

Sacrifice Nothing

A review of empirical research on financial performance of sustainable and impact investments



- Despite evidence, a myth persists that sustainable and impact investment strategies financially underperform conventional strategies. This report is intended to address that myth, clarify the purpose and use of environmental, social, and governance (ESG) analysis, and highlight key sustainable investment approaches and issues.
- ESG analysis seeks to identify and evaluate material environmental and social considerations that may influence long-term investment performance. "Materiality" implies that an ESG factor is reasonably likely to impact the financial condition or operating performance of a company. The analysis looks to see whether the relevant governance structures within asset managers, strategies, and underlying investments are equipped and motivated to govern effectively. The evidence shows that ESG analysis enhances the predictive insight provided by fundamental financial analysis.
- Sampling from more than 1,200 studies in the past two decades, including 80 reports published in the past three years alone, our assessment supports the conclusion that managers deploying ESG analysis to construct portfolios can achieve competitive returns while meeting the requirements of fiduciary duty. Some would argue it is an essential element of fiduciary duty.
- In this report, we address myths that have persisted despite the academic studies. We also seek to describe the consensus view among the studies identified in our bibliography. We lay out the rationale for ESG integration by investment analysts and by corporations in their respective business practices, and where possible we provide insight into the relevance of specific research for investment decisions.
- Lastly, we highlight the discipline used at Pathstone to evaluate investment managers who integrate ESG considerations into their research process. It is a critical endeavor to select strategies where the skill of the manager can offset the potential risks to portfolio construction when applying an ESG lens.

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Introduction

Many investors assume that sustainable and impact investing, by definition, entails the acceptance of concessionary returns. They may also be unfamiliar with the distinction between such investment strategies and the discipline of environmental, social, and governance (ESG) analysis. The latter is an analytical framework that, when properly used, can enhance and complement fundamental research.

In this report, through an analysis of the broad body of empirical research in the field, we seek to understand whether or not concerns about financial performance are warranted. The conclusion, based upon the preponderance of research, is clear: Investors need not assume that sustainable investing generates lagging returns. In fact, it appears that investors need "Sacrifice Nothing" when utilizing skilled managers to implement these strategies.

A Fresh Look at the Evidence

The reach and sophistication of sustainable investing strategies has grown in recent years, along with broader awareness among investors. Sustainable investing strategies span asset classes including equities, fixed income, and alternatives. Most major investment firms now offer strategies branded as "sustainable" or "impact."

Well-managed sustainable investing strategies integrate the discipline of environmental, social, and governance (ESG) analysis into their research process. They do so because they believe it helps them enhance their fundamental research to deliver superior long-term performance, as we discuss below.

Nonetheless, the perception persists that these strategies entail sub-market, or "concessionary," returns. Skepticism regarding the motives and efficacy of ESG analysis and sustainable investing persists as well. In light of these concerns, we undertook a fresh literature review to revisit the question of whether applying an ESG lens is consistent with fiduciary duty. This report extends research we conducted three years ago, in our original <u>Sacrifice Nothing</u> report, reviewing an extensive body of research on the linkages between ESG discipline and investment performance. Since that time, more than 80 new research studies have been released.

Included in our report are a number of articles that represent the most negative view on ESG analysis. Of all of the reports that we surveyed, these are the least constructive about ESG analysis. That said, none of these reports asserted that ESG analysis was

value destroying. With regard to "Where ESG Fails," we agree that it could be extremely hard to generate alpha just through a screening strategy.¹ That said, it can be done via a skilled manager.

With regards to the "Inconvenient Truth About ESG Investing," ESG ratings, which often vary to a great degree from one data provider to another, are themselves not truly indicative of what is referred to as ESG performance.² Skilled portfolio managers look to the underlaying data to support their investment analysis. The various data providers each have their own "secret sauce," and their methodology may be quite different from one that is driven by a focus on materiality. Given the data challenges due to the current lack of standards for corporate disclosure, we would argue that the basis for this study is problematic.

A report by Flugum and Souther states that some managers seemingly hide behind their ESG analysis to explain near-term poor earnings results.³ We know that good ESG analysis reflects both short-term and long-term drivers of stock performance. Lastly, "ESG Isn't Alpha" highlights the critical nature of analyzing the S in ESG. ⁴ The S is currently one of the most difficult elements to analyze as there is even less data available in the marketplace.

High-Level Conclusions

Researchers have studied the diverse approaches that managers now use to incorporate ESG factors into their investment research and strategies. The initial strategies of Socially Responsible Investors were implemented through negative screening (e.g., eliminating tobacco, alcohol, fossil fuels). Today, investment managers employ varied approaches, including integration of ESG factors into fundamental investment analysis and active ownership (engagement with management teams).

Our general findings are as follows:

- Sustainable investing is associated with improved performance or reduced risk at the firm or security level. Financial performance of portfolios deploying ESG analysis depends on how the portfolio is constructed and leads us to conclude that using an "ESG lens" can strengthen investment strategies — when employed by a skilled manager.
- Active ownership, especially in public equities, has had a tangible impact on corporate policy and practice, and may improve investment returns.



- Sustainable investing in the equity and fixed income asset classes is fully consistent with fiduciary duty, and investors in these asset classes can and should expect to achieve competitive returns relative to conventional investment vehicles.
- Research within some segments of the capital markets, such as public equities and real estate, is quite robust. For other segments, such as private equity, research is still in the early phases. This makes drawing clear conclusions on performance challenging for certain alternative investments.

Incorporating ESG analysis into an investment research process appears to deliver concrete benefits and returns. It has been shown to lead to higher stock informativeness and resiliency¹. Further, companies that manage their business well along ESG dimensions have been shown to protect company value, mitigate risks, expand opportunities, and increase corporate innovation, resilience, and growth.

Why Do Managers Use ESG Analysis?

Many managers seek to create strategies which are designed to be "Sustainable", "Impact", "Socially Responsible", Double Bottom Line", "Values-Aligned", "Triple Bottom-Line", etc. Regardless of terminology, managers who use ESG analysis do so because they find it offers material insights that support relevant investment choices.

Given the complexity of the world in which we live, creating a portfolio that meets the intended impact and sustainability focus of a strategy leads these managers to fully consider all material factors that can affect corporate performance. Competitive investment performance requires a deep understanding of portfolio construction including sector weighting and factor exposures. ESG analysis further enhances the quality of information used in decision-making by providing a more holistic picture of whether a fund is managing its risk exposures and opportunities in a "sustainable" manner.

