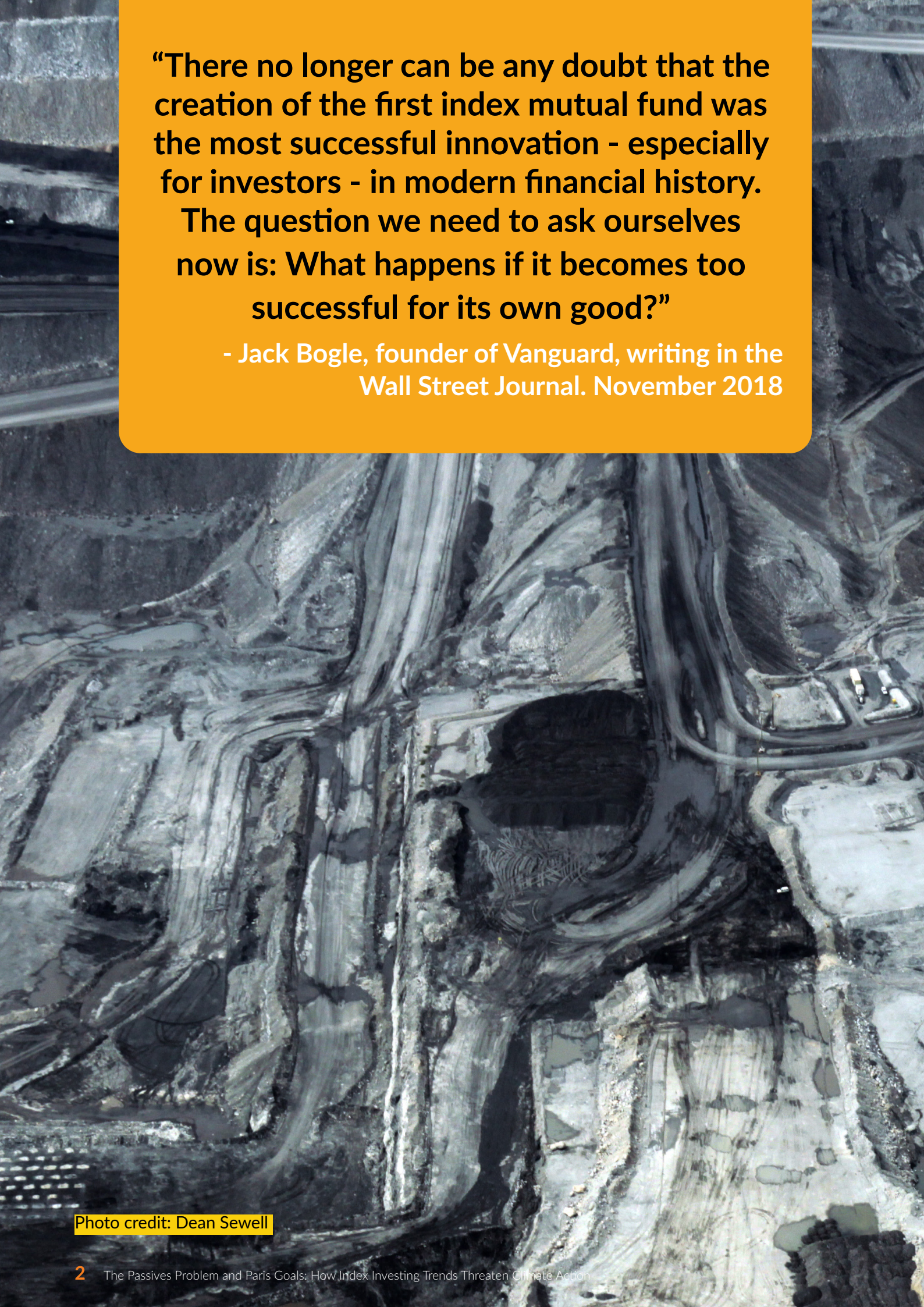


The Passives Problem and Paris Goals:

How Index Investing Trends
Threaten Climate Action



An aerial photograph showing a massive industrial or mining site. The landscape is heavily excavated, with deep, winding channels and large piles of earth or material. Several roads and tracks crisscross the area, and some industrial structures are visible on the right side. The overall scene depicts a significant human impact on the natural environment.

“There no longer can be any doubt that the creation of the first index mutual fund was the most successful innovation - especially for investors - in modern financial history. The question we need to ask ourselves now is: What happens if it becomes too successful for its own good?”

- Jack Bogle, founder of Vanguard, writing in the Wall Street Journal. November 2018

Photo credit: Dean Sewell

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Executive Summary

In 1976 Vanguard founder Jack Bogle launched the first mutual fund to passively follow the S&P 500. His innovation showed promise: It offered reduced risk, low fees, broad diversification, and stable and strong returns over a long-term horizon as compared to “stock picking” through active investment. Initially the concept caught on slowly—it took a decade for Vanguard’s benchmark index to cross the \$1 billion in assets under management mark. Since then, passive investing has exploded. In 2019, [passive equity investments eclipsed active equity investments in the U.S.](#) – a trend that’s [unfolding globally](#) as well.

As the passive investing wave has gathered momentum, a malignant side effect has emerged. The trend is increasingly setting our economy on autopilot and pumping capital into carbon-intensive companies. It is concentrating power with a shrinking set of asset managers who have few incentives to take action on climate. Jack Bogle’s breakthrough, which once showed so much promise, is now fueling the climate crisis at precisely the time when we need to radically shift course.

Even Bogle recognized the destructive power of the force he had unleashed. By the time he died in 2019, he was sounding alarms about passive investing; [he warned that the trend posed a threat to U.S. national interest](#). And the problem has only gotten worse.

Since the Paris climate agreement in 2016—and despite widespread calls to align investments with climate goals—the world’s fifteen largest asset managers have [increased thermal coal holdings by 20 percent](#), largely due to the rise of passive investing.

Meanwhile, the trend presents grave financial risks at both the portfolio/individual level and at the systemic level. In theory, the market should solve for these risks—but for a variety of reasons addressed below, it does not.

This paper aims to bring the contours of the passive investing problem into focus. We have used the best available research to summarize big trends, crystallize strategic questions, and point to possible solutions. Our findings are informed by extensive consultation with academics, members of the private sector, and the NGO community, as well as the experience and networks of the Sunrise Project staff. We hope to inspire and inform deeper work on the pernicious problem of passive investing, which has thus far been largely overlooked.

