
10. ESG performance and investor impact in public and private equities

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1. INTRODUCTION

In recent years, the term Environmental, Social, and Governance (ESG) has become ubiquitous across corporate, financial, and regulatory discourses. ESG and impact investing play a crucial role in the context of broader societal and investor priorities, such as the climate crisis, social inequality, and the Sustainable Development Goals (SDG). This has caused the lines between ESG, sustainability, corporate social responsibility (CSR), and even impact to blur.

In terms of figures alone, ESG and impact investing are rapidly growing fields that play a pivotal role in advancing sustainable development. The assets under management (AUM) in impact investments have reached \$1.57 trillion (GIIN, 2024a), and the ESG-focused AUM have surpassed \$30 trillion (Bloomberg, 2024). While these numbers are substantial, they represent still only a fraction of the \$15 trillion AUM in private markets (Preqin, 2023) and the over \$100 trillion in public equities.

Some view ESG as an ethical framework, while others use it to identify key risks and opportunities that affect financial performance (Amel-Zadeh & Serafeim, 2018). In this chapter, we adopt a broad view of ESG as a concept that considers both a firm's impact on the environment and society and how these dimensions, in turn, affect the firm. This view, referred to as “double materiality”, will guide our use of the term ESG performance.

The objective of this chapter is twofold: first, to demonstrate the rationale for integrating ESG considerations into investment decisions; and second, to outline how investors can enhance the ESG performance of their portfolios and generate positive impact.

Therefore, this chapter first examines the performance of ESG investing on the corporate and capital markets' financial returns. The focus is on returns, risks, market valuations, and persistence. Studies point toward the effectiveness of corporate investments in ESG in enhancing corporate financial performance (Friede et al., 2015; Narula, et al., 2023). This provides a rationale for ESG investing that goes beyond creating ESG performance and sustainable outcomes that can also appeal to purely financial return-oriented investors. Whether ESG investing can enhance investors' financial returns is explored in Section 3.

Simply providing capital is not enough. Awareness and ongoing efforts toward sustainability require an intensive dialogue between companies and their stakeholders. Stakeholder engagement, active ownership, and impact of investors therefore form the basis for Sections 4 and 5 on the sustainable implementation of ESG investing and the performance achieved in the process (Muaaz & Ali, 2024).

On the one hand, this is about the question of whether the public markets are able to raise the necessary financial resources to accommodate the upcoming huge investments in public and private sustainability projects. Only by supplementing with private markets will it be

possible to provide the necessary volumes of financial resources in a reasonable time (Park & Lee, 2023).

At the same time, the impact of investors in relation to the implementation of sustainability goals on the public market is limited. Here, private markets offer effective additions to capital allocation and the exercise of impact (Bhandari & Javakhadze, 2017). This particularly applies to large projects such as infrastructure investments or impact investing projects that can be financed via private markets. Here, too, performance considerations enable a conclusive assessment of the private equity asset class for ESG investments on a sound basis. In addition, a comparison between public markets and private markets is possible with regard to the implementation of ESG investments and the associated advantages and disadvantages of their asset classes. PE offers many advantages for impact-oriented ESG investors but does not come without drawbacks of its own, such as limited ESG disclosure, challenges in comparing returns, and illiquidity.

The entire chapter is based on a comprehensive literature review process and draws on both individual analytical studies and meta-studies (see Christensen et al., 2021). The comparative analyses of investor impact in public and private equities are carried out on the basis of current frameworks on capital allocation and stakeholder engagement (see Bose, 2020). The analysis is limited to the asset classes of public and private equities; other asset classes, such as listed debt and private debt, have differing relationships of ESG performance and investor returns and different avenues for stewardship, such as debt covenants.

2. ESG PERFORMANCE AND CORPORATE FINANCIAL PERFORMANCE

2.1 ESG Performance from a Corporate Perspective

In the literature, there has been long-standing discussion about the extent to which ESG performance affects a company's profitability, valuation, capital efficiency, and risk. Many articles have focused on the examination of a consistent relationship between ESG performance and Corporate Financial Performance (CFP). An overview of the most important studies and results is presented below.

