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**Title**

Impact Investing

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**Publication Date**

2023-04-27

Peer reviewed

## **Impact Investing**

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### **Synonyms**

double bottom line investing; dual objective investing; prosocial investing; consequentialist investing; investing with non-pecuniary benefit

### **Definition**

Impact investing is a class of investments that are designed to meet the non-pecuniary preferences of investors (or beneficiaries) and aim to generate a positive externality actively and causally through their ownership and/or governance of the companies they invest in.

### **Introduction**

Impact investing is a type of investment vehicles that emerged as a new branch of responsible, sustainable or ESG (environmental, social, and governance) investment universe in the last few decades. In this article, we provide a definition of impact investing, review the extant literature, and discuss suggestions for future research.

### **What is Impact Investing?**

An impact investing vehicle has two main characteristics:

1. An impact investing vehicle aims to generate both (i) positive social and environmental impact and (ii) a financial return.
2. An impact investing vehicle takes an active role in inducing the positive social and environmental outcomes at the companies it invests in.

Characteristic (1) defines impact investing as explicitly dual objective. Such a vehicle design is aligned with investors who derive non-pecuniary utility from generation of positive externality that benefits the broader society and the environment. This contrasts with investors who only care about ESG information to the extent that it affects the financial return and profitability of the investment. Both investors participate in the responsible/sustainable/ESG investing space and are often confused for one another, but their motivations are distinct and disjoint. Throughout this article we refer to the first type of investors as **impact** investors, and the latter type as **ESG-aware** investors. Impacting investing vehicles thus meet the demands of impact investors, but not those of ESG-aware investors. We will later discuss the specific types of vehicles that meet the impact investing criteria.

Characteristic (2) defines impact investing as a type of activist investors. This takes many forms. For example, an impact fund can be structured as a venture capital (VC) or a buyout fund that invests in private companies. By taking on a board seat, becoming the majority owner of the company, or becoming a strategic capital provider to a private company whose access to capital markets is limited, VC/buyout impact funds gain access to the management and use it to actively shape key decision making at the portfolio companies. Alternatively, a fund investing in public companies (e.g., exchange-traded funds (ETFs), mutual funds, or hedge funds) can use its proxy voting to nominate new board members, propose environmental or social corporate policy changes, and request greater ESG disclosures from the companies they invest in. In the mutual fund industry, the term “active” is typically used to refer to a fund that actively picks stocks in contrast to passive index funds. But being an active stock picker does not make a fund an impact investing vehicle. Instead, what is critical is that after choosing to invest in a company, the fund directly monitors and engages with the portfolio companies to induce positive externality generation.

The Global Impact Investing Network defines “Impact investing” as “investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return” (<https://thegiin.org/impact-investing/need-to-know/#what-is-impact-investing> accessed September 1, 2021). This definition clearly contains both characteristic (1) and (2). There is a third characteristic, which is that an impact investing vehicle aims to measure the impact it generates. This is an important characteristic, since without measuring the impact, the fund cannot fully verify its success as an impact fund. It is also a characteristic that is the least

studied in the academic literature, partly due to the paucity of impact data available to researchers and the challenge of comparing one impact measure unit to another. We will return to the measurement in the discussion for future research. To recap, impact investing is a class of investments that are designed to meet the non-pecuniary preferences of investors (or beneficiaries) and aim to generate a positive externality actively and causally through their ownership and/or governance of the companies they invest in.

In terms of products or investment activities within the impact investing category, four important subclasses exist and cater to different types of end-investors. First, impact funds are limited partnership vehicles organized as venture capital or private equity funds that last for 10 or more years. Investors make capital commitments to these funds as limited partners, and funds in turn screen and hold ownership stakes in private companies for multiple years and exit from investments before the funds mature. Most of the limited partners in impact funds are large, diversified institutional investors. Second, mission-based organizations such as foundations and development financial institutions make direct equity investments in private companies with dual objectives akin to those of impact funds. Third, there is a nascent activist class of ETFs and funds investing in public equity that aim to use proxy voting to causally improve the environmental footprint or social accountability of companies they invest in. Investors in these environmental and/or social funds are mostly small, individual retail investors. And finally, private (and sometimes public) debt (often) with below-market interest rate or yield is a popular instrument choice for impact investors who are willing to accept lower interest rate on the debt in exchange for generation of public goods.<sup>1</sup> Note that the first three subclasses are equity and therefore impact investors influence management decisions and firm activities of the portfolio companies they invest in as shareholders. In contrast, the fourth subclass is debt, and as creditors they do not hold the voting power to actively influence managerial decisions. Instead, debt impact investing induces impact generation by choosing projects that exclusively focus on externality generation such as affordable housing or social bonds that are designed to reduce recidivism.