We have identified four key features of the problem that merit a closer look:

- **Passive investing can artificially raise the valuations of carbon-intensive companies.** Because it tracks entire indices (like the S&P 500) or themes, passive investing bakes in significant new capital flows for listed coal, oil and gas, and agribusiness companies. That is why the [largest](#) firms offering passive investments are also the largest investors in carbon-intensive companies. These companies include [fossil fuel reserve holders](#), [deforestation drivers](#) (palm, pulp, paper, soy, cattle, rubber), and downstream sectors like auto manufacturers and [utilities](#). Despite market underperformance, passive investment capital can create an ‘index effect’, which allows companies to maintain artificially high valuations and signals consistent or strong performance.
- **Passive investing limits shareholder action on climate.** The Big Three asset managers (BlackRock, Vanguard, State Street Global Advisors) collectively [vote on average 25 percent of the shares of S&P 500 companies](#) while holding at least 5 percent in the vast majority of publicly listed companies. This consolidation, combined with the recent spike in passive products, has led the Big Three to own more and more of the market and wield ever greater control over companies via shareholder power—a power that is often [not aligned with climate goals](#). [Empirical evidence shows](#) that conflicts of interest inherent in the asset

management industry often distort investment managers' stewardship incentives.

- **Passive investing blunts asset owner pressure for change.** Passive investing is rearranging power in the financial system – away from asset owners to asset managers. The average asset owner is now so small relative to the total AUM of the largest asset managers that they have little control over allocation strategies. As a result, some asset owners seeking change in their investment strategies, particularly on ESG issues, are increasingly frustrated by a lack of action from their asset managers. Managers offering passive products routinely make the case that they cannot screen out companies like oil and gas in the index-tracking funds they sell. In fact, both index rules and the acceptance of tracking errors allow for funds to make small to moderate deviations from indices. This incorrect assumption makes it very difficult for asset managers to offer mainstream, screened, climate-friendly products, and for investors to access them.
- **Passive investing increases systemic financial risk from climate change.** The index investing trend exacerbates the risk to investors from climate change. A growing number of financial experts are worried that we could face a climate [‘Minsky’ moment](#) driven by

rapid re-pricing of fossil fuel assets and associated losses as the world gets serious about addressing climate change. As active investment exits the fossil fuel industry due to these warnings, passive investors are becoming the [“holders of last resort”](#) ensuring that losses will be borne overwhelmingly by average investors, savers, pensioners, and retirees.

While there may be a sense of futility in the financial sector and even within the climate community when it comes to the passive investing problem, there are in fact a number of potential solutions that have not yet been fully explored. One of the most promising is the introduction of default fossil-free investments that would be offered to all clients by the world's largest asset managers; investors would have to intentionally direct their managers to opt out of these climate-friendly funds. Other technical solutions include establishing a standard definition for ESG and updating or regulating the indices that funds track. Ultimately, any successful approach to the passive investing problem will also need to shift mindsets within the financial sector and address industry inertia.



Background: The Passive Investment Wave

In 2007 [Warren Buffett made a famous wager](#). He bet \$1 million that an investment in a passively managed index fund that tracked the whole market would generate a higher return than a basket of actively managed funds that bought and sold stocks to beat the market. A decade later the results were in: Buffet's passive investments had outperformed the actively managed funds by almost 5 percent compounded annually. His bet reflected a broader market shift that had been building for decades with significant unintended consequences for the climate: the passive investment wave.

Passive investment is rapidly gaining market share

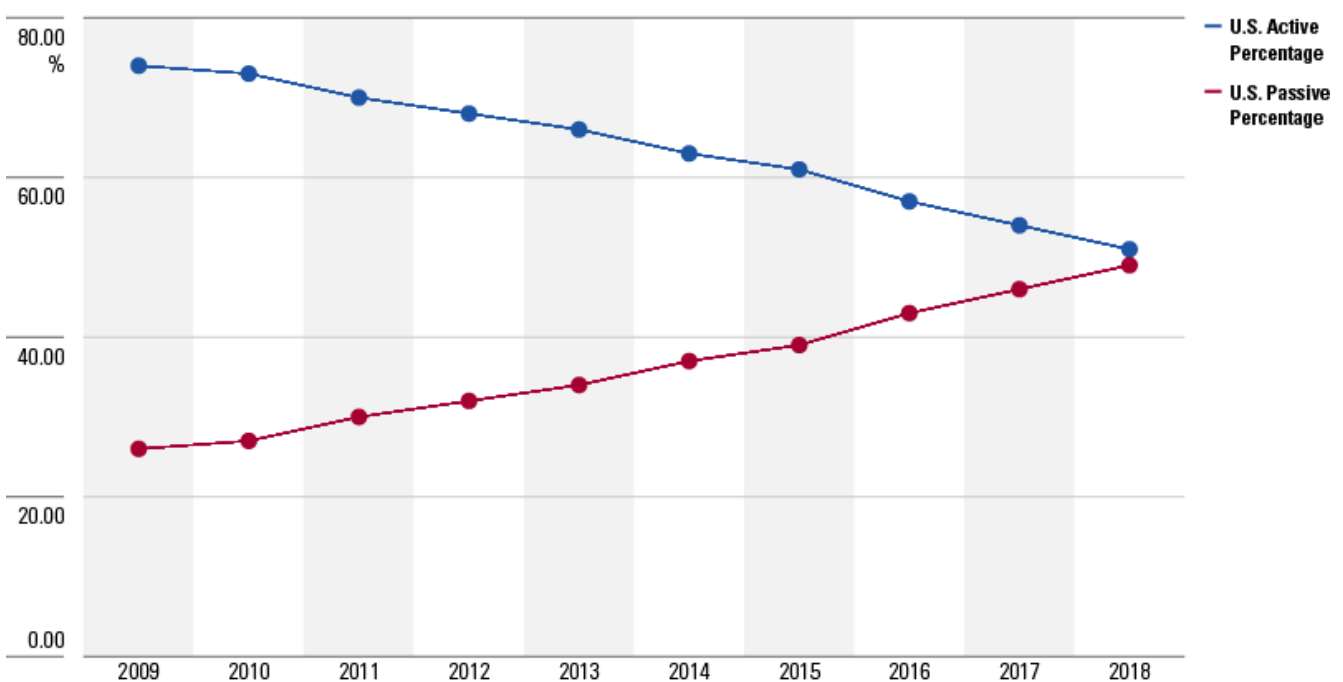
The rise of passive investing has been driven by the idea that it reduces and diversifies risk, lowers fees, and provides stable and strong long-term returns as compared to active management or "stock picking," which in aggregate struggles to generate returns that justify the increased fees and concentration risk. While passive investing initially grew slowly and steadily, [the financial crisis of 2008](#) — and the regulations that followed — supercharged the passive wave

as investors became increasingly wary of risk. In 2019, [passive equity investments](#) surpassed active investments in the U.S., and they continue to rapidly gain market share.

