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Sustainable Finance

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Abstract

Sustainable finance—the integration of environmental, social, and governance ("ESG") issues into financial decisions—is an increasingly important topic. Within companies, sustainability is no longer an ancillary issue confined to corporate social responsibility departments, but a CEO-level issue fundamental to the core business. Within the investment industry, sustainability used to be the exclusive domain of "socially responsible investors" who had social as well as financial objectives, but is now mainstream and includes investors with purely financial goals. This article introduces the *RF* Special Issue on Sustainability. It highlights three reasons for the rapid rise in sustainable finance—its financial relevance, its contribution to nonfinancial objectives, and investor tastes. It then summarizes the eight articles in the Special Issue, in particular drawing out their contributions to the literature. Finally, we offer ideas for future research.

Keywords: Sustainable finance, ESG, CSR, SRI, responsible business

JEL classification: D62, G11, G34

Sustainable finance—the integration of environmental, social, and governance ("ESG") issues into financial decisions—is an increasingly important topic. Within companies, sustainability is no longer an ancillary issue confined to corporate social responsibility departments, but a CEO-level issue fundamental to the core business. Within the investment industry, sustainability used to be the exclusive domain of "socially responsible investors" who had social as well as financial objectives, but is now mainstream and includes investors with purely financial goals. More broadly, the sustainability of business has a crucial impact on how it is viewed by wider society, including policymakers and citizens, including its social license to operate.

The increasing interest in sustainability among investors—which, in turn, flows through to companies—stems from three forces. The first is *financial relevance*. Companies with a positive impact on society may be more likely to attract customers and employees, capture business opportunities related to societal trends such as climate change and financial inclusion, and avoid environmental fines or regulatory intervention. If these benefits are not fully

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priced in, such companies will generate high risk-adjusted returns, and thus even investors with purely financial motives will prefer them. The second is *nonfinancial objectives*. For example, a pension fund invests on behalf of its beneficiaries, who care not only about their income in retirement but the state of the planet and the cohesiveness of society. Thus, they may support a company increasing its societal impact even if doing so sacrifices profits.

The third is *tastes*—that investors prefer to hold "green" stocks over "brown" stocks. Note that the second and third channels are subtly different. Under the second channel, a sustainable investor would only sacrifice financial returns if doing so has a causal impact on societal returns—for example, divesting from a "brown" stock increases its cost of capital and hinders it from expanding. Under the third channel, no causal effects are necessary. Even if the supply of capital is perfectly elastic, so divestment has no price impact, a sustainable investor will still boycott a brown stock since she suffers disutility from holding such a company.[1]

Due to this increasing importance, the *Review of Finance* launched a Special Issue on Sustainable Finance. Among 176 submissions we received between June and December 2021, we aimed to publish papers that meet the following ordered criteria: (i) papers that are high-quality academic work; (ii) papers that are of interest to a mainstream finance audience, not only readers who work in sustainable finance; (iii) papers that have implications for both theoretical and empirical research, and for both academia and practice. We sought to publish papers across all major research areas: corporate finance, asset pricing, financial intermediation, behavioral finance, and mutual funds. This Special Issue contains eight papers that satisfied the above criteria. We summarize their content and placement in the broader discussion on the topic in the order in which they appear in the issue. We would like to emphasize the important role of the reviewers, whose hard work has enabled us to put this issue together. Their input has been invaluable to the success of this endeavor.

One key challenge in sustainable finance is how to evaluate the sustainability of a company. In "Aggregate Confusion: The Divergence of ESG Ratings," Florian Berg, Julian Koelbel, and Roberto Rigobon document a significant discrepancy between the ESG ratings issued by six prominent ESG rating agencies: Sustainalytics, Moody's ESG (formerly Vigeo-Eiris), S&P Global (formerly RobecoSAM), Refinitiv (formerly Asset4), MSCI, and KLD (discontinued in 2017). They found an average pairwise correlation between rating agencies of 38%-71%, substantially lower than the 99% for credit ratings. They found that 56% of the divergence stems from measurement (e.g., labor practices could be measured by workforce turnover, or number of labor cases against the firm), 38% is due to scope (e.g., some rating agencies consider lobbying an ESG factor, others do not), and 6% results from different weightings. Their findings have important implications for both academics and practitioners. For academics, the choice of rating agency for empirical research is not innocuous,

1 The moral philosopher Bernard Williams (1973) highlights the difference in the following example. Jim, on a botanical expedition in South America, finds himself in a town square. Twenty natives are tied up against the war and about to be killed for protesting against the government. Since Jim is an honored visitor from another land, the captain offers him the privilege of killing one of the natives himself; if he does so, the other natives will be let off. Even though the "societal return" from killing the native is positive, Jim may choose not to do so due to tastes—he suffers disutility from killing.

