Daniel C. Apfel Exploring Divestment as a Strategy for Change: An Evaluation of the History, Success, and Challenges of Fossil Fuel Divestment

INFLUENCE STOCK PRICES. SHIFT POLICY. REMOVE COMPANIES' SOCIAL license to operate. Create a public debate. Change company policies. Shift capital into positive investments and solutions. Change Wall Street. Over the past 50 years, both critics of and advocates for divestment have claimed that the seemingly simple action of an investor selling his or her ownership stake in certain companies or groups of companies can do all of the above and many more.

Environmental and social justice activists have called for divestment in response to a variety of different situations. Campaigns have been launched to end investment in countries, including South Africa during apartheid, Sudan, and Israel, and in industries, including tobacco and more recently, fossil fuels and private prisons. These calls for divestment have drawn attention and scrutiny. Yet not all divestment campaigns are created equal. Both the goals and results of campaigns have varied dramatically.

The ongoing fossil fuel divestment movement, for example, has become one of the main manifestations of activism against climate change. It has already helped to change the public conversation about that issue. But it has other, broader goals—including shifting

investments and fundamentally changing the way Wall Street deals with the environment. How do the various goals of the fossil fuel divestment campaign support each other, and how are they at odds? How does this effort compare to past divestment campaigns? My experience helping to start the fossil fuel divestment campaign allows me to examine some of its areas of success and its challenges in a way that may be useful to others considering divestment as a strategy. Of particular interest is what I have come to believe is a major difference from other divestment campaigns: the argument that fossil fuel divestment has positive financial ramifications for investors.

Origins of Fossil Fuel Divestment

I met Will Lawrence late in the spring semester of 2011. I was 27, and for two years had been the executive director of the Responsible Endowments Coalition, an organization advocating for responsible investing by colleges and universities. Will, a sophomore at Swarthmore College at the time, appeared to me to be a stereotypical student activist. He called us because his student group was starting a fossil fuel divestment campaign and wanted the Responsible Endowments Coalition's help.

In the fall of 2010, Will and other students from Swarthmore had driven from campus to visit the Appalachian Mountains of West Virginia. Will told me how they learned from locals about the devastating effects of mountaintop-removal coal mining on communities and the environment. They asked what they could do to help. They expected local activists to ask for students to travel to West Virginia, block coal trucks and mining operations, and organize for policies that would stop mountaintop removal and support communities in Appalachia.

Instead, they heard something different: rather than coming to Appalachia or lobbying Washington, they should make the most of attending an elite and wealthy college. "Find a way to use Swarthmore to help us," the locals said.

Back on campus, the students investigated a variety of options to raise the issue. In the past, Swarthmore had implemented sustainability efforts and offered classes on environmental and social issues. But the students wanted something bigger and more direct. They were inspired by the remarkably successful activism on campuses during the 1970s and 1980s while the campaign for divestment from apartheid South Africa was under way, and they decided to demand that their Quaker institution divest from fossil fuel companies, especially those devastating Appalachia. They chose divestment because they believed it would ignite a debate and force the college to take a moral stand on the issue.

At first I was skeptical. The Responsible Endowments Coalition had avoided involvement in divestment campaigns since its founding seven years earlier. We were concerned about their effectiveness because many such campaigns are started without any consideration of divestment's impact. We were also concerned that these campaigns did not create change in people's lives or influence mainstream investment norms. Responsible investment advocates had in recent years tended to prefer engaging with companies to effect change. Personally, I was especially concerned about the ability of campaigners to overcome financial arguments against divestment in such a large industry. Nevertheless, we decided to work with the students at Swarthmore, in part because the tie between fossil fuel extraction and climate change was one of the major issues of our era, but also as an experiment: the students imagined a growing, national campaign that we felt might be possible and satisfy our concerns.

In the summer of 2011, as the Swarthmore campaign gathered steam, we met with a small group of nonprofit organizations looking at coal divestment. We brought the same set of concerns to the table about the challenges of divestment, but knew from the activity at Swarthmore that students were excited and that this might be an opportunity to galvanize them. With a broader set of stakeholders as partners, we decided to help expand the campaign to other campuses around the country. As a group we had our eye on the coal indus-

try, which was already under pressure financially, and toward driving new investments in solutions to climate change.

The campaign has now expanded to hundreds of campuses across the country and around the globe. In the spring of 2015, students at Harvard University occupied two administration buildings and blockaded the entrances. Nineteen students at Yale University were arrested for staging a sit-in at their investment office. And at Swarthmore College, students staged a long sit-in protesting their administration's continued refusal to divest.