The trend is global. European equity markets are now approximately [33 percent passive](#) and Asian equity markets about 50 percent passive. In China, [passive equities are growing faster](#) than any sector, currently at around ten percent of the market, with estimates that this number will double within the next five years. This [trend](#) extends beyond the equity market. In 2017, growth in passive fixed income products totalled 30 percent of the market in the U.S.; 18 percent in Europe; and 10 percent in Asia.

To put that in perspective, before the financial crisis, exchange-traded funds (ETFs) and other index investments only accounted for [\\$700 billion in assets under management \(AUM\)](#). Since the crisis, [they have grown more than five times](#) — to \$5 trillion in 2018. And ETFs have become highly concentrated, with just 20 funds attracting [more than 50 percent of capital inflows in 2017](#).

U.S. Equity Active and Passive Investment Percentages



Source: Morningstar Direct. Data as of 31 December 2018.

Asset managers are increasingly concentrated and powerful

As passive equity investing has risen, so have the asset management firms that offer these products. By the end of 2017, the global AUM by the world's largest firms totalled [\\$93.5 trillion](#). The top six companies alone manage around \$22 trillion. But the concentration is even more stark among the Big Three, who alone have quadrupled their ownership in S&P 500 companies over the past two decades. Each of the Big Three now manages five percent or more of the shares in a vast number of public companies, and they collectively cast an average of about 25 percent of shareholder votes in those same companies.

With the rising popularity of passive investing, in particular the explosion of ETF products, more and more capital is flowing to carbon-intensive industries via mainstream investment products offered by asset managers. [Recent analysis](#) has found that the world's 15 largest asset managers have increased their holdings in thermal coal by an [average of 20](#) percent since the Paris Agreement, in large part due to passive investing. Meanwhile, the capital that flows from their passive investments can enhance the equity valuations of the world's largest fossil fuel companies, which have spent \$1 billion to lobby against climate action just since the Paris agreement was signed in 2016.

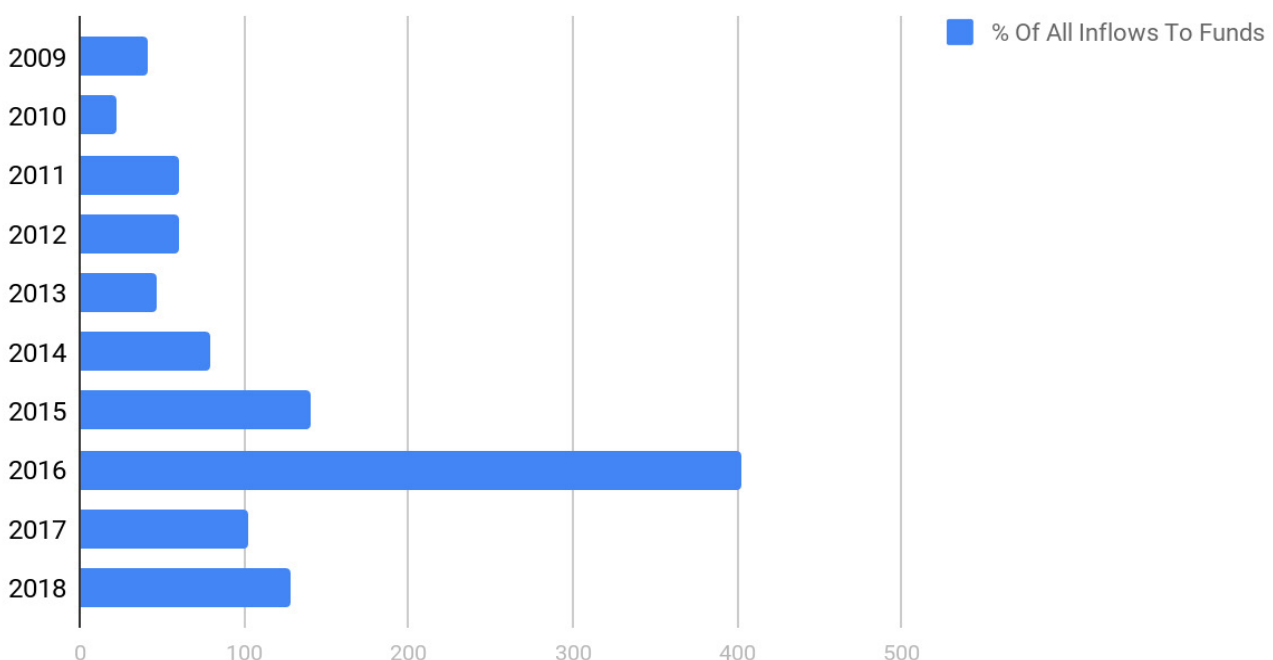
Today there is little knowledge amongst the general public – let alone the climate community – of the looming threat from this trend. As a result, passive investing is relatively unregulated compared to its peers in the financial sector. Despite efforts by some asset owners to increase investments in active strategies or manage funds in-house, the passive trend is likely to continue. If the next two decades mirror the past ten years, the Big Three asset managers alone will own over 33 percent of S&P 500 equity and [could vote 40 percent of S&P 500 companies' shares](#).

STATE STREET
GLOBAL ADVISORS



BLACKROCK

Big 3 Asset Managers Fund Inflow



Source: [The Specter of the Giant Three](#), Harvard Law

The Market is Broken

In theory, the market should solve for the financial risks raised by passive investing. All players in the financial system would price-in the transition and physical risks associated with climate change (aided by disclosure and good data) and we'd see a systematic re-pricing of fossil fuels and other key drivers of climate change. That re-pricing would be driven by active managers who would lower the price they're willing to pay or sell off overpriced assets facing climate risk. This would then force underperforming stocks or companies out of the biggest indices or benchmarks (like the S&P 500), and the passives problem would be solved.

Unfortunately, markets are not perfect and power imbalances and information asymmetries happen all the time. These imperfections skew the proper functioning of any market and require constant intervention to maintain a more free, fair, and informed marketplace. In the case of index investing, there are growing power imbalances between asset owners, asset managers, and other players within the financial ecosystem, creating a cascade of market imperfection.

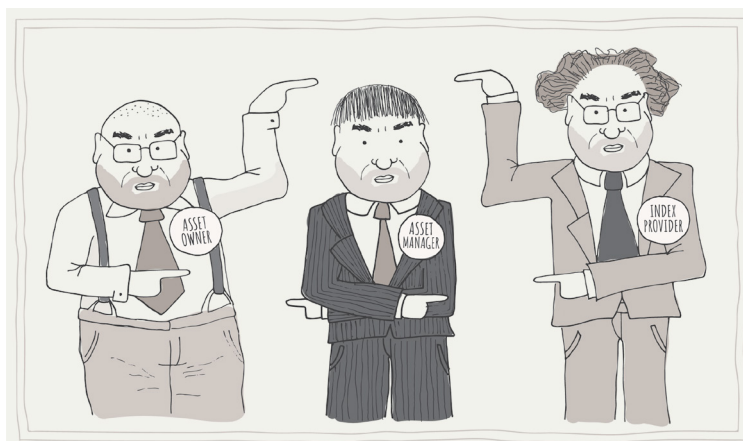
To begin with, there is a lack of disclosure of climate risk data, in part because many companies—including those in the financial sector—lobby to prevent it. Without this data, both ratings agencies and benchmark and index makers are not likely to appropriately factor climate risk into their assessments. When these assessments are off, it becomes difficult for investors and managers to re-price climate risk

into the evaluation of companies and investment products.

