EXAMINING THE IMPACT OF FOSSIL FUEL DIVESTMENT ON UNIVERSITY ENDOWMENTS

Christopher J. Ryan, Jr. & Christopher R. Marsicano

INTRODUCTION

Through their endowments, universities are significant participants in the global financial industry. As recently as 2018, the fair-market value of the top 100 university endowments totaled over $472 billion. Despite the fact...
that they control vast sums, universities are more than holders of institutional funds. They are also important social firms, and the manner in which they spend or do not spend their resources carries important social considerations.3

One social consideration is whether universities should divest from fossil fuels—or remove invested assets from companies involved in extracting fossil fuels—taking a stand in the effort to reduce the impact of climate change. Between 2011 and 2015, sixteen American universities and colleges fully divested their endowments,4 and another six American universities and university systems partially divested their endowments, from fossil fuels.5 This social and economic action paved the way for another thirteen American universities to divest their endowments from fossil fuels between 2016 to 2018.6

---

3 Lee-Ford Tritt & Ryan Scott Teschner, Re-Imagining the Business Trust as a Sustainable Business Form, 97 WASH. U. L. REV. 4 (2019) (noting that there has been a recent discourse, “in the business world, in academia, and in the popular press, about corporate sustainability . . . arising from a shift in the business world: companies have gone from focusing solely on the bottom line to making a positive impact on society. Both big and small businesses are considering their environmental, societal, and economic effects on the community rather than focusing solely on shareholder wealth maximization.”).

4 Universities that immediately and fully divested their endowments from fossil fuels between 2011 and 2015 include: Hampshire College (2011); Unity College (2012); Sterling College (2013); Santa Fe Art Institute (2013); College of the Atlantic (2013); Green Mountain College (2013); Naropa University (2013); Pitzer College (2014); Union Theological Seminary (2014); University of Dayton (2014); California State University at Chico (2014); Goddard College (2015); Syracuse University (2015); University of Hawaii (2015); and University of Maine at Presque Isle (2015). Three universities began a full divestment from fossil fuels within this period but included sunset provisions to their full divestment: Prescott College (Promised in 2014 with a 3-year divestment period); Warren Wilson College (Promised in 2015 with a 5-year divestment period); and Western Oregon University (Promised in 2013 with a 5-year divestment period).

5 Universities that partially divested their endowments from fossil fuels between 2011 and 2015 include: California Institute for the Arts (Partial divestment from fossil fuels, 2014); University of California System (Coal and tar sands only, 2015; Promised a full divestment beginning in 2018 with a 5-year divestment period, the full divestment promise falling outside of the scope of this study); Humboldt State University (No direct investment in fossil fuels, 2013); San Francisco State University (Coal and tar sands only, 2013; Promised full divestment beginning in 2017); Stanford University (Coal only, 2014); University of Maine System (Coal only, 2015); and University of Washington (Coal only, 2015).

6 Universities that fully divested their endowments from fossil fuels between 2016 and 2018 include: Northland College (Promised in 2017 with a 5-year divestment period); University of Maryland (Promised in 2016 but not complete in 2018); University of Massachusetts (2016); Oregon State University (2017); Lewis & Clark College (2018); Salem State University (2018); Seattle University (2018); and Middlebury College (Promised in 2018 with a 15-year divestment period). Universities that partially divested...
And universities are not alone in the movement to divest, thanks in part to pressure from organizations like the United Nations.\(^7\) Over 1,000 institutions with assets valued at over $8 trillion have committed to some form of fossil fuel divestment, such as the Rockefeller Brothers Fund, Guardian Media Group, and the World Council of Churches, as well as the governments of Norway, Ireland, and New York City.\(^8\) This could possibly signal that fossil-fuel investment vehicles may soon lose their status as blue-chip investments that they have historically been considered to be.\(^9\)

Amidst changes in perception about the role of fossil fuel producers in climate change, universities are increasingly pressured to consider divesting from fossil-fuel holdings. At a few of the universities that have divested from fossil fuels, the decision to divest their endowments from fossil-fuel holdings was hardly controversial, but for many universities, the decision to divest engendered both considerable support and opposition.\(^10\) Yet, to date, the academic study of the effect of divestment on endowment values has produced mixed results, and has only contemplated the possible future effects of divestment at a handful of universities that have partially divested from fossil fuels.\(^11\) That is, no study to date examines holistically the impact of


\(^9\) Id.


total or partial divestment on endowment values.

This study explores the actual, not merely estimated, impact of divestment on endowment values at universities that both fully and partially divested, using difference-in-differences and synthetic control modeling techniques, with a donor pool of like institutions. Combining data from the Integrated Postsecondary Education Data System (IPEDS) with recently-acquired datasets from the National Association of College and University Business Officers (NACUBO) and Edmit, a college consulting company, for university endowment market values from FY 2007-2016, this study makes use of a robust dataset that is ideal to isolate the changes to endowment values that are directly attributable to divestment and not attributable—directly or indirectly—to external market shocks impacting all university endowment values, such as the 2008 recession.

Part I of this Article places divestment campaigns in historical context. It then turns to the role of index funds, socially-responsible investment strategies, and the market effects of divestment. Part II examines pressures placed on universities and their boards to divest, as well as principal argument against divestment. It also discusses recent litigation that endowment divestment decisions have engendered and the possible inefficiencies resulting from the fiduciary requirements of the Uniform Prudent Management of Institutional Funds Act. Part III reports our data sources, analytical methodology, and findings. Leveraging our rich dataset, this study examines the extent of the fair market value change—positive or negative—that is attributable to divestment decisions. Results from our difference-in-differences analyses of the effect of full and partial divestment suggest that either form of divestment yields no discernable consequences for university endowments’ fair-market values. We urge the reader to interpret these preliminary results with caution, in part because our second method of analysis, using the synthetic control method for four universities (Pitzer College, University of Dayton, Syracuse University, and Stanford University), suggests that consequences may vary across institutional contexts. Finally, based on these results, we then consider whether universities, as charitable organizations, might have different fiduciary duties that transcend the default “total return” method of investing, and evaluate the extent to which UPMIFA may need to directly contemplate different standards of reasonable investment based on the institutional beneficiary’s purpose or mission.

neither-warranted-nor-wise/ (reasoning that Harvard’s endowment losses in the recession were greater for having invested in fossil fuel companies).

12 The donor pool is based on enrollment, location, size of endowment, Carnegie classification of the school’s institutional typology, and other related factors.
I. THE EFFECT OF DIVESTMENT

A. Past Divestment Campaigns

Divestment, on the basis of social or moral concerns, is something of a latter-day invention. Originating in the early 1980s, Protestant and Roman Catholic churches initiated a wave of divestment from holdings in banks in South Africa on moral grounds, taking a stand against the practice of apartheid, and public organizations—including health-related organizations, such as the American Cancer Society and the World Health Organization—started to divest from the tobacco industry. By the end of the decade, university endowments—led by Harvard University and Columbia University—followed suit, divesting from holdings in tobacco companies and selling off shares of companies operating in South Africa. In the mid- to late-1990s, public pension funds started to divest from tobacco companies and financial institutions in South Africa, and investors in the wider market began to do the same.

The economic result of these early divestment campaigns often had a negligible impact on the companies within the targeted sector. While the share values in divested companies dropped significantly in a few cases, most did not. In fact, shares in these companies were merely reallocated to share

13 In many ways, divestment decisions by these organizations can be seen as constituent with their health-related missions. See ANIF ANSAR, BEN CALDECOTT, AND JAMES TILBURY, STRANDED ASSETS AND THE FOSSIL FUEL DIVESTMENT CAMPAIGN: WHAT DOES DIVESTMENT MEAN FOR THE VALUATION OF FOSSIL FUEL ASSETS? 10 (2013), https://www.smithschool.ox.ac.uk/publications/reports/SAP-divestment-report-final.pdf.

14 Yet, for universities, these divestment decisions can be seen as more removed from their educational missions. See id.


purchasers who were not concerned with the social movement prompting divestment from these companies.\(^{17}\) While divestment movements can be successful, this success rarely results in permanently reducing any firm’s share value, because other investors, who are unconcerned by the social considerations the divestment campaign, can buy the divested shares, perhaps at a reduced rate.\(^{18}\) For example, “sinvestors”—who invest exclusively in sectors like alcohol, tobacco, firearms, and gambling—can wait in the offing for a divestment campaign to target a firm and scoop up the divested shares at a reduction in share value and hold the assets until they become more profitable again.\(^ {19}\) If the divesting party sells low and the sinvestor buys the divested stock low as well, the valuations of the divested stock will remain relatively stable and unaffected by this reallocation.\(^ {20}\)

In other words, stock in a particular company that is the target of divestment is unlikely to be significantly affected by an individual investor’s or even an institutional investor’s decision to divest from it.\(^ {21}\) To the extent that the targeted company has a large enough market cap, any anticipated drop in stock valuation associated with divestment from investors with limited holdings in the company are likely to present short-term decreases in value only; however, to the extent that multiple institutional investors with holdings in a targeted company divest at the same time, it is conceivable that declines in valuation would persist into the longer-term.\(^ {22}\) A divestment campaign can sow the seeds of uncertainty among investors, who may fear—even if unreasonably—that stock values will drop and thus cause them to also divest.\(^ {23}\) If divestment is coordinated, divestment could impact stock values by changing market norms, so that even if it is economically irrational not to invest in fossil fuel stocks, it could be the norm not to do so, realizing the broader social impact that current proponents of fossil fuel divestment seek.\(^ {24}\) Accordingly, it may be instructive to look at how past divestment campaigns were successful in order predict the success of the movement encouraging


\(^{18}\) Id. In fact, making investment decisions based on social impact rarely results in increases to firm value See Benjamin Sporton, The High Cost of Divestment, CORNERSTONE (June 16, 2015), http://cornerstonemag.net/the-high-cost-of-divestment/.

\(^{19}\) See MacAskill, supra note 17.

\(^{20}\) Id.

\(^{21}\) See Ansar, et al., supra note 13, at 29.

\(^{22}\) Id. at 30. See also Noam Bergman, Impacts of the Fossil Fuel Divestment Movement: Effects on Finance, Policy, and Public Discourse, 10 SUSTAINABILITY 1, 6 (2018), http://dx.doi.org/10.3390/su10072529.

\(^{23}\) See id. at 34-35. See also Belinda Glen, Divestment – Does It Drive Real Change?, SCHRODERS 7 (July 2019), https://www.schroders.com/getfunddocument/?oid=1.9.3338808.

\(^{24}\) See Ansar, et al., supra note 13, at 31-32; Bergman, supra note 22, at 8.
universities to divest from the fossil fuel sector.25

B. Index Funds and Socially-Responsible Investing

Since the year 2000, actively managed funds have ceded ground to index funds, which are mainly collections of securities and bonds, or both, tracking an index.26 In theory, the value of index funds is that they are designed to increase long-term gains by significant diversification, and as such, they may indeed be superior to active fund management.27 Thus, the increase in popularity of index funds can be viewed as an investor preference for insulation from market sector volatility and away from a focus on short-term returns. But this shift from active to passive asset management has also coincided with the migration of large assets to three main asset firms—BlackRock, Vanguard, and State Street—which manage over 90 percent of all passive equity assets.28

In the last decade, many index funds have increased their holdings in fossil fuel companies’ securities such that fossil fuel companies now make up a large part of major benchmark indices.29 Thus, one could argue that index funds would be unavailable to investors opposed to certain kinds of assets on moral grounds; if the index contains even one such security from a category of asset in which investor does not want to invest, the whole index fund would be unavailable to the investor.30 However, this argument ignores two meaningful realities of investment and asset management.

