CHAPTER 3

Promise and Peril of Big Finance

BIG FINANCE AND SUSTAINABILITY

Like the creation of the Wicked Problem framework, the genesis of capital for social purpose was born out of the tumultuous times of the 60s and 70s. Citizen activism and unrest around the Vietnam War; civil, environmental, and women’s rights movements; and the anti-nuclear and South Africa anti-apartheid movements catalyzed transformative thinking around the role of business and society. Business schools debated the role of socially responsible business. Conservative University of Chicago economist Milton Friedman espoused a philosophy that the best way for business to be responsible was to increase profits and shareholder value; anything else would be irresponsible. But by the early 80s, Milton Moskowitz (a graduate of the University of Chicago) was advocating that the greatest companies were committed to business and society. He published, *The 100 Best Companies to Work for in America* and provided annual updates to *Fortune Magazine*.
During this same time, Ford, MacArthur, and W. K. Kellogg foundations launched program-related investments using grantmaking to test the financial tools of debt capital, equity, and guarantees to philanthropy.

Oxford scholar Amir Amel-Zadeh’s summarizes the evolution of a socially responsible investing movement and milestones in Fig. 3.1.

In 1998, the Aspen Institute founded its Business and Society Program working with business executives and scholars to align business decisions and investments with the long-term health of society and the planet. The program was designed to “challenge conventional ideas about capitalism and markets, to test new measures of business success and to connect classroom theory and business practice.”

The 2000s ushered in a robust Corporate Social Responsibility movement and the United Nations Global Compact was created to support responsible corporate sustainability. In 2004, the United Nations Environment Programme (UNEP) Finance Initiative coined the term ESG (Environmental, Social, and Governance) and in 2006 the UN Principles of Responsible Investing (UNPRI) were established. Launched at the New York Stock Exchange, the Principles for Responsible Investment are “a voluntary and aspirational set of investment principles that offer a menu of possible actions for incorporating ESG issues into investment practice” (PRI 2019). Today 450 of the 2300-plus PRI signatories
have over $1.3 trillion in assets linked UNPRI-related investments (IFC 2019b).

In 2015, UNPRI, UNEP, and Generation Foundation launched a three-year project, *Fiduciary Duty in The 21st Century—Global Statement on Investor Obligations and Duties*, to clarify investors’ obligations around incorporating ESG (Environmental, Social, and Governance) issues into investment practices (Sullivan et al. 2019). The project published a global statement of investors’ obligations and duties, roadmaps in more than 10 countries on policy changes required and research into investor obligations and duties in six Asian markets (Sullivan et al. 2019).

Again, like the Wicked Problems framework, supporters of SRI, UNPRI, ESG are diverse and vocal. Advocates for socially responsible investing include CEOs of large investment houses, corporations, foundations, civil society organizations, and government. Clients and citizens are calling for business to be more responsible and trustworthy in practice, helping protect the planet and end inequality. The World Economic Forum and the UN through the SDGs are amplifying the call for capital with purpose and performance measures.

According to the *Financial Times*, ESG has gone mainstream and ESG investments are making money. ESG-focused investments across asset classes do as well or better than markets’ average returns (Holder 2019; Thompson 2018). Studies also show that sovereign debt risk is inversely related to ESG scores (Reznick et al. 2019). Estimates run between $20–30 trillion under ESG management in 2018, up from $16 trillion in 2016 and with $35 trillion projected for 2020 (McGrath 2019). While this is a lot of money, relative to the estimated total market of $269 trillion in investable assets (IFC Appendix B 2019a), ESG-related investing comprises around 8.6% (IFC 2019b). Nonetheless, naysayers who predicted that ESG would collapse at the first sign of trouble in the markets, seem to have been proved wrong during the COVID-19 pandemic during which ESG investing has stayed strong (Mooney 2020). According to Morningstar, ESG investment funds in the United Kingdom enjoyed their second highest quarter for inflows during the first three months of 2020, and despite a fall in March as the pandemic hit home, inflows had recovered by April (Mooney 2020).

Figure 3.2 defines the three facets of ESG—environment, social, and governance.

Interest in ESG investments is growing across the globe. At the beginning of 2018, Europe led the way in terms of gross ESG assets (US$14,765 billion) followed by the US (US$11,995 billion) followed by Canada, Australia and Japan (Fig. 3.3).
**Fig. 3.2** ESG categories (Source Adapted from Amel-Zadeh [2019])

**Fig. 3.3** Growth in ESG assets by region 2014–2018 (Source Adapted from Global Sustainable Investment Alliance’s 2018 Global Sustainable Investment Review; conversion to US currency based on currency exchanges as of 31 December 2017)
ESG Challenges

These are promising signs of a growing movement, and a sense that companies with strong ESG performance are better able to ride out the kind of crisis the COVID-19 pandemic represents (Mooney 2020). But there are still red flags waving for the field. Research by Amel-Zadeh shows several obstacles and perils in ESG investment practice (Amel-Zadeh 2019). As shown in Fig. 3.4, the top areas of concern for the field include: lack of compatibility across firms; lack of reporting standards; the cost of gathering and analyzing ESG data; nonfinancial disclosures are too general; and the lack of quantifiable nonfinancial information and lack of comparability over time.

Lack of Compatibility

When it comes to what is meant by ESG, the lack of compatibility across firms is significant. And there are a lot of firms that have developed and continue to refine their own factors, and rating and reporting systems, e.g., Bloomberg ESG Data Service, Institutional Shareholder Services (ISS), MSCI, Sustainalytics Company, and Thomson Reuters ESG (Huber and Comstock 2017). Moreover, most of the large asset managers (e.g., BlackRock, Vanguard Asset Management, State Street

![Fig. 3.4 Challenges of ESG Mainstream (Source Adapted from Amel-Zadeh [2019])](image-url)
Global Advisors, Fidelity Investments, and J.P. Morgan Asset Management) have their own proprietary ESG rating systems.