There are also financial disincentives at play. Asset managers whose incentives lie with selling more 401k plans to S&P 500 companies—including fossil fuel companies—are not necessarily interested in pushing those companies to shift their business practices. To do so could risk losing business or access to powerful corporate boards.

Lastly, those same asset owners are no more capable of shifting large index providers, whose main clients are actually asset managers who buy their products. All of which leaves a messy marketplace on autopilot with no one capable of taking hold of the wheel and steering us down a different path.

In this environment, asset owners—particularly smaller institutional and retail investors—are at a significant disadvantage when it comes to structurally shifting the market in the way they theoretically should be able to. Ultimately, a large and well-organized cohort of the largest asset owners in the world could overcome these barriers. New initiatives like the [Net-Zero Asset Owners Alliance](#) could help drive change. A set of large and powerful asset managers could similarly shift the market. Absent such a network, the default setting for the market today leaves key actors pointing at each other and shifting the blame while the problem grows.



As asset managers, asset owners and index providers point to each other and shift the blame, the passive problem continues to grow.

The Problem with Passive Investing

There are four serious issues created by the passive investing wave when it comes to climate: these issues span from individual/portfolio risk to wider systemic risk. 1) Passive investing can artificially raise the valuations of carbon-intensive companies; 2) It limits shareholder action on climate; 3) It blunts asset owner pressure for change; 4) It increases systemic financial risk from climate change.

Passive investing can artificially raise the valuation of carbon-intensive companies

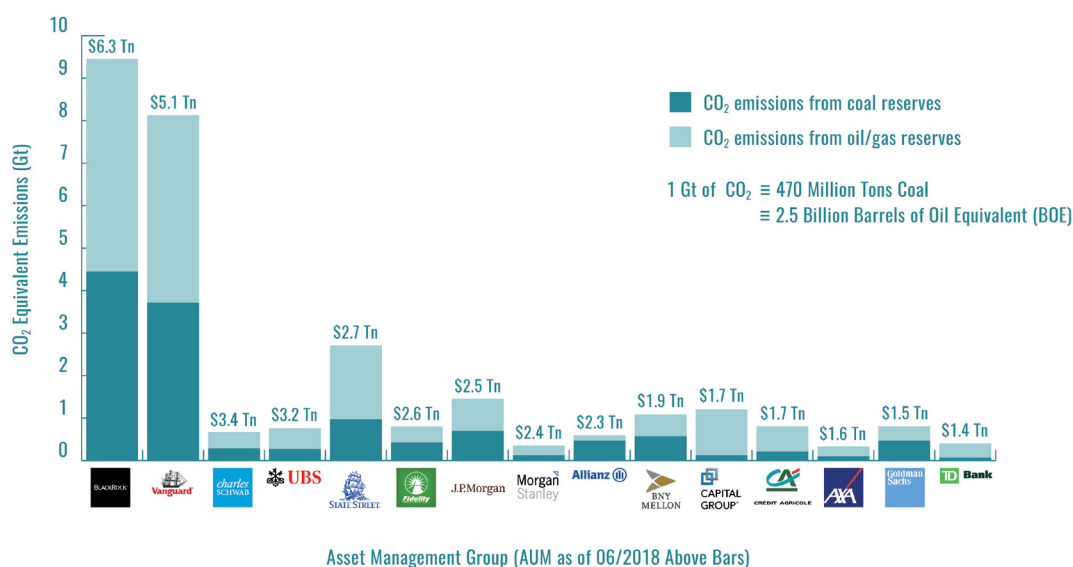
As early as 2011 scientific analysis showed that up to [80 percent](#) of listed fossil fuel reserves were unburnable given the current global carbon budget. [Things have only gotten worse](#) since that analysis – including the approach to investment. Despite the Paris Agreement, holdings of thermal coal by the fifteen largest asset managers have increased by 20 percent. BlackRock, the world's biggest asset manager, [now has the largest absolute holdings in thermal coal, and the most coal-dense portfolios of any asset management firm.](#)

This investment in fossil fuel companies, many of which have [underperformed against the market benchmark](#) for years, makes it difficult for investors to bet against a major megatrend. For

instance, General Electric (GE), which bet heavily on fossil fuel for power generation [lost investors \\$193 billion in just three years. \\$19 billion for BlackRock alone.](#) Passive investors have borne these losses because GE is a publicly listed entity included in most mainstream indices. And yet despite the loss, BlackRock continues to remain one of the biggest shareholders in GE. This is not an isolated case. [A recent study](#) reports that BlackRock's fossil fuel-heavy strategy has lost investors \$90 billion over the past decade, mostly through large cap passive products.

Worse, as they're continually included in indices, fossil fuel companies can enjoy inflated stock prices and valuations, thanks to ["the index effect."](#) This means that despite market underperformance and increased turbulence in the future, these companies have the potential to enjoy artificially high valuations. This can create a negative feedback loop in which, despite increased risk and/or poor economic performance, fossil fuel companies in passive funds attract a steady trickle of capital; and continue to operate and create emissions, further intensifying the climate crisis and increasing the financial risk to these investments. Worse still, fossil companies [are increasingly using portions of this money](#) as CapEx to pursue expansion.

Asset Managers and Fossil Fuels Reserves Ownership



[Influence Map: Who Owns the World's Fossil Fuels Report 2018](#)



Passive investing limits shareholder action on climate

Despite the increased risk posed by fossil fuel investments, [short-term disincentives](#) prevent these large asset managers from engaging in adequate stewardship that might lead to climate action.

[These managers hold significant \(greater than 5 percent\) equity stakes](#) in most publicly traded companies (including the majority of fossil fuel companies). Their stakes offer access to senior management and boards – something asset managers prize. Large asset managers are disinclined to vote against management – because of lack of capacity to adequately engage, historic or financial ties with the company, or fear of losing access – which makes it difficult to take a stand on climate. In fact, in the rare cases where companies like Vanguard or BlackRock have voted against management on shareholder

resolutions or board votes, it has generally been about a [lack of access to management](#).