This campaign has not only spread across campuses. The Rocke-feller Brothers Fund and Norway's \$900 billion sovereign wealth fund have both made divestment commitments. On September 22, 2015, the California state legislature voted to divest that state's pension funds from coal. Over the past four years, the campaign has become the major focus of the Responsible Endowments Coalition, which includes some influential names and has raised the issue of climate change on Wall Street. It has helped to reinvigorate the movement to stop climate change, especially on campuses, and formed the core of a 400,000-person march in New York City in 2014. It has helped make a fossil-free future seem possible.

When thinking about how this campaign became so successful, and what makes divestment campaigns successful in general, one valuable approach is to look at earlier divestment campaigns and examine what contributed to their failure or success.

Fossil Fuel Divestment in Context

When I was first asked to help launch the fossil fuel divestment campaign, I attempted to examine the campaign in the context of responsible investing as well as past divestment campaigns. Investors have been formally excluding stocks from their portfolios for ethical reasons for nearly 100 years. Early in the twentieth century, investors with strong Christian values "screened" alcohol and then tobacco investments from their portfolios. Fifty years later, investors began screening weapons manufacturers. In general, this process was under-

taken not with any practical goal of having an impact on the companies or society, but rather to purify portfolios for the benefit of the investor. In divestment campaigns, on the other hand, the act of selling a stock is a public undertaking with the stated goal of influencing society. While I looked into this I tried to understand the possible value of fossil fuel divestment and the lessons campaigners might draw to assess next steps for fossil fuel divestment and divestment campaigns in general.

One assumption we made is that investment actions taken privately to exclusively benefit the moral standing of the investor have very limited effects on society. When one investor sells a stock to another, there is no reason to believe a company knows, let alone changes any practices in response. The value, then, of one or even many investors selling any security for moral reasons is unlikely to have an impact on either the ability of any product—fossil fuels or products from South Africa—to make it to market or the overall profitability of that company. One of the concerns about the fossil fuel divestment campaign was that it would similarly lack effect. It was important that investors not simply absolve their responsibility for their investments without a meaningful impact.

That is one of the reasons that the Responsible Endowments Coalition and many responsible investors have often turned to engagement, rather than screening or divestment, as the main strategy for using investments to create change. Divestment by selling shares, many have argued, reduces the opportunity to engage with these companies, and therefore to encourage them to become better actors. On the other hand, any investor can engage with companies and encourage them to become better actors, whether by improving working conditions or limiting environmental problems. In the case of the fossil fuel industry, such engagement would mean shifting the vast pool of investor resources toward the transition to a sustainable economy.

The general belief of the Responsible Endowments Coalition had been that because of these concerns, divestment from a company

should only be used as a last resort. Serious engagement should be attempted first, and divestment would only be successful as part of a larger campaign. Yet it was and is evident that divestment campaigns have had some major successes. When examining the potential of fossil fuel divestment, we studied the history of divestment campaigns—primarily those targeting apartheid in South Africa, tobacco, and Sudan—and attempted to understand the lessons of those campaigns

One crucial way in which each of these three divestment campaigns differed was the context in which they operated. In the case of South Africa, divestment was part of, and in support of, an extant political movement to end apartheid. When activists called for tobacco divestment, it was part of a major movement for reducing tobacco usage that was both political and social. In Sudan the campaign took place within the context of an ongoing sanctions regime by the US government. The fossil fuel divestment campaign is also part of an ongoing effort to limit global greenhouse gas emissions. That 30-year-old effort has been characterized by education and policy advocacy in the context of ongoing formal negotiations. Nations have officially been discussing climate change since the signing of the United Nations Framework Convention on Climate Change (UNFCC) at the Earth Summit in Rio de Janeiro in 1992. Considering the context of a potential divestment campaign is essential to understanding its potential impacts.

The targets of each of these three campaigns also varied substantially. In South Africa, the demand was for divestment from US companies that comprised a substantial portion of the U.S. economy. The goal was for those companies to pull out of South Africa before reinvestment in them would be acceptable. With regard to Sudan, the effort targeted a very small number of foreign companies traded on US stock exchanges that were actively supporting Sudan's government. Fossil fuel divestment is a bit different: it calls for exclusion of an enormously powerful industry whose fundamental existence underlies much of the global economy. It is not nearly as simple to say "leave fossil fuels and we will reinvest." In this way, the campaign

is similar to tobacco divestment, where the companies' fundamental business, rather than their particular decisions, was the problem. The fossil fuel divestment campaign, therefore, may prove less successful at influencing corporate behavior than policy, because corporate action alone cannot solve the problem.