**The Exxon–Tesla Challenge: Which One Is a Better ESG Investment?**

How does the lack of compatibility, reporting standards, quantifiable and nonquantifiable reporting data manifest itself in these challenges? Imagine that you are an investor that wants to make money and support organizations that have a high ESG rating. Who would you invest in: Exxon Mobile or Tesla?

The obvious answer would seem to be Tesla with its strong foothold in emissions-free transport. ExxonMobil or Exxon, by contrast, would appear to be part of the high polluting, hydrocarbon based economy that advocates of sustainability would like to come to a close. The *Wall Street Journal* compared the ESG ratings of Tesla and Exxon (among others) by three major rating firms—FTSE Russell, MSCI and Sustainalytics (Mackintosh 2018). The ratings—overall and by E, S, and G—vary significantly (Fig. 3.5).

![Fig. 3.5 T and exxon ESG scores: comparison by rating firm](Source Adapted from Amel-Zadeh [2019])
Depending on the firm, Tesla either ranked at the top of the industry (MSCI), somewhere in the middle (Sustainalytics), or at the bottom of carmakers (FTSE). Why the disparities? FTSE Russell, MSCI and Sustainalytics each have different rating systems (Mackintosh 2018). Each measured different aspects of Tesla and weighted differently the ones they all measured. For example, “MSCI gives Tesla a near-perfect score for environment, because it has selected two themes as the most important for the car industry: the carbon produced by its products, and the opportunities the company has in clean technology. FTSE gives Tesla a “zero” on environment, because its scores ignore emissions from the company’s cars, rating only emissions from its factories …” Lack of disclosure by Tesla on social issues is another factor behind the very different scores. If no information is provided, FTSE “assumes the worst.” Whereas “MSCI is more generous, assuming that if there’s no disclosure the company operates in line with regional and industry norms.”

The three firms rating ExxonMobil exemplify the lack of standardization in compiling the three dimensions—E, S, and G—into a composite score. Does one of the three factors get more weight? One firm, Sustainalytics, rated Exxon the highest “… because it puts a 40 percent weight on social issues, where Exxon does well thanks to strong policies for its workers, supply chain, and local communities.” MSCI, however, puts more weight on the E factor (51%) and less on the S factor (17%), thus ranking Exxon lower.

Overall, Exxon appears to rate higher on ESG than Tesla.

Let’s scratch beyond the ratings. As an investor interested investing in companies with high environmental, social, and financial returns how would you feel if you discovered during due diligence the following information about Exxon and Tesla.

Exxon is being sued by several state and city governments seeking compensation for climate change damages. Internal Exxon documents disclosed that the oil company understood the science of global warming; predicted its dangerous consequences; and spent millions knowingly misleading the public on its contributions to climate change.

In April 2020, Moody’s Investor Service downgraded ExxonMobil’s rating from Aaa to Aa1, following a long period of concern about negative cash flow. Low prices for oil and diminished refining and chemical earnings have caused ExxonMobil’s rising capital expenditures and weak revenues. In theory, ESG ratings would also be impacted. The E is related to potential carbon dioxide regulations, but also include natural and
man-made hazards. Social risks are related to demographic and societal trends. Demand for oil, gas, and refined products could accelerate the pace of energy transitions or changes in technology that affect demand for hydrocarbon represent a material and growing risk for the company.

Exxon has a history of contesting environmental remediation efforts, including suits like the Exxon Valdez oil spill in which 11 million gallons of crude oil was spilled into Alaska’s Prince William Sound killing hundreds of thousands of animals and fouling more than 1000 miles of coastline (Taylor 2014). For more than 20 years, Exxon waged a legal battle to reduce a civil settlement with fishermen and impacted communities from $5 billion to $500 million. Because of the long delay, more than one-third of the fishermen had died.

Unlike its peers at Royal Dutch Shell, Exxon is not actively investing in alternative energy. Table 3.1 shows how it compares to other oil and gas companies are making the shift to renewable energy. Exxon is investing in oil exploration, fracking, and oil sands even though the use of those reserves threatens to push the temperature of the planet to 4° Celsius (Pickl 2019).

Let’s turn to Tesla.

In early 2019, Tesla has been found guilty of federal hazardous waste violations at their automobile manufacturing plant in Fremont, California (Egelko 2019). The settlement required Tesla to purchase $55,000 in emergency response equipment and pay a $31,000 penalty. Worker safety is also an issue. Investigative reporting reveals ongoing safety concerns such as back strain, repetitive-stress injuries, and severe headaches (Evans and Perry 2018). It notes that Tesla’s injury rate exceeded the industry average in 2016 and that the company had chosen not to report certain incidents as required under California labor law. Recall from Chapter 1 T’s involvement in a lawsuit with other tech companies about the illegal use of child labor in securing precious metals such as cobalt in the DRC.

Yet, Tesla remains a vibrant company with significant revenues. Through the end of the third quarter in 2019, it had over $17 billion in revenue (Tesla 2019). Though it had a net loss of $907 million for the year, its third-quarter profits of $254 million sent its shares up more than 20% (Tesla 2019; Kolodny 2019).