Strategies that employ ESG analysis seek to determine:

1) Whether a company uses natural resources effectively and disposes of its waste responsibly (Environment);

2) Whether a company treats its employees well, offers transparency in its supply chain, and interacts appropriately with the communities within which it operates (Social); and,

3) Whether a company operates with integrity, transparency, and consistency (Governance). For instance, does it consider conflicts of interest in its business model, its board committee structure, compensation practices, and capital structure?

Managers offering sustainable strategies argue that they can deliver better results over the long run through their securities selection. Many assert that they can focus on opportunities presented by emerging trends and themes across ESG dimensions, such as the transition to a lower-carbon economy and resource efficiency, the decision-making benefits of diversity in senior management, and the resilience and goodwill generated by fair treatment of all stakeholders, including owners, employees, customers, regulators, and the environment.

Pathstone Investment Research Perspective

In our own analysis of managers' capabilities, Pathstone's Investment Research team looks at their process for integrating ESG into portfolios, who is responsible for the integration of ESG information — the portfolio manager, fundamental analyst, a dedicated ESG analyst, or another approach — the data sources used, the manager's thesis of how ESG adds value to the portfolio and over what time horizon it matters.

Even among funds not specifically marketed as such, managers often apply an analytical framework based on ESG metrics to capture material information on opportunities and risks of prospective investments. "Material" refers to useful information that can and may impact the future performance of companies. Several fund managers have constructed teams dedicated to ESG research alone. Several studies show that active ESG portfolios significantly outperform the US MSCI Index. When employed by a skilled manager, ESG analysis reveals risks that may have previously been hidden; thus proving that utilizing an ESG lens is well within the fiduciary duty of a manager.

¹ Informativeness a measure of the level to which stocks' prices reflect available information, with higher informativeness considered to be reflecting transparency and efficiency. Resiliency refers to a

stock's ability to withstand market volatility and economic headwinds.



Do Sustainable Strategies Underperform?

There are some researchers who purport that ESG analysis and integration into an investment strategy negatively impacts financial performance. These critics point to a lack of real-world evidence on the ability of Socially Responsible (SR) screens to deliver alpha.

Marie Brière, head of the Investor Research Center at Amundy Paris, Jonathan Peillex, assistant professor at Leonard de Vinci Research Center, and Loredana Ureche-Rangau, professor of finance at the University of Picardie Jules Verne, published an article in the CFA Institute's journal, in 2018, on the effect of Social Responsibility (SR) screens in a mutual fund's investment strategy. They concluded that SR screening resulted in under- or overweighting of countries, industries, or strategies and styles that leads to indirect asset allocation choices that should be factored explicitly into the analysis of fund performance.⁵

On face value, Michael E. Porter, George Serafeim, and Mark Kramer released an opinion piece in Institutional Investor that seems to counter the perspective above. However, financial materiality and nuance are instrumental in the delivery of alpha when it comes to integrating ESG factors in investment strategy. The Serafeim opinion piece shifts the discussion away from the negative stance on SR screening that underpins the original article's main point. Rather, Serafeim places emphasis on the importance of focusing on metrics that are *financially material and specific to the relevant industry*. Brière et. al, on the other hand, makes it clear that SR stock market indexes have only slightly lower returns than conventional indexes, and only in the short term.⁶ This difference does not detract from the author's main point that a more ESG-influenced analytical lens should be applied to funds when determining alpha.

Moreover, ESG-influenced investment strategies provide investors with downside protection, especially during a social and/or economic crisis. NYU Stern's Center for Sustainable business conducted a meta-study on the relationship between ESG and financial performance between 2015 and 2020. During the 2008 financial crisis, from 2007 to 2009, German green mutual funds actually provided better risk-adjusted returns than conventional funds. Additionally, after the 2008 financial crash, FTSE4Good, an ESG stock market index, not only performed better but also recovered more quickly. In another more recent example, at the beginning of the pandemic, Q1 of 2020, 45% of ESG-focused funds outperformed their closest conventional counterparts.⁷ Additionally, the meta-study discovered an evidence-backed positive correlation between ESG and corporate financial performance. After analyzing ESG exposures through a factor lens it is apparent that ESG-focused funds have large factor exposures.⁸ Those ESG funds with high environmental scores are especially rewarded.⁹

Where Does Active Ownership Fit In?

Active ownership, also known as shareholder engagement, is the use of rights and ownership to influence corporate behavior.¹⁰ Generally, active ownership is an effective mechanism and investment strategy to hold companies accountable for their policies and actions as a way to mitigate risks for customers, employees, and shareholders. This is especially true for companies with executive leadership and boards resistant to such change.

Active ownership has been consistently found to lead to corporate policy changes in line with shareholder values. For example, during the 2022 proxy season, which is when most companies hold annual general meetings, sustainable investors in Jack in the Box, Costco, Disney, Apple, and Microsoft pushed for change related to environmental and social standards. At Costco, 80% of shareholders voted against management in favor of Costco disclosing short-, medium-, and long-term plans for reducing emissions across the entire value chain.¹¹

While the reports found in our literature review related to active ownership date back a few years, the trend of significantly increasing active ownership has been continuing. One of these reports points to outperformance in a long-term context, citing performance prior to engagement and then five years following shareholder engagement.¹² Research highlighted in this report seems to suggest that it is the largest shareholders with the strongest dissident voices have the strongest positive effect on the performance.

Resource Depletion: Risk or Opportunity?

As noted above, asset managers may use ESG analysis to identify both risks and opportunities presented by emerging trends and themes across ESG dimensions. The energy sector offers a clear example given the challenges of transitioning to clean energy while needing to sustain current energy supplies.

The recent Russian incursion in Ukraine is a stark reminder that investors need to select funds and managers that understand the need to push for clean energy. Currently, oil and gas make up more than 50% of the world's total energy supply.¹³ In this past year, the US placed a sanction against all Russian oil imports.¹⁴



The European Union followed suit by announcing a ban on all sea-imported Russian oil by the end of 2022.¹⁵ According to a recent Accenture Energy sector research report, oil prices could rise to \$150-\$200 per barrel and over the long term close the supply/demand gap.¹⁶

In 2019, Park and Monk shared research proving that going long on carbon-efficient firms, while also shorting carbon-inefficient firms, could potentially earn abnormal returns of 3.5%-5.4%.¹⁷

Continuing to invest in sectors with proven detrimental impacts, coupled with finite resources, may result in short-term gains. Notably, however, despite modestly lagging over the past one and three years ending September 30, 2022, the MSCI World ex Fossil Fuels Index performance in the US outperformed the MSCI World Index over the five- and ten-year periods, as well as since the inception of the index on November 30, 2010. The ex-Fossil Fuels index did so with slightly less volatility as measured by standard deviation.