First, individual investors have substantially less influence than index fund managers. Investors with significant holdings in a firm can use their

26 Adi Libson & Gideon Parchomovsky, Reversing the Fortunes of Active Funds, U. Penn. Inst. For L. & Econ. Research Paper No. 20-04 at 1 (January 23, 2020) (discussing the considerable shift from active to passive investment in recent years, culminating in 2019, when passive funds surpassed active funds in terms of assets under management); and Patrick Jahnke, Holders of Last Resort: The Role of Index Funds and Index Providers in Divestment and Climate Change, SSRN Working Paper at 5 (March 9, 2019), https://ssrn.com/abstract=3314906. The advantage of using an index fund in lieu of an actively managed funds is that the index fund management approach is considerably more passive. However, these funds may not be as passive as they seem, since index creators still making decisions about which firms to include and what criteria they will use to create the index. See id. at 10-12.
27 See Benjamin Braun, From Performativity to Political Economy: Index Investing, ETFs and Asset Manager Capitalism, 21 NEW POL. ECON. 257, 258 (2016).
29 See Jahnke, supra note 26, at 5-6.
30 See id. at 3-4. See Geddes, supra note 16.
influence as shareholders to affect firm governance.\textsuperscript{31} Exit, or the threat of exit, is an essential part of shareholder voice, even for shareholders that do not actively engage with the firm.\textsuperscript{32} Yet, critics have argued that the three firms controlling the lion’s share of passive equity are not unambiguously dedicated to a long-term outlook—as evidenced by their voting record, which may not reflect a commitment to a long-term return strategy—despite the fact that these three firms are the best-positioned actors to take advantage of long-term investment strategies.\textsuperscript{33}

As a corollary, even when they are not bound by exclusionary requirements, index fund managers could simply choose exclude from the fund, for example, securities from coal companies, while still using the rest of the fund’s index, carrying very low tracking error cost.\textsuperscript{34} Thus, managers of the significant assets invested in index funds could also affect real social change.\textsuperscript{35} Perhaps this market solution is both efficient and timely. While asset managers have been criticized for changing their investment behavior in response to social concerns, failing to adapt investment principles that are not responsive to the concerns of those calling for social change has reputational repercussions for the fund and may be untenable.\textsuperscript{36} Moreover, refusal to take action regarding social concerns assets could be detrimental to the value of index funds that do not divest if such assets do, as some expect, depreciate in the future.\textsuperscript{37}

Given the function of index funds and the fact that managers of large institutional funds have little incentive to move away from the stable securities on which their funds rely, it could be difficult for asset managers

\textsuperscript{31} See Jahnke, supra note 26, at 7. While the share size required for voting to opt out of certain funds can vary across fund type, generally a controlling share is required. See id.


\textsuperscript{33} See Fichtner & Heemskerk, supra note 28, at 17-23.

\textsuperscript{34} \textit{Id.} at 14. \textit{See also} Ari Weinberg, \textit{Watch an Index Fund’s ‘Tracking Error’}, \textit{WALL STREET J.} (July 9, 2012), https://www.wsj.com/articles/SB10001424052702303734204577466453629079534.

\textsuperscript{35} Fichner & Heemskerk, \textit{supra} note 28, at 15-16; \textit{see also} Gray, \textit{supra} note 31.


to divest from holdings on the basis of moral or social concerns. However, asset managers’ hands are not as tied as many critics suggest, and socially undesirable holdings could be dropped from the fund with a minimal impact on the tracking error of the index fund portfolio. In fact, there are many index funds consisting of a portfolio of “environmentally friendly” bonds and securities, suggesting that index fund managers already contemplate and meet the demand for greener investment options for their clients. Moreover, making strategic financial decisions to divest can effect change in nuanced ways, such as divesting from fossil-fuel companies that are making no efforts to move to renewable energy while not divesting from those that are.

Despite the purported benefits of index fund investment, university endowments have been wary to choose to invest in index funds, and they have done so to their own detriment. In recent years, index funds have led nearly all investment programs, beating returns to highly diversified university endowments with substantial holdings. In fact, while some university endowments invest in funds that use a benchmark index, the universities with the largest endowments have recently decreased their holdings in funds tracking benchmark indices. Perhaps this trend illustrates the fact that large

38 See id. See also Fichtner & Heemskerk, supra note 28, at 17.
39 Id. at 12. If the purpose of funds invested using a benchmark index strategy is to decrease tracking error and transaction costs to investors, specialized index funds, such as “green” index funds, may have higher tracking errors and possibly increase transaction costs of investors, given the scarcity of specialized index funds relative to non-specialized index funds. See id. at 12-13; and Vladyslav Sushko & Grant Turner, The Implications of Passive Investing for Securities Markets, BANK FOR INT’L SETTLEMENTS (March 11, 2018), https://www.bis.org/publ/qtrpdf/r_qt1803j.htm.
41 Andrew Bary, Ivy League Endowments Are No Match for a Simple Index Fund, BARRON’S (October 3, 2018), https://www.barrons.com/articles/ivy-league-endowments-1538530379 (noting that, in FY 2018, index funds returned 14.4 percent in dividends, beating Yale, Harvard, Penn, and Dartmouth by at least 1.5 percent and as much as 4.4 percent, and ten year performance of many of these endowments lag index fund performance by similar margins).
42 David Randall, Largest U.S. University Endowment Funds Pull Back on ETF Exposure, REUTERS (September 13, 2017), https://www.reuters.com/article/us-usa-funds-endowment-etfs/largest-u-s-university-endowment-funds-pull-back-on-etf-exposure-idUSKCN1BO2L0. While exchange-traded funds (ETFs) and index funds are not the same—index funds are essentially mutual funds while ETFs are traded like stocks and thus have higher trading costs—both use an underlying benchmark index. This context is provided because this source compares endowment performance to ETF performance and not to index fund performance, as the other sources in this section do. See id. See also Sophia Bera, What’s the Difference between an ETF and Index Funds?, BUSINESS INSIDER (May 1, 2016), https://www.businessinsider.com/difference-between-etf-and-index-fund-2016-4.
university endowments do not need the same flexibility as individual investors to be able to trade at different values throughout the trading day. Regardless, many of the top university endowments appear to prefer to actively manage their investment rather than delegating investment through an index fund portfolio, but this strategy increases market exposure by as much as 70 percent as compared with a passive investment strategy, such as an index fund.43

However, market exposure may indeed be a reason why several of the largest university endowments continue to trail index fund returns. For example, the endowment manager of Carthage College, in Wisconsin, achieved an average annual value of 6.2 percent for fiscal years 2008 through 2017—beating 90 percent of all college endowment funds over this period, which included the Recession—by primarily investing in market-tracking index funds.44 While it is difficult to come by specific data on the participation of university endowments in index funds, a recent study conducted by NACUBO and the Teacher’s Insurance and Annuity Association (TIAA) indicates that the largest university endowments tend to under-invest in domestic securities, especially when compared with all other university endowments.45 Only 3 percent of Yale University’s formidable endowment is weighted to domestic equities, meaning that its diversification precludes its exposure to securities in some of the world’s most successful companies.46 On one hand, universities with the largest endowments may be functionally divested from fossil fuels by not investing in index funds with holdings in fossil fuel companies—or by hardly investing in index funds at all. On the other hand, given the favorable market returns of index funds, perhaps the time has come for university endowment managers to consider

43 Randall, supra note 42.
44 Janet Lorin, *A Small College’s Endowment Manager Beat Harvard with Index Funds*, BLOOMBERG BUSINESSWEEK (May 4, 2018), https://www.bloomberg.com/news/articles/2018-05-04/a-small-college-s-endowment-manager-beat-harvard-with-index-funds. It bears noting, however, that Carthage College’s endowment is not as diversified as many other college endowments. Thus, it can afford to utilize a more conservative market-tracking strategy, because its endowment returns account for such a low proportion of Carthage College’s annual budget (3 to 5 percent, as compared to Harvard University, with its endowment returns accounting for roughly 33 percent of its annual budget). Id.
45 *Asset Allocation for College and University Endowments and Affiliated Foundations, FY18*, 2018 NACUBO-TIAA Study of Endowments (2018), available at https://www.nacubo.org/-/media/Nacubo/Documents/research/2018-NTSE-Public-Tables--Asset-Allocations--FINAL.ashx?la=en&hash=32F16B88DB7E16039401F8E8E17916331AF8A88C. Among university endowments valued over $1 billion participating in the study, only 13 percent of their endowment was invested in domestic equities, while endowments valued between $501 million and $1 billion had 22 percent of their endowments invested in domestic equities. Id.
46 See Bary, supra note 41.
investment in long-term-focused index funds, and in particular, if they are so inclined, green index funds.

But a discussion of the financial participation of universities in index funds elides the reality that most of these funds—or at least the firms that manage them—already engage in socially-responsible investing strategies. The principal theories on which two notable socially-responsible investing strategies rest are based on prudent investment management norms. These strategies include screening—the practice of excluding "securities of certain otherwise attractive companies from an investor’s portfolio because the companies are judged to be socially responsible"—and integration, or the combination of traditional financial metrics with material environmental, social, or governance factors in making investment decisions.

47 Charitable endowments are subject to the prudent investor rule by way of the Uniform Prudent Management of Institutional Funds Act. Max M. Schanzenbach & Robert H. Sitkoff, The Law and Economics of Environmental, Social, and Governance Investing by a Fiduciary, Harvard John M. Olin Discussion Paper Series, Paper No. 971, 33 n.217 (Sept. 2018). https://ssrn.com/abstract=3244665. Any institutional fund operated for educational purposes could be subject to the broad jurisdictional hook of the Uniform Prudent Management of Institutional Funds Act—or its predecessor, the Uniform Management of Institutional Funds Act—to the extent that [the university] holds funds exclusively for [educational] purposes.” UNIF. MGMT. INST. FUNDS ACT § 1(1), 7A U.L.A. 484 (1999). See also Ryan, supra note 2, at 174. Investing based on environmental, social, and governance concerns can conform to—but is not required by—the prudent investor rule under UPMIFA. See Schanzenbach & Sitkoff, supra note 47, at 47-48 (stating that “the current theory and evidence on risk-return ESG indicates that use of ESG factors in active investing or active shareholding could possibly generate excess risk-adjusted return—but not necessarily so, and not indefinitely so.”). Additionally, the U.S. Department of Labor concludes that consideration of environmental, social, and governance concerns is not explicitly required or endorsed by UPMIFA, while noting that an investor “must not too readily treat ESG factors as economically relevant to the particular investment choices at issue when making a decision.” Id. at 48-49 (quoting Department of Labor Interpretive Bulletin Relating to the Fiduciary Standard Under ERISA in Consider Economically Target Investments, 80 Fed. Reg. 65,135, 65,136 (October 26, 2015) (codified at 29 C.F.R. pt. 2509)). A greater discussion of UPMIFA and the prudent-investor and sole-interest rules follows at notes 111-159, infra.

48 Langbein & Posner, supra note 15, at 73. Screening, then, can be described as financial decision making based on factors that are not purely financial in nature. Note that positive screening is the converse of the socially-responsible investment screening discussed here, which is emblematic of negative screening. For instance, “an investor might use ‘clean energy’ as a positive screen and then look for best-in-class companies within the group of companies that meet the standards of the screen.” Susan N. Gary, Best Interests in the Long Term: Fiduciary Duties and ESG Integration, 90 COLO. L. REV. 731, 740 (2019).

49 Id. at 745-46. “Environmental fac-tors refer to a company’s stewardship of the natural environment, including how the company addresses things like pollution, energy use, or water use. Social factors focus on labor relations, including the treatment of workers, the conditions for workers, and worker compensation. Social factors also include how a company interacts with the communities in which the company operates. Governance factors
Screening strategies have been widely used for some time, despite claims that their financial value will diminish. Critics of screening focus on the role that screening factors play in investment decisions and the costs they pose to the portfolios that use them. However, proponents of the strategy submit that, when employed for a passively-managed institutional investor, the use of negative screening procedures may in fact mitigate these costs, relative to actively-managed, non-screened portfolios. This is because active investing strategies generally involve more transaction costs than passive investing strategies. But integration, a more common strategy today than screening, could reduce these costs even further if not eliminate them altogether. Proponents of integration tout that the strategy leads to better short-term returns than non-integrated funds, because the market often misprices firms when investors fail to consider material environmental, social, or governance factors. And integrated funds also outperform non-integrated funds over the long-term as well, because integration helps to identify long-term risk. While integration may indeed be the gold standard of institutional investment strategies, given its combined focus on return and social responsibility, many universities do not avail themselves of this strategy, foreclosing their endowments to its several benefits.

relate to how the company governs itself, including executive compensation, internal controls, audits, and transparency for shareholders and the public. ” Id. See also Mozaffar Khan, George Serafeim, and Aaron Yoon, Corporate Sustainability: First Evidence on Materiality, 91 ACCT. REV. 1697, 1697 n.1 (2016) (discussing the materiality of environmental, social, or governance factors in evaluating companies).