Roughly 90% of studies found a non-negative ESG–CFP relation. More importantly, the large majority of studies report positive findings. Friede et al. (2015) highlight in their evaluation of about 2200 academic studies that the positive ESG impact on CFP appears stable over time. Promising results are obtained when differentiating for regions.

Another meta study by Whelan et al. (2021) also finds a positive relationship between ESG and financial performance for 58% of the corporate studies focused on operational metrics such as ROE, ROA, or stock price, with 13% showing neutral impact, 21% mixed results, and only 8% showing a negative relationship. Looking at investor studies, 65% showed positive or neutral performance compared to conventional investments, with only 13% indicating negative findings.

Aydoğmuş et al. (2022) examine the effect of ESG performance on firm value. Their results suggest that combined ESG scores are positively and significantly associated with firm value and firm profitability. Individual Social and Governance scores have a positive and significant

relationship while the Environment score does not have a significant relationship with firm value.

According to Velte (2017), Alareeni and Hamdan (2020), and Koundouri et al. (2022), the G dimension has the strongest influence on the CFP within the E, S, and G categories compared to the E and S dimensions. However, the difference between E and S concerning the impact on CFP with positive and negative outcomes is marginal. Meta-analyses focusing on social aspects (van Wijk et al., 2008; Crook et al., 2011; Stam et al., 2014) usually find higher correlations, in contrast to environment-focused meta-analyses (Albertini, 2013; Dixon-Fowler et al., 2013; Endrikat et al., 2014). Thus, the E, S, and G dimensions individually demonstrate no meaningful superior positive relation to CFP.

Still, Chatterji and Toffel (2010) provide evidence that companies react to ranking low on environmental benchmarks by improving their environmental performance, especially when the cost of the necessary reforms is low, and when the company operates in a highly regulated industry. A problem with this effect, however, is that there are remarkable differences between the benchmarks compiled by different ESG rating agencies. Due to these differences, Chatterji et al. (2016) conclude that “Socially responsible investing ratings will have a limited impact on driving rated firms toward any particular shared behaviors”. One determinant of the effectiveness of the impact of benchmarking is thus the consistency of ESG benchmarks—the more consistent ESG benchmarks are, the greater is their effect on company activities.

Furthermore, Barnett and Salomon (2012) found a U-shaped relationship between corporate social performance and corporate financial performance. Specifically, companies with low ESG performance have higher CFP than those with medium ESG performance, but companies with high ESG performance have the highest CFP. That is, the companies with the highest ESG performance usually have the highest CFP.

A study by Eccles et al. (2012) reported that “high” sustainability companies outperform “low” sustainability companies in terms of stock market and accounting performance. In the study, there was an attempt to distinguish “material” from less important ESG factors. In so doing, they find a significant positive correlation between performance on material ESG factors and corporate and investor financial performance. The findings suggest that investing in high ESG performance promises financial return for the firm in terms of both value and profitability.

In general, ESG can boost CFP for some sectors by enabling businesses to maintain sustainability, establish a solid reputation, win the trust of stakeholders, and contribute to solving sustainable development issues. Additionally, these results can boost management effectiveness, which in turn can help firms succeed. In the context of environmentally sensitive industries, the study of Chen et al. (2023) provides empirical insights to the association between the corporate firms’ success and ESG performance. In addition, the analysis shows the significance of ESG integration in the business organization.

2.2 ESG Performance and Firm Risk

Another line of research presents evidence of the relationship between ESG performance and firm risk. The rationale behind investigating this topic, especially in developing countries where firms face many operational uncertainties, is the potential of ESG actions to reduce firm risk and consequently improve CFP (Yu et al., 2018; Oualaid Janah & Sassi, 2021).