Do ESG Ratings Matter?

Another myth that has persisted despite several studies is that the large number of ESG ratings diminishes the usefulness of ESG factors and reporting at the fund level.

To date, there are 140 different ESG data providers, each with their own assessment style.¹⁸ Some of the most notable are MSCI, Sustainalytics (recently acquired by Morningstar), RobecoSAM (acquired by S&P in 2020), Eikon Refinitiv (recently acquired by the London Stock Exchange), RepRisk, and the CDP Global Environmental Information Research Center.¹⁹ According to the Sloan School of Management at MIT, there is a correlation of just 0.61 amongst the six most prominent rating agencies,²⁰ which means their methodologies yield highly inconsistent outcomes.

However, other evidence suggests that this seemingly overwhelming number of ESG ratings does not detract from the importance of ESG research and its potential to help deliver alpha for investors. In 2021, the CFA Institute released an article which revealed a positive relationship between ESG rating differences and stock returns, especially regarding environmental ratings. "Higher levels of ESG rating disagreement creates an uncertainty premium which leads to the positive relationship." We believe that this is a reasonable interpretation because those fund managers that are truly skilled are not just looking at ESG ratings, they are looking at the underlying data in order to gain further insight. They are likely to be using their own analytical methodologies in determining investment opportunities. ESG rating disagreement has little power in explaining standard risk measures,²¹ once again supporting the validity and efficacy of ESG-backed investment strategies. The argument at ratings discrepancies cloud the usefulness of ESG analysis is according to the study, is actually the opposite.

Pathstone's Approach to ESG Scoring

Pathstone uses a proprietary ESG scoring framework for our investment manager research.

We review the broad universe of company scores and adjust for bias that systematically rewards or punishes companies based upon either size or region. We analyze the E, S and G pillars separately to review the relationships among these variables and adjust for bias accordingly. Once we have adjusted for controversies, capitalization bias and regional bias, Pathstone combines the proprietary E, S, and G rankings, with a modest emphasis on the Environment.

The final step of the process involves surveying investment management firms for intentionality. This appropriately compensates firms that are actively engaged in thoughtful shareholder engagement with underlying portfolio holdings and are voting proxies in a responsible and thoughtful manner. The adjustment also helps separate those that "just happen to have" portfolios with exceptional ESG scores from those that have arrived at their exceptional scores through a deliberate process.

After assembling Pathstone ESG scores for each investment manager's strategy, we provide a modest boost to strategies that are managed by firms that score very well across the survey metrics. The end result of companies' Pathstone ESG scores are on a 1 to 200 scale.

The resulting score is available to clients, along with comparisons to benchmarks. In addition, manager scores are rolled up to the asset class and portfolio level, with comparisons to appropriate blended benchmarks.

Does Negative Screening Hurt Returns?

"Negative screens" are policies that exclude certain companies from portfolios according to defined criteria, usually based upon the company's product line. Examples of negative screens include tobacco free or fossil fuel free. Negative screens have been perceived by some investors as potentially limiting returns or increasing volatility by narrowing the "opportunity set," or investable universe.

Only one study supports the claim that divesting from specific industries negatively impacts financial returns. According to David Blitz of Robeco Quantitative Investments, excluding fossil fuel stocks can create portfolio vulnerability in the short and medium term.²²



Controlled research studies aside, there is an argument that capital diverted from investments ranked low in terms of ESG factors does not help transform problematic industries in the long run. David Blitz and Laurens Swinkels of Robeco Ouantitative Investments use the example of the tobacco industry to drive this point home. By funneling capital away from this "sin stock" category, investors give up the opportunity to push for ESG policies as stakeholders. Additionally, Blitz and Swinkels highlight that when an investor buys tobacco shares, they are not financing the tobacco business, "but merely exchanging ownership of an existing financial instrument with another investor." Our firm's interactions with practitioners in the field, who are actively involved in shareholder engagement, caution that one can waste substantial resources and time trying to convince a tobacco company or an oil company to exit their core business.

Most research studies in this report find that sector exclusion does not necessarily negatively affect long-term returns. In fact, investors may well reduce risk and protect their long-term returns by excluding a sin stock. Jeremy Grantham, a well-respected leader in the ESG space, carried out a research study demonstrating that divesting does not have a dramatic impact. Grantham and his colleagues divested from a group of fossil fuel companies listed in the Standard and Poor's 500. This resulted in only a 50-basis point difference.²³ His research has shown that it does not matter which sector is excluded, since there is a minimal impact on the long-term returns of the remaining diversified portfolio from such an exclusion.

Arguments against exclusion also ignore two important truths: 1) it is impossible to invest in the entire universe of public and private investments across the global capital markets, the socalled "unconstrained" opportunity set; and 2) every investment manager, even index fund managers, are narrowing their universe of securities down to a manageable level, excluding securities that fall outside their parameters

Does ESG Integration Distract from Fundamental Analysis?

ESG integration is the use of environmental, social and governance information to strengthen investment analysis. Integration assesses corporate operating policies on ESG factors because they believe that this information provides "material," or useful, information about the potential future performance of companies.

At the portfolio level, the consensus has shifted from mixed to being strongly in favor of the positive impact of ESG information on portfolio returns. Among the studies we reviewed, there is a strong consensus that applying an ESG lens leads to greater stock "informativeness," a measure of the level to which stocks' prices reflect available information, with higher informativeness considered to be reflecting transparency and efficiency. Utilizing an ESG lens has also been shown to increase stock resiliency. Clarissa Hauptmann of Oxford University, Jody Grewal or the University of Toronto, and George Serafeim of the Harvard Business School conducted a research study that proved the disclosure of SASB-identified sustainability information is associated with greater stock price informativeness. In fact, a large decrease in stock informativeness was found to be associated with a decreased SASB-identified sustainability disclosure.²⁴ It is important to note that while material ESG information is strongly associated with greater stock resiliency, this distinction is not specific to SASB-identified information alone.

Funds that integrated ESG and sustainability also fared better during the Covid-19 pandemic. In 2020, according to Morgan Stanley's Sustainable Reality Update, U.S. sustainable equity funds outperformed traditional funds by 4.3 percentage points.²⁵ Moreover, the median downside deviation of US sustainable equity funds was 3.1 percentage points less than traditional peer funds.²⁶ Looking at longer time horizons ending September 30, 2022, the MSCI World ESG Leaders Index performance in US Dollars modestly outpaced the MSCI World Index over the fiveand ten-year periods, as well as since the inception of the index on September 28, 2007. The ESG Leaders index did so with slightly less volatility as measured by standard deviation. Slightly higher return, with slightly less risk. These results suggest that integrating an ESG lens allows fund managers to be better able to navigate financial crises like the Covid-19 pandemic.