The concentration in the asset management sector also means that the top managers all have fossil fuel companies as large clients. There is a disincentive to lose out on tens of millions of dollars in yearly fees by voting against management; the most recent analysis from [50/50 Climate](#) (now Majority Action) showed a correlation between asset managers with more fossil fuel clients and poor shareholder voting records.

Fossil fuel companies and the trade industries that represent them also fear the potential [voting block power](#) of these asset managers. This has given rise to well-funded industry astroturf groups, most notably the [Main Street Investors](#) coalition, which advocates against proxy voting and shareholder resolutions deemed “political.”

Pressed on one side by industry groups aiming to maintain the status quo, and on the other side by a global call from investors, heads of state, and others who want to address climate change, asset managers can mistakenly draw a Goldilocks conclusion: They say they must take the “just right” approach between the two critiques. The result is that too often managers default to the status quo, which prevents action on climate.

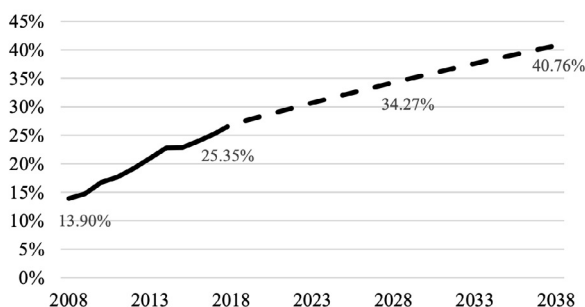
Passive investing blunts asset owner pressure for change

Passive investing is also rearranging power in the financial system – away from asset owners to asset managers. The average asset owner is now so small relative to the total AUM of the largest asset managers that they have little control over allocation strategies. At this point nothing short of collaborative pressure – from retail customers, large asset owners, regulators, legislators, civil society, and employees – is likely to force asset managers to change course.

As a result, some asset owners seeking change in their investment strategies, particularly on ESG issues, are increasingly frustrated by a lack of action from their asset managers. [Recent surveys](#) show that a significant number of pension plan

Expected Future Growth - Big Three Combined Voting Stake

Panel 1: S&P 500 Companies



Source: [Specter of the Giant Three](#), Harvard Law

managers (with \$2.43 trillion in assets) said index managers were not meeting their stewardship goals at all, while 23 percent said they were only meeting them 'to a limited extent.' That's largely because in the grand scheme of things they are not big enough, coordinated with one another, or loud enough to force change.

That is highly problematic for climate change, because investors are just now waking up to the power they can wield. For instance, the \$34 trillion Climate Action 100+ investor initiative was created to engage the 100 largest carbon-emitting companies on the planet to reduce their emissions. By being active stewards, [Climate Action 100+](#) and many other individual investors are increasingly seeking climate policies from companies they own (see Glencore's commitment to cap coal production [due to investor pressure](#)).

Investor initiatives like Climate Action 100+ do not currently include the largest asset managers. And much of the power investors seek to wield through these coalitions on securing climate progress is either watered down by different engagement priorities from large passive-heavy asset managers, or simply ignored. The absence of the largest asset managers from Climate Action 100+ also means that when engagement fails and change is left to a shareholder or board of directors' vote, increasingly these votes are determined based on the shares voted by BlackRock, Vanguard, and State Street. In 2019, at least 16 critical climate resolutions would have received majority support of voting shareholders

if [BlackRock and Vanguard](#) had voted in favor of them.

Passive investing increases systemic financial risk from climate change

Passive investment poses significant risk to the entire financial system by fueling the rise of assets that will be stranded as the world gets serious about addressing climate change. Many studies have surfaced that examine the financial risk climate change poses to particular investments, including [detailed analysis from BlackRock](#) earlier in 2019 focusing on the physical climate risk to three of their key asset classes. Yet very little discussion or action is happening among mainstream financial players about the risk *from* their investments. This is a much more difficult but needed conversation.

As lawsuits that seek to assign liability for climate related disasters work their way through the courts, these risks could further magnify. A growing number of financial experts like Mark Carney, the Governor of the Bank of England, are worried the financial system could face a '[Minsky](#)' moment driven by rapid re-pricing of fossil fuel assets and losses experienced as a sudden shock.

As investors respond to increasing financial risk of climate change in their actively managed investments, we'll see a partial or accelerated exodus from fossil fuels; the Influence Map [study](#) shows that even larger managers are more lightly invested in fossil fuels in their active

Photo: CIFOR, deforestation for agricultural clearing in Brazil



rather than passive holdings. This phenomenon creates a situation where passive investors are poised to become the [“holders of last resort”](#) as it relates to fossil fuels investments, and it ensures that the fallout will be borne overwhelming by average investors, pensioners, and retirees, all of whom are significantly passively invested.

Helping avoid such a climate-related financial shock, and the resulting financial crisis it would create, should be the purview of central banks. At the Paris “One Planet Summit” in December 2017, eight central banks and supervisors created the [Network for Greening the Financial System \(NGFS\)](#) – a network of central banks and financial regulators (42 members and eight observers) around the world working to promote financial stability while addressing climate risk.