[Insert Figure 1 Here]

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<sup>1</sup> Green debt (bonds, loans, debt) overlaps with impact debt to some extent but they are not identical. For example, firms may issue green bonds to fund projects that they believe will enhance the long-run value of their assets or reduce the firm risk. Such instruments are not designed to meet non-pecuniary preferences of investors but to signal the sustainability of the firm's valuation in the long run.

Figure 1 illustrates the structure of the three main types of sustainable investing and how impact investing is distinguished from other types of investing vehicles. As discussed before, impact funds are explicitly dual objective and actively engage with their portfolio companies to induce generation of positive externality. In contrast, ESG-aware investors are single-objective and incorporate ESG information into their stock screening process to achieve the best risk-adjusted financial performance. They are also typically passive shareholders. These ESG funds meet the needs of ESG-aware investors, who do not have non-pecuniary utility but recognize that ESG information about the firms has material, or value-relevant, content and seeks funds that integrate this information into their investment process.

Socially responsible investment (SRI) funds traditionally employ negative screen process to either eschew investing in certain industries (e.g., tobacco, gambling, weapon manufacturing, and alcohol) or divest from others (e.g., oil and gas). These funds meet the needs of ethically motivated investors who would derive negative utility from investing in these so-called “sin” stocks and wish to avoid the loss of utility.

Figure 2 classifies these 3 types of sustainable investing vehicles along two dimensions: (i) investor objectives, and (ii) belief about social responsibility. First, investor objectives can be either (i) purely financial risk/return or (ii) financial risk/return and non-pecuniary preferences. ESG-aware investors are single objective investors, whereas both impact and SRI investors have non-pecuniary utility. Second, belief about social responsibility distinguishes impact investors from SRI investors. Impact investors ascribe to consequentialism, or “the view that normative properties depend only on consequences. ... What is best or right is whatever makes the world best in the future (Stanford Encyclopedia of Philosophy).”<sup>2</sup> This view is consistent with impact investing, where outcome measures (e.g., reduction in emissions) are used to gauge its impact and success. In contrast, deontology, often associated with the philosopher Kant, postulates that the morality of an action should be based on whether that action itself is right or wrong under a series of rules and principles, rather than based on the consequences of the action. Deontological moral responsibility is aligned with categorical negative screening (e.g., tobacco, alcohol, and now fossil-fuel energy) irrespective of consequences, and thus fits the SRI investing methods via divestments.

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<sup>2</sup> Available at <https://plato.stanford.edu>.

Note that ESG-aware funds and SRI funds have overlaps, i.e., some sustainable funds cater to both ESG-aware investors and deontological investors by both investing in high-ESG rated stocks and eschewing sin stocks. In contrast, impact investing overlaps significantly less with either of the other categories (Yang and Yasuda (2023)).

Academic research on impact investing is nascent and growing. The next two sections review the two main strands of the extant academic literature on impact investing. First, theorists analyze impact investing as a solution to the problem of private provision of public goods by investors with nonpecuniary utility functions, and empiricists examine whether investors exhibit nonpecuniary utility from investing in impact projects. Second, theorists study how prosocial investors' participation in the capital markets affect the equilibrium (pecuniary and nonpecuniary) outcomes for impact and non-impact investments, and empiricists investigate the performance outcomes of impact investments.

### **Nonpecuniary Utility**

Impact investing is predicated on the idea that some investors have non-pecuniary utility functions and desire that the firms they invest in produce some public goods as well as profits. Thus, its emergence alone challenges the argument made by Milton Friedman in his New York Times op-ed (Friedman 1970) that for-profit firms should focus only on maximizing shareholder returns and not divert profits towards social good provision. Each shareholder should in turn make decentralized contributions to public good production via charities as private citizens, but not while they are making investment decisions. Taking issue with the separability assumption made by Friedman, Hart and Zingales (2017) argue that when shareholders are prosocial and externalities are not perfectly separable from production decisions, companies should maximize shareholder welfare and not market value of the firm and propose voting by shareholders to set corporate policy that is consistent with the social and ethical preferences of investors.