At the company level, there is an academic consensus that corporate social responsibility (CSR) and the integration of ESG in corporate strategy lead to higher financial returns and boost resiliency in stock performance. A reason for this positive relationship is the importance placed on material CSR and ESG issues. The incorporation of ESG measures may protect company value and provide risk mitigation.

Researchers have not had to expend a lot of resources on creating a scenario testing stock resiliency during a crisis, as we have just lived through one: the Covid-19 pandemic. David C. Broadstock, Kalok Chan, Louis T.W. Cheng, and Xiaowei Wang examined the



role of ESG performance at the beginning of the pandemic. Their research revealed the importance of ESG performance strengthened during the crisis. Firms with higher environmental performance were better able to weather the negative business impacts of Covid-19.²⁷ Funds that integrated ESG and sustainability more generally also fared better.

The integration of ESG measures can provide protection from financial fallout associated with U.S. class action lawsuits. Crises such as the 2015 "Dieselgate" at VW could arguably have been averted if the company had acted earlier to check unethical behavior and had developed stronger standards of corporate environmental, sustainability, and social responsibility. At the time, diesel vehicles accounted for 3% of total auto sales in the United States and up to 72% of total medium and heavy truck sales.²⁸ As recompense, VW pledged to U.S. authorities to buy back up to 475,000 polluting diesel cars, an endeavor which cost the company \$15.3 billion and caused its stock market value to decline by \notin 25 billion in just two days.²⁹

Fauser and Utz conducted research that indicated that even one standard deviation improvement in ESG controversies reduces litigation risk from 3.1% to 2.4%.³⁰ This reduction is because corporate social performance (CSP) has risk-reducing characteristics. Beyond protecting from litigation risk, Fauser and Utz's results show that portfolios comprised of stocks with low predicted litigation risk show significantly higher alpha than portfolios of stock with high exposure to litigation. Furthermore, the average sample firm with a low ESG score that faced a class-action lawsuit suffered an excess loss in market value of about \$1.14 billion, compared to firms with high ESG scores who also faced class-action lawsuits.³¹

As industries face mounting costs related to increasingly finite raw materials, ESG contributes toward reducing operating expenses. The integration of Social-focused metrics empowers a company to better navigate a globally fragmented value creation network, with a multitude of diverse stakeholders across geographic regions. According to McKinsey, integrating ESG measures can boost a company's operating profits by as much as 60%.³²

From a corporate perspective, integrating ESG measures helps to bolster corporate supply chains, especially during crises as we have seen during the Covid 19 pandemic. Tinlong Dai of the Carey Business School at John Hopkins University and Christopher S. Tang of the University of California conducted research on the interaction of ESG and operations management (OM). Dai and Tang focused on how the S in ESG interacts with supply chain operations. They found that ESG measures must be integrated into a firm's end-to-end operations throughout the supply chain, given that we live in a globalized economy.³³ Specifically, companies need to integrate ESG measures in five identified gaps: supply chain opacity, the ambiguous relationship between ESG supply chain measures and a firm's performance, supply chain ESG measurement complexity, biased ESG supply chain measures, and inconsistent supply chain law and enforcement.³⁴ Without closing these supply chain gaps, using ESG measures, companies have experienced risk and economic crises. Just recently, in 2021, the Biden administration issued the Supply Chain Advisory.³⁵ This advisory warned US companies that they would be liable for any forced labor involved in any link in their supply chain.36

Many studies have noted the financial benefit of analyzing corporate sustainability. One such study is the "Considerations Relevant to Sustainable Investment," by Dan DiBartolomeo, Steve Dyer and Howard Hoffman, analyzed the "sustainability" of companies over a 25-year period ending September 30, 2017. Their study suggests that "the intuitive benefit of investing in firms that are 'sustainable' is real." Metrics of firm sustainability, including fundamental analysis, ESG perspectives, or other quant approaches all appear to be beneficial. In addition, they found that traditional risk model factors are not explanatory of the statistically significant return differences evident across the broad security universes they examined.

Conclusion

For clients interested in ESG considerations or sustainable investing, Pathstone has vetted several fund managers across asset classes who successfully integrate ESG analysis into their investment strategies. The integration of ESG analysis contributes to resource resiliency, stronger risk mitigation, increased stock informativeness, and results in a more sustainable long-term alpha generation. With the increasing impact of resource scarcity and scrutiny over corporate decisionmaking, it is clear that ESG analysis is not a phase. Rather, ESG metrics offer research insights that can power a better investment solution. Ultimately, this is an important perspective that Pathstone utilizes to ensure we select fund managers who understand and adjust for risks and opportunities across the capital markets.