During the same period, ExxonMobil reported a 49% decline in third-quarter earnings on lower oil prices and higher costs. The company reported 75 cents in earnings and $65.05 billion in revenue, which did top analyst expectations. According to Chairman and CEO Darren
Table 3.1  Comparison oil and gas companies renewable energy investments

| Assessment criteria                                      | Weigh (%) | Shell | ExxonMobil | Chevron | Total | BP | Eni | Petrobas | Equinor |
|----------------------------------------------------------|-----------|-------|------------|---------|-------|----|-----|----------|---------|
| Hydro                                                    | 5         | 0     | 0          | 0       | 1     | 0  | 0   | 1        | 0       |
| Solar                                                    | 5         | 1     | 0          | 1       | 1     | 1  | 1   | 1        | 1       |
| Wind                                                     | 5         | 1     | 0          | 1       | 1     | 1  | 1   | 1        | 1       |
| Biofuels                                                 | 1         | 1     | 1          | 1       | 1     | 1  | 1   | 1        | 0       |
| Carbon Capture                                           | 5         | 1     | 1          | 1       | 1     | 1  | 1   | 1        | 0       |
| Geothermal                                               | 0         | 0     | 0          | 0       | 0     | 0  | 0   | 0        | 0       |
| Energy Storage/EV Charging                              | 1         | 0     | 0          | 1       | 1     | 1  | 0   | 0        | 1       |
| Explicit Renewable Strategy/Renewable Capital Allocation | 5         | 1     | 0          | 0       | 1     | 1  | 1   | 0        | 1       |
| Capital Investment into Renewables (billion $ per year)  | 50        | 1     | 0          | 0       | 0.5   | 0.5| 0.3 | 0        | 0.5     |
| Dedicated Renewable Team                                 | 5         | 1     | 0          | 0       | 1     | 1  | 1   | 1        | 0       |
| Renewable Venture Capital Arm                            | 5         | 1     | 0          | 1       | 1     | 1  | 1   | 1        | 0       |
| Total score                                              | 100       | 9     | 2          | 4       | 9.5   | 8.5| 7.3 | 3        | 7.5     |
| Total weighted (%)                                       | 90        | 10    | 20         | 70      | 65    | 50 | 15  | 60       |

*Source* Adapted from Pickl, Energy Strategy Reviews 26 (2019)
Woods, the company is “Making excellent progress on our long-term growth strategy” (Stevens 2019). Shares of the United States’s largest oil company gained 3% after Woods’ announcement.

These examples are not outliers or based on older efforts. A September 2019 report from InfluenceMap indicates ongoing issues with the energy sector and ESGs. Assessing the presence of fossil fuel reserves owned by the companies held by 118 climate-themed ESG funds with an aggregate asset under management (AUM) of US$18B, the report found dramatic variation (InfluenceMap 2019). At one extreme, it found two funds (each with over $100M in AUM) marketed by Asia-based Fullgoal and Lion Fund Management companies had holdings of Chinese mining companies like Shaanxi Coal and Yanzhou Coal Mining. Its research also identified two State Street funds marketed as “fossil fuel reserves free” and based on MSCI indices, which have stakes in major energy and mining companies active in thermal coal, including RWE, Vale and Sasol. The report concludes by stating, “There remains huge variation in the terms used to market funds as climate themed, including ‘low carbon,’ ‘climate aware,’ and ‘fossil fuel free.’ Clear discrepancies between these labels and fund contents (for instance, the presence of coal mining companies in ‘fossil fuel reserve free’ funds) indicate that more stringent advertising standards may be pertinent” (InfluenceMap 2019). The two ESG examples provided later in this chapter delve further into the climate aspects of ESG and climate funds.

The lesson? Due diligence on ESG is essential yet can be insufficient to produce a picture of environmental, social, or governance performance in line with what people might expect to be good practice.

Lack of Standard Rules

Often touted is the fact that “38 of the largest 50 economies in the world have, or are developing, disclosure requirements for corporations covering environmental, social and governance issues” (Heath et al. 2016). That is a good first step: however, many of the largest economies remain at the development stage, or have what Agnes Neher of J. Safra Sarasin Bank calls “soft” or voluntary requirements (Neher 2017).

The two largest countries and regions for ESG funds—the EU and the United States—are at very different stages of development and are developing different approaches to disclosure (Langenbucher 2018). The
EU already has several “hard rules,” with more in development (Langenbacher 2018). In the United States, sixty-eight organizations and individuals, including state pension funds, state treasuries, and asset managers, petitioned the US Securities Exchange Commission in October 2018 to develop rules (Williams and Fisch 2018). The authors summarized the need for such standards:

Without adequate standards, more and more public companies are voluntarily producing ‘sustainability reports’ designed to explain how they are creating long-term value. There are substantial problems with the nature, timing, and extent of these voluntary disclosures, however. Thus, we respectfully ask the Commission to engage in notice and comment rule-making to develop a comprehensive framework for clearer, more consistent, more complete, and more easily comparable information relevant to companies’ long-term risks and performance.

Timothy Doyle of the American Council for Capital Formation (ACCF), raises deeper concerns about the current system’s ability to generate very different rating results. “Individual agencies’ ESG ratings can vary dramatically. An individual company can carry vastly divergent ratings from different agencies simultaneously, due to differences in methodology, subjective interpretation, or an individual agency’s agenda. There are also inherent biases: from market cap size, to location, to industry or sector – all rooted in a lack of uniform disclosure” (Doyle 2018). Furthering the need for standardization is the concern that the ratings industry may have conflicts of interest similar to those reported with proxy advisors. Doyle summarizes,

[A]sset manager reliance on outsourced data, to comply with their fiduciary duty or new mandates, is similar to the rise of the proxy advisory industry. Many of the lacking elements within the proxy advisory industry (i.e., transparency, oversight, and unaudited disclosures) are also present in the ESG ratings industry.

There are various ongoing attempts to foster a more uniform understanding of ESG. These include, but are not limited to, common principles/standards of the kind advocated through the Global Reporting Initiative, the SDGs and the Future-Fit Foundation benchmark discussed in Chapter 6. Standardization is fostered indirectly through initiatives
such as the collaboration between MIT’s Presencing Institute and Huff-
Post so that the latter’s multimedia platform can be used to raise
awareness about the changing nature of capitalism, and develop a rigorous
discourse about what this involves. It promises to illuminate the envi-
ronmental, social, and economic costs of capitalism’s current course;
to illustrate the principles and practices that make change happen; and
to showcase the inspiring stories and strategies that are moving new
economy models from the margins into the mainstream. A different
approach to engendering standardization is being taken by the Well-
being Economy Alliance, and the Well-being Economy Governments
partnership (WEGo) in particular, a collaboration of national and regional
governments promoting and sharing expertise and transferrable policy
practices in order to deepen their understanding and advance their shared
ambition of building well-being economies. Participating governments
include Scotland, New Zealand, Iceland, and Wales. Other examples
include initiatives such as Positive Money which is pushing central banks
to align their policies with sustainability, and Climate Safe Lending which
seeks to align European and North American bank lending with the goals
of the Paris Climate Accord to keep the planet well below a 1.5°C Celsius
temperature rise.