Looking at the three dimensions of ESG, Sassen et al. (2016) showed that social performance significantly decreases the three risk measures: systematic risk, idiosyncratic risk, and total risk. Environmental performance generally lowers idiosyncratic risk whereas systematic risk and total risk are only affected in environmentally sensitive industries. In contrast, the study could not detect a significant effect of corporate governance performance on firm risk. Their findings suggest that ESG performance, particularly in S, has the potential to increase firm value through lower firm risk. A growing body of research suggests that ESG factors can contribute to long-term CFP either through increasing upside opportunities or minimizing downside risks (e.g., Glossner, 2019; Aw et al., 2022).

The results of Xiong (2021) show that green stocks with lower ESG risk ratings outperform brown stocks with higher ESG risk ratings significantly but have also provided better tail-risk protection than brown stocks, particularly during the COVID-19 crisis. It is not surprising to see that green stocks provide better tail-risk protection. A low ESG risk rating signals to investors that the firm is well-managed and has good governance structures in place. By following the principles of socially responsible practices, green firms are assumed to be less likely involved in adverse events, which leads to reduced tail risk.

The economic rationale for this is explained in research by Godfrey et al. (2009), Jo and Na (2012), and Oikonomou et al. (2012). Companies with strong ESG characteristics typically have above-average risk control and compliance standards across the company and within their supply chain management. Because of better risk control standards, high ESG-rated companies suffer less frequently from severe incidents such as fraud, embezzlement, corruption, or litigation cases (Hong & Kacperczyk, 2009) that can seriously impact the value of the company and therefore the company's stock price. Hoepner et al. (2011) call this an "insurance-like protection of firm value against negative events".

2.3 ESG, Sectors, and Regional Differences

Some studies have analyzed potential differences in the ESG–CFP relation across regions. The study of Şeker and Güngör (2022) shows that in some but not in all sectors, firms with strong ESG performance demonstrate a greater profit margin. In the utilities sector, ESG performance has no impact on financial performance according to the regression results. This may be due to the specific characteristics of either the sector or the business and the way it operates to be profitable (Koundouri et al., 2022).

Though findings are far from consistent, some hypothesized that the ESG–CFP relation across countries is particularly affected by a higher social orientation (Miras-Rodríguez et al., 2015). Others find that the ESG–CFP relationship for US assets is significantly higher compared to non-US assets (Allouche & Laroche, 2005; Dixon-Fowler et al., 2013). In contrast, a few researchers also discovered significantly higher effects for studies conducted in the rest of the world (Albertini, 2013; Golcic & Smith, 2013).

Regional findings reveal that within developed markets, there is a higher share of positive results from North America compared to Europe and Asia/Australia (Brooks & Negro, 2005; Lee & Choi, 2023). This can partially be explained by the lower share of portfolio studies within the sub-sample for North America (Friede et al., 2015).

But investors in European countries (except Italy) also do not jeopardize their returns by investing in companies with high ESG scores. For Italy, Gavrilakis and Floros (2023) argue that if the benefit of investing in high ESG scoring companies is not significantly higher, then

investors tend to select smaller companies with a higher price-to-book value and a higher Sharpe ratio, as they are more likely to generate higher returns. Moreover, Italian firms are more susceptible to ESG issues, as ESG performance and stock return seem to have a significant negative correlation.

In summary, there are differences in the ESG–CFP relationship between sectors and countries. Furthermore, ESG trends can lead to structural changes in emerging and frontier markets (Swiss Sustainable Finance, 2016).

2.4 ESG Effects and Disclosure over Time

The question has been raised of whether the ESG–CFP relation is stable over time (Griffin & Mahon, 1997; Borgers et al., 2013). The increasing number of signatories to the UN Principles for Responsible Investment (UN PRI) and the implementation of ESG investment strategies show a growing awareness of the positive ESG–CFP relationship. However, empirical findings of meta-analyses investigating if investors' increased focus on stakeholder issues also leads to changing ESG–CFP patterns over time present a fuzzy picture (Pavie & Filho, 2008; Rubera & Kirca, 2012; Albertini, 2013; Endrikat et al., 2014).