Bibliography

- "8 Best ESG Rating Agencies Who Gets to Grade?" June 21, 2022. https://theimpactinvestor.com/esg-rating-agencies/.
- Abraham, Jefferson Kaduvinal, Marcel Olbert, and Florin P. Vasvari. "ESG Disclosures in the Private Equity Industry." SSRN Scholarly Paper. Rochester, NY, November 1, 2022. https://doi.org/10.2139/ssrn.4265171.
- Antoncic, Madelyn, Geert Bekaert, Richard V. Rothenberg, and Miquel Noguer. "Sustainable Investment Exploring the Linkage between Alpha, ESG, and SDG's." SSRN Scholarly Paper. Rochester, NY, August 1, 2020. https://doi.org/10.2139/ssrn.3623459.
- "Autodesk FYI21 Impact Report." Autodesk. Accessed May 2, 2022. https://damassets.autodesk.net/content/dam/autodesk/www/sustainability/docs/pdf/autodesk-fy2021-impact-report.pdf.
- Aw, Edward N. W., Stephen J. LaPerla, and Gregory Y. Sivin. "A Morality Tale of ESG: Assessing Socially Responsible Investing." *The Journal of Wealth Management* 19, no. 4 (January 31, 2017): 14–23. https://doi.org/10.3905/jwm.2017.19.4.014.
- Azmi, Wajahat, M. Kabir Hassan, Reza Houston, and Mohammad Sydul Karim. "ESG Activities and Banking Performance: International Evidence from Emerging Economies." *Journal of International Financial Markets, Institutions and Money* 70 (January 1, 2021): 101277. https://doi.org/10.1016/j.intfin.2020.101277.
- Bansal, Ravi, Di Wu, and Amir Yaron. "Socially Responsible Investing: Good Is Good, Bad Is Bad," n.d., 35.
- Bhagat, Sanjai. "An Inconvenient Truth About ESG Investing." *Harvard Business Review*, March 31, 2022. https://hbr.org/2022/03/an-inconvenient-truth-about-esg-investing.
- Billio, Monica, Michele Costola, Iva Hristova, Carmelo Latino, and Loriana Pelizzon. "Inside the ESG Ratings: (Dis)Agreement and Performance." *Corporate Social Responsibility and Environmental Management* 28, no. 5 (2021): 1426–45. https://doi.org/10.1002/csr.2177.
- Blitz, David. "Betting Against Oil: The Implications of Divesting from Fossil Fuel Stocks." SSRN Scholarly Paper. Rochester, NY, December 2, 2021. https://doi.org/10.2139/ssrn.3976267.
- Blitz, David, and Laurens Swinkels. "Do Tobacco Share Owners Finance the Tobacco Business?" SSRN Scholarly Paper. Rochester, NY, July 31, 2020. https://doi.org/10.2139/ssrn.3602316.
- Bofinger, Yannik, Kim J. Heyden, Björn Rock, and Christina E. Bannier. "The Sustainability Trap: Active Fund Managers between ESG Investing and Fund Overpricing." *Finance Research Letters* 45 (March 1, 2022): 102160. https://doi.org/10.1016/j.frl.2021.102160.
- Bolger v. Amazon.com, LLC, 53 Cal.App.5th 431, 267 Cal.Rptr.3d 601 (App. 4th Dist. 2020), Court Opinion, Bloomberg Law (Court of Appeal of California, Fourth Appellate District, Division One 2020).
- Breedt, André, Stefano Ciliberti, Stanislao Gualdi, and Philip Seager. "Is ESG an Equity Factor or Just an Investment Guide?" SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, July 3, 2018. https://doi.org/10.2139/ssrn.3207372.
- Brière, Marie, Peillex Jonathan, and Ureche-Rangau Loredana. "Do Social Responsibility Screens Matter When Assessing Mutual Fund Performance?" *CFA Institute*, Financial Analysts Journal, 73, no. 3 (December 26, 2018): 53–66.
- Broadstock, David C., Kalok Chan, Louis T. W. Cheng, and Xiaowei Wang. "The Role of ESG Performance during Times of Financial Crisis: Evidence from COVID-19 in China." *Finance Research Letters* 38 (January 1, 2021): 101716. https://doi.org/10.1016/j.frl.2020.101716.
- Bruno, Giovanni, Mikheil Esakia, and Felix Goltz. "Honey, I Shrunk the ESG Alpha': Risk-Adjusting ESG Portfolio Returns." *The Journal of Investing* 31, no. 3 (March 31, 2022): 45–61. https://doi.org/10.3905/joi.2021.1.215.
- Cain, Áine. "A California Court Case over a Flammable Hoverboard Could Force Amazon to Change Its Entire Third-Party Sales Business Model." Business Insider, May 5, 2021. https://www.businessinsider.com/amazon-legal-lawsuit-third-party-sales-california-loomis-2021-5.
- Capelle-Blancard, Gunther, and Stéphanie Monjon. "Trends in the Literature on Socially Responsible Investment: Looking for the Keys under the Lamppost." *Business Ethics: A European Review* 21, no. 3 (June 2012): 239–50. https://doi.org/10.1111/j.1467-8608.2012.01658.x.
- Cappucci, Michael. "The ESG Integration Paradox," n.d., 8.
- Chambers, Matthew, and Rolf Schmitt. "Diesel-Powered Passenger Cars and Light Trucks." U.S. Department of Transportation Bureau of Transportation Statistics, October 2015, 4.