What Is not Included

Other ESG perils beyond the lack of standardization limit the current
ESG’s credibility. Some may be fixable; others may be inherent to the
financial system’s narrow view of risks.

Lack of Adequate “S” and “G” Metrics

The “S” in ESG (i.e., social) remains the most challenging in that social
dimensions of sustainability are not always as easy to quantify as the other
two dimensions. Moreover, the majority of social factors assessed in the
ratings focus on internal issues like company policies and training, and not
on external issues affecting the communities in which the companies or
investments are occurring. A 2017 study by New York University’s Stern
Center for Business and Human Rights found that:

[S]ocial measurement prioritized internal procedures over those that
involved external stakeholder participation. Over half of all indicators
(58 percent) evaluated either the governance structures a company has in place for social issues (e.g., roles, management systems, policies, and commitments) or its information gathering and assessment processes (e.g., audits and external assurance, risk or impact assessments, and general data gathering efforts). Less than 20 percent of indicators examined either stakeholder engagement or remedial mechanisms. (O’Connor and Labowitz 2017)

Furthermore, the same study found that much of the social measures focused on activities or efforts rather than on outcomes or effects.

Only 8 percent of the more than 1700 ‘S’ indicators we examined evaluated the effects of company practices. Rather, a significant majority of indicators (92 percent) measured company efforts and activities, such as issuing policies or commitments; conducting audits, risk assessments, or training; participating in membership organizations or other collaborations; or engaging stakeholders. (O’Connor and Labowitz 2017)

Capturing What Happens in Supply Chains

It is not just the ESG of the target company that needs to be considered but also the ESG of its suppliers. Two critical supply chain issues are labor (part of the “S”) and environmental impact.

Labor. The complexity of global supply chains along with the lax enforcement of labor laws in many countries have helped enable forced labor. Today, forced labor affects an estimated 25 million people worldwide (International Labor Organization). A significant number of people in conditions of modern-day slavery are employed in the supply chains of global industries, from electronics and apparel to primary commodities like palm oil and seafood. In some places, slavery is passed down through generations—notably South Asia’s centuries-old practices of bonded labor, where debts pass down from parent to child (pfc social impact advisors-Humanity United 2018a).

Currently, ESG ratings inadequately capture slave labor in a company’s supply chains, especially past their first-tier suppliers; tracking further down the chain has proven to be difficult. A recent multilateral effort, the Global Fund to End Modern Slavery (Global Fund, or GFEMS), announced at the January 2018 World Economic Forum should help. One of its three interconnected goals is to “create value by eliminating forced labor from supply chains at local, national, and international levels,
as well as provide alternatives for vulnerable individuals” (Global Fund to End Modern Slavery).

Short of slave labor are the 700 million working poor (those earning below US$3.10 /day in terms of purchasing power parity) and the 1.4 billion workers in “vulnerable employment,” i.e., without formal work arrangements, inadequate earnings, difficult working conditions, and inadequate social security, voice and representation by trade unions and similar organizations (International Labour Organization 2018).

**Environment.** Many companies rely on natural resources either directly or indirectly. This natural capital—clean air and water, land, fertile soil, biodiversity, and geological resources—has an estimated value of up to $72 trillion per year (The Corporate ECO Forum and The Nature Conservancy 2012). UNEP reports that we are spending this natural capital at around $6.6 trillion per year (PRI Association and UNEP Finance Initiative 2011). Yet, the ESG ratings do not fully account for such costs. In the 2018 State of Green Business, Joel Makower notes,

If companies had to internalize all of the natural capital costs associated with their business, for example as a result of increased regulations or new carbon taxes, their profit would be greatly at risk. The natural capital cost generated by the largest 1200 companies in the world is nearly two times higher than their net income. (Makower 2018)

Furthermore, Makower continues, much of these natural capital costs are embedded in supply chains. “On average, 79 percent of company impacts are in their supply chain. For this reason, measuring impacts from goods and services purchased by companies is essential in understanding their natural capital costs and exposure to environmental regulation and policy risks.”

**ESG and Tales of Two Climate-Focused Investors**

*Making Money Through Mission: ESG and Climate as Risk Management*

We have presented data to suggest that ESG investment is not only on the increase but looks robust when confronted by sustainability challenges. Away from the statistics, another perspective is provided by investors themselves. Thomas Van Dyck has been active in social and responsible investing for 35 years starting with his work to help the South Africa
divestment movement. He is one of the founding members of the Divest Invest Movement, and is a founder and board member of As You Sow, a shareholder action group and environmental foundation.

Using climate investments as an example, Van Dyck offers a rationale for Big Finance to embrace ESG. He describes the potential for reduced risk and better long-term financial and nonfinancial gains when ESG factors are appropriately incorporated into investment analyses. Not attending to ESG, he notes, can mean foregoing investment opportunities, such as in alternative energy companies or underestimating the speed with which existing technologies can be disintermediated by new technologies, which “experts” have a track record of doing.

Van Dyck got into socially responsible investing in its infancy because of his passion for the environment and justice. In the 1980s, Desmond Tutu was for global action on Apartheid in South Africa through the divestment movement. As a young investment advisor, Van Dyck and many investors wanted to take action too. Through research and advocacy, he and his partner at the time, Ted Barone, documented how the California State Teachers Retirement System (CALSTRS) could divest from South Africa. CALSTRS did divest, and Nelson Mandela and Rev. Desmond Tutu credited the divestment movement as one of the important factors in the fall of apartheid.