50 See Schanzenbach & Sitkoff, supra note 47, at 40-41.
51 For example, a study commissioned and financed by the Independent Petroleum Association of America discusses the transaction costs of divesting and the possible related costs of under-diversifying by screening the energy sector as a whole. DANIEL R. FISCHEL, FOSSIL FUEL DIVESTMENT: A COSTLY AND INEFFECTIVE INVESTMENT STRATEGY, 6-11 (2017), http://divestmentfacts.com/pdf/Fischel_Report.pdf.
52 See Schanzenbach & Sitkoff, supra note 47, at 41.
53 Id. at 42-43.
54 See id. at 39-40.
56 See, e.g., Michael T. Cappucci, The ESG Integration Paradox, 30 J. APPLIED CORP. FIN. 22 (2018); Matt Turner, Here Is the Letter the World’s Largest Investor, BlackRock CEO Larry Fink, Just Sent to CEOs Everywhere, BUS. INSIDER (February 2, 2016),
B. Divestment and Market Effects

Modern Portfolio Theory would suggest that divestment from any industry could be an inefficient investment decision, since the investor would, at the very least, fall short of an opportunity to diversify to the fullest extent possible. Moreover, in theory, a divestor from securities in the fossil fuel industry would be selling low and buying high into non-fossil-fuel investment alternatives, while expecting a lower return on investment. Thus, from the perspective of Modern Portfolio Theory, fossil fuel industry stocks should outperform many non-fossil-fuel investment alternatives while divestment is taking place. However, this theoretical assumption may be overstated.

A recent study examined the possible impacts of divesting from fossil fuel companies by constructing twelve portfolios: six fossil-fuel-free portfolios and six unconstrained portfolios that included assets in companies involved in coal, natural gas, and fossil-fuel production. The researchers then compared the differences, retrospectively, based on a rich dataset of historic returns. The results from this study demonstrated that there was not a significant abnormal risk-adjusted return for fossil-fuel-free portfolios, as

http://www.businessinsider.com/blackrock-ceo-larry-fink-letter-to-sp-500-ceos-2016-2 (discussing a letter written by the CEO of Blackrock sent to CEOs of S&P 500 companies expressing Blackrock’s present and continued use of integration in valuing companies); and Mike Ryan Reflects on Sustainable Investing, UBS (July 29, 2019), https://www.ubs.com/global/en/wealth-management/marketnews/home/article.1443906.html (noting “a profound change in popularity, access, and capability has been in the field of sustainable investing.”)

57 Arjan Trinks, Bert Scholtens, Machiel Mulder, & Lammertjan Dam, Fossil Fuel Divestment and Portfolio Performance, 146 ECOLOGICAL ECON. 740, 741 (2018). The tenets of Modern Portfolio Theory with regard to endowment investment and management can be distilled into the following wisdom: (1) isolation of investments and investment decisions should be avoided; (2) investments should be evaluated in terms of their expected risk and return; (3) diversification of investments is essential and can mitigate firm and industry risk but is not impervious to market risk; and (4) delegation of investments to experts is preferable to actively-managed investment by endowment agents. See also Harry M. Markowitz, Foundations of Portfolio Theory, 46 J. FINANCE 469-77 (1991).

58 See Trinks, et al., supra note 57, at 741. See also Cornell, supra note 11.

59 Trinks, et al., supra note 57, at 741-42. See also Cornell, supra note 11, at 4-11.


61 Trinks, et al., supra note 57, at 745. Currently, the companies targeted by divestment are the fossil fuel producers, but future divesting efforts could target companies which consume significant levels of fossil fuels, which could also change the diversification-risk factor. Because fossil fuel companies have occupied varied levels of total market share throughout the past few decades, the diversification risk of divesting can change over time. See id. at 744-45.
compared with unconstrained portfolios, and that these same investment-restricted portfolios were not foreclosed to the diversification opportunities available to unconstrained portfolios. The authors of the study note that the impact of divestment is more evident for portfolios that are less diversified, but because fossil fuel stocks are essentially market substitutes, divestment from them does not yield substantial loss of return that is attributable to a corresponding lack of diversification. Thus, the results of the study seem to indicate that divestment from fossil-fuels presents a viable investment strategy for endowment managers to consider.

The most significant obstacle to endowment divestment having a real effect, however, lies with the paltry global market share for which university endowments account. American university endowments control assets valued at just a quarter of one percent of the global financial market, consisting of equity market capitalization and outstanding bonds and loans. Even considering university endowments together with public funds, such as pension funds and sovereign wealth funds, the value of assets under management of these combined funds rises to approximately 5 percent of all of the global financial market. On average, between 2 and 5 percent of all assets controlled by university endowments and public funds are invested in fossil fuel assets. Thus, university endowments are remarkably underexposed to the fossil fuel sector already. For example, in 2013, for the average university participating in the NACUBO-Commonfund Study of Endowments, just 2 percent of its endowment was invested in fossil fuels—lower than almost any other sector. In light of the underinvestment in fossil fuel stocks and the small percentage of the financial market accounted for by university endowments and public funds, divestment actions taken by these investor groups are unlikely to have direct effects on the valuation of the fossil fuel stocks targeted by institutional divestors.

The more credible threat to the fossil fuel sector, then, is the

---

62 Id. at 745-46 (noting that the market accounts for virtually all variation in returns for fossil-fuel-free portfolios). This finding is supported as well by Cornell’s study of endowment divestment. Cornell, supra note 11, at 8.
63 Trinks, et al., supra note 47, at 747. See also Zakri Y. Bello, Socially Responsible Investing and Portfolio Diversification, 28 J. FINANCIAL RESEARCH 41-57 (2005).
64 Ansar, et al., supra note 13, at 54. In fact, in 2013, American universities endowments accounted for just $450 billion of the $212 trillion global financial market. Id.
65 Id. at 56-57. Combining university endowments with public funds would yield a total of $11.4 trillion in assets—just over 5 percent of the global financial market. Id.
66 Id. at 58-59. Thus, “the plausible upper limit of possible equity divestment for oil and gas companies is in the range of $249-600 billion.” Id. at 59.
67 Id. at 11 (citing the NACUBO-Commonfund Study of Endowments as well as other sources).
68 Id. at 61, 64. See also, Bergman, supra note 22, at 2.
stigmatization of investments in fossil fuel stocks.\textsuperscript{69} Such stigmatization has led to legislative action against targeted companies in the past, and while legislative action against investments in fossil fuel companies is unlikely, the imposition of sanctions against fossil fuel companies, such as a carbon tax, are possible.\textsuperscript{70} But for every action, an equal and opposite reaction should be anticipated. Fossil fuel producers, in an effort to dilute the stigma imposed against them by the divestment movement, may change their behavior, policies, and processes, all of which could mitigate this stigma while nevertheless continuing to extract fossil fuels.\textsuperscript{71}

Leveraging stigma—such as negative media attention leading to negative social attitudes towards investing in or otherwise supporting fossil fuel companies—may indeed be a better pathway to success in transforming a targeted firm’s or industry’s practices.\textsuperscript{72} But divestment movements may also harm institutions if they are viewed as being too aggressive towards organizations that have not divested from certain firms or industries, even though these institutions might be valuable and responsible social actors.\textsuperscript{73} For example, critics claim that activist organizations that spend a disproportionate amount of time and resources on divestment campaigns could be overlooking more directly effective strategies, like lobbying for carbon taxes, encouraging people to “adopt life styles with lower carbon footprints, or calling on universities to boycott energy providers that rely on fossil fuels.”\textsuperscript{74} Thus, divestment may be viewed as one part of a larger

\textsuperscript{69} Id. at 65. See also, Laura E. Deeks, Discourse and Duty: University Endowments, Fiduciary Law, and the Cultural Politics of Fossil Fuel Divestment, 47 ENV’T L. 335, 342 (2017) (noting that non-economic factors are considered in divestment from fossil fuels).

\textsuperscript{70} Id. at 66-67. For example, Congress and the President have previously taken a strong stance against the tobacco industry. See, e.g., Public Health Cigarette Smoking Act, 91st Cong., Pub.L. 89-92 (1972) (requiring health warnings on cigarette packaging and banning cigarette advertisements on radio and television); and Executive Order: Federal Leadership on Global Tobacco Control and Prevention, 3 C.F.R. 13193 (2001) (noting that the executive branch was committed to deterring tobacco use and providing information about the adverse health effects of the same). Congress has also sanctioned South Africa for its practice of apartheid. See, e.g., Comprehensive Anti-Apartheid Act, H.R. 4648, 99th Cong. (1986) (instantiating congressionally imposed sanctions on South Africa to end apartheid, although the law was repealed following South Africa’s ending of apartheid in 1991); Levy, supra note 16 (examining the sanctions Congress placed on South Africa). These acts undoubtedly stigmatized tobacco producers and nations practicing apartheid. Thus, it is well within the realm of possibility that Congress could act to stigmatize if not sanction the fossil fuel industry if it so desired.

\textsuperscript{71} See Ansar, et al., supra note 13, at 68-69.

\textsuperscript{72} Id. See also, Bergman, supra note 22, at 2-3; and Fergus Green, Anti Fossil Fuel Norms, 150 CLIMATIC CHANGE 103, 107-112 (2017).

\textsuperscript{73} See id.; Ansar, et al., supra note 13, at 68-69.

\textsuperscript{74} Id. See also, Ansar, et al., supra note 13, at 68-69; and Jeff Tollefson, Fossil-Fuel Divestment Campaign Hits Resistance, 521 NATURE 16-17 (May 2015),

Electronic copy available at: https://ssrn.com/abstract=3501231
strategy to achieve sustainability goals.

II. UNIVERSITIES AND ENDOWMENT DIVESTMENT

A. The Case on Campus

The vast majority of American universities maintain their operations by at least some reliance on fossil fuels, and because of this reliance, financial divestment from the fossil-fuel industry is a more pragmatic approach to eliminating support for fossil-fuel producers than ceasing consumption of fossil fuels for university operations altogether.75 This reliance on fossil fuels, and the fact that this reliance is unlikely to change in the near-term, could motivate individuals toward collective action and campaigns for divestment from fossil-fuel producers. That is, even though individuals can reduce their own reliance on fossil fuels and perhaps even reduce an institution’s reliance as well, the only way individuals can effect systematic change is to cease or reduce financial support for the fossil-fuel industry through the institutions in which they are stakeholders.76

Universities are institutions that rely on their human capital to produce knowledge and awareness of contemporary problems. In the context of environmental change, universities, as microcosms of society, can be laboratories of innovation for how campuses can sustainably operate.77 Universities, as places of higher learning, can promote and advance sustainability through teaching and curriculum, as well as through

75 That said, many universities are changing the way that they operate not only to reduce costs but to promote energy efficiency and reduce impacts on the local community. To that end: “322 institutions have committed to reaching carbon neutrality by 2050[,] 6 have become carbon neutral[,] 29 are taking an accelerated path to carbon neutrality[,] and] 10 purchase 100% renewable energy.” Scott Carlson & Lawrence Biemiller, The Campus as City, CHRONICLE OF HIGHER EDUC. 20 (2019).

76 See Green, supra note 72; and Ellen Dorsey & Richard N. Mott, Philanthropy Rises to the Fossil Divest-Invest Challenge, HUFFINGTON POST (January 30, 2014), https://www.huffpost.com/entry/philanthropy-rises-to-the b 4690774.


https://www.nature.com/articles/521016a
independent research and the free exchange of ideas.\textsuperscript{78} This unique position allows for universities to be influencers of social change through education, research, and engagement and outreach to society.\textsuperscript{79} Through their human agents—faculty and often students—universities drive engagement with critical social issues, such as fossil-fuel divestment.