Divestment from Apartheid South Africa

In the United States, divestment from apartheid South Africa is often remembered as the defining feature of the movement to end apartheid. Of course, that is only one part of the story. For decades, activists in South Africa had been using a wide array of tactics to fight for justice. In the United States, the call for international sanctions had generally been ignored. Instead of heeding demands to pull out of South Africa, many companies engaged with shareholders, signed on to the Sullivan Principles for positive engagement in the country, and changed their workplace practices. For many years, investors continued to invest in those companies while engaging with them. As repression in South Africa increased, there was a clear, understandable human cost visible every day in the struggle against apartheid. Divestment enabled people to connect to that struggle in their own backyard by facing those invested in companies doing business in South Africa. Hundreds of companies were implicated, and the movement, of which divestment was a part, eventually succeeded in pushing the US Congress to enact strong sanctions against South Africa.

A number of factors helped make this divestment campaign successful. In part, the visibility of horrible human rights abuses aroused strong feelings of empathy, which led to broad participation in the campaign. The long struggle allowed for continued engagement over decades. Indeed, the ongoing campaigns against different investors, rather than any single declaration of divestment, may have been the defining characteristic of the movement. Over a period of 20 years, there was a long series of victories for divestment, many at colleges and universities, but also in cities and states. Direct action, organizing, and those victories helped activists succeed in making South Africa a moral pariah throughout the United States. Divestment by itself did not end the regime in South Africa. Instead, the synergy between divestment and other aspects of the campaign eventually led to strong political action, which contributed to ending apartheid.

One essential lesson from South Africa, and in some ways from each of these campaigns, is that divestment is more successful in support of a broader movement than on its own, and that it may be most successful when coordinated with those efforts. The most compelling leaders of the anti-apartheid efforts came directly from communities suffering its worst effects. Divestment campaigners would do well to consider how to support such broader efforts and how partnership may help engage broader audiences for divestment.

Tobacco Divestment

The somewhat less well known tobacco divestment campaign took place from the late 1980s through the 1990s. Students, doctors, and others pressed their institutions to divest from tobacco product manufacturing companies as part of a much broader movement against the tobacco industry for the negative health effects of its products. Unlike in the South African campaign, only a handful of companies were targeted for exclusion. Comparatively quickly, many investors divested from these companies. The divestment campaign, along with many other efforts at the time, had some impact on public perception and contributed to the shrinking of the tobacco industry in the United States. The tobacco problem has since become less visible in the United States as smoking rates have declined. Divestment was never the largest front in the fight against tobacco, but rather part of the echo chamber of the campaign for public awareness and policy change.

Yet fossil fuel divestment and tobacco divestment have much in common. The tobacco and fossil fuel extraction industries are both relatively well defined. Each of those industries has substantial operations in the United States, the geographic center of the campaign, and in each case the industry benefits from government pro-

tection through subsidies, regulations, or as an obstacle of regulation. Both tobacco use and fossil fuel burning are chronic problems. While people die from smoking each day, there is no ongoing horror to be broadcast on television each day. Similarly, the effects of climate change are generational. While we might hear about dying polar bears or even see communities affected by fossil fuel extraction, the widest-ranging effects loom in the future, from the destruction of coastal communities to the impending changes throughout society.

Early on, many activists argued that tobacco was the most analogous case to fossil fuel divestment. Upon closer examination there are vast differences between these two campaigns. Most obviously, while both of these campaigns target an industry rather than a country, the fossil fuel extraction industry is much, much larger and more integral to the economy than the tobacco industry. Fossil fuel extraction companies alone make up nearly 10 percent of the US and global stock markets.

Another dissimilarity is that while individuals cannot have much of a direct effect on the broad usage of fossil fuels or, therefore, its collective impacts, people are at least theoretically able to quit using tobacco, thereby limiting the personal impact. Possibly the greatest similarity between fossil fuel and tobacco divestment campaigns, however, is that they target an industry with only limited ability to change its underlying business model and no interest in doing so.

What lessons might we draw from the tobacco divestment campaign for the value of divestment campaigns in general? We might intuit that fast divestment by institutions can help a broader campaign, but alone may have a limited impact on an industry and on policy. Regulation, taxation, and change in societal perceptions have dramatically decreased the use of tobacco in the United States. Elsewhere these companies have thrived, and many investors—even in the United States—have continued to invest. Another lesson is that a large percentage of investors will continue to invest in any company regardless of such a campaign; a corollary is that even a small but high profile number of investors committing to divestment can have a major impact.