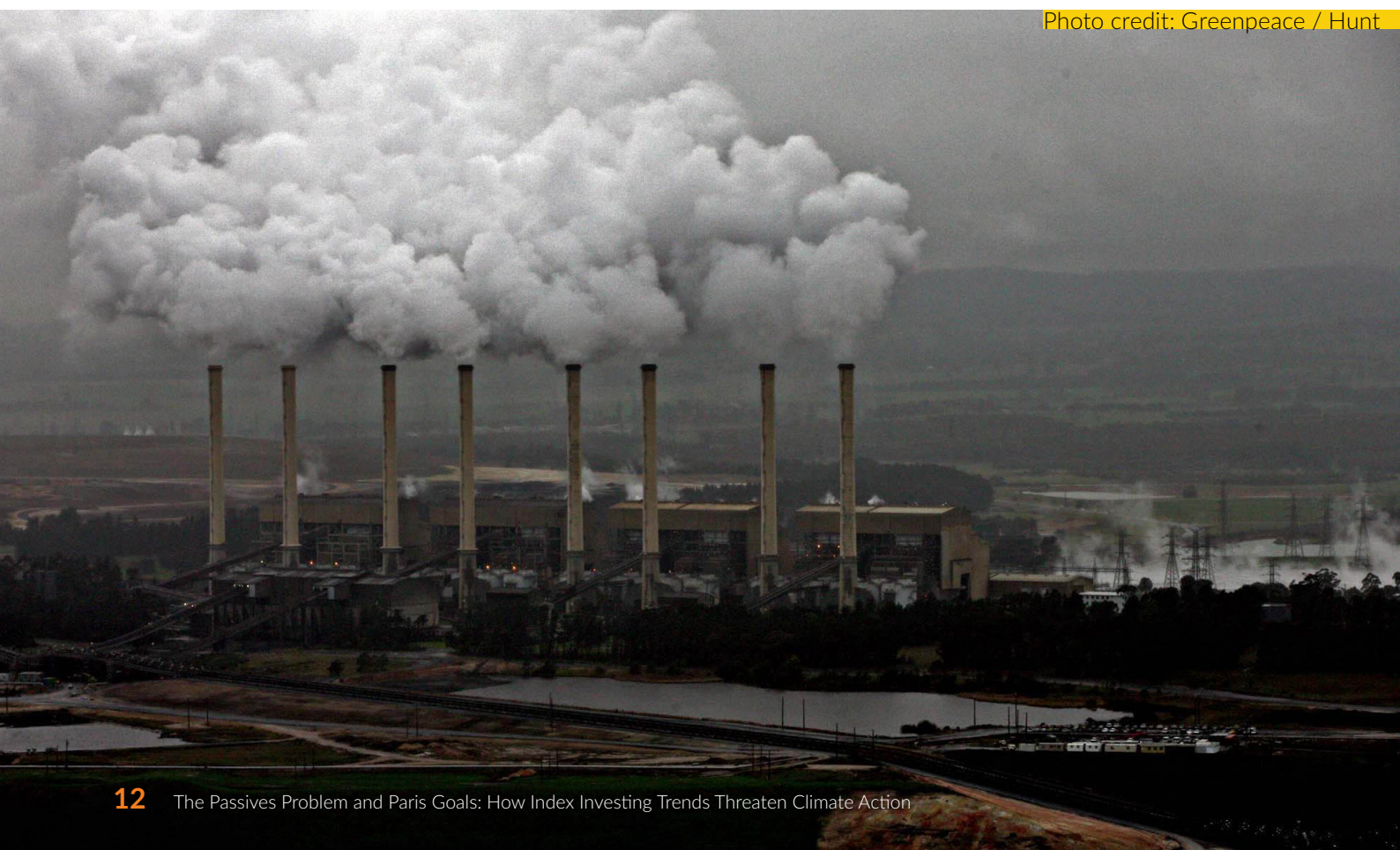
But even these institutions charged with addressing the problem are actively perpetuating it through investments of their own. Through quantitative easing (QE), central banks have been purchasing bonds and, in some cases equities, at an increasing rate. QE grew dramatically in response to the financial crisis of 2007/2008. As a result, central bank balance sheets expanded significantly. At the peak of its Asset Purchase Program, the European Central Bank (ECB) injected €80 billion per month into the economy.

Today, assets on the ECB balance sheet stand at €4.7 trillion, a more than fourfold increase. Similarly, the Fed expanded its balance sheet from below \$1 trillion in December 2007 to just under \$4 trillion today all in bonds. Bank of Japan, the Swiss National Bank, the Czech Central Bank, the Hong Kong Monetary Authority, and the Bank of Israel have all included equities in their investment strategies.

More troubling, central banks’ QE investments often skew towards [carbon exposed industries](#), an outcome [pronounced in European quantitative easing programs](#) which, in some cases, directly contradicts the stated goals of national policy.

Ultimately, this means that if or when the next financial crisis occurs, without further intervention or changes in policy, many of these institutions could push additional capital to the fossil fuel sector as a result of renewed rounds of QE. This could occur despite the emergence of the NGFS and active concerns about the financial risk posed by climate. Central banks are attempting to mitigate risk with one hand, but are exacerbating it with the other.

Photo credit: Greenpeace / Hunt



ESG Alternatives Alone won't Solve the Problem

One possible way to tackle the passives problem is through ESG (Environmental, Social, Governance) investment options that either screen out carbon-intensive companies or screen in climate-friendly companies. In a recent Morningstar poll, [72 percent](#) of respondents indicated interest in ESG investments. As a result of this rising demand, 'green' options (including but not limited to ESG products) have grown dramatically, [and now represent \\$31 trillion](#).

Unfortunately, because of a [lack of standardization](#), regulation, and enforcement, many of these options still include fossil fuels, along with soft commodities and companies directly tied to deforestation. Some of BlackRock's ESG products feature [pure play coal companies](#) like Peabody. Even with current best in class standards, without intervention, sustainable investing will further entrench fossil fuels. Two concurrent issues are at play which further exacerbate this problem: Poor and inconsistent disclosure standards at the company level and a business practice at the index provider/asset manager level that assumes that sustainable funds should simply include the [most sustainable companies of each sector](#), not restrict or exclude sectors which are blatantly unsustainable by their very nature.

This is slowly changing as European regulators concerned with [greenwashing](#) have introduced a [Europe-wide classification system for ESG](#).

Though the process continues to face delay, a "green taxonomy" framework will likely be introduced in 2020 and could come into [force as early as 2021](#).

In response, calls for increased oversight from lawmakers and regulators in the U.S. are growing; [in 2019 the House hosted hearings](#) focused on establishing a single standard and common definition of 'sustainable.' However, the Trump administration signed an [an executive order](#) calling into question the materiality of ESG considerations and climate related disclosure. This will likely will be challenged in court.

There are signs of change in Washington with the introduction of [RISE Act legislation which would give federal employees](#) a fossil-free investment option. However, neither the RISE Act nor the proposed disclosure rules resolve the lingering issue of what defines 'sustainable' investment products or what kind of oversight and federal regulation is needed to standardize a common definition of these products.

Even if a common definition is reached, ESG options alone won't solve the passives problem. As long as they are an opt-in product rather than the default offering, they'll remain niche and not to scale.

Photo credit: Gregoire Dubois, deforestation in Madagascar



Barriers and Potential Solutions

Below is an initial set of potential solutions and barriers to address the passives problem. They represent a jumping off point for further discussion, analysis, and applied strategy.

1. Opting In vs. Opting Out

Even if a new index is created for passive investment products, a significant barrier remains. Products that asset managers provide as core, portfolio-building lead investment vehicles are the overwhelming [majority of the funds clients eventually choose](#) because they must opt-out if they don't want them. Sustainable options, which clients must ask for (opt-in) inevitably account for a small share of total fund volume. The power of opting in vs. opting out is well established in psychology, and is a proven strategy for change. For example, countries like France and Sweden that require people to opt out of organ donation enjoy

[80 percent participation in their programs](#), while countries that require donors to sign up see less than 30 percent participation.

One solution is to make climate-friendly products the default choice. Mainstream asset managers would offer these as their standard, lead investment products. This would not necessarily require a total ban on fossil fuel investments. It would likely require some combination of [self-indexing](#), pressure on third party index providers (like MSCI, FTSE, S&P Dow Jones) to create new indices, new investment products, and/or acceptance of greater tracking errors. This may also occur in phases – initial coal-free defaults, or one fossil-free default, building towards an entire suite of products that are climate-friendly (they exclude companies with a negative impact and include companies with a positive impact) across both equity and debt investment options.