The call for universities to divest from fossil-fuel holdings, given their environmental impact, has grown louder over the last decade. For example, student protestors delayed the Harvard vs. Yale football game in 2019 over their concerns about climate change and the fact that their universities have not yet divested from fossil fuels.\textsuperscript{80} It should come as no surprise that this movement, like many other social movements on university campuses, has been advanced by student-led groups as well as faculty-led coalitions, using their collective action to effect institutional change.\textsuperscript{81} In fact, faculty and students are the primary forces behind divestment movements on university campuses. A recent study examining 30 letters sent to administrators by faculty at university campuses located in the United States and Canada, revealed that more than 4,550 faculty across disciplines support fossil-fuel divestment.\textsuperscript{82} At the heart of the movement is a core message: “the act of disinvesting from fossil fuel companies provides a powerful signal with potential to accelerate a just societal transformation” to clean energy.\textsuperscript{83}

University endowments are apt targets for divestment movements led by faculties and students alike, because these two groups—perhaps more than any other two groups of stakeholders—are core participants in the enterprise of the university.\textsuperscript{84} However, a decision by a university to divest from fossil-fuels is not always an easy one, because it usually requires ratification by the university board of trustees.\textsuperscript{85}

\textsuperscript{78} See id. at 321. See also Laura Colucci-Gray, Elena Camino, Guiseppe Barbiero, and Donald Gray, \textit{From Scientific Literacy to Sustainability Literacy: An Ecological Framework for Education}, 90 SCI. EDUC. 277-52 (2006).

\textsuperscript{79} See Stephens, et al., supra note 77, at 322.


\textsuperscript{82} See Jennie C. Stephens, Peter Frumhoff, and Leehi Yona, \textit{The Role of College and University Faculty in the Fossil Fuel Divestment Movement}, 6-41 ELEMENTA SCI. ANTHROPOCENE 1 (2018), https://www.elementascience.org/articles/10.1525/elementa.297/. Not surprisingly, these letters revealed a greater proportion of tenured faculty signatories than non-tenured faculty signatories. \textit{Id.}

\textsuperscript{83} \textit{Id.} at 1-2.

\textsuperscript{84} Grady-Benson & Sarathy, \textit{supra} note 81, at 666-67.

\textsuperscript{85} See, e.g., Damian Garcia, \textit{GU Fossil Free Petitions University To End Investments In}
B. Buy-in from the Board

Occasionally, getting trustees to approve a proposed university divestment strategy is not an insurmountable challenge, even for student-led groups, when the board buys-in to the stated goals of divestment. For example, in 2018, the board of trustees at Whitman College approved a policy, without much controversy, directing its endowment managers to begin divestment over the next 10 years in response to a student-led campaign for total divestment. 86 On other occasions, boards—while carefully considering campaigns for total divestment—elect to take a more conservative approach. For instance, the board of trustees at Johns Hopkins University voted to divest its holdings from coal producers in 2017 on the theory that coal contributes more greenhouse gases per unit than any other type of fossil fuel. 87 But even boards that initially took conservative steps toward divestment have left the door open to total divestment. Stanford University’s board of trustees voted to divest its endowment from coal producers’ stock, after calls to divest from a panel of students, staff, and alumni. 88 However, Stanford’s endowment policy now allows trustees to consider corporate policies that create “substantial social injury” when making investment choices, leaving the option for total divestment available. 89 And while the board of trustees at Smith College denied a proposal from a student campaign to divest in 2018, they also adopted


86 Whitman College Board of Trustees Statement on Divestment from Fossil Fuels, Whitman College (November 9, 2018), https://www.whitman.edu/Documents/Offices/Treasurer's%20Office/nov-2018-fossil-fuel-divestment.pdf?fbclid=IwAR0PGdOudFxJ5uLI_Krl4Cj0k2NxY6AcsQt6Qpz-liicArR4opLNUX84nhU.

87 Johns Hopkins University to Divest Holdings in Major Coal Producers, HUB (December 12, 2017), https://hub.jhu.edu/2017/12/12/thermal-coal-divestment-board-vote/.

88 Bill McKibben, John Hennessy, and Lisa Lapin, Stanford University to Divest Endowment of Coal Stock, Philanthropy News Digest (May 8, 2014), https://philanthropynewsdigest.org/news/stanford-university-to-divest-endowment-of-coal-stock/. Additionally, Stanford’s president stated that the university “has a responsibility as a global citizen to promote sustainability for our planet, and we work intensively to do so through our research, our educational programs, and our campus operations.” Id.

89 Id.
measures to not acquire more fossil fuel holdings and contribute further investments to environmentally conscious areas. The main apprehension of the board at Smith—shared by many university boards—is the possibility of compromising endowment values.

Most of the time, pressures from student- and faculty-led groups to divest are insufficient to overcome the board’s concerns about either compromising the university’s endowment values through divestment, which could violate the board’s fiduciary duties, or subject the board to scrutiny for giving into the demands of divestment campaigners. Notably, the board of trustees at the University of Pennsylvania has dismissed two proposals for divestment—the first in 2015 and the second in 2018—citing a duty to keep the university endowment as diversified as possible.

But perhaps no example better illustrates the tension between fiduciary duty and social responsibility than the ongoing divestment debate at Harvard University. The university made its position clear in a 2013 statement: it would not divest. In 2015, the Kennedy School at Harvard hosted a debate between two professors, James Engell and Rebecca Henderson, on whether Harvard should divest from fossil fuels. Engell, a Professor of English, whose position that Harvard should divest was supported by an open letter signed by more than 250 faculty members calling for the university to divest, argued in favor of divestment as a catalyst for better energy policies and social change. Henderson, a Professor of Management, took the opposite position, contending that divestment risks the university’s mission to teach and

---


91 Id. Importantly, boards of trust at universities are concerned about producing financial harm to their endowments’ values, because of the fiduciary duties they owe to the endowments beneficiary—the university. For a more complete discussion of these duties, see infra, notes 105-153.

92 The “ideological origins and radical political undertones of the [fossil-fuel divestment] campaign may impact the ability of the campaigners to effectively” appear legitimate in reference to the fiduciary law that governs endowment management. See Deeks, supra note 69, at 339.


94 Drew Gilpin Faust, Fossil Fuel Divestment Statement, Harvard Univ. (October 3, 2013), https://www.harvard.edu/president/news/2013/fossil-fuel-divestment-statement. “The funds in the endowment have been given to us by generous benefactors over many years to advance academic aims, not to serve other purposes, however worthy.” Id.

research by interfering with the endowment returns that are spent on the university’s core mission. Instead, she suggested that Harvard’s research efforts provided a more effective way to demonstrate the harms of fossil fuel consumption.

However, in the wake of this debate, the board of overseers at Harvard was reluctant to contemplate divestment until, in 2018, a board member requested that the university divest, despite the fact that many of her colleagues on the board felt that it would be inappropriate to use the endowment for political ends or to interfere with their duty to maximize the endowment’s value. As an alternative to total divestment, Harvard signed on to a set of principles for “responsible investment” supported by the United Nations. And in February of 2018, Harvard’s president, Lawrence Bacow, outlined plans to make the university fossil-fuel free by 2050. However, Bacow contended that there were practical concerns that would complicate any attempts at divestment, and any meaningful change could only be brought about by working with the fossil-fuel industry.

Yet, the argument that divestment would negatively impact the university’s endowment value has not been persuasive to several boards of trustees. Four of the eleven schools that divested prior to 2015 cited a minimal expected harm to the endowment value in supporting their decision. Indeed, Unity College, in Maine, which is among the earliest higher education institutions to divest, met or exceeded market benchmarks in the five-year period following its divestment. Perhaps this evidence of post-

---

96 *Id.*
97 *Id.*
99 *Id.*
100 *Id.*
102 Grady-Benson & Sarathy, *supra* note 81, at 668. Among these four universities is Green Mountain College in Vermont, with an estimated endowment of just $3.4 million, and has ceased operations. Scott Jaschik, *Another Small College Will Close*, Inside Higher Ed (January 24, 2019), [https://www.insidehighered.com/news/2019/01/24/green-mountain-latest-small-college-close](https://www.insidehighered.com/news/2019/01/24/green-mountain-latest-small-college-close). However, it is highly unlikely that Green Mountain’s divestment caused the school any significant financial harm, especially in light of its relatively small endowment. The school’s stated reasons—a general decrease in the number of college-aged people and thus a drop in enrollment coupled with an increase in the cost of providing an education—were far more impactful in bringing about the school’s downfall. See *id.*
103 Grady-Benson & Sarathy, *supra* note 81, at 669-70 (quoting Tom Groening, *Unity
divestment performance has convinced some university boards that previously took the wait-and-see approach to divestment to elect to divest in the last two years. Still, other boards have been more skeptical, electing not to divest because of anticipated negative consequences to endowment values.


See Response to Divest Smith, supra note 90; Becky Kramer, GU’s Board Votes Against Fossil Fuel Divestiture, but Will Invest $10 Million to Combat Climate Change, SPEAKMAN – REVIEW (December 11, 2018), http://www.spokesman.com/stories/2018/dec/10/gus-board-votes-against-fossil-fuel-divestiture-bu/ (discussing the decision by board of trustees at Gonzaga University not to divest its $228 million endowment from fossil fuels but instead to invest $10 million in companies combating climate change, given its approximate endowment returns of $8.7 million annually and an estimated $1.7 million loss from divestment); Sustainable Investments Task Force Recommendations, DICKINSON COLL. (May 5, 2013), https://www.dickinson.edu/info/20281/sustainable_investments_task_force/2134/sustainable_investments_task_force_recommendations (recommending that Dickinson College not divest the 4 percent of its endowment in fossil fuel holdings because of anticipated negative returns); and Daniel Weiss, Fossil Fuels Divestment, HAVERFORD COLL. (November 5,
C. Divestment Litigation

Despite the rapid growth of the divestment movement, almost no litigation has resulted from a university’s decision to divest or not to divest.\textsuperscript{106} The first and only case of divestment litigation was lodged in 2014 by seven student members of the Harvard Climate Justice Coalition, which sought to compel Harvard University to divest its endowment from fossil fuels.\textsuperscript{107} The students brought their suit on two theories. First, the students alleged that the university’s investments in fossil fuel companies breached the university’s fiduciary and charitable duties.\textsuperscript{108} Second, the students asserted a tort claim, on behalf of future generations, to be free from intentional investment in abnormally dangerous activity. The court disagreed with the students’ complaint that the students were eligible for the relief they sought and dismissed both claims for lack of standing.\textsuperscript{109}

The court’s decision in this case is illustrative of the fact that endowments are necessarily different from other charitable trusts in two notable respects. The first difference is that the beneficiary of an endowment is the university itself and not some other constituent group who benefits from the endowment, distinguishing endowments from other institutional funds, such as pension plans.\textsuperscript{110} In the absence of identifiable endowment beneficiaries beyond the university itself, a challenge to a university’s divestment decision could likely only be lodged by donors who have placed restrictions on gifts to the university, or a state’s attorney general to litigate endowment management decisions.\textsuperscript{111} The second difference is related to the first but may

\textsuperscript{108} Id. at 381.
\textsuperscript{109} Id.
\textsuperscript{111} Id. at 73. \textit{See also} Robert Steyer, \textit{New Jersey Grappling with Role of Divesting Investments, Strategies, PENSIONS \\& INV.} (September 4, 2018), \url{https://www.pionline.com/article/20180904/ONLINE/180909970/new-jersey-grappling-with-role-of-divesting-investments-strategies} (discussing how managers of New Jersey’s...
be somewhat less overt. Because individual constituents of the university are unlikely to have standing to compel divestment by the university, fiduciaries of the university endowment remain bound by the longstanding interpretation of their duty to increase the endowment’s short- and long-term value. This narrow view of the duties of fiduciaries to endowments would seem to prohibit a potentially imprudent decision to divest, even if a significant proportion of university constituents wanted the university to do so or other similarly situated universities were doing so.

While the Harvard students were unsuccessful in their claim, a successful challenge to compel divestment could lead to a rapid increase in the divestment movement. Yet, outside of Harvard Climate Justice Coalition v. President & Fellows of Harvard College, there are no other cases challenging a university’s decision to divest or not to divest.112 However, courts are not the only forum through which proponents of divestment can seek to advance their cause. Some state legislatures have already passed more flexible prudent investor statutes, and others, like the Massachusetts legislature, are beginning to consider ways to free managers of institutional funds to divest from fossil fuels, if divestment can be accomplished prudently, possibly presenting a path forward for proponents of divestment to achieve their goals.113
While legislatures have been reluctant to wade into the politically-charged waters of divestment, statutory guidance may be instructive if not conclusive on this matter. Regulatory bodies and legislatures often issue advisory rules and laws which clarify that making investment decisions based on social responsibility factors are not contrary to fiduciary management principles.\textsuperscript{114} And litigation, while unsuccessful to date, might provide another avenue to strengthen the requirement for fiduciaries of charitable trusts—such as endowments—to consider the social and environmental ramifications of their investment decisions, assuming the public nature of these charitable trusts and the purported social missions of universities.\textsuperscript{115}

\textit{D. A Duty to Divest?}

Historically, the legal lever, while a fairly reliable catalyst for practical reform, has not been a trigger for change in the area of trust administration. One notable exception was the Massachusetts Supreme Court’s decision in \textit{Harvard College v. Amory}, which led fiduciaries to shift away from investing in the safest assets available to investing in investment vehicles that were considered to be speculative prior to the decision.\textsuperscript{116} While this landmark decision brought about a sea change in trust administration in the late Nineteenth Century, its hold on trust administration lasted longer than it

\textsuperscript{114} See Sarang, \textit{supra} note 112, at 328-30.