Sudan Divestment

The most recent popular divestment campaign was built around the genocide in Sudan. In the early 2000s, inhabitants of the Darfur region of Sudan took up arms against the national government for poor treatment and for not protecting them from militia attacks. The government of Sudan then supported paramilitaries entering Darfur that carried out genocide against the people of the region. This action was condemned internationally, including across the political spectrum in the United States, though only limited action was taken. Demands for divestment were made as part of this condemnation—particularly demands for divestment from Chinese oil companies supporting the regime. In this case, the investors were attempting not to achieve policy objectives but rather, primarily, to influence the companies. Disinvestment by some Western companies from Sudan has been perceived by many to have failed, as other companies with an interest in valuable resources were simply willing to fill their place.

At the time there was little attempt to divest from the entire country of Sudan. Rather, divestment was for the most part targeted at companies with ties to the Sudanese government. Brown University, for example, divested from companies that "meet the criteria for supporting and facilitating the Sudanese government in its continuing sponsorship of genocidal actions and human rights violations in Darfur" (Lader 2006).

While Sudan's location and specific geography initially draw comparisons to South Africa, it is not a good analogy. Divestment surely helped to expand knowledge about the issue, but decisionmakers had little ability to influence Sudan or the companies involved, which were mostly foreign companies with little interest in pleasing stakeholders.

Sudan divestment helped raise the profile of the Sudan genocide but had mixed results as a strategy for ending it. Rather than leading to action on the ground to end the genocide, some foreign companies responded simply by pulling out of Sudan, their assets ending up in the hands of other companies. One lesson might be that when targeting specific situations, it is important to ensure that demands are clear and are likely to have the intended effects. Campaigners should consider other possible outcomes and whether those outcomes might be detrimental to the end goals in the long term. For example, in the fossil fuel divestment campaign, we considered whether the impact of divestments outweighed any potential limitations of giving up their voice as shareholders.

The Value of a Divestment Strategy

Another method for evaluating a divestment campaign is to examine the campaign's goals and assess how its various strategies are fulfilling those goals. When hearing the word "divestment," often the first thought that comes to mind is "values" and how they are manifest in an investment portfolio. One may ask: do I agree with the companies that are held in my portfolio, or support their industries and practices? Some will simply answer no to the first question and sell their holdings, thereby "cleansing" their portfolio of that problematic company. An individual with investment experience may ask a second question: will my divestment, or sale of stock, have an impact on the stock price of the company? Yet analyzing these questions more deeply, we find that they are the wrong questions to be asking with regard to a divestment campaign.

The simple decision to sell stock may be based on the belief that moral or ethical responsibility for a company's actions comes only from ownership. In the case of fossil fuels at least, that is clearly inaccurate. Fossil fuels are a foundational part of the modern economy, and all investors are implicated in their extraction and burning. Instead of basing ethical responsibility on ownership, another principle may be better. An investor who knows about climate change has the responsibility to take action; one that does not attempt to take meaningful action could therefore be considered unethical. Rather

than simply selling, a thoughtful and responsible investor should examine the available actions and determine their likely effects. The most important question investors should ask is: what are the most effective options for action on climate change?

In attempting to answer this question, one inevitable concern that arises is divestment's impact on stock prices. It is a truism that a single investor selling the stock of a reasonably large company will not affect the company's long-term stock price. This is especially so for the fossil fuel industry. The energy extraction industry, as it is defined by the stock exchanges, makes up approximately 8 percent of global stock markets. Utilities, which burn fossil fuels, make up another 6 percent. Together they total many trillions of dollars. Not only does the act of selling the stock not influence stock price, it also fails to impair the business of the company—in this case, the extraction and burning of fossil fuels. If these two statements about individual divestments are true, investors should instead attempt to determine whether the divestment campaign as a whole can achieve the desired outcomes.

Rather than decreasing stock prices or influencing a specific company, the various entities involved in the fossil fuel divestment campaign aim to achieve many other goals. The primary goals of the campaign can be encapsulated in the following:

- 1. leverage the power of investors and institutions to make the strongest statement possible—divestment—on the need to end the fossil fuel industry, and leverage the power of those institutions towards policy change;
- 2. raise awareness of the fossil fuel economy's impact on the climate and on communities facing extraction;
- 3. lead the market to start considering the implications of climate change when evaluating investments in the fossil fuel-based economy;
- 4. drive investment of capital into clean energy and other solutions that mitigate the effects of climate change, supporting the transition to a fossil-free economy.

To be clear, these are not explicit goals that have been agreed upon but rather my assertion of the campaign's overall aims. It is also important to note that different groups have their own secondary priorities that range from engaging a generation of young activists to making institutions more accountable to stakeholders.