Galvanized by the push to divest from Apartheid, Van Dyck and a small group of others formed a circle to grow socially responsible investing in the United States. The circle included people such as Amy Domini, Peter Kinder, Steve Lydenberg of KLD and the Domini Index, Wayne Silby of the Calvert Group, Tim Smith of ICCR (Interfaith Committee on Corporate Responsibility), John Harrington, and other frontline groups who have led the way to push investments to help build global justice. They were joined by foundation leaders: Steve Viederman of Jessie Smith Noyes, John Powers of The Educational Foundation of America, Adelaide Gomer, and later the Park Foundation, and celebrities who were early adopters of aligning their money with their values. This group would become leaders of the movement that has evolved into ESG investing.

As their group began to see what was happening to the climate and our planet, there was a new call to action. Desmond Tutu wrote in The Guardian in 2014, “we need an apartheid-style boycott to save the planet” (Tutu 2014). Executive Director Ellen Dorsey of Wallace Global Foundation wondered why there wasn’t a divestment movement on fossil
fuels, and moved to form the Divest Invest movement (pfc social impact
advisors-Wallace Global, 2018b).

Van Dyck’s team was asked to look at the financial impacts of divesting
from fossil fuel. What they found was that beyond the moral reasons to
push for change, there was an incredible amount of financial issues with
the whole fossil fuel sector. They discovered three important ideas. First,
the entire energy sector is underperforming. Second, the shift away from a
fossil fuel economy is a shift in innovation, and innovation often happens
exponentially faster than expected. Third, there are important drivers in
growing a new energy economy for the United States and other countries.
We examine these individually below.

The Energy Sector Is a Chronic Underperformer
Van Dyck points out that many finance experts might argue, “you can’t
wipe out the entire energy sector of the S&P 500 from your portfolio,
because you’ll lose diversity, you’ll increase your risk, and you’ll lower
your expected return.” They are correct in one regard: diversifying your
portfolio by asset class and by sectors is, for the most part, critical to
generating long-term outperformance. However, the energy sector has
issues with long-term performance, and therefore this logic does not
apply. As such, in addition to their moral opposition to owning fossil fuels,
many investors began to question why a sector that is underperforming
was still in their portfolio.

Van Dyck notes that the S&P 500 energy sector does not have a
single renewable energy company, only oil and gas companies. Moreover,
looking at a full market cycle, from the peak of the market in 2007, before
the Great Recession, up through the second quarter of 2019, the energy
sector is the worst performing sector in the S&P (see Table 3.2). The
energy sector has had a total (non-annualized) return of 7.7%. The entire
S&P has more than doubled over that same time frame, with a total return
of 141.4%. Furthermore, if you look back to the market bottom, in 2009,
until the end of the second quarter 2019, energy was up 97.3% while the
S&P 500 was up over 400%.

A comparison of the S&P 500 and the performance of XLE, an index
fund tracking the energy sector of the S&P 500, also shows the underper-
formance of oil and gas. Between 2007 and 2012, oil and gas was broadly
aligned with S&P 500 as a whole; but from 2013 onwards, the former
considerably and consistently underperformed the latter. Table 3.3 shows
the extent of underperformance, not only compared to the S&P 500, but also ESG indexes. It demonstrates that not only is the absolute return of the ESG Manager better than the energy sector of the S&P 500, but the risk adjusted return is better, too.

Energy is also the most volatile sector of all the S&P 500 sectors, and it tends to fall harder than other sectors (Table 3.4). Investors in the energy sector are getting less return than other sectors with more risk. That should be the opposite of one’s goal. This is why those who divested over five years ago have enhanced their returns.
Table 3.4  Annual returns for S&P 500 and S&P sectors: 2015–2018

|               | 2018  | 2017  | 2016  | 2015  | 5-year annualized |
|---------------|-------|-------|-------|-------|-------------------|
| S&P 500       | -4.40 | 21.82 | 11.95 | 1.37  | 8.49              |
| Consumer discretionary | 0.80 | 22.98 | 6.03  | 10.11 | 9.69              |
| Consumer staples          | -8.40 | 13.49 | 5.38  | 6.60  | 6.26              |
| Energy         | -18.10 | -1.01 | 27.36 | -21.12 | -5.56             |
| Financials     | -13.00 | 22.14 | 22.75 | -1.56 | 8.16              |
| Health care    | 6.50  | 22.08 | -2.69 | 6.89  | 11.12             |
| Industrials    | -13.10 | 21.01 | 18.85 | -2.56 | 5.95              |
| Materials      | -14.70 | 23.84 | 16.69 | -8.38 | 3.84              |
| Real estate    | -2.20 | 10.85 | 1.12  | 1.24  | 8.84              |
| Tech           | -2.30 | 38.83 | 13.85 | 5.92  | 14.93             |
| Telecom        | -12.50 | -1.25 | 23.49 | 3.40  | 3.90              |
| Utilities      | 4.10  | 12.11 | 16.29 | -4.84 | 10.74             |
| BCGI           | 0.88  | 2.14  | 2.08  | 1.07  | 1.85              |

Source: RBC Wealth Management, Bloomberg; S&P Dow Jones Indices; total-return data. 5-Year Annualized 2013–2018

The Experts Are Often Wrong

Thirty-four years ago, Van Dyck was an anti-nuclear power activist on the East Coast. He worked for the Fund for Secure Energy and raised money for media campaigns to close down nuclear power plants. Back then, the industry experts said nuclear power was too cheap to be metered. As with nuclear power, industry experts consistently underestimate the power of disruption and how quickly it can take place. As such, industry experts have a track record of making very bad predictions. Like the time in 1985 when McKinsey and AT&T predicted that by the year 2000 there would be over 900,000 cell phone subscribers. The actual number? 109 million. They were off by a factor of 120 times. Not a small miss in only 15 years.