\textsuperscript{115} See \textit{id.} at 332, 335-38. There is also an argument by analogy that the public trust doctrine could be applied to the atmosphere, which would give a common law right to enjoin actions causing “waste” to the subject of the trust (or, at the very least, force investors to consider climate-harming factors when making investment decisions). \textit{See id.} at 338-40.

\textsuperscript{116} Harvard Coll. v. Amory, 9 Pick. 446 (Mass. 1830). This decision articulated the formula for the prudent person rule, which became the national benchmark for endowment management for over a century. The court in Harvard College v. Amory adopted—and coined—the “prudent person” rule, holding that a trustee’s fiduciary duty in the governance of a trust was based on “how men of prudence, discretion and intelligence manage their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income, and as well as the probable safety of the capital to be invested.” \textit{Id.} at 469. \textit{See also} \textit{TELLUS INST. \\& CTR. FOR SOCIAL PHILANTHROPY, EDUC. ENDOWMENTS AND THE FIN. CRISIS: SOCIAL COSTS AND SYSTEMIC RISKS IN THE SHADOW BANKING SYSTEM,} 8 (2010), \textit{available} at \url{http://www.community-wealth.org/_pdfs/news/recent-articles/07-10/report-humphreys- et-al.pdf}. 

\textsuperscript{retirement-systems-to-divest-from-fossil-fuels/}. Under the current framework, a state-level agency oversees town-level investment decisions and has the power to order reversal or prospectively block decisions. \textit{Id.} The state agency ordered a town in 2017 to reverse a decision to divest its fossil-fuel holdings from its pension funds, because the agency asserted that a decision to disregard an entire class of investments constituted a breach of fiduciary duty. \textit{Id.} The town disagreed and filed a home rule petition—a request to the legislature that the town be granted autonomy over a certain matter—concerning the dispute, which was denied. \textit{Id.} However, the passage of either bill could open the door for similar statutes to be adopted with regard to other public funds, such as public university endowment funds.
probably should have. By the late Twentieth Century, the Prudent Person Rule, advanced in *Harvard College v. Amory*, was outmoded and could not keep pace with the innovative investment strategies furthered by Modern Portfolio Theory, requiring a reactive change to institutional investing that centers on a strategy of total return.\footnote{See id. See also Ryan, *supra* note 2, at 174 (2015). While Modern Portfolio Theory has dominated the institutional investment space for the last fifty years, it may have run its course in light of new economic and social concerns. See infra, notes 122-159.}

In 1972, the National Conference of Commissioners on Uniform State Laws (NCCUSL) adopted the Uniform Management of Institutional Funds Act (UMIFA), which was passed into law nearly contemporaneously by a vast majority of states, instantiating a total return strategy as a requirement of trust administration.\footnote{UMIFA made into law many of the late Twentieth Century understandings of sound institutional fund investment strategy for adopting states. Specifically, it created more flexible fiduciary duty standards, making way for riskier investment strategies. See *Tellus Inst.*, *supra* note 114, at n.11.} And this focus persisted in the 2006 adoption of the Uniform Prudent Management of Institutional Funds Act (UPMIFA) by the Uniform Law Commission, the successor of the NCCUSL.\footnote{Unif. Prudent Mgmt. of Institutional Funds Act § 2 (2006).} UPMIFA has now been adopted in 49 of the 50 states, and it requires that the manager of institutional funds act—*inter alia*—in accordance with the manager’s duty of loyalty, in good faith, and in a prudent manner in managing the funds.\footnote{Id. at § 3(a)–(b). All of these requirements are standard fiduciary duties, and none are objectionable. However, the only state that has not adopted UPMIFA is Pennsylvania.} Importantly, UPMIFA adopted language from UMIFA, requiring institutional fund managers to diversify the fund, unless “the institution reasonably determines that, because of special circumstances, the purposes of the funds are better served without diversification.”\footnote{Id. at § 3(e)(4) (emphasis added).}

Thus, when read strictly, UPMIFA’s emphasis on the diversification tenet of Modern Portfolio Theory might indeed influence trust fiduciaries to conclude that they cannot consider socially-responsible investment factors.\footnote{See generally, Gary, *supra* note 48 (noting the misconceptions of fiduciaries in thinking about sustainable investment strategies).} However, UPMIFA also requires the fund manager consider all a broad range of circumstances when making management decisions, including those that directly and indirectly impact the institution’s mission.\footnote{See Unif. Prudent Mgmt. of Institutional Funds Act § 3(e) (stating in part that “[i]n managing and investing an institutional fund, the follow factors, if relevant, must be considered: (A) general economic conditions; (B) the possible effect of inflation or deflation; (C) the expected tax consequences, if any, of investment decisions or strategies; (D) the role that each investment or course of action plays within the overall investment portfolio of the fund; (E) the expected total return from income and the appreciation of investments; (F) other resources of the institution; (G) the needs of the institution and the fund to make distributions...”)} Accordingly,
considering socially-responsible investment factors in the absence of special circumstances is *per se* impermissible under UPMIFA. But considering socially-responsible investment factors in any circumstance directly or indirectly impacting the institution’s mission may indeed be permissible.

Recent trends in institutional investment involve consideration of environmental, social, and governance (ESG) concerns. And this new strategy comports with recent consumer trends in index funds. Proponents of investing based on ESG concerns argue that this method of investment management can actually improve risk-adjusted returns. As such, in terms of institutional investment strategies, there is nothing to distinguish ESG-motivated investing strategies from any other investing strategy if claims about ESG-motivated investing are taken as true. However, in practice,

and to preserve capital; and (H) an asset’s special relationship or special value, if any, to the charitable purposes of the institution” (emphasis added). See also id. at § 3(e)(4).


For example, proponents indicate that risk-adjusted returns will not be penalized by divestment: “instead of avoiding the fossil fuel industry to achieve collateral benefits from reduced pollution, the new suggestion [i]s that a fossil fuel company should be divested because its litigation and regulatory risks were underestimated by its share price, and therefore divestment would improve risk-adjusted return.” Schanzenbach & Sitkoff, *supra* note 47, at 3.

Id. at 5. However, there may be a distinction to be drawn between a “collateral benefit” ESG and improved risk-adjusted return ESG. The former is *not* motivated by a desire to improve portfolio performance—and is instead motivated by a desire to have some positive social impact—while the latter is the type of consideration that would be explicitly permissible under UPMIFA in most, if not all, cases. Id. Yet, some have argued that this
ESG-motivated investment decisions may not be made because of a desire to improve portfolio performance and instead could be motivated by a desire to have some positive social impact. This distinction has important implications in light of the total-return rule to which fiduciaries of institutional funds must adhere, which precludes consideration of factors that do not directly benefit the beneficiary.

Because ESG investing is new to the scene of investment strategies, it has created some confusion about what sorts of factors count as ESG factors and whether those factors are considered positive or negative, for purposes of sound trust administration. If a fiduciary is motivated by collateral benefits—such as social good—then, this motivation may violate the sole-interest rule, which is prized by UPMIFA and similar statutes. The sole-interest rule, which is similar to the total-return rule, can be violated “for example, [when] a trustee . . . does ‘not act for personal advantage,’ and instead is ‘motivated by a desire to assist a worthy project,’ . . . because such a motive or desire is something other than the sole interest of the beneficiary.” The sole-interest rule is nested within the fiduciary duty of loyalty, and to the extent that an endowment is considered a non-profit corporation and not a trust, fiduciaries of endowments might be subject to the more lenient best-interest rule—rather than the sole-interest rule. But even construing endowments as trusts—as most do—recent changes to prudent investor statutes allow fiduciaries to consider not only the financial interests of but also the values of the beneficiary.

Another possible counter-

---

128 Schazenbach & Sitkoff, supra note 47, at 5-7.
129 See id. at 8-9.
130 Id. at 11-12 (discussing, for example, how nuclear energy may be considered positive for those concerned about carbon emissions, but it could be negative considering catastrophic nuclear meltdowns).
131 See id. at 18-19. Meanwhile, the prudent investor rule requires that a fiduciary manage a trust with an investment strategy with risk and return objectives suitable for the fund under management, while diversifying the fund where possible. Id. at 33 (citing RESTATEMENT (THIRD) OF TRUSTS § 90 (AM. LAW INST. 2007)).
132 Id. at 17 (citing Conway v. Emeny, 96 A.2d 221, 225 (Conn. 1953)). It should be noted that the sole-interest rule is closely related to the total-return rule in that both are animated by the desire to produce immediate and long-term returns for the beneficiary. Id. at 8-10.
133 See, e.g., Gary, supra note 48, at 788 (arguing that “‘best interests’ should be interpreted to mean more than financial interests”).
134 See, e.g., Ore. Rev. Stat. Ann. § 130.755(j) (2019) (noting that fiduciaries may consider “[t]he needs of the beneficiaries, including but not limited to the beneficiaries’ personal values and desire that the trustee engage in sustainable or socially responsible investing strategies that align with the beneficiaries’ social, environmental, governance or other values or beliefs, as well as the financial needs of the beneficiaries.”); and Del. Code.
balance to reading the sole-interest rule as strictly precluding ESG considerations in the context of endowment investment decisions may be the fact that divestment could increase donations to the institution, thereby serving the intent of the sole-interest rule.\textsuperscript{135} But the opposite could be true if the institution counts fossil-fuel magnates among its donor pool, muddying the waters for endowment fiduciaries considering ESG factors.

The fiduciary duties of an endowment manager are defined by the endowment’s purpose, which for many institutions is to generate as much annual return as possible to support the institution’s mission.\textsuperscript{136} It follows that if an investment in a firm or sector is inconsistent with a institution’s mission of education, divestment from that firm or sector is permitted under prudent investor statutes.\textsuperscript{137} And while politically motivated investment decisions may indeed be prohibited by the fiduciary duties of loyalty and prudence, a fund manager can legitimately take ESG factors into account, so long as they serve the financial viability of the endowment.\textsuperscript{138} Thus, a liberal reading of the prudent investor rule would require an institutional fund manager to take into account many factors when making investment decisions, including “[e]conomic, regulatory, litigation, and reputation risk.”\textsuperscript{139}

At one point, in the late Twentieth Century, considering ESG factors was frowned upon, since these concerns were considered noneconomic. However, Ann. tit. 12, § 3302(a) (2018) (allowing that fiduciaries “may take into account the financial needs of the beneficiaries as well as the beneficiaries’ personal values, including the beneficiaries’ desire to engage in sustainable investing strategies that align with the beneficiaries’ social, environmental, governance or other values or beliefs of the beneficiaries.”).

\textsuperscript{135} See, e.g., Janet Kiholm Smith & Richard L. Smith, Socially Responsible Investing by Colleges and Universities, 45 FIN. MGMT. 877, 878 (2016) (finding that “highly selective and elite schools do not seek differentiation through SRI and are unlikely to sacrifice returns for SRI, and we find that Less Selective schools appear to regard costs of SRI as branding investments . . . [and that boards with] less investments expertise . . . appear more oriented toward generating donations and less focused on investment policy.”

\textsuperscript{136} Deeks, supra note 59, at 341.

\textsuperscript{137} See id. at 341-42 (citing BURTON A. WEISBROD, JEFFREY P. BALLOU, AND EVELYN D. ASCH, MISSION AND MONEY: UNDERSTANDING THE UNIVERSITY 145 (2008)).

\textsuperscript{138} For a discussion of how such a decision could violate the duty of loyalty, see RESTATEMENT THIRD OF TRUSTS: P.I.R. §170 cmt. Q (1992) (noting that the trustee has a duty “not to be influenced by the interests of any third person or by motives other than the accomplishment of the purposes of the trust). For a discussion of how such a decision could violate the duty of prudence, see John H. Langbein, The Uniform Prudent Investor Act and the Future of Trust Investment, 81 IOWA L. REV. 641, 646-49 (describing how divestment may be at odds with the duty of prudence); and Langbein & Posner, supra note 15, at 88 (arguing, presciently, that investment based on social concerns, such as divestment from fossil fuels, could result in under-diversification, contrary to what the duty of prudence requires).