From the beginning, the fossil fuel divestment campaign's plan was to spark serious public and confrontational organizing on the issue of climate change and fossil fuel extraction. Campaigners hoped to engage thousands of young people in confronting complacence in the face of community and planetary destruction. Policy change, the primary strategy used to date, requires spending energy engaging with legislators, who often have other political priorities. It requires a specific skill set and can be demoralizing, in part because there are (especially in this case) few meaningful milestones or victories. From a campaign perspective, policy change is difficult to organize around because there is no clear target—decisionmaking is distributed, and the "opposition" is not necessarily a decisionmaker. One associated challenge is that this leaves limited opportunities for media spectacle. Yet victories, an opposition, and media are important components of a campaign premised in part on raising public awareness. Climate change is not unique in this way, but presents its own particular challenge in that it has a compelling scientific story but a limited human one.

In contrast to an amorphous policy change strategy, a divestment strategy offers many tangible opportunities to develop a successful campaign with clear engagement at a variety of different levels. We might call the campaign "target rich"—that is, there are many opportunities for people of all kinds to engage with the institutions with which they already have a connection. Colleges, hospitals, and foundations have endowments, while almost every city of substantial size has a pension fund with investments. This also means there are thousands of opportunities for victory in the process of driving the campaign forward. As of September 30, 2015, according to Fossil Free (gofossilfree.org/commitments), more than 440 institutions had committed to divestment, each one encouraging to activists. For students, this "target rich" campaign means that an institution they strongly identify with and have likely considered benevolent is making the wrong decision on an important issue. While there are many reasons to invest in fossil fuels, to a new activist it appears, at first glance, clear on moral grounds that an institution of higher education should not be doing so. This dichotomy provides a clear engagement point for new activists.

The number of targets and new activists has created a moment of dynamic campaign growth. Institutions in general follow different logic than these activists: they have what they believe to be rational reasons for investing in fossil fuels. When students ask for information about their investments, the institutions regularly take the opportunity to treat them as uneducated about the poor logic of divestment. One meeting at which I accompanied a student activist to meet with a college's chief financial officer is illustrative. When the issue of the school's investments in fossil fuels was raised, the administrator insisted on asking the student a series of questions. The first was, "Did you drive here in a car today?" This chief financial officer of a major institution of higher education resorted to making the disproportionate comparison between the choices of an individual made necessary by existing infrastructure and institutional decisions grossing hundreds of millions of dollars. Not surprisingly, these kinds of belittling responses anger students and, to institutional dismay, encourage them to fight harder. The institutions have exacerbated the distance between themselves and the students and clearly placed themselves on the wrong side of the moral situation.

Demanding divestment is also compelling because it puts the reputations of highly respected institutions at stake. Harvard University, for instance, has been forced to publicly battle its own students. One public letter from Drew Faust (2013), the president of Harvard, states that "We should, moreover, be very wary of steps intended to instrumentalize our endowment in ways that would appear to position the University as a political actor rather than an academic insti-

tution." Yet students feel that Harvard has already taken a position by investing in fossil fuels. Conflicts like these have helped to draw further attention to the campaign.

While divestment by an institution like Harvard would create immediate waves, the long, protracted fight of the broader campaign, with some important victories, is itself key to developing a larger movement. It keeps climate change and investments in the headlines, while individual victories drive campaigners' belief in the possibility of success. Each time there is a major protest, a letter from an investment officer, or any other direct response, there are more headlines and more activists get involved. Challenging their authority often provokes anger from institutions. The institutional responses are often more noteworthy to the press and general public than the actions themselves.

Another benefit of divestment is that it forces individuals, especially board members of institutions, to face the challenge of climate change themselves. Boards at elite institutions like Harvard are comprised of the wealthiest and most notable members of society, from foundation directors to CEOs. Many have never been confronted in this way before. For the first time, they have to make clear decisions about action on climate change. This challenge may help to get them off the fence. After participating in a statement in support of divestment, they may see the value of meaningful action on climate change in other parts of their lives. If not, they have gained a greater understanding of how passionate many people are about the issue and might think twice before making a similar decision in the future. At the very least, they have clarified their role as an opponent of action on climate change and have opened themselves to criticism. These small changes help drive acceptance of the importance of action on climate change.

There are a number of reasons that divestment has the potential to be a broadly successful campaign for change, even if an individual divestment action may have no financial impact. But there

are difficulties as well for such a campaign, in particular how certain financial arguments have the potential to influence the campaign's effectiveness.