In estimating disruption, the experts don’t only get the order of magnitude wrong. They also get the pace wrong. When technology disrupts an industry, it happens much quicker than what the experts expect. Imagine a picture of Fifth Avenue, Manhattan on Easter morning 1900. Between the columns of pedestrians along the sidewalks, the horse and buggy dominates the streets. In fact, you would be lucky to see a single automobile. But just 13 years later, a photo taken from the same position would present a very different picture. Instead of horses, the
street would be filled with cars: it was as if the horse and buggy had become extinct. That is rapid change indeed.

Another example is when digital imaging entered the film era. Eastman Kodak, remember it? It used to be a Dow Jones industrial company with a $30 billion market cap (Gara and Deaux 2013). The digital camera came into place in 1999, then the smartphone, and nine years later, in 2012, Eastman Kodak declared bankruptcy after 131 years in business (Gara and Deaux 2013; Zhang 2017; De La Merced 2012).

Even within the cell phone industry: Nokia and Blackberry were early movers in bringing cell phones to the masses. When the first iPhone was launched in 2007, Blackberry—business’s cell phone of choice—had a market cap of over $40 billion, and Nokia—the world’s most popular cell phone—had a cap of $144.5 billion. Over the next half a decade, Apple launched iPhones 3g to 5, and by the time iPhone 5s/5c came out, Blackberry’s market cap had slumped to $5.4 billion while Nokia’s was just $15.2 billion.

**Technological Disruption in the Energy Sector**

These examples show how rapidly change can take place, removing incumbent companies like a tornado can uproot a house. Why should renewable energy not be the next tornado? In fact, one can argue that it already is. General Electric, the global industrials conglomerate with sales strongly tied to the natural gas power generation market, has already felt the impact. From 2014 until early 2017, GE’s stock price was broadly in step with the S&P 500. But its stock price declined massively after misjudging the demand for gas turbines, as well as the increasing affordability of alternative energy sources. By 2019, the price had fallen 64.6% compared to 2014, while the S&P 500 was up 43.1%.

Why is that happening? Because the cost of producing and storing renewable energy has been declining over this period, driving increased adoption of these energy sources. Solar power is at $0.04 a kilowatt hour, having fallen $0.02–$0.03 per year on average from 2006 to 2012 and $0.01 per year from 2013 to 2016 (Bolinger and Seel 2018). Wind power is at or below $0.02 a kilowatt hour, down from $0.07 in 2000 (Wiser and Bolinger 2017). Massive adoption of both solar and wind technologies has followed. And the cost of battery storage has dropped almost 76% since 2012 (Mai 2019). Why is that important? Because when the sun and wind produce more energy than you need, if you can store that
electron in a battery, you can release it during those times when the sun isn’t shining and the wind isn’t blowing.

Additional Risks to Owning Carbon

In addition to the risk of technological disruption, which is one of the biggest risks to owning fossil fuels, here are five of the other main risks that Van Dyck uses to help people understand why divesting their portfolios from carbon can generate long term outperformance:

1. **Stranded asset risk.** This is addressed in the Carbon Tracker paper that Bill McKibben made famous in a Rolling Stone article that went viral called “Do the Math” (McKibben 2012). Carbon Tracker, a group of former oil analysts based in London, says that we have to keep 80% of the reserves currently reflected on the balance sheets of the oil companies in the ground in order to keep the temperature of the planet below the two degrees Celsius level required to avert climate catastrophe (Carbon Tracker Initiative 2011).

   Therefore, the question we should be asking is: are the oil companies going to be allowed to burn that 80% of their reserves, and allow taxpayers and global citizens to bear the costs of the resulting climate change? Or are they going to be forced to keep those reserves in the ground? This is the battle being waged in many places. Those reserves are priced into their stock today as an asset available for extraction, which presents a risk from an investment perspective.

2. **Litigation risk.** Over the past few years, two states in the United States launched fraud investigations into Exxon over climate change, and one has followed with a lawsuit. Nine cities and counties, from New York to San Francisco, have sued major fossil fuel companies seeking compensation for climate change damages. And determined children have filed lawsuits against the federal government and various state governments, claiming the governments have an obligation to safeguard the environment. These suits remain ongoing, but we hope to see their outcomes follow in the footsteps of the lawsuits against the tobacco industry, where plaintiffs have seen increasing success in the last 20 years (Michon, undated). While the majority of climate cases are in the United States, such cases are expanding further afield: according to a recent report by the
Grantham Research Institute on Climate Change and the Environment at the London School of Economics, cases have been brought in at least 28 countries and have been spreading across Europe and the Asia/Pacific region (Drugmand 2019). That’s a huge liability if you own fossil fuels.

3. **Regulatory risk.** Given the massive economic and societal impacts of climate change, in the right political environment, investors should be worried about what regulator might do to impact the flexibility of traditional energy companies. We know the current White House Administration has trumped the regulatory situation by gutting the EPA. Regulations, however, cannot stop technology innovation. It can slow it down, or speed it up, but it can’t stop technology’s disruption from taking place.

4. **Demand risk.** The oil companies think they’re going to need to keep looking for supply until 2050. They don’t think peak demand is going to happen. We think peak demand for oil is going to happen when we move to electric cars. California is considering legislation to accelerate the push to get 5 million electric cars on the roads by 2030 using tax credits. Nine states in the United States are planning on using 100% renewable energy by various target dates (Sierra Club, undated). Sweden is aiming to eliminate fossil fuels from electricity generation by 2040. Costa Rica is already 95% renewable and is aiming for 100% carbon neutrality by 2021. Nicaragua, Scotland, Germany, Uruguay, and Denmark are others hitting impressive milestones (The Climate Reality Project 2016).