\textsuperscript{139} See Deeks, supra note 59, at 342-43.
as time has progressed, observers have noted that ESG factors may be mandatory, in light of the research showing how important these factors can be in terms of risk management.\textsuperscript{140} Harvard and Yale manage their endowments without total official divestment, and still regularly consider social and environmental factors but mostly by proxy action.\textsuperscript{141} Yet, despite the fact that Harvard has not yet fully divested from fossil-fuel producers, it may be a university ripe for full divestment given these concerns.\textsuperscript{142} In fact, the moral presumption against divestment is drawn from legal principles—such as the concern of breaking from compliance with fiduciary duties—but is also based on the trouble with basing an objective financial decision on a subjective factor—like what constitutes “substantial social injury,”—and scant evidence that divesting is an effective mode of effecting social change.\textsuperscript{143}

Apart from the requirements arising under the fiduciary duty of prudence, there may be little incentive for universities with large endowments, like Harvard and Yale, to fully diversify their portfolios.\textsuperscript{144} Yet, both have actually divested their endowments over social issues in the past.\textsuperscript{145}

\textsuperscript{140} See id. at 343-45. It “is helpful to recall that the modern rules governing SRI and divestment reflect an accommodation of the concerns presented by previous campaigns.” \textit{Id.} at 347-50.

\textsuperscript{141} \textit{Id.} at 350-53.

\textsuperscript{142} \textit{Id.} at 354. First, there must be a finding of “substantial social injury,” and then the following analysis is applied:

1) corporate action (or inaction) is the direct cause of the social injury; 2) all practicable shareholder rights have been exhausted or deemed to be futile; 3) there is redressability—i.e., “[t]he desired change in the company's behavior will clearly, directly, and materially diminish the social harm caused by the company”; 4) the benefits of the company action over the long term do not outweigh the social injury caused; 5) the company has been afforded the “maximum reasonable opportunity” to change its behavior and has failed to do so in a way that materially alleviates the injury; and 6) divesting does not infringe on the university's capacity to carry out its mission. Then, if the action is “consistent with fiduciary obligations,” the stock may be divested.


\textsuperscript{143} See Deeks, supra note 69, at 355-57.

\textsuperscript{144} See Smith & Smith, supra note 133, at 878 (discussing the fact that “highly selective and elite schools do not seek differentiation through SRI and are unlikely to sacrifice returns for SRI”).

\textsuperscript{145} For instance, these universities have previously divested from companies that were implicated in the following: South African apartheid, tobacco sales, and oil supporting the Sudanese government. \textit{See} Ansar, et al., \textit{supra} note 13, at 10. \textit{See also} Deeks, \textit{supra} note 69, at 355-57.
Nevertheless, any investment decision by a fiduciary of an endowment to is “firmly rooted in the fiduciary obligations of prudence and care.”146 The context of fossil-fuel divestment, however, may be different than previous divestment decisions for a variety of reasons. Chief among these reasons is the sheer scale and pervasiveness of fossil fuels in investment markets.147 Furthermore, “[i]t is not currently possible to swap fossil fuel and alternative energy assets like-for-like without harming returns, and, in so doing, violating the duty of prudence.”148 As such, the moral or ethical part of the divestment calculus is less than clear: “[T]he ethical case at first blush would seem to support divestment, but if the ethical thing to do is that which will be most effective at addressing climate change, divestment may not be the most ethical choice.”149

Ultimately, the success of divestment will be evaluated not only “by how closely aligned the campaign discourse is with the discourse of endowment law”150 but also how a divestment campaign gains legitimacy in reference to fiduciary law, as inconsistent narratives constitute significant opportunity costs to the campaigners.151 In fact, fossil-fuel divestment campaigns at

146 Id. at 358-62.
147 See id. at 362-368.
148 Id. at 368 (citing NATHANIEL BULLARD, FOSSIL FUEL DIVESTMENT: A $5 TRILLION CHALLENGE 16-17 (2014), https://perma.cc/B9UV-437L).
149 See Deeks, supra note 69, at 368. Thus, the matter of which companies from which a university endowment should divest—the fossil fuel producers, or heavy fossil fuel consumers—should also be considered. Id. There may be moral reasons proffered for divestment. For example, “fossil fuels contribute to climate change and climate change is bad for the environment; therefore, fossil fuel companies are bad and should be divested from.” Id. at 369. See also, Bergman, supra note 22, at 4-5; and Green, supra note 62, at 5-7. There may also be equitable concerns to consider. For instance, “fossil fuel companies emit carbon dioxide for free, those emissions harm the environment, and the companies should be made to internalize the costs associate with those emissions via a carbon tax.” Deeks, supra note 69, at 369-70. Finally, there are and should be financial concerns to weigh. As an example, “80% of known fossil fuel reserve must be kept in the ground if the world is to stay below the 2 degree Celsius . . . target agreed upon in the Paris Accord. These reserves will become ‘stranded assets,’ incurring significant write-offs and rending fossil fuel stocks financial liabilities.” Id. at 370. See also Tom Sanzillo, Cathy Hipple, and Clark Williams-Derry, The Financial Case for Fossil Fuel Divestment, INST. FOR ENERGY ECON. & FINANCIAL ANALYSIS, 7-10, 17-23 (2018), http://ieefa.org/wp-content/uploads/2018/07/Divestment-from-Fossil-Fuels_The-Financial-Case_July-2018.pdf.
150 Deeks, supra note 69, at 378-82. See also Sarang, supra note 112, at 303-10 (outlining the fact that divestment may be at odds with some fiduciary duties—such as the duty to diversify, which is a facet of the duty of prudence).
151 See Deeks, supra note 69, at 404-413 (“[T]here is a cost to using discourse that does not coincide with the dominant discourse of the arena of action. . . . Giving political justifications for divestment is rhetorically costly vis-à-vis the trustees because they are prohibited from making politically motivated divestment decisions.). Id.
universities are somewhat fragmented, in that the shared rationale between
groups on different campuses is not always apparent, and the legal context is
almost entirely ignored by most campus-based divestment campaigns.152

Perhaps, then, university endowment divestment from fossil-fuel holdings, along with how it fits within the wider phenomenon of socially
responsibility investing, is a question of weighing the financial and reputational costs associated with divestment or continued investment in the
fossil fuel sector.153 As a result, some universities that have resisted calls to
divest are nonetheless signatories of the United Nations Principles for
Responsible Investment (UNPRI)—evidence of the proverbially hedged bet
until the financial and reputational costs of not divesting are too great to
ignore.154 But the “business case” for fossil-fuel divestment—to avoid the
downside of financial risks associated with the fossil fuel industry and catch
the upside of the growing green energy industry—is often ignored by
endowment fiduciaries.155 In fact, there may be compelling business reasons
to motivate universities to divest from fossil fuels, including: avoiding complicity,156 reputational concerns,157 and that divesting represents a
socially responsible leverage of power over powerful bad actors.158 Thus, a
decision by a university endowment to divest from fossil fuels would likely
be consistent with fiduciary principles so long as it is genuinely motivated by
financial and legal factors.159 And depending on a trust’s purpose, divestment
may indeed be consistent with fiduciary law.160

That said, business reasons alone are not enough motivation for most
universities to divest, given that endowment managers, like other trust

152 Richardson, supra note 110, at 63-64.
153 Id. at 62-63.
154 Id. at 63-64. The UNPRI does not require divestment per se, but simply that the
signatories take active steps towards acting in a socially responsible managers with their
funds, as well as publicly disclosing their SRI policies and practices. Id. at 64. Although
outside the U.S., it is worth noting that in 2014, the Australian National University caused
an uproar when it announced it had divested from seven companies, citing concern with their
environmental practices and impacts; even Tony Abbott, then the Australian Prime Mi-
nister, expressed his disapproval at what he saw as simply a bad investment decision. Id.

155 This includes the presumption that “over the long term the business case to take
cclimate change seriously is compelling, in the near term is may not necessarily be so.” Id. at
65.
156 Id. at 65-67.
157 Id. at 66-67
158 Id. at 67-68.
159 Id. at 70.
160 See Sarang, supra note 112, at 307-14. “Given the wide-ranging physical, social, and
economic havoc that climate change will cause, it may be possible to argue that minimizing
cclimate risk is related to the purposes of the trust and in the beneficiaries best interest.” Id.

See also UNIF. PRUDENT MGMT. OF INSTITUTIONAL FUNDS ACT § 3(e) (enumerating
the factors that must be considered in investing funds).
administrators, are historically averse to change and only respond when their duties are externally changed. This is because endowment managers are beholden to principles of fiduciary law. Yet, because trust fiduciaries are required to oversee a trust in a manner protect all beneficiaries’ interests equitably under the fiduciary duty of impartiality, “fossil fuel investments impermissibly favor current beneficiaries at the expense of future beneficiaries who will suffer the severest effects of climate change, and . . . breach this duty.” While a consideration of violating the duty of impartiality on these grounds is beyond the scope of this Article, we seek to test the concern of many endowment fiduciaries about violating the duty of loyalty through a divestment decision that negatively impacts the endowment value in the section that follows.

III. ANALYSIS OF THE IMPACT OF DIVESTMENT ON UNIVERSITY ENDOWMENTS

Given that there may be no actual legal restriction against divestment—or, put another way, prudent investment principles may indeed require fiduciaries of endowments to consider ESG factors in alignment with the university’s mission—the only major concern of endowment fiduciaries is the possibility that divestment reduces the annual returns and overall value of the endowment. We examine this possibility using two methods commonly employed in the economics and higher education research literatures: the difference-in-differences method, as well as another statistical method.

161 Richardson, supra note 110, at 69. “The fact that [socially responsible investing] comprises an exceptionally wide range of goals and methods further complicates [legal analysis] because each carries different legal consequences.” Id. These principles are unaffected even when a school delegates the fund management to an external manager. Id.

162 See Sarang, supra note 112, at 311. This duty and theory would likely not apply so strictly to college endowments, but it is nevertheless an interesting theory. Exerting shareholder pressure on companies is another action that endowments may take, as referenced previously. See id. at 318-23, 327-38 (describing various studies regarding the conflicting findings of divestment on portfolio performance). See also Gary, supra note 48; Sarang, supra note 112, at 327-28; and Cynthia E. Clark & Elise Perrault Crawford, Influencing Environmental Performance, 51 BUS. & SOC’y 148, 152 (2012) (discussing the proposition that shareholders have pressured firms to change their behavior in reference to social and political goals). Many investors tend to be biased against action which may have a short-term negative impact, even if there may be a positive long-term impact.

known as a synthetic control.\textsuperscript{164} Both methods identify institutions that committed to divestment and create artificial counterfactual institutions that approximate, as closely as practicable, a world in which divesting institutions did not publicly state their decision to divest from fossil fuels. We further explain both methods later in this Article. Using these methods, we find no discernible evidence of a reduction in endowment assets due to fossil fuel divestment and evidence of modestly positive returns to some university endowments based on their divestment decision.

\textit{A. Data and Methods}

Data for this study come from three primary sources. We rely heavily on the Integrated Postsecondary Education Data System (IPEDS) for a large proportion of our data concerning institutional characteristics. IPEDS includes results from a number of interrelated surveys conducted by the National Center for Education Statistics, an agency within the U.S. Department of Education. For our endowment data, we rely on proprietary data from the NACUBO-Commonfund Study of Endowments. The NACUBO-Commonfund includes data on institutional endowment values and, in some years, distributions of endowment funds. However, the NACUBO-Commonfund data carry the limitation that in some years, institutions will drop-in and drop-out of analysis, leaving gaps in their reporting. To deal with this issue, we also use proprietary data from Edmit, a college costs and choice advisory company, that includes endowment values for several non-profit institutions. Where the NACUBO-Commonfund data are incomplete, we replace missing values with data from Edmit. Edmit data account for 1,220 endowment values for institution-years across 134 institutions. The remaining endowment values come from the NACUBO-Commonfund Study of Endowments.