The Investment Case for Divestment

In the discussion about whether to divest, a debate usually arises about divestment's financial costs. Regardless of the moral imperative, financial analysis becomes a central part of the discussion. Decisionmakers want to examine whether there will be a trade-off between a moral decision and the financial cost of that decision, and if so, what that cost might be.

Almost every investor examines these questions in some form or another. The question is often framed as whether a portfolio will "lose" money, but more properly framed, the question would be whether limiting investment in certain companies will reduce financial returns in comparison to what they would have been otherwise. While weighing morals against finances may be morally problematic, it is a necessary legal question for an institutional investor, where board members have a fiduciary responsibility. I will not delve into the particulars of whether or not divestment will cost investors money here; numerous analyses from investment firms and data providers are available. For our purposes it is important to understand that the legal responsibility may mean that investment decisionmakers may be unwilling, or believe themselves legally unable, to make any decision that they believe will sacrifice returns in order to benefit the broader public or the planet. Of course, it is impossible to know the outcome of these decisions, so according to fiduciary law they must be based on what is legally referred to as what a "prudent man" would do in this situation. This means hypothetical return considerations are a major area of debate not only for financial but also for legal reasons.

In the fossil fuel divestment campaign, as in past divestment campaigns, this question of financial ramifications remains at the top of the priority list. Both sides have invested substantial resources in making their arguments. The Independent Petroleum Association of America, for instance, commissioned a study by Daniel Fischel, a professor of law and business at the University of Chicago and chairman of the consulting group CompassLexecon. The study, titled Fossil Fuel Divestment: A Costly and Ineffective Investment Strategy, argues for the importance of fossil fuel stocks in investment portfolios. Yet while the debate over returns continues, the debate in this campaign differs substantially from many other divestment decisions.

A defining feature of the current divestment campaign has been to inject into the financial conversation on Wall Street the relevant and relatively strong argument that fossil fuel investments themselves will be detrimental to asset owners' portfolios over the long term. This argument is based on a fundamental premise of climate change organizing. Society has a choice: transition from fossil fuels or face catastrophic warming. It follows that because we must transition from fossil fuels, it makes sense to invest on the premise that we will. If we accept that society will act, then there must be some impact on companies invested in the fossil fuel economy. In other divestment campaigns, arguments have occasionally been made that different portfolio compositions would enable stronger returns. Many "socially responsible investors" have in recent years made compelling arguments that the broad application of environmental and social analysis in investment decision-making allows outperformance of those who ignore such information. But in no other situation has a financial argument been tied so tightly to a divestment case.

Divestment and the Carbon Bubble

In the case of the fossil fuel divestment campaign, the argument that returns will improve after an investor has removed fossil fuel stocks from his or her portfolio has played an important role in the campaign. This general investment argument has been named the "carbon bubble" by the Carbon Tracker Initiative. It is based on the idea that our economy, in particular our financial markets, maintains an extraordinary overvaluation of fossil fuel reserves that at some

point must burst. This is not simply because those reserves are valued improperly—in fact, they are probably valued correctly based on a continuation of today's economy. Instead, the problem is that there is a limited amount of carbon and greenhouse gases that can be emitted into the atmosphere. This has been termed a "budget" that, when exceeded, will lead to extraordinary planetary warming with its attendant damage. Publicly traded fossil fuel companies and governments together own proven reserves that, if burned, *far* exceed the amount of greenhouse gases in the budget. The logic, then, leads us to only two possible scenarios:

- 1. Necessary action is taken, by way of governments or private actors, which results in leaving the vast majority of these fossil fuels in the ground.
- 2. These fossil fuels are extracted and burned at their presumed market values, causing runaway global warming and a substantial shift from society in its present form because of the changed climate.

Only in the first scenario can we prevent severe planetary disruption. Fossil fuel companies are valued by the stock market, in large part by the amount of fossil fuels they have and plan to extract. Therefore, assuming action on climate, the business model of companies that plan to extract these fossil fuels must suffer when market players finally agree that these fuels will be left in the ground. Investor portfolios will then also suffer as the market realigns, hence the term "bubble." It follows that an investor who believes global society will react in some way should take a financial position to prepare for that scenario. In investment terminology this can be called a "bet" that fossil fuels will be kept in the ground. Similarly, infrastructure tied up in the refining and delivery of fossil fuels would also be financially at risk. The fossil fuels themselves, and this infrastructure, will become "stranded assets," or assets that cannot be used or extracted, and therefore have no value to investors.