2. Standardized Definition of ESG Funds

Absent universal standards that are enforced by regulators, consumer demand for ESG products will have the unintended result of further entrenching fossil fuels. However, it is possible to solve for this. In Europe, regulators increasingly concerned about greenwashing are working towards universal standards for ESGs. With the threat of a new green taxonomy in Europe on the horizon, coupled with the growing investor demands for better, cleaner ESG products, some asset managers have already started introducing screened ESG products. In 2018 BlackRock, which has loose U.S. standards for ESG, marketed six new European ESG ETF products which [explicitly and publicly excluded thermal coal and tar sands](#).

In order to truly address climate change, all ESG products worldwide would need to adhere to a common (legally enforceable or third party-certified) definition that would exclude not only pure play fossil fuel companies, but diversified companies that exceed certain limits (for example in the [case of coal](#), the established criteria of greater than 30 percent of revenues from coal mining or coal power; greater than 10 GW of existing coal plant assets; or 20 MT of annual coal production). Such a global definition has not yet been created for oil and gas companies.

Some ETF providers, such as Etho Capital's [ETHO ETF](#), are doing this right, creating climate-friendly products that screen out carbon-intensive industries while also screening in (and heavily weighting investments in) companies that are driving climate solutions. Launching alternative low-carbon or fossil-free ESG ETFs

and expecting consumers to make an active decision to switch is a limited solution. A more promising approach is to combine two strategies: raised-ambition ESG-screened funds and default climate-friendly options.

3. Addressing Tracking Errors

Asset managers insist they can't simply remove fossil fuels from their products because doing so would create undesirable tracking errors. Industry norms suggest that a portfolio that deviates from an underlying index by greater than one percent results in a tracking error which is unacceptable or overly risky for large passive investors. However, in many cases, beyond when the portfolio prospectus directly calls for it, there is no consistent regulation or fiduciary duty principle that requires tracking errors to remain at this level.

In fact, tracking errors are neither good nor bad—it just depends on one's investment approach. [Several studies](#) show that tracking errors from screening oil, gas, and consumable fuels range between 0.79 percent and 2.9 percent with similar—even superior—returns. [MSCI analysis](#) found tracking errors for their MSCI world index ranged from 0.3 percent to 1 percent based on the criteria applied to coal vs. all fossil fuels respectively. It is worth noting that many large asset owners, including CALPERS, CALSTRS, and the Norwegian Sovereign Wealth Fund already employ a coal-only screen and accept these tracking errors. One solution is to organize customer demand for coal-free, fossil-free products—regardless of their tracking errors—and demonstrate to other big investors that this approach is viable.



4. Changing the Index

Asset managers often point to the underlying index from a third party as the source of the problem. “We have to follow the index. We are legally bound to our customers” is a common refrain. However, asset managers [wield the power in the system](#) and could request new indices from index providers, or make their own, if they wanted to (as Vanguard and others already do). Many ETFs and other products are self-indexed by large asset managers and for those products, asset managers could make [deliberate decisions](#) to eliminate fossil fuels because they have the power to make adjustments to the index.

In terms of third party indices, an enormous number of individual indices could be changed, but the greatest impact would come from focusing on the most popular and largest. [Standard and Poor’s and FTSE](#) represent 18 of the 20 most popular benchmark indices for U.S. mutual funds and 15 of the 20 largest by assets under management. The S&P alone constitutes as much as 41 percent of total AUM tracking the U.S. market. There is regulatory precedent from Europe, where the European Securities and Markets Authority and the International Organization of Securities Commissions [have introduced guidance and regulations](#) to improve index governance and transparency so regulation is possible. Short of stripping fossil fuel companies entirely, even proposing reclassifying oil companies as “non-renewable energy,” as FTSE Russell [attempted](#) (though [eventually dropped because of pressure from the London Stock Exchange](#)), can make a difference.

While indices that exclude fossil fuels [already exist](#), they are boutique ([and not immune to “sin” companies still showing up in the fund by mistake](#)). There are multiple ways to grow and strengthen this approach as a solution to the passives problem. With the promise of significant capital, large asset managers and asset owners can push index providers to create new cost-effective indices; asset managers can also self-index. Self-indexing and the creation of new indices do have added costs. If these costs are a barrier, one answer is to push the index to change its methodology, which [can and does](#)

[happen over time](#). The methodology for the S&P 500 changed at least eight times between 2015 and 2018. Overall, indices tracking the S&P changed twenty-two times within that same period. It is possible that, absent regulatory pressure, asset managers or owners could lobby index providers to change the index rules. However, indices don’t adhere to common definitions so what is considered ‘industry’ or ‘energy’ could vary wildly and would need to be standardized.

5. Addressing Market Concentration

Because the Big Three dominate the market, it is difficult for new entrants to disrupt them with competing climate-friendly products. The Big Three enjoy that power because of [economies of scale, higher liquidity, and barriers to entry](#). However, should smaller upstarts demonstrate the popularity of climate-friendly products, large asset managers could easily and quickly replicate them and spread them widely across the market, [as the pricing wars have shown](#). The situation also holds in the reverse: If one of the Big Three is disproportionately skewed towards fossil fuels, as BlackRock appears to be, there may be reluctance to admit or change that tilt. BlackRock has a higher thermal coal intensity in its funds than any other top asset manager [as analyzed by Influence Map](#), with the most coal-intensive portfolios situated in BlackRock’s passively managed funds.

There could also be a push to regulate asset managers to promote more competition. In May of 2019, Harvard Law professors Lucian Bebchuk and Scott Hirst made [a compelling case](#) for regulation in the United States that would “prevent or deter investment fund managers from managing investment funds that cross certain thresholds in the aggregate, whether through fiat, tax penalties, or otherwise.” This approach will be more or less feasible depending on who occupies the White House and Congress.

6. Generating Awareness and Consumer Demand

Despite the growth in demand for general sustainable investment options, asset managers often point to a lack of demand specifically for fossil-free funds. Absent that demand, asset managers tend to follow broad market strategies in the products they offer or prioritize. Meanwhile, few consumers understand that most investment options include fossil fuels – and those who do demand sustainable options could incorrectly assume they are fossil-free. Customers can't reject what they don't know is there.

Even in the dedicated climate change community, there is little awareness that such a thing as a “passive investment problem” exists – let alone its significance in perpetuating the flow of capital to fossil fuel companies. In order to generate consumer demand, pressure for change, and regulatory oversight, this problem must first be elevated through research, reports, and widespread media coverage.

It is possible that demand among the general public, particularly in the U.S., might never be high enough to change this trajectory. Passive investors are by nature, passive. But targeted solutions – like engaging financial advisors as vectors, or establishing default fossil-free products – could help overcome this barrier.