Using these datasets, we created a unique panel dataset in which the unit of analysis is an institution in a given year, for 697 institutions from the years 2007 to 2016. We chose these years due to the recency of the divestment phenomenon and the cleanliness of the data; prior years used different measures for endowment assets, enrollment, and other key institutional characteristics. We include only institutions for which we have full data on

enrollment and endowment values, choosing case-wise deletion to eliminate institutions without full endowment values through the 10-year period. The resulting dataset includes 6,970 individual observations.

Using a difference-in-differences method, we leverage institutional changes in policy concerning fossil fuel divestments. We compare university endowment returns of institutions that change their investment policy to those that do not. Fossil-fuel divestment serves as a treatment condition. We call those institutions that chose to divest “divestors.” Those that do not divest from fossil fuels serve as the control group. We call those who do not publicly divest from fossil fuels “investors.” Traditional models of the difference-in-differences equation would follow the “classic” model as follows,

\[ Y_{it} = \beta_1 F_{it} + \beta_2 D_{it} + \beta_3 (F \times D)_{it} + \gamma X_{it} + \epsilon_{it} \tag{1} \]

where \( Y \) represents the outcome variable (natural log of endowment assets) for institution \( i \) in year \( t \). \( D_{it} \) is a dichotomous indicator for whether the institution, \( i \), divested from fossil fuels in any year in the panel. The coefficient of this measure, \( \beta_2 \), will show any pre-divestment differences between treatment and control universities. \( F_{it} \) is a dichotomous indicator that equals “1” in years in which an institution divested from fossil fuels. Its coefficient, \( \beta_1 \), therefore captures the differences between the time period in which the institution divested from fossil fuels and when the institution was willing to invest its endowment in fossil fuel companies. The coefficient of interest is \( \beta_3 \) of the interaction represented by \((F \times D)_{it}\), where,

\[ \beta_3 = (Y_{\text{Divestor(before)}} - Y_{\text{Divestor(after)}}) - (Y_{\text{Investor(before)}} - Y_{\text{Investor(after)}}). \tag{2} \]

represents the difference in outcomes between the time period in which an institution did not state that it was divesting from fossil fuels and the time period after the institution says that it divested, controlling for already extant differences between investor and divestor institutions. \( X_{it} \) from model 2 represents a vector of covariates—number of students applied, admitted, and enrolled—included in the model to increase precision. \( \gamma \) represents the coefficients on each of the covariates in the vector. Lastly, \( \epsilon \) represents the error term.

However, this traditional method of modelling the difference-in-differences approach does not allow the slopes to vary year-by-year, nor does it allow differential policy changes. The traditional method restricts the effect over time for an institution to be linear and the effect over time to be the same for all institutions. Furthermore, because divestor institutions did not all choose the same year to divest, we must allow for multiple treatment take up years. For those reasons, we model the above difference-in-differences model as a two-way fixed effects model. We eliminate the need for a single
treatment adoption year and the need to make functional form decisions by creating the following non-parametric equation as shown here:

\[ Y_{it} = \beta_1 F_t + \beta_2 D_i + \beta_3 (F \times D)_{it} + \alpha A_i + \Omega Z_t + \gamma X_{it} + \epsilon_{it} \]  

(3)

In this model, we add vectors of indicator variables for institutions (i) and years (t) - \( A_i \) and \( Z_t \). We also add \( \alpha \) and \( \Omega \), which represent all of the individual coefficients associated with each institution and year indicator; the remaining variables from model 2 retain their meanings in model 4. Because the institution and year fixed effects account for the variation in \( F_t \) and \( D_i \), we eliminate the terms from the model and simplify the equation as follows:

\[ Y_{it} = \alpha A_i + \Omega Z_t + \beta_3 (F \times D)_{it} + \gamma X_{it} + \epsilon_{it} \]  

(4)

In this model, \((F \times D)_{it}\) serves as an indicator variable that is equal to “1” for divestor institutions in the years after they have announced divestment. \( \beta_3 \) is the coefficient of interest for that indicator. For example, Harvard University never divested from fossil fuels. As a fossil fuel investor, Harvard will maintain a value of “0” for this measure throughout the panel. Stanford University, however, divested from coal extraction in 2014. Stanford will have a value of “0” prior to 2014. Stanford receives a value of “1” in 2014 and all successive years. Functionally, \( \beta_3 (F \times D)_{it} \) in model 5 is equivalent to \( \beta_3 (F \times D)_{it} \) in models 4 and 2.

By specifying a difference-in-differences model that employs two-way fixed effects, we assume that divestment is systematic; that is, divestment may occur at institutions with large or small endowments. The fixed effects model allows covariance between the treatment indicator and \( A_i \) and \( Z_t \). Therefore, the year fixed effects allow us to control for differences across to all institutions over time, and the institution fixed effects allow us to control for institution-level differences that do not change over time.

Another specification of the two-way fixed effects model that we employ is as follows:

\[ Y_{it} = \alpha A_i + \beta_3 (F \times D)_{it} + \tau_1 + \tau_1^2 + \tau_1 (F \times D)_{it} + \tau_1^2 (F \times D)_{it} + \tau_1^3 (F \times D)_{it} + \gamma X_{it} + \epsilon_{it} \]  

(5)

Rather than include year fixed effects, we use a different specification of the year variables in this model. We include the term \( \tau \), which represents a continuous year variable, and the squared and cubed forms of that same variable. We then interact each of those year terms with the indicator of treatment in years of treatment. The remaining terms in model 5 retain their meanings from model 4. Given the necessarily small number of institutions that have divested from fossil fuels and short time period, we are concerned that traditional year fixed effects may soak up necessary variation and
overspecify the model. We attempt to offset those concerns with the continuous, polynomial year variables in model 5.

We also use multiple comparison groups to increase confidence in our models. First, we compare all institutions that divested fully from fossil fuels to all of the remaining institutions in our data set that did not. Next, we compare all institutions that partially divested their endowments from fossil fuels—for example, those schools that divested from coal or tar sands only—to those that did not partially divest. We then confine groups to public institutions and private institutions, resulting in three distinct comparison groups. We hope that using multiple comparison groups will ensure that any findings will be generalizable to multiple contexts.

In order to attain precise estimates, difference-in-differences models must meet the standard that divestors and fossil fuel investors would behave identically in the absence of fossil fuel divestment. We cannot practically meet that standard; it is impossible to ensure that Harvard and Stanford would make the exact same decisions over the period of time that Stanford divested from fossil fuels and Harvard did not. Therefore, scholars who use the difference-in-differences analytic strategy instead attempt to meet the parallel trends assumption. In short, we assume the divestor and fossil fuel investor groups would show parallel trends in investment behavior in the absence of treatment during the post-treatment time period. To ensure that assumption stands, we assess pre-treatment trends of the divestor group and compare those trends to those of the investor group. We also assume in difference-in-difference models with multiple treatment times that every institution—regardless of eventual treatment status—will act as a control for treated institutions at the time of treatment status if the institution has not yet adopted treatment. The institution-level difference-in-difference estimates for each divestor may vary wildly as a result of this aspect of the two-way fixed effects model. To account for the parallel trends assumption and heterogeneous effects as a result of differential time of divestment, we also perform synthetic control models for four major divesting institutions as a robustness check for our difference-in-differences models.

The synthetic control method uses all available comparison investor institutions and weights institutions to create a comparison group from a specified donor pool that follows the trends within the divestment group in the pre-divestment period allowing us to relax the parallel-trends assumption. For a given institution, the method creates a synthetic institution with outcomes that mirror the divesting institution on observable characteristics prior to divestment. The synthetic institution then serves as a viable control to the actual divestor institution, as it is statistically indistinguishable from the actual divestor prior to divestment. We chose four private institutions for our synthetic control institutions: Pitzer College, the University of Dayton,
Syracuse University, and Stanford University. Three of these institutions—Pitzer, Dayton, and Syracuse—have fully divested from fossil fuels, while Stanford has divested from coal only.

The basic purpose of the synthetic control method is to use a combination of units—in this case, a series of investor institutions—to provide a better comparison group for each divestor institution than guaranteed by difference-in-differences estimation. Thus, synthetic control takes a weighted average of investor institutions to serve as a synthetic control institution for each divestor institution.

The first step in creating a synthetic control is to choose a donor pool for the institutions. An adequate donor pool must include a sufficient number of institutions that match the divesting institutions on pre-divestment observable characteristics. The synthetic control method also assumes that the divesting institution does not experience post-divestment shocks that the donor pool would not experience, and that donor pool institutions do not experience any results of the treatment. Therefore, for these private institutions, we confined our donor pool to all private institutions. We see no reason that the entire pools of donor institutions would experience systematically different trends than the divesting institutions themselves.

Using those donor pool institutions, J, as a base, we assign weights (ω₁, ..., ωₖ)’ as a vector (J x 1) – to each institution, where,

$$\omega_j \geq 0 \text{ with } \sum_{j=1}^{J} \omega_j = 1 \quad (6)$$

The weights are chosen so that the synthetic divestor most closely resembles the actual divestor prior to divestment. The underlying procedure of selecting the weights is chosen to minimize

$$D(\omega) = (x_1 - X_0 \omega)' V (x_1 - X_0 \omega) \quad (7)$$

Where x₁ is a (K x 1) vector of predictor variables including pre-divestment lagged outcome variables and other covariates for a given divestor, and X₀ is a (K x J) matrix containing the values of the same predictor variables for the J possible control institutions, and V is a diagonal matrix with positive components that reflects the importance of the different outcome predictors.

From these weights, we construct the counterfactual synthetic divestor institution. Assume y₁ is a (T x 1) vector including the values of the outcome variable for T years in the divestor institution, and that y₀ is a (T x J) vector the values of the same variables for T years in the donor pool institutions; we can construct the counterfactual outcome variable pattern (the log-transformed endowment variable in the absence of divestment) as y₁* = y₀ * ω*. By plotting the counterfactual outcome pattern and visually comparing it
to the divestor institution, we can examine the potential impact of divestment on institutional endowment outcomes.

**B. Methodological Limitations**

Both the difference-in-differences method and the synthetic control method require a theoretically sound control group to compare against the treatment group (in difference-in-differences) or from which to select a donor pool (in synthetic control). Furthermore, it is possible that the variables used to add to precision of the difference-in-differences method estimates in vector $\gamma X_{it}$ in equation 4 or the predictor variables selected to create the weights in the synthetic control method in equation 6 could bias the results of either estimation. There are a series of robustness checks that allow researchers to account for these issues. We do not undertake them for this manuscript; given repeated null to moderately significant results in our findings section and our reticence to make strong policy recommendations from those results, we argue that further study with more comprehensive data would provide a greater understanding of the robustness of the null results than running those checks on our available data.

Our data themselves have a number of limitations. First, the data are not fully comprehensive. In a number of years, institutions did not report endowment returns to the NACUBO-Commonfund study. While we supplement these data with a proprietary dataset of non-profit institutions from Edmit, we believe the choice not to present those data is an intentional one; therefore, data are not missing at random, especially for public institutions. Rather than impute those data based on previous years, we confine to only those institutions that provide data throughout the time period. This eliminates over a hundred institutions from our dataset. While the total number of institutions in our study still allows us sufficient power to detect a result, it may be unintentionally biased in the outcomes presented. It is possible that the institutions sharing data with the NACUBO-Commonfund Study systematically perform better or worse than those institutions that did not share the data.

Another major data limitation is our identification of “divestment.” We collected indicators for divestment based on public pronouncements of divestment from fossil fuels by institutions themselves. It is possible that seemingly divestor institutions are actually invested in fossil fuels and institutions that have not stated publicly that they have divested from fossil fuels have actually done so quietly. We are making the assumption that institutions that say they have divested have remained faithful to that commitment.

Lastly, we cannot isolate the direct amount of an institution’s endowment
associated with investment returns. It is possible any investment gains we could see may be wholly due to charitable giving or other revenue sources. Furthermore, endowment managers most often focus on long-term gains. Our estimates generally apply to the result of divestment after a short-term time period, for example between 2015 and 2016. It is entirely possible that returns in successive years would provide long-term trend that differs from short-term gains and losses. In spite of these clear limitations, we believe this analysis is the first and—to this point—best attempt at determining the impact of fossil fuel investment on university endowments. It should be viewed as a “first cut” for future researchers to improve upon.

C. Findings

Before we began our analysis, we noticed the vast difference in endowment sizes in our dataset, illustrated in Figure 1. The tremendous differences between endowment sizes lead us to log-transform our dependent variable of interest, endowment values.