- --. "Diesel-Powered Passenger Cars and Light Trucks." Bureau of Transportation Statistics, October 15, 2015. https://www.bts.gov/archive/publications/bts_fact_sheets/oct_2015/entire.
- Chen, Chun-Da, Ching-Hui (Joan) Su, and Ming-Hsiang Chen. "Understanding How ESG-Focused Airlines Reduce the Impact of the COVID-19 Pandemic on Stock Returns." *Journal of Air Transport Management* 102 (July 1, 2022): 102229. https://doi.org/10.1016/j.jairtraman.2022.102229.
- Cherry, Catherine, Kate Scott, John Barrett, and Nick Pidgeon. "Public Acceptance of Resource-Efficiency Strategies to Mitigate Climate Change." *Nature Climate Change* 8, no. 11 (November 2018): 1007–12. https://doi.org/10.1038/s41558-018-0298-3.
- Clark, Gordon L., and Michael Viehs. "The Implications of Corporate Social Responsibility for Investors: An Overview and Evaluation of the Existing CSR Literature." *SSRN Electronic Journal*, 2014. https://doi.org/10.2139/ssrn.2481877.
- Coën, Alain, Patrick Lecomte, and Dorra Abdelmoula. "The Financial Performance of «Green» REITs Revisited," 2017. https://doi.org/10.15396/eres2017_339.
- Curtis, Quinn, Jill E. Fisch, and Adriana Robertson. "Do ESG Mutual Funds Deliver on Their Promises?" SSRN Scholarly Paper. Rochester, NY, June 8, 2021. https://papers.ssrn.com/abstract=3839785.
- Dai, Tinglong, and Christopher Tang. "Frontiers in Service Science: Integrating ESG Measures and Supply Chain Management: Research Opportunities in the Postpandemic Era." Johns Hopkins University, December 29, 2021. https://doi.org/10.1287/serv.2021.0295.
- Dai, Tinglong, and Christopher S. Tang. "Integrating ESG Measures and Supply Chain Management: Research Opportunities in the Post-Pandemic Era." *SSRN Electronic Journal*, 2021. https://doi.org/10.2139/ssrn.3939968.
- De, Indrani, and Michelle Clayman. "The Benefits of Socially Responsible Investing: An Active Manager's Perspective." SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, July 9, 2014. https://doi.org/10.2139/ssrn.2464204.
- "Debunking ESG Myths Part 1: The Fear of Sacrificing Financial Returns | OpenInvest." Accessed April 11, 2022. https://www.openinvest.com/articles-insights/debunking-esg-myths-pt-1-the-fear-of-sacrificing-financial-returns.
- Demasters, Karen. "COVID-19 Panic Seen As Boost To ESG Investing." Accessed April 11, 2022. https://www.fa-mag.com/news/esginvesting-will-see-surge-from-coronavirus--devere-says-54890.html.
- "Does Investing Sustainably Mean Sacrificing Returns?" Accessed April 11, 2022. https://www.architas.com/insights/news/esg/doesinvesting-sustainably-mean-sacrificing-returns/?acceptlegal=true&p=cce9e070-47ef-45f8-94f9-51ae0c3abb6d.
- Ermey, Ryan. "Ignore ESG Funds 'at Your Peril,' Experts Say: Sustainable Funds Outperformed Peers in 2020." Grow from Acorns + CNBC, May 4, 2021. https://grow.acorns.com/investing-in-esg-funds-doesnt-mean-sacrificing-returns/.
- CFA Institute Enterprising Investor. "ESG Criteria: Global Asset Managers Expand Their Embrace," September 7, 2022. https://blogs.cfainstitute.org/investor/2022/09/07/esg-criteria-global-asset-managers-expand-their-embrace/.
- Ewing, Jack. "Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception." *The New York Times*, September 22, 2015, sec. Business. https://www.nytimes.com/2015/09/23/business/international/volkswagen-diesel-car-scandal.html.
- The White House. "Executive Order on America's Supply Chains," February 24, 2021. https://www.whitehouse.gov/briefingroom/presidential-actions/2021/02/24/executive-order-on-americas-supply-chains/.
- Fafaliou, Irene, Maria Giaka, Dimitrios Konstantios, and Michael Polemis. "Firms' ESG Reputational Risk and Market Longevity: A Firm-Level Analysis for the United States." *Journal of Business Research* 149 (October 1, 2022): 161–77. https://doi.org/10.1016/j.jbusres.2022.05.010.
- Fauser, Daniel V., and Sebastian Utz. "Risk Mitigation of Corporate Social Performance in US Class Action Lawsuits." *Financial Analysts Journal* 77 (April 15, 2021): 43–65.
- February 2018, 27. "Introduction to Active Ownership in Listed Equity." PRI. Accessed November 30, 2022. https://www.unpri.org/listed-equity/introduction-to-active-ownership-in-listed-equity/2719.article.
- Fuente, Gabriel de la, Margarita Ortiz, and Pilar Velasco. "The Value of a Firm's Engagement in ESG Practices: Are We Looking at the Right Side?" *Long Range Planning* 55, no. 4 (August 1, 2022): 102143. https://doi.org/10.1016/j.lrp.2021.102143.
- Gangi, Francesco, Nicola Varrone, Lucia Michela Daniele, and Maria Coscia. "Mainstreaming Socially Responsible Investment: Do Environmental, Social and Governance Ratings of Investment Funds Converge?" *Journal of Cleaner Production* 353 (June 15, 2022): 131684. https://doi.org/10.1016/j.jclepro.2022.131684.



- Gibson Brandon, Rajna, Philipp Krueger, and Peter Steffen Schmidt. "ESG Rating Disagreement and Stock Returns." *Financial Analysts Journal* 77, no. 4 (October 15, 2021): 104–27. https://doi.org/10.1080/0015198X.2021.1963186.
- Grantham, Jeremy. "The Mythical Peril of Divesting from Fossil Fuels." The London School of Economics and Political Science, June 13, 2018. https://www.lse.ac.uk/granthaminstitute/news/the-mythical-peril-of-divesting-from-fossil-fuels/.
- Grewal, Jody, Clarissa Hauptmann, and George Serafeim. "Material Sustainability Information and Stock Price Informativeness," Journal of Business Ethics, January 17, 2020. https://doi.org/10.2139/ssrn.2966144.
- Hale, Jon. "Why Sustainable Investors Should Stay the Course | Morningstar." Morningstar, Inc. Accessed June 29, 2022. https://www.morningstar.com/articles/1093155/why-sustainable-investors-should-stay-the-course.
- He, Feng, Hanyu Du, and Bo Yu. "Corporate ESG Performance and Manager Misconduct: Evidence from China." *International Review of Financial Analysis* 82 (July 1, 2022): 102201. https://doi.org/10.1016/j.irfa.2022.102201.
- Henisz, Witold, Tim Koller, and Robin Nuttall. "Five Ways That ESG Creates Value: Getting Your Environmental, Social, and Governance (ESG) Proposition Right Links to Higher Value Creation. Here's Why." McKinsey Quarterly, November 2019. https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Strategy%20and%20Corporate%20Finance/Our%20Insights/Five %20ways%20that%20ESG%20creates%20value/Five-ways-that-ESG-creates-value.ashx.
- Hofmann, Florian. "Circular Business Models: Business Approach as Driver or Obstructer of Sustainability Transitions?" *Journal of Cleaner Production* 224 (July 1, 2019): 361–74. https://doi.org/10.1016/j.jclepro.2019.03.115.
- ---. "Circular Business Models: Business Approach as Driver or Obstructer of Sustainability Transitions?" *Journal of Cleaner Production* 224 (July 1, 2019): 361–74. https://doi.org/10.1016/j.jclepro.2019.03.115.
- Huang, Wei, Yan Luo, Xiaohuan Wang, and Lifu Xiao. "Controlling Shareholder Pledging and Corporate ESG Behavior." *Research in International Business and Finance* 61 (October 1, 2022): 101655. https://doi.org/10.1016/j.ribaf.2022.101655.
- Karim, Sitara, Muhammad Abubakr Naeem, and Brian M. Lucey. "Do Ethics Outpace Sins?" *Finance Research Letters* 47 (June 1, 2022): 102945. https://doi.org/10.1016/j.frl.2022.102945.
- Luo, Di. "ESG, Liquidity, and Stock Returns." *Journal of International Financial Markets, Institutions and Money* 78 (May 1, 2022): 101526. https://doi.org/10.1016/j.intfin.2022.101526.
- Madhavan, Ananth, Aleksander Sobczyk, and Andrew Ang. "Toward ESG Alpha: Analyzing ESG Exposures through a Factor Lens." *Financial Analysts Journal* 77, no. 1 (January 2, 2021): 69–88. https://doi.org/10.1080/0015198X.2020.1816366.
- Manavalan, E., and K. Jayakrishna. "An Analysis on Sustainable Supply Chain for Circular Economy." *Procedia Manufacturing*, Sustainable Manufacturing for Global Circular Economy: Proceedings of the 16th Global Conference on Sustainable Manufacturing, 33 (January 1, 2019): 477–84. https://doi.org/10.1016/j.promfg.2019.04.059.
- Miller, Kiley. "Sustainable Investing Doesn't Mean Sacrificing Returns." ThinkAdvisor. Accessed April 11, 2022. https://www.thinkadvisor.com/2020/07/17/sustainable-investing-doesnt-mean-sacrificing-returns/.
- Muqsit, Ashraf, Vivek Chidambaram, Ogan Kose, Filippos Kaponis, Simone Ponticelli, and Lasse Kari. "The War in Ukraine: A Moment of Reckoning for the Oil and Gas Industry." Accenture, May 10, 2022. https://www.accenture.com/us-en/insights/energy/ukraine-oil-gas.
- Palmer, Annie. "Amazon Was the Worst-Performing FAANG Stock of 2021 Here's Why." CNBC, January 5, 2022. https://www.cnbc.com/2022/01/05/amazon-was-the-worst-performing-faang-stock-of-2021-heres-why.html.
- The National Law Review. "Renewed Warnings and New Legislation on Forced Labor in Global Supply Chains." Accessed June 27, 2022. https://www.natlawreview.com/article/renewed-warnings-and-new-legislation-forced-labor-global-supply-chains.
- "Research Shows Increased ESG Disclosures Linked to Stronger PE Fund Performance | PitchBook." Accessed November 28, 2022. https://pitchbook.com/news/articles/private-equity-ESG-fund-performance.
- Schwartz, Jan, and Victoria Bryan. "VW's Dieselgate Bill Hits \$30 Bln after Another Charge." *Reuters*, September 29, 2017, sec. U.S. Legal News. https://www.reuters.com/article/legal-uk-volkswagen-emissions-idUSKCN1C4271.
- Serafeim, George. "Social-Impact Efforts That Create Real Value." Harvard Business Review, October 2020. https://hbr.org/2020/09/socialimpact-efforts-that-create-real-value.
- Stackpole, Beth. "Why Sustainable Business Needs Better ESG Ratings." MIT Sloan, December 6, 2021. https://mitsloan.mit.edu/ideas-madeto-matter/why-sustainable-business-needs-better-esg-ratings.