Several theoretical papers examine when for-profit firms with dual objectives of both financial return and social or environmental impact emerge as a contractual solution to the problem of private provision of public goods. Morgan and Tumlinson (2019) assume all investors derive utility from public goods and show that in the absence of managerial agency cost and private benefits, corporate social responsibility emerges as a more efficient, centralized giving mechanism

that solves the free-rider problem of decentralized contribution. Firm managers act as a commitment device and use firm resources to produce more public goods, and shareholder welfare is increased. Shareholders are poorer but happier. In contrast, Chowdhry, Davies, and Waters (2019) assume only a subset of investors derive utility from social goods (prosocial investors) and analyze when their investment alongside profit-only investors improves social outcomes. When optimal, joint financing by impact and non-impact investors is mutually beneficial because impact investors are willing to give non-impact investors a subsidy in exchange for production of social goods. Oehmke and Opp (2022) similarly assume socially responsible investors who internalize the social impact of externalities generated by firms and financial investors who disregard externalities and only seek financial returns. They find that when the externalities are negative, impact investors can generate impact only if they care about the counterfactual negative externalities of not investing in a company. In contrast, when the externalities are positive, then the impact is greater when impact investors care only about the externalities generated by the companies they do invest in.

Each of these papers maps to a distinct setting within the impact investing ecosystem. First, impact funds raise funds from investors who all presumably have nonpecuniary utility functions and use impact fund GPs as a centralized, commitment device who will produce more public goods through their fund activities than individual LPs would produce on their own separately. LPs are poorer but happier, as per Morgan and Tumlinson (2019). Second, individual portfolio companies of impact funds typically receive funding from a mix of both impact and non-impact investors. For example, a developer of a malaria drug may receive VC funding from Gates Foundation's VC arm acting as an impact fund as well as a syndicate of traditional biotech VC funds. Chowdhry, Davies, and Waters (2019) and Oehmke and Opp (2022) suggest that impact funds' investment acts as a subsidy, effectively allowing the investee firm to monetize their social good provision, and thus benefit non-impact investors through greater return accruing to them.

Further, Oehmke and Opp (2022) bring to sharper focus the disjoint nature of impact vs. ESG-aware investors' motivations: "Because avoided externalities matter, ... investments in sin industries ... can be consistent with a socially responsible investment mandate. In contrast, it is efficient to not invest in firms that are already committed to clean production ... because clean production will occur regardless of investment by socially responsible investors." (p.5) As an example, Engine No. 1, an impact investor, invested in Exxon Mobil in order to install new board

directors and shift its corporate strategy towards faster transition out of fossil fuel into renewable energy. The fund aims at reducing the negative externalities generated by a major oil company which, even after implementation of the recommended changes, would still produce large quantities of negative externalities in the form of greenhouse gas. In contrast, many ESG funds avoid investing in fossil fuel industries and have often held large technology companies such as Alphabet (Google parent) and Microsoft, which have small carbon footprint to begin with and will achieve net zero emissions with or without investments by ESG funds. ESG funds' behavior is in line with ESG-aware investors' motivation but not with that of impact investors.

In the empirical literature, Barber, Morse and Yasuda (2021) test the assumption built in these theoretical models, namely, that nonpecuniary motives affect investors' allocation of capital in a way that reflects an intentional willingness to pay for impact. To do so they examine the actual investment choices investors made for impact and non-impact VC funds as functions of ex-ante expected fund return, fund and investor characteristics, and the impact status of the fund, and estimate the willingness to pay as the sensitivity of the choice to the impact status scaled by the sensitivity of the choice to price. This methodology builds on a large literature on hedonic pricing in economics. The paper finds that investors on average exhibit a willingness to pay (WTP) for impact of 2.5%-3.7% in expected internal rate of return (IRR), and there is considerable heterogeneity among investors in their WTP. Development organizations, foundations, financial institutions, public pensions, Europeans, and United Nations Principles of Responsible Investment signatories have high WTP. Investors with mission objectives and/or facing political pressure exhibit high WTP; those subject to legal restrictions (e.g., Employee Retirement Income Security Act) exhibit low WTP. Overall, the paper confirms that investors in impact funds do in fact exhibit nonpecuniary utility, as the theory assumes, in their ex ante investment decisions.