From a corporate point of view, ESG actions are generally intended to improve financials over the long term (Vitolla et al., 2019). For example, the installation of environment-friendly equipment may lead to reduced economic costs through savings from water, energy, and waste reduction (Hebb et al., 2010) and, as a result, to a higher level of profitability. These reduced economic costs are expected over the long-term rather than instantly. Therefore, the effect on CFP might not be observable until after a period of time (Oualaid Janah & Sassi, 2021).

Over the past two decades, ESG reporting has gained importance significantly, especially for companies with a high impact on the environment and society. To promote corporate ESG reporting, many reporting frameworks have been developed and subsequently updated by international organizations over the last decade, e.g., Global Reporting Initiative (GRI) and International Sustainability Standards Board (ISSB).

Capital market regulators use these frameworks as a basis for elaborating mandatory ESG reports. Within the international regulatory framework and regulations, European Union (EU) standards on sustainability reporting and ESG reporting are particularly noteworthy. The Non-Financial Reporting Directive (NFRD), introduced in 2014, set the EU on a clear course toward greater business transparency and accountability on social and environmental issues (Directive 2014/95/EU).

The NFRD was a key step in the EU's efforts to enhance ESG transparency, requiring large companies with more than 500 employees to disclose how they manage ESG challenges. However, quickly, the NFRD faced criticism for its limited disclosure requirements and scope.

In response to the critique, the NFRD was replaced by the Corporate Sustainability Reporting Directive (CSRD). The new directive, starting phased implementation in January 2024, is a reinforcement and extension of the existing regulatory framework. The CSRD is designed to strengthen the requirement for companies in the European Union to publish sustainability-related information. The CSRD significantly expands the group of companies required to report sustainability information compared to the NFRD. Besides large and public companies, smaller companies are also affected (Directive 2022/2464/EU).

In order to reduce the administrative burden on companies, especially SMEs, the European Commission presented a legislative proposal on 26 February 2025 with the so-called EU

Omnibus Package. The omnibus simplification package aims to reduce the regulatory burden on companies by repealing, amending, and reducing in scope several EU requirements related to sustainability and corporate reporting (European Commission, 2025).

To meet all of these new requirements for greater transparency in sustainability reporting, companies as a whole have made considerable progress in improving the quality of their reporting (Wasiuzzaman & Mohammad, 2020). It is therefore all the more surprising that the improvements in sustainability disclosure have not yet improved the alignment between ESG rating agencies and market participants on companies' ESG performance, as Christensen et al. (2022) show.

2.5 Summary

We draw the following conclusions about the relationship between ESG and financial performance from our previous analysis:

- Corporate management of ESG issues results in improved operational metrics such as ROE, ROA.
- Improvements in CFP due to ESG factors become more pronounced over a longer time horizon.
- Managing for a low-carbon future improves CFP.
- Firms' ESG performance has a positive impact on financial reporting quality.
- Reporting regulations should carefully balance transparency with administrative burdens.
- ESG investment strategy integration seems to perform better than negative screening approaches.

Overall, however, the empirical results clearly show that sustainable investments do not result in a loss of CFP. It is therefore possible to achieve a positive impact, reduce reputational risks, and at the same time generate appropriate returns.

3. ESG PERFORMANCE AND INVESTOR FINANCIAL PERFORMANCE

3.1 ESG Performance and Investor Perspective

As we have established above, better ESG performance is associated with better CFP. But does this also translate to better returns for equity investors? Academic evidence differs. For example, Giese et al. (2021) find an outperformance for portfolios that invest according to the MSCI ESG rating. Bruno et al. (2022) also observe a financial outperformance for ESG investors but explain most of it with factor and sector biases that come with ESG investing.

Similarly, Pástor et al. (2022) observe an outperformance by green stocks that can be attributed to an increase of climate concerns. Bolton and Kacperczyk (2021), on the other hand, find that high-emitting firms offer investors higher returns as investors demand compensation for their exposure to carbon risk.