Figure 1: Difference in Distribution of Key Endowment Outcomes

For example, in 2011 Augustana College had an endowment valued just over $110,000, while Harvard University’s endowment was valued over $31 billion. In fact, just under 85 percent of the sample was comprised of institutions with endowment values of less than $650 million in any given
year. Additionally, while the mean value of the remaining 15 percent of institutions is $3 billion, the mean of the endowment values for all institutions is around $520 million, with a standard deviation is $2.2 billion. Given this distribution, we transformed endowment values by their natural log, limiting error in our estimates related to a non-normally distributed sample of endowment values.

After controlling for this error with the log-transformation of endowment values, we began our analysis. Table 1 presents the difference-in-differences estimates of fossil fuel divestment on the natural log of endowment assets, the latter of which can be interpreted as a percent change in overall assets. Models 1 through 3 present the results for the comparison group that includes all 697 institutions in our sample. Models 4 through 6 represent the public institutions, and models 7 through 9 show the results of the private institution comparison group. The first, fourth, and seventh models show the results of a naïve two-way fixed effects difference-in-differences model without a vector of controls. In short, they represent equation 4 the previous section without the $\gamma X_{it}$ term. The second, fifth, and eighth models add that term. The final model in each comparison group reflects the time-trends model as represented by equation 5. We present clustered standard errors in parentheses, adjusted R-squared values in angle brackets, and within R-squared values in brace. The within R-squared values attempt to determine the extent to which the treatment interaction term contributes to the overall explanatory power of the model.

When looking across all institutions, we find null results across all three model specifications and all three comparison groups in the log-transformed endowment outcome. This suggests no discernable impact of fossil fuel divestment the natural log of endowment assets. The fact that we have complete data for far fewer divestor institutions than investor institutions may be leading to null result that these estimates provide. Unlike the endowment level outcomes, the lack of significant results is robust to multiple comparison groups – all institutions, private institution, and public institutions – and all treatment conditions – any divestment, partial divestment, or full divestment. The most striking support for a lack of any relationship between divestment of any kind and endowment values is not the lack of statistical significance, but the consistent null within R-squared values encapsulated by braces. Those values represent the proportion of variation in the outcome variable accounted for by the treatment indicator alone. In all models, the value is less than 0.02. This means that, when accounting for several time-varying and invariant institutional characteristics, the choice to divest from fossil fuels in a partial or full manner accounts for little to no variation in the percent change in an endowment from one year to the next.
<table>
<thead>
<tr>
<th></th>
<th>All Institutions (N= 697)</th>
<th>Public Institutions (N=152)</th>
<th>Private Institutions (N=545)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Endowment Value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any Divestment</td>
<td>-0.0237</td>
<td>-0.0560</td>
<td>-0.0639</td>
</tr>
<tr>
<td></td>
<td>(0.0452)</td>
<td>(0.0364)</td>
<td>(0.0379)</td>
</tr>
<tr>
<td></td>
<td>&lt;0.98&gt;</td>
<td>&lt;0.98&gt;</td>
<td>&lt;0.98&gt;</td>
</tr>
<tr>
<td></td>
<td>{0.00}</td>
<td>{0.01}</td>
<td>{0.01}</td>
</tr>
<tr>
<td>Full Divestment</td>
<td>-0.0806</td>
<td>-0.0942</td>
<td>-0.0921</td>
</tr>
<tr>
<td></td>
<td>(0.0621)</td>
<td>(0.0553)</td>
<td>(0.0519)</td>
</tr>
<tr>
<td></td>
<td>&lt;0.98&gt;</td>
<td>&lt;0.98&gt;</td>
<td>&lt;0.98&gt;</td>
</tr>
<tr>
<td></td>
<td>{0.00}</td>
<td>{0.01}</td>
<td>{0.01}</td>
</tr>
<tr>
<td>Partial Divestment</td>
<td>0.0031</td>
<td>-0.0364</td>
<td>-0.0499</td>
</tr>
<tr>
<td></td>
<td>(0.0569)</td>
<td>(0.0438)</td>
<td>(0.0492)</td>
</tr>
<tr>
<td></td>
<td>&lt;0.98&gt;</td>
<td>&lt;0.98&gt;</td>
<td>&lt;0.98&gt;</td>
</tr>
<tr>
<td></td>
<td>{0.00}</td>
<td>{0.01}</td>
<td>{0.01}</td>
</tr>
</tbody>
</table>

* p<0.05, ** p<0.01, *** p<0.001

Notes: Clustered standard errors in parentheses. Adjusted R-Squared value in angle brackets. Within R-Squared in Braces. Public institution treatment group excludes the University of Washington and the University of Maine System (partial divestment for both in 2015) and Union Theological Seminary (full divestment in 2014) due to incomplete endowment and enrollment data. The total number of divestment institutions in any given year is 17. Full divestment treatment institutions include Hampshire College (divested in 2011), Pitzer College (2014), the University of Dayton (2014), Syracuse University (2015), and California State – Chico (2014). Partial divestment institutions include San Francisco State University (2013), Humboldt State University (2013), California Institute of the Arts (2014), Stanford University (2014), and all University of California system institutions (2015). Partial divestment institutions removed from the control group for full divestment institutions and vice versa. The University of California System does not report institution-specific endowment values; therefore, UC institution endowments derived by multiplying the total UC System endowment by the proportion of the overall UC student body at each institution.
Given the small number of institutions that have divested from fossil fuels in our sample, the synthetic control method may provide a much better understanding of the impact of fossil fuel divestment on institutional endowments. While our difference-in-differences analysis yielded null results in the aggregate, our synthetic control analysis can provide insight into individual institutional contexts. We ran the synthetic control process using only NACUBO data. Given that all four institutions are NACUBO members that reported endowment values, we wanted to condition our sample on institutions that made the same choice. By doing so, we account for one of the limitations we mentioned earlier in this paper – that NACUBO reporters and non-reporters may have differential investing or endowment return patterns.

Figure 2 represents the synthetic control results for Pitzer College, which is the only institution in our synthetic control analysis that demonstrates possibly negative effects of divestment. Since divestment, Pitzer College’s endowment declined by more than $10 Million. Meanwhile, Synthetic Pitzer’s endowment value increased in the post-divestment time period. This suggests a negative impact associated with divestment for a school with a relatively small endowment, like Pitzer. However, the magnitude of that negative impact may be negligible, given that the trend lines for Pitzer and Synthetic Pitzer are farthest apart at the time of divestment, differing by as much as $5 million—a non-trivial amount, given Pitzer’s endowment size.

**Figure 2: Synthetic Control Results – Pitzer College**
Figures 3 and 4 represent the synthetic control results for the University of Dayton and Syracuse University, respectively. Both of the synthetic control trend graphs tell the same story. In both cases, the synthetic institution closely matches the actual institution’s outcome in the pre-treatment time period. However, in neither case do we see differences in trends after divestment. Both synthetic institutions follow their actual institutions post-divestment in a manner consistent with the actual outcome, suggesting no discernable negative impact of divestment on these institutions’ endowment values. In fact, given that the synthetic institutions’ endowment values fall below the actual institutions’ endowment values, we interpret these graphs to indicate that there may even be a modestly positive impact of divestment for institutions with mid-sized and large endowments, like Dayton and Syracuse, respectively.

Figure 3: Synthetic Control Results – University of Dayton

[Graph showing synthetic and actual endowment values for the University of Dayton, with a downward trend before divestment and a flat trend after divestment.]
Figure 5 shows the synthetic control results for Stanford University. Like Figures 3 and 4, Figure 5 provides no discernible evidence that partial divestment has hampered Stanford’s endowment value and may indeed suggest that divestment substantially positively impacted Stanford’s endowment value. This would seem to suggest that for the most elite endowments, divestment is not the risk to endowment value that it is purported to be. However, we note two points of caution with this interpretation. First, the distance between real and synthetic Stanford is quite large—in real dollars, given the size of Stanford’s endowment value—in some years. That said, Synthetic Stanford follows the overall trend of actual Stanford in all years but 2012; moreover, the trend lines never diverge by more than $0.5 billion at any point in the pre-treatment trend line, demonstrating a relatively good synthetic match. However, because the Synthetic Stanford diverges from the actual Stanford a year post-divestment, we also caution against making causal claims from this trend graph about the magnitude of the positive impact of divestment observed, which is fairly substantial—over $1.25 billion dollars.
In summary, the findings from our synthetic control analysis suggest that there are limited, if any, negative effects of divestment on endowment values. To wit, only the synthetic control trend graph of Pitzer College could support the notion that divestment marginally hurts a smaller college endowment. However, the synthetic controls for Syracuse University and the University of Dayton offer a much clearer picture and would suggest that divestment has a negligible if not a marginally positive effect on endowment values for mid-to large-sized endowments. Finally, with the caveats to the synthetic control trend graph for Stanford University, it is hard to make causal claims about the overwhelmingly positive magnitude of divestment on Stanford’s endowment value. That said, it is clear that there is no discernibly negative effect of partial divestment on Stanford’s endowment, suggesting that divestment does not necessarily negatively impact very large university endowments either. In fact, divestment appears to have benefitted Stanford’s endowment value when comparing it to its synthetic counterfactual self. However, when taken together with our difference-in-difference estimates, it is difficult to paint clear conclusions about the economic effects of divestment for all universities with such a broad brush. On one hand, with the possible exception of Pitzer, divestment does not appear to draw down endowment values in any of the institutions for which we conducted the synthetic control analysis. On the other hand, divestment does not conclusively yield guaranteed positive gains to endowment values either.
CONCLUSION

Universities have competing responsibilities in the management of their endowments. First, they must attempt to earn the greatest possible return, thereby enabling them to pursue their trifold mission of educating the next generation of leaders, pushing forward the frontiers of science through cutting edge research, and engaging in civic leadership in their communities. Second, they must invest intentionally in a manner that is consistent with their values as well as fiduciary law. Given the clear signals from researchers at universities throughout the world, climate change presents an existential threat in opposition to most universities’ values. Yet, a decision to divest an endowment from fossil fuels is clouded by political controversy and is perhaps contrary to strict constructions of the duties of loyalty, prudence, and impartiality required of fiduciaries.

How then should a university respond to these competing responsibilities? Our research found no discernable, consistent, average impact of divestment on endowment assets and no conclusive evidence of negative effects to private university endowments more generally. However, among the institutions we selected for synthetic control analysis, we find that divestment had limited but positive effect on the value of mid-sized, large, and very large endowments. While it is possible that divestment could still negatively impact endowment assets in ways undetectable to our methods, we find no credible evidence to suggest that divestment causes poor market returns. As such, endowment fiduciaries at institutions that have divested should rest easy with their decision to divest, given these findings. And endowment fiduciaries at institutions that are on the fence about divestment should consider our findings in light of their duties to make investment decisions that inure to the growth of the endowment value—even if the regime governing institutional fund management may not yet be explicitly permissive of this investment decision.

If there are no necessary costs to financial decisions like divestment, then fiduciaries should integrate non-financial factors into their investment decision calculus. A university could reasonably consider its reputation and institutional concerns for social responsibility as encompassed in making a decision consistent with the university’s best interest. Moreover, because the effect of divestment negligibly—if at all—impacts endowment values for mid-sized, large, and very large endowments, our results may indeed provide evidence that ESG factors could further the charitable purposes for university endowments were created without sacrificing their value. Ultimately, in light of the financial benefits of ESG integration, UPMIFA should be reformed to permit fiduciaries to take ESG factors into account, but until UPMIFA

165 See Richardson, supra note 110, at 70-71.
directly contemplates ESG factors in institutional investment decision-making, at the very least, ethical and social concerns might be used as a “tie-breaker” when endowment fund managers are faced with making a decision between two options—one involving continued investment in fossil fuels and the other in renewable energies or divestment from fossil fuels—projecting similar financial returns.166 We hope that this study both grounds and advances the debate about endowment fiduciaries’ duties with empirical evidence and a reasoned discussion of the indiscernible costs and possible benefits of fossil-fuel divestment.

* * *

166 Id. at 71. For example, if an instrument establishing a university endowment stated—explicitly or implicitly—that the trust’s purpose was to serve ethical principles, then this might provide a clean legal pathway for the university to divest. See generally, id.; Gary, supra note 48.