- Morningstar, Inc. "Sustainable Funds Weather the First Quarter Better Than Conventional Funds," April 3, 2020. https://www.morningstar.com/articles/976361/sustainable-funds-weather-the-first-quarter-better-than-conventional-funds.
- "Sustainable Reality: 2020 Update." Morgan Stanley: Institute for Sustainable Investing, 2020. https://www.morganstanley.com/content/dam/msdotcom/en/assets/pdfs/3190436-20-09-15_Sustainable-Reality-2020-update_Final-Revised.pdf.
- Tang, Christopher S., and Tinglong Dai. "Amazon's Trust Problem." Barron's, August 7, 2020. https://www.barrons.com/articles/amazon-hasa-trust-problem-51596825474.
- Morningstar, Inc. "The Anti-ESG Rhetoric and Actions of Republican Politicians Are Bad for Investors and Business," August 26, 2022. https://www.morningstar.com/articles/1111509/the-anti-esg-rhetoric-and-actions-of-republican-politicians-are-bad-for-investors-and-business.
- "Think ESG Investments Sacrifice Performance? Think Again." Accessed April 11, 2022. https://advisors.vanguard.com/insights/article/thinkesginvestmentssacrificeperformancethinkagain.
- "Time to Put the Fossil-Fuel Industry Into Hospice (SSIR)." Accessed November 28, 2022. https://ssir.org/articles/entry/time to put the fossil fuel industry into hospice.
- "U.S. Steps Up Pressure on Businesses Over Forced Labor in China WSJ." Accessed June 27, 2022. https://www.wsj.com/articles/u-s-steps-up-pressure-on-businesses-over-forced-labor-in-china-11628501400.
- BBC News. "War in Ukraine: West Hits Russia with Oil Bans and Gas Curbs," March 9, 2022, sec. US & Canada. https://www.bbc.com/news/world-us-canada-60666251.
- "What COVID-19 Teaches Us About ESG Investing | OpenInvest." Accessed April 11, 2022. https://www.openinvest.com/articlesinsights/what-covid-19-teaches-us-about-esg-investing.
- Institutional Investor. "What Does ESG Need to Work?" Accessed November 28, 2022. https://www.institutionalinvestor.com/article/b1zkm44768190g/What-Does-ESG-Need-to-Work.
- Deloitte China. "What Is ESG Rating? | Deloitte China | Risk Advisory." Accessed September 12, 2022. https://www2.deloitte.com/cn/en/pages/risk/articles/what-is-esg-rating.html.
- Whelan, Tensie, Ulrich Atz, Tracy Van Holt, and Casey Clark. "ESG and Financial Performance: Uncovering the Relationship by Aggregating Evidence from 1,000 Plus Studies Published Between 2015-2020." NYU Stern, August 2021. https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:4bf7ad81-ff72-3341-a50e-815959fdf90b#pageNum=1.

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End Notes

¹ Michael Porter, George Serafeim, and Mark Kramer, "Where ESG Fails," Institutional Investor, October 16, 2019, https://sharedvalue.org.au/wp-content/uploads/2019/11/Where-ESG-Fails-_-Institutional-Investor.pdf.

⁵ Marie Brière, Peillex Jonathan, and Ureche-Rangau Loredana, "Do Social Responsibility Screens Matter When Assessing Mutual Fund Performance?," *CFA Institute*, Financial Analysts Journal, 73, no. 3 (December 26, 2018): 53–66.

⁶ Brière, Jonathan, and Loredana, "Do Social Responsibility Screens Matter When Assessing Mutual Fund Performance?"

⁷ Whelan et al., "ESG and Financial Performance: Uncovering the Relationship by Aggregating Evidence from 1,000 Plus Studies Published Between 2015-2020."

⁸ Ananth Madhavan, Aleksander Sobczyk, and Andrew Ang, "Toward ESG Alpha: Analyzing ESG Exposures through a Factor Lens," *Financial Analysts Journal* 77, no. 1 (January 2, 2021): 69–88, https://doi.org/10.1080/0015198X.2020.1816366.

⁹ Madhavan, Sobczyk, and Ang, "Toward ESG Alpha."

¹⁰ 27 February 2018, "Introduction to Active Ownership in Listed Equity," PRI, accessed November 30, 2022, https://www.unpri.org/Listed-equity/introduction-to-active-ownership-in-listed-equity-/2719.article.

¹¹ Jon Hale, "Why Sustainable Investors Should Stay the Course | Morningstar," Morningstar, Inc., accessed June 29, 2022,

https://www.morningstar.com/articles/1093155/why-sustainable-investors-should-stay-the-course.