What form of nonpecuniary utility functions do impact investors maximize, how do their choices respond to their informational environment, and what is the allocative effect for the economy? Some studies examine these questions using experimental setting. Lee, Adbi, and Singh (2020) test whether investors correctly identify the conditions under which joint production of profits and positive externality by dual-objective private firms is more efficient than separate production of profits by profit-only firms and externality by charities. They find that subjects frequently make inefficient allocation decisions when choices are labeled as "charity", "social enterprises" (for impact investments), and "for-profit", and their errors



decrease significantly when the categorical labels are removed. The paper points out the cross-categorical challenge of impact investing: “impact investors grapple with unfamiliar combinations of investments and notions of value.” (p.103)

Heeb, Kölbel, Paetzold, and Zeisberger (2023) measure experiment subjects’ willingness to pay (WTP) by presenting them with a choice to invest between a sustainable fund that reduces greenhouse gas emissions and a conventional fund with zero impact. WTP is elicited as a monetary fee that subjects agree to pay in order to invest in the sustainable fund. The amount of GHG emission savings are varied and investors’ WTP relative to the environment impact of the fund is compared. They find that subjects exhibit a positive WTP, but that its magnitude is insensitive to the level of impact the fund generates. When presented with a choice set of multiple sustainable funds, subjects choose the most sustainable option, but their WTP is again inelastic to the magnitude of the impact.

While Lee, Adbi, and Singh (2020) emphasize the sensitivity of the subjects’ responses to framing and labels used, Heeb, Kölbel, Paetzold, and Zeisberger (2023) argue that their overall results imply that impact investors are primarily driven by emotional “warm glow” rather than calculable outcomes. Note that being consequentialist and being cognitively challenged when faced with uncertainty and unfamiliar tasks are not mutually exclusive. Given the nascent stage of the field, clearly more research is needed to advance our understanding of the underlying non-pecuniary utility functions of impact investors.

## **Asset Pricing Dynamics**

Several theoretical papers analyze the impact of investor prosocial preference on capital allocation and valuation of firms that generate positive (or negative) externality. Papers vary on their assumptions about the way in which prosocial investors internalize the externality in their utility functions. For example, Hart and Zingales (2017) assumes investors only partially internalize outcomes produced by firms that investors invest in when they actively influence the firms’ activities. Pástor, Stambaugh, and Taylor (2021) and Pedersen, Fitzgibbons, and Pomorski (2021) assume internalization of all outcomes produced by firms that investors invest in. In contrast, Oehmke and Opp (2022) and Landier and Lovo (2020) allow internalization of outcomes produced by all firms, including those that investors do not invest in. It is assumed in

these papers that the Friedman solution – i.e., firms maximize profits only and then shareholders pay tax and make donations to nonprofit organizations which generate positive externality – is either infeasible or inefficient. For example, pollution is inseparable from firm production activities and its damage is irreversible.

Pastor, Stambaugh, and Taylor (2021) analyze financial and real effects of sustainable investing in an equilibrium where (i) companies can either create positive (green) or negative (brown) externality and (ii) investors derive utility (disutility) for holding green (brown) assets, care about companies' aggregate social impact, and care about climate risk. In the model, pro-social investors' willingness to forgo return in exchange for investing in green-tilted portfolio lowers green companies' cost of capital. Climate risk also increases brown companies' expected return. Pro-social investors enjoy "investor surplus" despite earning negative alpha. This equilibrium framework is useful in understanding expected financial returns of impact funds. Impact fund investors derive utility from holding impact funds that generate positive impact, and thus are rationally willing to invest in them even though their expected financial return alone may be lower than that from investing in non-impact private equity funds.

Taking this insight to the fund-level financial performance data, Barber, Morse, and Yasuda (2021) estimate random-utility/willing-to-pay models and find that limited partners accept 2.5-3.7 ppts lower IRRs ex ante for impact funds, compared to comparable non-impact funds. These results are consistent with the predictions for pro-social investors in Pastor, Stambaugh, and Taylor (2021): pro-social investors earn negative alpha in expectation but are rationally willing to do so because of nonpecuniary utility they derive from holding impact funds in their portfolios. Note that Barber, Morse, and Yasuda (2021) do not filter on investor return expectations when identifying impact funds. Impact funds are identified as VC funds that have an explicit dual objective regardless of returns. That investors accept lower returns in expectation is a result, not an assumption.