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and it is important to demonstrate robustness to other providers. For practitioners, ESG ratings should be viewed as opinion, not fact. Responsible investors should not choose stocks by simply following one provider's rating.

Given information about a company's ESG performance, how does it affect asset prices, both theoretically and empirically? "A Sustainable Capital Asset Pricing Model" by Olivier David Zerbib is an important step in answering these questions. The article proposes a model in which sustainability features as an important force driving investors' portfolio decisions. The main contribution of the article is to show that expected returns can be decomposed into a part that reflects the negative exclusion preferences, along the lines of Merton (1987), and the part that reflects tastes for ESG. Using the evidence from USA sin stocks, the article shows that the exclusion forces contribute about 2.7% per year to the observed risk premia and the taste forces add on roughly 2% per year extra.

Many commentators point to the growth in assets under management by UN Principles for Responsible Investment ("PRI") signatories, from $6.5 trillion in 2006 to $121 trillion by the end of 2021, as evidence of the rise in sustainable investing. But does signing the PRI mean anything? In "Do Responsible Investors Invest Responsibly?", Rajna Gibson Brandon, Simon Glossner, Philipp Krueger, Pedro Matos, and Tom Steffen study whether signatories invest in firms with higher ESG ratings, measured using either Sustainalytics, Refinitiv, or MSCI scores. They find that non-US signatories have superior ESG portfolio-level ESG scores than nonsignatories. However, in the USA, signatories have at best similar ESG ratings, or worse ratings if they have underperformed recently, are retail-client facing, and joined the PRI late—indicators that they may have signed the PRI to greenwash. An alternative explanation is that US investors buy ESG underperformers and engage with them to improve their ratings, but the authors find no such improvements. The different behavior of investors in the USA may be due to commercial incentives to become a PRI signatory being higher, more regulatory uncertainty as to whether ESG investing is consistent with fiduciary duty, and the lower maturity of the ESG market making it easier to greenwash.

One potential explanation for such behavior is that it is not clear that green investors should be avoiding brown stocks once you take into account the importance of hedging. How to hedge the risks in the presence of climate-related externalities is the topic of the theoretical piece "Asset Prices and Portfolios With Externalities" by Steven Baker, Burton Hollifield, and Emilio Osambela. In their model, agents who suffer disproportionately from pollution have a desire to hedge against this. If states in which pollution is high are also states in which polluting firms do well, then investing in polluting firms becomes a natural hedge. Environmentalists, who take pollution as given, will then invest disproportionately in polluting firms in order to hedge this risk, thus driving up capital allocations into such firms. In the process of understanding the economic mechanism behind their results, the authors also consider two countervailing forces that could reverse the surprising results on returns and investments: (i) investors coordinate so that they internalize their effect on pollution and (ii) investors derive nonpecuniary benefit from investing in nonpolluting firms.

Nickolay Gantchev, Mariassunta Giannetti, and Rachel Li tackle the question of whether investor behavior can affect company behavior in "Does Money Talk? Divestitures and Corporate Environmental and Social Policies." They study whether governance through exit can improve firms' environmental and social (E&S) policies. The authors find that negative E&S incidents are indeed followed by divestitures, but the magnitudes are relatively small. The authors conjecture that even more powerful than actual exit upon an E&S incident might be the threat of future exit if E&S performance remains

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poor. Consistent with this conjecture, after an E&S incident, firms decrease their greenhouse gas emissions and improve their E&S scores significantly if they have a high proportion of E&S-conscious investors and the CEO recives equity compensation so is concerned about the effect of investor exit on share prices. These results suggest that the threat of exit improves E&S performance if investors are E&S-conscious and CEO wealth is tied to the stock price.