In the case that the latter scenario is allowed to happen, the bubble may not "burst" per se. Investors who "bet" that society would

take action will have made an incorrect wager on the stock market and suffer reduced returns accordingly. Yet, in the longterm, the investors who retained those stocks will still lose money if the dire forecasts for the planet come true.

The argument that not investing in fossil fuels can lead to better performance has attracted substantial attention from the divestment campaign and members of the financial community. Unlike divesting for political reasons, this is an amoral argument that the investment industry can understand. It has started to influence the debate well beyond the scope of divestment itself. Wall Street banks, including HSBC and Chase, have responded to the carbon bubble, and some investors have begun demanding that the fossil fuel companies discuss these risks in their public statements. The Netherlands-based oil company Shell even advised shareholders to vote in favor of a proposal that discussed issues related to the carbon bubble, stating that it will begin disclosing "asset-portfolio resilience to post-2035 scenarios" (Traynor 2015).

These actions are evidence of the changes in how investments in fossil fuels are discussed and even made. Eventually, a financial understanding of the valuations of fossil fuel investments may make it harder for the continued operation of these companies. This is particularly true for those producing the fuels that emit the most greenhouse gases, including tar sands.

Expert investors and analysts have applied these considerations to investment decisions. Robert Litterman, a respected investor formerly at Goldman Sachs and developer of a highly regarded quantitative portfolio allocation tool, who is also an environmentalist, has argued that the most likely assets to be stranded are those that are most polluting, especially coal and hard to extract fuels such as oil shale and tar sands. While serving as a member of the World Wildlife Fund board of directors, he made an investment decision based on this premise using a financial mechanism called a "swap," under which the fund stands to gain or lose in inverse with the performance of coal and tar sands companies. An oft-cited report by HSBC, for instance, makes the case that some oil companies stand to lose as much as 50 percent of their value due to the stranding of assets like those used by Litterman to make decisions.

There are different actions that society can take when making the "choice" to avoid runaway global warming, leading to the validation of the carbon bubble and the devaluation of fossil fuel investments. First, most simply, is policy change. If governments agree to an instrument that puts a substantial price on greenhouse gas emissions or regulates fossil fuel extraction in another way that increases the costs of extraction, many fossil fuels will no longer be financially viable. A barrel of oil that costs \$50 to bring to market is not worth extracting when it returns only \$45. Innovation may bring down the cost of renewables, leading to a switch from fossil fuels because of cost. Many investors argue that neither of these scenarios is likely, even given the circumstances of climate change. Some combination of action may lead to reduction in demand for fossil fuels and increased use of other production methods. One argument for divestment is that the fossil fuel industry has leveraged its substantial power to prevent these changes.

Many or most institutional asset owners—the investors with final control over decisions—subscribe to the scientific consensus that climate change is happening. For years, many have operated under the belief that climate is a policy issue and that policy decisions alone will solve this crisis. They also believed that they would gradually be able to shift away from fossil fuel investments. Because gradual policy change seems unlikely and climate change impacts increasingly real, more investors are starting to consider how climate change might affect their portfolios.

The volume of published articles that simultaneously reference the divestment campaign and the risks of investing in fossil fuels, including in such major financial news venues as Bloomberg and the *Financial Times*, leads us to believe that these campaigns are beginning to influence the financial industry's thinking on climate change. But how does this conversation about returns support or hurt the ends of

the divestment campaign? Does it undermine the moral argument? Does it support changes to the financial system in such a way as to improve the values of the campaign? These are important questions for campaigners to consider when thinking about the long-term success of the campaign.

Campaigning and the Carbon Bubble

The impact of the carbon bubble argument on the campaign should be an important consideration for activists. Some investors have divested or taken action primarily because of the financial arguments of climate risk. Yet many of world's largest investors that support action on climate change, including the California Public Employees Retirement System (CalPERS), have generally argued against divestment. They have made arguments that divestment will not protect their investment portfolio and instead will add risk in the short-term by removing stable fossil fuel stocks. According to these investors, so much of the economy is heavily dependent on fossil fuels—not just fossil fuel companies, but utilities, car companies, airlines, and chemical manufacturers—that removing fossil fuel companies from the portfolio may not limit investment risk from climate change. They have also made the case that investing in renewables and engaging in shareholder and policy advocacy are the most likely opportunities to have a major influence.

What are the implications of these different actions for campaigners, and how does the carbon bubble case support or detract from the goals of the fossil fuel divestment campaign?