Other papers incorporate more complex dynamics. Pedersen, Fitzgibbons, and Pomorski (2021) build an ESG-adjusted capital asset pricing model in which three types of investors differ in their preferences and information sets with respect to assets' ESG characteristics, and their respective portfolio decisions affect equilibrium asset prices and returns. ESG-Motivated investors derive utility from holding high-ESG score assets. ESG-aware investors use firms' ESG scores to update their views on risk and expected returns. ESG-unaware investors are

unaware and therefore ignore ESG scores. In the model, ESG-aware investors choose the tangency portfolio on the ESG-Sharpe Ratio frontier, whereas ESG-motivated and ESG-unaware investors choose other portfolios. The equilibrium security prices and returns are given by an ESG-adjusted CAPM and depending on the composition of the three types of investors in the economy, ESG is associated either higher or lower returns in equilibrium. Similarly, Lo and Zhang (2021) point out that depending on the sign of the correlation between the impact factor and unobserved excess returns, impact investing is associated with either higher or lower returns relative to traditional mean-variance optimal portfolios. For example, passage of a climate-friendly bill in the legislature or rollbacks of federal environmental protections could affect the sign and magnitudes of correlations between the impact factor and unobserved excess returns of a given investment. Finally, Goldstein, Kopytov, Shen, and Xiang (2022) show that because of preference heterogeneity, pro-social investors and ESG-aware investors trade in the opposite directions based on the same information, resulting in reduced price informativeness as the fraction of pro-social investors rises. The equilibrium price may not be uniquely determined.

Given the complex dynamics between investors preference heterogeneity, shifting composition of investor types and information quality/availability over time, and the laws and regulations affecting the sign and magnitudes of the relationship between the impact factor and the financial returns of investments, it is not surprising that the empirical evidence on the financial performance of impact investing is mixed. Kovner and Lerner (2015) study 28 community development venture capital funds in the US, finding that these funds tend to invest in companies at an earlier stage and in industries outside the VC mainstream and with fewer successful exits. Cole, Melecky, Mölders, and Reed (2020) study over 2,500 private equity investments made by the International Finance Corporation in emerging and developing countries and find that investments made under tighter capital control regimes in earlier years perform competitively relative to public markets, while more recent investments underperform. Jeffers, Lyu and Posenau (2021) study cash flows of 51 impact funds that target market-rate returns and find that while they underperform relative to public markets, they perform competitively relative to matched traditional VC funds.

## Impact Measurement and Other Studies

There is little academic work in the extant finance literature regarding how impact is measured and reported by impact investing vehicles. Note that ESG scores or ESG ratings are snapshots of overall ESG practices by companies, and do not measure the impact that investments by a given impact investing vehicle in the company causally generated. Moreover, ESG scores are often aimed to capture value relevance (materiality) of ESG practice for *financial* performance of the company, e.g., how robust the company value will hold up when faced with stranded asset risk, rather than the positive externality generated by the company. For these and other reasons, simply aggregating ESG scores of portfolio companies to the fund portfolio level would not be sufficient as fund impact measures.

Vandebroek, Ferraro, Mascena, and Liechtenstein (2020) take on an ethnographic approach to study practices of impact quantification inside Bridges, an impact investing fund manager in the U.K. They find that “numbers are used to contextualize qualitative matters, as opposed to decontextualize; the numbers represent qualities which remain present in the discussion, as opposed to disappearing once being translated into a number. Impact in Bridges is integrated into investment decision-making by maintaining a separate organizational unit, whose mission is to encourage dialogue on impact, and through the iteration of quantitative and qualitative tools.” (pp.213-214)

Geczy, Jeffers, Musto, and Tucker (2021) study limited partnership contracts of impact funds and find that impact funds give limited partners advisory roles that enable them to perform substantial oversight over deal selection, due diligence, conflict of interest, and other material fund activity. At the same time, the study finds that impact funds typically do not tie manager compensation explicitly to impact outcomes.