Much of the financial costs associated with climate finance relates to transition risk ensuing from uncertain technological, political, and policy environment. But financial costs could also result from physical damages affected by climate-related events. The extent to which such physical risk is reflected in asset prices is a topic of "Climate Change Risk and the Cost of Mortgage Credit" by Duc Nguyen, Steven Ongena, Shusen Qi, and Vathunyoo Sila. The authors study the question in the context of mortgage markets. This setting is different from other studies that directly focus on valuations of climate-affected assets, such as real estate or insurance companies. Using data on 1,581,600 first-lien 30-year mortgages from BlackKnight McDash originated in the USA between January 1992 and June 2018 the authors document that financing costs of houses that are exposed to more sea level rise see higher interest rate spreads which are 10.2 basis points larger for mortgages in a zip code where all properties are exposed to SLR relative to a zip with no sea level rise. The interesting feature of this result is that, even though some of the risks may be still distant in the future financial, markets already price them in through the credit contracts.

While much of the literature on sustainable investors' concerns institutions, Anders Anderson and David Robinson study household investors in "Financial Literacy in the Age of Green Investment." They survey a large sample of Swedish households on their environmental preferences, such as the relative importance of environmental versus financial goals to them, and show that green households, surprisingly, do not hold green portfolios. One explanation is financial disengagement. Green households are generally uninterested in investing, being less likely to own stocks, check pension balances, or make active pension choices (instead relying on the default allocation). The second is informational constraints, which prevent households from finding investments that match their preferences. For example, they buy mutual funds with pro-environmental names even if they are not ESG-compliant, as classified by the Swedish Pension Authority. Many practitioners and policymakers argue that "people's capitalism" will force companies to improve environmental performance, but the authors' results suggest that, without financial literacy, households are unable to reflect their preferences in actions.

Finally, an important question pertaining to sustainable finance relates to portfolio ownership, incentives driving decisions, and performance consequences for investors with designated sustainable principles. In "Responsible Hedge Funds" Hao Liang, Lin Sun, and Melvyn Teo study this question in the context of hedge funds. They show that hedge funds that endorse the PRI underperform other hedge funds after adjusting for risk but attract greater investor flows, accumulate more assets, and harvest greater fee revenues. The authors attribute the main explanation of their findings to the apparent disconnect between the stated mandate and the observed exposure of investors to ESG factors, which is consistent with the story of greenwashing frequently brought up by ESG skeptics.

While we believe that these eight papers make substantial contributions to the area of sustainable finance, many questions are still to be answered. We repeat here the potential research directions that we included in the Call for Papers (with some additions) in the hope that they might spark future research. Needless to say, the *Review of Finance* will

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strive to consider high-quality papers that address the following questions for publication in regular issues:

- Research on different aspects of sustainability—not only climate but environmental issues beyond climate (including financing of biodiversity protection), and other stakeholders such as employees, customers, communities, and suppliers.
- Research using non-US data, studying private companies, or asset classes other than equity.
- Research on how company practices (e.g., reporting, signing commitments, governance structures) help to embed sustainability, and how investors do so within their investee companies.
- The effect, and potential unintended consequences, of policy and regulation on sustainability.
- Research on the extent to which asset prices incorporate, or do not incorporate, sustainability, and whether this is through a cash flow and/or cost of capital channel.
- Research on innovation and technological solutions to ESG issues.
- Research on the adoption of green energy, emissions abatement, and the value of stranded assets.
- Contrarian research, for example, showing that sustainable business practices may not be associated with superior long-term company performance; that sustainable investing may not achieve its desired objectives; or that companies/investors that claim to be sustainable may not actually "walk the talk."
- The effect of public attitudes and the media on sustainability, and the effect of company/investor sustainability practices on public attitudes.
- Theoretical models of the effect of sustainable practices by companies, investors, and regulators.
- Experimental or survey research on the households', investors', or executives' sustainability preferences or beliefs.
- Methodological papers on the evaluation/certification of sustainability datasets and giving best practice on which ones to use and any issues that arise.
- Descriptive research that does not make causal claims, as long as "clean identification" is not central to the research question being addressed.

References

Merton, R. C. (1987): A simplemodel of capital market equilibrium with incomplete information, *Journal of Finance* 42, 483–510.

Williams, B. (1973): A critique of utilitarianism, in B. Williams and J. J. C. Smart (eds.), *Utilitarianism: For and Against*. Cambridge University Press, Cambridge.

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