In contrast to those studies finding directional evidence, Halbritter and Dorfleitner (2015) conclude that no abnormal returns should be expected from an ESG investing strategy. They detect no significant return difference between companies with high and low ESG ratings using data from different rating providers for the US market. This result is consistent with Junkus and Berry (2015), who find that the financial performance of socially responsible mutual funds and indices generally are not significantly different from conventional funds or indices.

Similarly, Morgan Stanley (2019), using fund data from Morningstar, finds that the returns of sustainable funds were in line with comparable traditional funds. There was no consistent and statistically significant difference in total returns. Moreover, the report emphasizes that sustainable funds may offer lower market risk and show a smaller downside deviation than traditional funds. This is a consistent and statistically significant finding. The study also finds that in turbulent markets, sustainable funds' downside deviation was significantly smaller than that of traditional funds. The authors stress that these findings might come as a "surprise to the 53% of individual investors who believe that investing sustainably requires a financial trade-off".

A recent meta study by Atz et al. (2023), looking at a large sample of peer-reviewed journal articles from 2015 to 2020, finds that, on aggregate, the returns of ESG investing are indistinguishable from those of conventional investing. Still, there are conceptual arguments for an equal, a worse, and a better financial performance for investors in firms with strong ESG performance that are discussed below.

3.2 Transmission of ESG Performance to Investor Financial Performance

Koundouri et al. (2022) shows that, in general, companies with a good ESG performance tend to have lower beta and, therefore, lower risk. The beta coefficient, a widely used measure for shareholders' risk, tends to be lower in companies with strong ESG performance, thus implying a comparatively lower equity risk. Lower equity risk premia are contrasted by the better CFP of firms with good ESG performance. Several articles analyze the transmission channels of ESG performance to CFP and investor financial performance.

In contrast, studies by El Ghouli et al. (2011), Eccles et al. (2014), and Gregory et al. (2014) argue that a strong ESG profile leads to higher valuations through a transmission process. In their economic rationale, companies with a strong ESG profile are less vulnerable to systematic market shocks and therefore show lower systematic risk. In the CAPM model framework, beta measures the systematic risk exposure of companies (i.e., lower beta means less systematic risk) and translates the equity risk premium into the required rate of return for the individual company. A lower systematic risk means a company's equity has a lower value for beta, and therefore, investors require a lower rate of return. Ultimately, this translates into a lower cost of capital for a company. Finally, a lower cost of capital leads directly to the last step of the transmission mechanism; in a discounted cashflow model framework, a company with a lower cost of capital has a higher valuation.

Research by Hong and Kacperczyk (2009) and El Ghouli et al. (2011) shows that the transmission channel from lower systematic risk to higher valuations can also be explained through the relative size of the investor base. The authors argue that companies with low ESG ratings have a relatively small investor base because of two effects:

- Investor preferences: Risk-averse investors and socially conscious investors avoid exposure to low ESG-ranked companies.
- Information asymmetry: This problem between companies and their investors is less severe for high ESG-rated companies, which are more transparent to their risk exposures, risk management, and governance standards.

Consequently, ESG factors have an impact on company valuation and cost of capital, and as such become an integral part of financial analysis. ESG affects the valuation and performance of companies, both through their systematic risk profile (lower costs of capital and higher valuations) and their idiosyncratic risk profile (higher profitability and lower exposures to tail risk).

Another indirect transmission channel is investor demand. Lou (2012) shows that the flow-driven return effect can fully account for fund performance persistence and partially explain stock price momentum. Research by van der Beck (2021) demonstrates that the investment flows toward firms with high ESG performance have affected stock prices. Pástor et al. (2022) explain the outperformance of “green stocks” over the past years with increases in environmental concerns and thus expect lower returns going forward. Hong and Shore (2023) show that at least some investors are driven by nonpecuniary motives and are thus willing to accept lower expected returns in exchange for ESG performance. A study by Alessi et al. (2021) indicates a willingness from investors to exchange some return for less exposure to climate risks (greenium).

Bofinger et al. (2022) find that firms with high ESG ratings are overvalued. They argue that this misvaluation is caused by the increasing demand for sustainable assets. This explanation is consistent with a study by Berg et al. (2022) that finds MSCI ESG rating changes affect the holdings of ESG funds and, in the case of a downgrade, result in a -2.37% abnormal return while upgrades cause a weaker positive effect.