Many questions remain open for future research. In particular, the underlying investor motivations for caring about nonpecuniary outcomes of investments are not well understood. Are impact investors consequentialist, but face Knightian uncertainty and thus appear insensitive to outcome measures? Or are they more ethicist than consequentialist, and care more about the discrete fact of associating themselves with “virtue” than about how productively or efficiently the public good is being created? Is the investors’ cognitive ability to make return-impact trade-offs uniquely challenged because of the tension between the individualist, survivalist logic of

finance and the notion of collective value? As the impact measure quality improves, do the investors' responses become more sensitive to the measured impact outcomes? More empirical studies on impact measurement by impact investing vehicles and investors' response to impact performance of these vehicles will shed light on the kind of nonpecuniary utility functions these end-investors in impact investing vehicles possess. They will further improve our understanding of the allocative impact of impact investing on the environmental and social public good generation by corporations in the 21<sup>st</sup> century as the world tackles environmental and social problems on global scale.

### **Cross-References**

- Carbon Footprint of Private Equity
- Diversity in Venture Capital
- ESG in Private Debt

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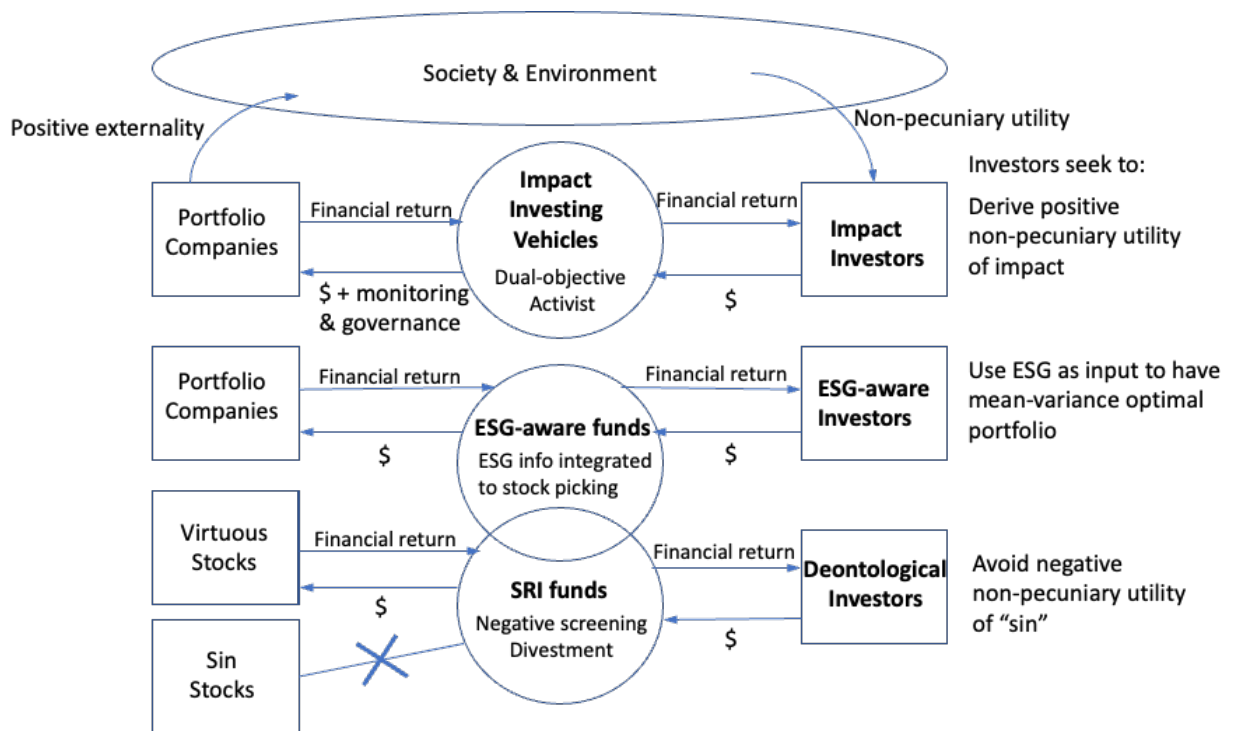


Figure 1. 3 Types of Sustainable Investors and Funds

		<b>Belief about Social Responsibility</b>	
		Consequentialist Output-based	Deontological Input-based
<b>Investor Objectives</b>	Include non-pecuniary preferences	Impact Investing	Socially Responsible Investing
	Financial risk/return only	ESG-Aware investing	

Figure 2. ESG/Impact Investment Objectives