First, if the positive financial arguments for divestment were evident in the short-term, investors would sell their fossil fuel holdings without action by campaigners. These investors would not necessarily be making a statement on climate change but rather making a financial decision. That might leave activists without the important opportunity for a public fight. Yet many investors refuse to make nonfinancial factors part of their investments, insisting that they can only make decisions based on financial premises. While this may be

ascribed to fiduciary duty, it may also be a simple allergy to influence from campaigners. This leaves the campaign in a challenging situation. It would seem that there is value in striking a balance. Overreliance on the carbon bubble argument has the potential to undermine the clear moral issue of investing in the destruction of the planet, yet not simultaneously promoting the financial argument may limit the number of investors willing to divest.

We can also evaluate the impact of the positive financial argument for divestment based on how it affects the ability of the campaign to achieve its goals. For example, this argument supports the campaign's goals by raising the issue of climate change in a way that forces different audiences to respond. Large investors, from pension funds to Wall Street banks, are forced to confront the issue of climate change in their own language. When faced with the moral issue of climate, many investors can simply respond that values do not relate to investment returns and should not be part of the "neutral" investment process. Service providers such as investment managers and investment consultants argue their responsibility is only to implement clients' decisions, passing off the immediate need for action on climate. Yet once it is brought up in terms of financial performance, these investors have no choice but to respond. The divestment campaign helps to change the broader conversation about the climate in this way.

This engagement with climate issues alongside broader pressure from activists not only encourages investors to respond, it also encourages them to take actions that may directly support policy change. For instance, a variety of companies have announced or clarified their support for legislation on climate since the beginning of the fossil fuel divestment campaign. The financial arguments have also helped investment companies to realize new opportunities for profit by selling products that help to avoid carbon risk or drive investment in solutions to climate change. These products help to further stimulate the conversation between investors and with the broader public on climate change.

Yet even though these changes do support broader action on climate, it is likely that they may not encourage—or may even undermine—the more vocal and potentially more transformative demands of divestment, especially those encouraging consideration of the impact of fossil fuels on communities and the need to transition to a fossil-free economy. Investors discussing climate may determine that other actions with similar or potentially even stronger financial results are more appealing. Alternatives range from shareholder engagement to using the tools of financial engineering to hedge against or bet on climate change. Without making a vocal and moral statement on fossil fuels, these investors are not taking as significant a stand as they would have if they had publicly committed to divesting.

Using the carbon bubble argument may also more sharply come into conflict with raising awareness of the destruction of frontline communities from fossil fuel extraction and effects of climate change. The carbon bubble context makes crystal clear the economic damage from burning fossil fuels and how much our economy is tied to the use of fossil fuels. But beyond that it may distract from the real community impacts because it shifts the frame even further from people to just money and returns. In this way it also may shift the concerns to the owners of capital and away from those who lack capital and disproportionately face the consequences of fossil fuel extraction and climate change. Divestment campaigners ought to consider when it is appropriate to resort to careful use of the financial justification to influence major investors on Wall Street, rather than focusing on the stories of individuals most impacted by fossil fuels and climate change. It is essential for the success of the campaign and for the most transformative change that stories of people and communities not be lost in the broader discussion of the financials of divestment.

As we look at the fossil fuel divestment campaign, and at divestment campaigns in general, the financial and investment aspects can be important. How much does it make sense to incorporate a financial aspect into the campaigning? In the case of fossil fuel divestment, it can add a powerful case that investors should divest. The

substantial conversation on Wall Street may not have happened. At the same time, focusing too much on financial arguments can divert attention from the goals that are often at the center of the campaign: the moral questions demand the urgent attention of society and therefore investors. It is important to ensure that we do not lose sight of the importance of making hard choices about the future of the planet and its inhabitants.

The Future of Divestment

Fossil fuel divestment has very quickly had extraordinary success. It has expanded rapidly and become a topic of debate in the media around the world. It has forced major investors to confront climate change. It has opened a new conversation on Wall Street. And it is even encouraging exploration of alternative solutions to climate change by investors including the University of California and the Rockefeller Brothers Fund. Divestment has helped reinvigorate the climate movement. Yet we should remember that divestment remains only one strategy for promoting change.

Divestment offers some distinct advantages over other kinds of efforts. It provides a clear-cut moral message and plenty of targets. It makes a statement with money, which many people take more seriously than merely verbal statements. And in some scenarios, it can help investors think differently about the financial aspects of a topic. Divestment also has its challenges, including a forced focus on the financial and monetary as well as limits to its potential influence on major investors. With this in mind, it is clear that even in the diversified and complicated financial markets of the twenty-first century, divestment remains a powerful strategy, one that in the right context and with proper consideration can be used to raise public awareness, influence policy, and in some situations, influence corporate behavior.

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