¹² Arleta Majoch, E. Gifford, and Andreas G. F. Hoepner, "Active Ownership and ESG Performance," SSRN Scholarly Paper (Rochester, NY, September 16, 2014), https://doi.org/10.2139/ssrn.2496903.

¹³ Ashraf Muqsit et al., "The War in Ukraine: A Moment of Reckoning for the Oil and Gas Industry," Accenture, May 10, 2022, https://www.accenture.com/usen/insights/energy/ukraine-oil-gas.

¹⁴ "War in Ukraine: West Hits Russia with Oil Bans and Gas Curbs," *BBC News*, March 9, 2022, sec. US & Canada, https://www.bbc.com/news/world-us-canada-60666251.

15 "War in Ukraine."

¹⁶ Muqsit et al., "The War in Ukraine: A Moment of Reckoning for the Oil and Gas Industry."

¹⁷ Tensie Whelan et al., "ESG and Financial Performance: Uncovering the Relationship by Aggregating Evidence from 1,000 Plus Studies Published Between 2015-2020" (NYU Stern, August 2021), https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:4bf7ad81-ff72-3341-a50e-815959fdf90b#pageNum=1. ¹⁸ "8 Best ESG Rating Agencies - Who Gets to Grade?," June 21, 2022, https://theimpactinvestor.com/esg-rating-agencies/.

¹⁹ "What Is ESG Rating? | Deloitte China | Risk Advisory," Deloitte China, accessed September 12, 2022,

https://www2.deloitte.com/cn/en/pages/risk/articles/what-is-esg-rating.html.

²⁰ Beth Stackpole, "Why Sustainable Business Needs Better ESG Ratings," MIT Sloan, December 6, 2021, https://mitsloan.mit.edu/ideas-made-to-matter/why-sustainable-business-needs-better-esg-ratings.

²¹ Rajna Gibson Brandon, Philipp Krueger, and Peter Steffen Schmidt, "ESG Rating Disagreement and Stock Returns," *Financial Analysts Journal* 77, no. 4 (October 15, 2021): 104–27, https://doi.org/10.1080/0015198X.2021.1963186.

²² David Blitz, "Betting Against Oil: The Implications of Divesting from Fossil Fuel Stocks," SSRN Scholarly Paper (Rochester, NY, December 2, 2021), https://doi.org/10.2139/ssrn.3976267.

²³ Jeremy Grantham, "The Mythical Peril of Divesting from Fossil Fuels," The London School of Economics and Political Science, June 13, 2018, https://www.lse.ac.uk/granthaminstitute/news/the-mythical-peril-of-divesting-from-fossil-fuels/.

²⁴ Jody Grewal, Clarissa Hauptmann, and George Serafeim, "Material Sustainability Information and Stock Price Informativeness," Journal of Business Ethics, January 17, 2020, https://doi.org/10.2139/ssrn.2966144.

²⁵ "Sustainable Reality: 2020 Update" (Morgan Stanley: Institute for Sustainable Investing, 2020),

https://www.morganstanley.com/content/dam/msdotcom/en/assets/pdfs/3190436-20-09-15_Sustainable-Reality-2020-update_Final-Revised.pdf. ²⁶ "Sustainable Reality: 2020 Update."

²⁷ David C. Broadstock et al., "The Role of ESG Performance during Times of Financial Crisis: Evidence from COVID-19 in China," *Finance Research Letters* 38 (January 1, 2021): 101716, https://doi.org/10.1016/j.frl.2020.101716.

²⁸ Matthew Chambers and Rolf Schmitt, "Diesel-Powered Passenger Cars and Light Trucks," Bureau of Transportation Statistics, October 15, 2015, https://www.bts.gov/archive/publications/bts_fact_sheets/oct_2015/entire.

²⁹ Jan Schwartz and Victoria Bryan, "VW's Dieselgate Bill Hits \$30 Bln after Another Charge," *Reuters*, September 29, 2017, sec. U.S. Legal News, https://www.reuters.com/article/legal-uk-volkswagen-emissions-idUSKCN1C4271.; Jack Ewing, "Volkswagen Says 11 Million Cars Worldwide Are Affected in Diesel Deception," *The New York Times*, September 22, 2015, sec. Business, https://www.nytimes.com/2015/09/23/business/international/volkswagen-dieselcar-scandal.html.

² Sanjai Bhagat, "An Inconvenient Truth About ESG Investing," *Harvard Business Review*, March 31, 2022, https://hbr.org/2022/03/an-inconvenient-truth-about-esg-investing.

³ Ryan Flugum and Matthew E. Souther, "Stakeholder Value: A Convenient Excuse for Underperforming Managers?," SSRN Scholarly Paper (Rochester, NY, September 13, 2022), https://doi.org/10.2139/ssrn.3725828.

⁴ Alicia McElhaney, "ESG Isn't Enough for Alpha," Institutional Investor, June 2, 2020, https://www.institutionalinvestor.com/article/b1lwxt3h988shf/ESG-Isn-t-Enough-for-Alpha.



³⁰ Daniel V. Fauser and Sebastian Utz, "Risk Mitigation of Corporate Social Performance in US Class Action Lawsuits," *Financial Analysts Journal* 77 (April 15, 2021): 43–65.

https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Strategy%20and%20Corporate%20Finance/Our%20Insights/Five%20ways%20that%20 ESG%20creates%20value/Five-ways-that-ESG-creates-value.ashx.

³³ "Tinglong Dai and Christopher Tang, "Frontiers in Service Science: Integrating ESG Measures and Supply Chain Management: Research Opportunities in the Postpandemic Era" (Johns Hopkins University, December 29, 2021), https://doi.org/10.1287/serv.2021.0295.

³⁴ Dai and Tang, "Frontiers in Service Science."

https://www.natlawreview.com/article/renewed-warnings-and-new-legislation-forced-labor-global-supply-chains...

³⁶ Dai and Tang, "Frontiers in Service Science."

³¹ Fauser and Utz, "Risk Mitigation of Corporate Social Performance in US Class Action Lawsuits."

³² Witold Henisz, Tim Koller, and Robin Nuttall, "Five Ways That ESG Creates Value: Getting Your Environmental, Social, and Governance (ESG) Proposition Right Links to Higher Value Creation. Here's Why." (McKinsey Quarterly, November 2019),

³⁵ "Renewed Warnings and New Legislation on Forced Labor in Global Supply Chains," The National Law Review, accessed June 27, 2022,