7. Shifting Fiduciary Duty

Many in the industry believe that it would violate their fiduciary duty to restrict fossil fuel companies from underlying indices or products. These concerns are reinforced by [the current U.S. administration's effort to block consideration of sustainability under the guise of fiduciary duty](#). This uncertainty can hold back even the most progressive investors. These concerns could ultimately be addressed by regulatory guidance and legal challenges; establishing a precedent would show that fears of violating fiduciary duty are unfounded.

Discussion and interpretations of fiduciary duty are changing. This will have an inevitable impact on the investment strategies applied by asset owners and managers. Short-term investment strategy which fails to take into account or stress

test known long-term material risks of climate change could leave managers vulnerable to legal challenges and complaints from investors. This is an area that deserves close attention from the legal and investment communities.

8. Asset Manager Action

Asset managers, especially the Big Three, need to change their approach to shareholder engagement so that they can drive action with key companies on supply chain emissions, corporate lobbying, and Paris-aligned investment. When transparent time-bound engagement fails, managers will need to act as “forceful stewards” and take much stronger action to drive change. This must include supporting climate resolution votes, board of director challenges, and—if companies fail to align—divestment. To achieve these goals would require actively shifting asset managers' incentives, including publicly pressuring laggards, making regulatory changes, and organizing asset owners to speak out for more aggressive action.

Furthermore, asset owners should change their asset manager if that manager fails to meet standards of climate stewardship. The Japanese Government Pension Fund (GPIF) recently did this in response to BlackRock's poor voting record on climate resolutions in 2019. In light of new UK Stewardship Code, this could become standard practice, even a legal duty, for European asset owners.

Finally, recent analysis from Jeremy Grantham and other investment advisors shows that shifting capital out of particular companies and entire sectors is neither risky nor unprofitable, especially for long-term passive investors. However, this has not yet led to a mass exodus of capital from the fossil fuel sectors. Many within the financial community maintain that indices should be well-balanced across all sectors. Changing this archaic industry standard will require behavioral changes from large asset owners and managers.

State of Play: What's Being Done to Align Passive Investment With Paris Goals?

There is of course a long history of work focused on fossil-free funds as a part of the divestment movement. The push for divestment has generated numerous in-depth studies over the past decade that address issues like tracking errors. Much of this work has forced mainstream analysts and companies to engage in the discussion, which is why index providers like MSCI have produced their own tracking error studies. Moreover, some of the solutions identified already exist, including an S&P 500 fossil-free index and associated products offered by the largest asset managers. Meanwhile NGOs [offer tools](#) that allow retail investors to compare fossil-free funds.

But these solutions are still niche, narrowly focused, and require opting in. Political support for changing this is not widespread. The ecosystem focused on the passives problem is still limited; by and large it is confined to an activist base associated with the divest/invest movement which has yet to achieve mainstream popularity.

At the same time, most fossil fuel divestment commitments have not placed exclusion screens beyond pure play fossil fuel companies (the Carbon Underground 200) which allows diversified companies crucial to the fossil fuel industry (e.g. utilities and auto manufacturers) to escape the impact of divestment pressure. There are of course exceptions to that rule, including the [Global Coal Exit List](#), which names companies directly tied to global coal expansion and has been applied to cover nearly \$10 trillion AUM, mainly from institutional investors. This list screens coal investments using far more sophisticated criteria, which push diversified companies as much, if not more, than pure play coal companies. And Europe's largest asset manager, Amundi, has a new coal policy that applies to its passive investment portfolio. (See "Case Study: Crédit Agricole - Leaders in Climate-Aligned Asset Management" below)

The situation may be shifting as tension between asset owners and asset managers builds,

awareness of climate risk grows, the divestment movement continues apace, and returns from the fossil fuel sector decline dramatically. For instance, the San Francisco Federal Reserve recently hosted exploratory meetings to greater understand the risk climate change poses to the financial system. Other key regulators at a global level are increasingly concerned about climate risk. This has raised new questions about the risk exposure passive funds create and the role they play in driving climate change. Yet very few have moved from analyzing climate risk and running climate stress tests to the real-world steps required to limit our exposure by actually changing the composition of investment products.

There is also a small but growing body of research and stakeholders focused on the increasingly powerful role of asset managers and passive investing generally (with some focus on climate and ESG), which creates the opportunity to build a bigger network of support from academics, investors, elected officials, and civil society. There is growing tension over short-term vs. long-term investment strategy that has already become a source of friction between asset owners and asset managers. That frustration is also manifesting itself in the rapid growth of ESG, which has been changing faster than anyone thought possible. Just a few years ago no one thought ESG would outperform traditional funds, claim significant demand growth, or be seen as the key to unlock the next generation of investors. Clearly the industry is in the midst of rapid change.

But absent significant efforts to address the passives problem, these potentially promising conditions will not lead to large-scale solutions. That is in part because the problem has magnified since the divestment movement first began—thanks to broader market trends that have accelerated consolidation. It is also because the universe of actors focused on divestment, and their asks, has still not penetrated the mainstream.

Case Study: Crédit Agricole, a Leader in Climate Aligned Asset Management

In June 2019 Crédit Agricole adopted a [landmark new strategy](#) aiming to align its coal-related business with the Paris Agreement. The policy applies to all financial services provided by the group's entities and subsidiaries, including its banking branch and its asset management business Amundi. While Credit Agricole has yet to establish specific policies, the group confirmed in June of 2019 that the policy will apply to all assets under management, including third party assets and passively managed assets.

While many financial institutions have adopted coal exclusions policies, most policies only address lending, underwriting, and active investment portfolios. Amundi's new policy takes a noticeable step further by also addressing clients' portfolios and passive investment strategies.

Highlights of [the strategy](#) include:

- Crédit Agricole has committed to fully reducing coal exposure of investment portfolios to zero by 2030 in European and OECD countries, by 2040 in the rest of the world.

- A full exclusion of companies planning new coal mines, plants and infrastructures projects and a severe restriction of support to companies with more than 25 percent of their activities based on coal.
- A call to coal companies that remain invested to adopt a coal phase-out plan by 2021.
- Crédit Agricole will align AUM portfolios and third party investments with the Paris Agreement through "gradual reallocation."

Why this matters:

Amundi is one of the top 15 largest asset managers in the world, with approximately \$1.7 trillion AUM. This latest policy by Crédit Agricole reflects a recognition that asset managers have the responsibility to climate stress-test all investment portfolios, including managing clients' investments towards long-term climate stability.

Read [further analysis](#) of Crédit Agricole's strategy.

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Photo credit: Markel Redondo





Gemasolar solar thermal power station, Spain. Photo credit: Markel Redondo/Greenpeace.



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