### The Externalities: Hidden Costs of Not Transitioning to Renewables

The costs of climate change—droughts, floods, fires, hurricanes, tornadoes, etc.,—exemplify the perils of not considering the wide ranging, immediate, and long-term impacts of investments. Moreover, they are climbing. In its 2018 report, Economic Losses, Poverty and Disasters 1998–2017, the UN Office for Disaster Risk Reduction states, “In 1998-2017 disaster-hit countries also reported direct economic losses valued at US$2908 billion, of which climate-related disasters caused US$2,245 billion or 77 percent of the total. This is up from 68 percent (US$ 895 billion) of losses (US$ 1313 billion) reported between 1978 and 1997. Overall, reported losses from extreme weather events rose by 151 percent between these two 20-year periods.”
Drivers of Investing in Renewable Energy

Now let’s look at the five imperative reasons to invest sustainably in clean energy and related areas. Each relates to other ESG rating criteria.

1. **Global security.** Microgrids are much safer than centralized grids in two ways. The CIA and the FBI worry extensively about the centralized grid structure in the United States because it is easily hacked. Microgrids are much more difficult to hack. In addition, with centralized grids, accidents and impacts from climate disasters have far-reaching effects: Hurricane Maria took out power in Puerto Rico for up to 11 months in some parts of the country (Fernández Campbell 2018); when a tree fell across a power line in Ohio about 15 years ago, it set off a sequence of events that took out power for eight northeastern states for two days (Minkel 2008). More recently, the Camp Fire in California raged due to PG&E transmission lines (Eavis and Penn 2019). So microgrids from a national security perspective are much safer. The Planetary Security Initiative indicates that globally, climate change and the degradation of natural resources impact defense and foreign policy and missions in ways ranging from migration patterns, to conflict management over resource scarcity, or weaponizing, to changing demands on operational military capacity (van Reedt Dortland et al. 2019).

2. **Human Displacement.** According to a 2019 World Bank report, climate change may cause over 140 million people to be displaced before 2050 as families flee water scarcity, crop failure and rising sea levels. Much of this migration is expected to entail movement from rural areas to urban areas. As such, the World Bank “urged cities to prepare infrastructure, social services and employment opportunities ahead of the predicted influx” (Barron 2018).

3. **Jobs.** The 2019 National Solar Jobs Consensus found that there are more than 249,000 solar jobs in the United States (Solar Foundation 2020). Wind jobs amounted to 111,166 (National Association of State Energy Officials and Energy Futures Initiative 2018). Coal power generation jobs shrank by about 7%. The solar jobs are found in every single state and country (National Association of State Energy Officials and Energy Futures Initiative 2018). You don’t need an oil reserve or a carbon reserve. They are in urban areas,
rural areas, in red states and blue states. These are high paying jobs and they’ll be around for 20 or 30 years.

4. **Healthcare and other economic costs.** According to a report by the International Monetary Fund (IMF), as of 2015 there were $5.2 trillion in estimated annual subsidies provided to the global fossil fuel industry. Half of these were related to health impacts and lost work productivity (Coady et al. 2019).

5. **More predictable pricing.** Renewable energy costs do not fluctuate the way commodity prices do. Therefore, big companies are able to use renewable energy to better budget one of their main costs (RE100, undated). As such, we have seen major companies commit to going renewable as a business decision. It benefits employees and shareholders.

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**The Transition Is Coming**

This transition to a clean energy economy is not just going to be in the solar and wind space: it’s going to affect every single element of our economy. It’s going to be in water infrastructure and pumping technology. It’s going to be energy grid optimization, microgrids, battery storage. Transportation, sustainable buildings, LED lighting, HVAC systems, waste reduction, and agriculture. It’s going to be across the entire global economy.

Investment and divestment fuel the transition including the Divest/Invest movement. Launched in 2014, it was organized by Divest Invest Philanthropy led by Wallace Global Foundation’s Ellen Dorsey, The Park Foundation, University of Dayton, the Educational Foundation of America, Rockefeller Foundation and their grantees, Carbon Tracker, 350.org, As You Sow, and many more. At launch in 2014, asset owners and managers controlling $50 billion signed on to the movement, committing to divest from fossil fuels and invest in clean energy and sustainable business practices. As of August 2019, there was over $8.8 trillion of assets committed, and growing rapidly. A few recognizable signatories include The KR Foundation, The Church of Sweden, The Church of England, The Rockefeller Family Fund, the University of Oxford, the University of Cambridge, and the London School of Economics (DivestInvest 2018).
As the impacts from climate change continue to grow, Van Dyck predicts that the movement will also change. He believes that investors can help push for what is needed. It is possible.

Greta Thurnberg, a climate organizer has called all of us up to change:

It is still not too late to act. It will take a far-reaching vision, it will take courage, it will take fierce, fierce determination to act now, to lay the foundations where we may not know all the details about how to shape the ceiling. In other words, it will take cathedral thinking. I ask you to please wake up and make changes required possible.

Hunter Lovins, American environmentalist, and co-founder of Rocky Mountain Institute added to Greta’s call.

“A challenge to all of us. Be a worthy ancestor.”

A “worthy ancestor” is one who takes necessary action even when they don’t yet know the “shape of the ceiling.” That might include the work of Majority Action which empowers shareholders to hold corporations accountable to high standards of corporate governance, social responsibility, and long-term value creation. Its Climate Majority Project educates and engages investors to transform the business models of the highest-carbon emitting companies by changing the composition, outlook, and practices of their governing boards to focus on climate change mitigation, adaptation, and resiliency. Equally, it might include nationalization of fossil fuel companies or reserves to avoid a potentially ruinous financial crisis caused by the bursting of the so-called “carbon bubble” as fossil fuels have to be kept in the ground. Understanding how to achieve this is part of the work of the Democracy Collaborative.

The Case of the McKnight Foundation

Carbon Efficiency Strategy

The McKnight Foundation (McKnight), a fourth-generation family foundation based in Minnesota, has a mission to advance a more just, creative, and abundant future where people and planet thrive (McKnight Foundation 2018). Central to fulfilling its mission are two key programs focused on cutting carbon pollution in the Midwest and building a vibrant future of shared power, prosperity, and participation for all Minnesotans.

