtzwXhpcnFRCTpLygMPuqQuDahVZkfM1gzyyoWzk-1634833097-0-gqNtZGzNAmWjcnBszQiR

34 John Authers, 'Indices don't just measure markets – they drive performance', Financial Times. 23 June 2018. https://www.ft.com/content/ebcb8e88-7572-11e8-aa31-31da4279a601

35 'The Secret Diary of a 'Sustainable Investor' — Part 1', Fancy, Tariq 2021, https://medium.com/@sosofancy/the-secret-diary-of-a-sustainable-investor-part-1-70b6987fa139

36 US-based non-profit group the Private Equity Stakeholder Project recently reported $1.1 trillion worth of energy investment since 2021 by the ten private equity that they studied, noting a 'persistent focus on fossil fuel assets'. 'Private equity propels the climate crisis', Private Equity Stakeholder Project (2021), https://pestakeholder.org/wp-content/uploads/2021/10/PESP_SpecialReport_ClimateCrisis_Oct2021_Final.pdf