In 2014, McKnight committed to invest $200 million of its US$2.3 bn endowment in strategies that align with its mission. Investments aimed
at generating a triple bottom line of financial, environmental and social returns, and were allocated across three classes, with 50% of the portfolio in lower-risk market return investments; 25% in investments with higher risk and lower possible financial returns; and 25% in program-related investments (PRIs) with returns running from zero to market rates (McKnight Foundation).

This commitment came from a history of innovative thinking, a Deliberate Leadership quality, about how to use resources more effectively. McKnight was one of the early adopters of program-related investments, beginning in the 1980s to support urban renewal and affordable housing with loans at below-market rates. Since 2008, McKnight has applied ISS (formerly RiskMetrics), a decision support tool for institutional investors, to vote proxies on its managed financial accounts, and has employed eight investment firms—representing over US$1.3 billion of its portfolio—who are signatories to the UN Principles for Responsible Investment (pfc social impact advisors 2016).

Rather than waiting for possible investments and products to appear, in late October 2014, McKnight launched the Carbon Efficiency Strategy (CES) with one of its assets managers, Mellon Capital Management (MCM), a wholly owned subsidiary of BNY Mellon, one of the world’s largest and most established financial services firms. A portfolio of lower-carbon investments seeded by The McKnight Foundation, the CES product offered McKnight and other carbon-conscious investors a more proactive way to shift institutional investments toward companies whose practices could reduce carbon emissions exposure in investment portfolios.

The CES represented another milestone in McKnight’s journey to, as Foundation President Kate Wolford says, “walk the talk” by aligning its programmatic and endowment investments with its mission. Wolford believes that the CES “helps fill a gap in the universe of investment products by demonstrating responsiveness to the demand by an institutional investor and sends a signal to the market about carbon emissions.” CES investments, focused on one critical piece of the “E” of ESG, promise to reduce the Foundation’s emissions-intensity profile in this particular investment account by more than 50% relative to investments with a more standard index exposure.

Building the CES portfolio proved a formidable task for McKnight, MCM (and its mothership BNY Mellon), and the other advisors McKnight brought to the table, including Mercer and Imprint Capital.
They learned that getting the right “standards” for creating an acceptable CES portfolio in terms of carbon reduction and market performance required several iterations and listening sessions.

Several issues required deeper dives into what McKnight really wanted and what its asset managers could deliver. As Wolford admits, “McKnight did not exactly know what success would look like when it embarked on this process.” It knew it wanted a substantive product and not just window dressing. It knew it did not want to invest in any coal companies, but also saw that some companies with big carbon footprints had the opportunity to also make big carbon reductions. It did not want to have standards or screening processes that by definition excluded or biased against such companies. And it wanted to make sure that the CES portfolio did not track too far from the benchmarks it and its investment managers used to assess performance.

This learning and discovery were happening as MCM and the other advisors were trying to build the CES platform. The interim results revealed this dynamism. Regarding CES’s second iteration Wolford observed, “It wasn’t as robust as we had hoped, which was disheartening. It was simply a negative screen with weak data.” She explained, “Our investment committee, foundation staff, and Imprint were disappointed. I didn’t think we were going to go forward.” One of the reasons for the unsuccessful first effort by MCM was the lack of knowledge of staff about climate change. This was a new field and a stretch for the team. However, the MCM team recognized it needed to expand its understanding in climate change and took up the challenge. A senior leader explained that once she learned the harm climate change causes globally and the fragility of the planet, she changed her own behavior and has tried to help influence her colleagues at MCM to incorporate climate into their portfolios.

Though at times frustrating, the intentional, iterative, and collaborative process of creating the CES ultimately offered both the investor, McKnight, and its asset managers a product that aligned with mission, used sound metrics and standards for assessing companies’ carbon efficiencies, and tracked acceptably well against benchmarks. Moreover, it allowed them to ensure that the ESG expectations of the investor could be met by the asset managers while also meeting the risk return profile McKnight had established for its $200 million investment. The lessons? Meeting the promise while avoiding the perils is not one size fits all. It requires investors to dig in, question, be very clear on what they want,
and to push for it. It requires asset managers to have deep knowledge of a topic, capabilities, agility, and commitment to creating impactful ESG products and not merely window dressing. Sending a product to market that doesn’t advance agenda to mitigate climate change is a peril. Financial institutions are looking for products to give to their clients. The demand is being felt. Off the shelf products that may not meet client needs are a peril. Having the expertise in-house to avoid problems and “if I had only known” syndrome, is essential.

The outcome? A CES that provides broad equity exposure cost-effectively while assessing, recognizing, and supporting strong climate performance using a combination of screening, rewards, and penalties for climate-related behaviors and proxy voting in support of shareholder resolutions and other corporate initiatives related to climate risk, performance, and disclosure (pfc social impact advisors-Humanity United 2016). The hope was that it would enable investors to send a strong signal of climate change-related action and engagement while maintaining a beta investment profile and managing climate-related investment risk.

Throughout the process, the key stakeholders—MCM, BNY Mellon, and McKnight – exhibited the characteristics of Deliberate Leadership in ways that were true to their organizational cultures.

**CONCLUSION**

Bringing the full power of markets to bear on climate change and the myriad of other complex social and environmental challenges facing the planet requires focusing investments for impact. These investments are not just good for our planet, but also make sound financial sense for investors, offering more stable investments that mitigate risk and outperform portfolios that continue to include fossil fuels. Making such investments commonplace requires Deliberate Leadership as demonstrated by the McKnight Foundation—creativity in exploring new solutions, courage to lead and risk failure, and building collaborative relationships with diverse stakeholders and community members based on compassion and candor. Initiatives such as Positive Money are pushing central banks to align their policies with sustainability, while Climate Safe Lending seeks to align European and North American bank lending with the goals of the Paris Climate Accord. The processes, tools, criteria and standards needed to ensure a level playing field for all companies and investors are possible. To get there, however, will take more than better modeling,
standards and criteria; it will require leadership deliberately and continually seeking, ready and willing to take risks and adapt, collaborating, keeping communities as the focal point, and compassionately making the hard decisions.

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