The timeframe in which ESG performance translates into investor financial performance is also interesting to investigate. Most corporate ESG reports are available at the period end, along with periodic financial reports. These reports provide more information about past ESG performance than anticipated actions. Due to this lag, same-year ESG performance might not impact market financial performance as much as previous ESG performance (Oualaid Janah & Sassi, 2021).

Thus, the transmission from ESG characteristics to financial value is a multichannel process, as opposed to factor investing, in which the transmission mechanism is typically simpler and one-dimensional.

3.3 Drivers of ESG Investor Returns

In the lead article “Creating Shareholder Value through ESG Engagement”, Mercereau et al. (2022) demonstrate that enhancing key E, S, and G variables for each portfolio company tends to boost return. The authors single out different ESG features chosen for their degree of materiality. They give empirical evidence on over 2000 globally listed firms over an eight-year period from 2012 to 2020.

Their argument is straightforward: better ESG features mean healthier firms, and healthier firms trade at higher prices. Which ESG improvements can boost share price mostly depend on firms. More than half the gains come from just one or two ESG variables. The research

allows to identify such improvements for each firm and, hence, to prioritize ESG engagement. The focus on creating shareholder value should be persuasive to companies, creating a virtuous circle between ESG performance and returns.

Henisz et al. (2019) from McKinsey Research offers five ESG drivers in its concept that are suitable for establishing a link between ESG and value creation at a strategic level, which are more holistic in their cause-and-effect chains. The five drivers have applications in specific industries, sectors, or regions, for example. Still, all five should be considered regardless of a company's business model or location. The potential for value creation is too great to leave any of them unexplored.

But while the case for a strong ESG offering is becoming more compelling, there is a lack of understanding of how these criteria are linked to value creation. Therefore, an understanding of why these criteria link to value creation is necessary. ESG links to cash flow in five important ways:

- **Top-line growth:** A strong ESG proposition helps companies tap new markets and expand into existing ones. They were perceived to be beneficial to stakeholders. These companies achieved higher valuations than competitors with lower social capital.
- **Cost reductions:** ESG can also reduce costs substantially (such as raw material costs and the true cost of water or carbon). There is a significant correlation between resource efficiency and financial performance.
- **Reduced regulatory and legal interventions:** A stronger external-value proposition enables companies to achieve greater strategic freedom. Strength in ESG reduces companies' risk of adverse government action and engenders government support.
- **Employee productivity uplift:** A strong ESG proposition helps companies attract and retain quality employees, enhances employee motivation by instilling a sense of purpose, and increases productivity overall. This is positively correlated with shareholder returns.
- **Investment and asset optimization:** A strong ESG proposition enhances investment returns by allocating capital to more promising and more sustainable opportunities (e.g., renewables, waste reduction). It helps companies avoid stranded investments that may not pay off because of longer-term environmental issues (e.g., coal-fired power plants).

Each of these five levers for value creation should be considered when approaching ESG opportunities. The five links to value creation are suitable for identifying new ESG opportunities and thus provide a chance to steer a company in a future-oriented sustainable direction (Henisz et al., 2019).

In the context of new ESG opportunities, Giese et al. (2019) argue that ESG characteristics are a useful indicator of corporate fundamentals that cannot necessarily be observed elsewhere. However, in an efficient market, the information will be priced in as soon as it becomes available. This makes it difficult for investors to exploit without incurring significant research costs.

Investors looking to exploit ESG performance characteristics need to find characteristics that are not already priced into the share price. Edmans (2012) provides one example of such a characteristic relating to job satisfaction. Firms in the "100 Best Companies to Work for in America", a list that is annually updated and published by Fortune magazine, generated a significant 2.3–3.8% higher stock return per year than their peers from 1984 to 2011.

Some ESG strategies have generated an alpha that can be explained by sector and factor biases (Bruno et al., 2022). Over recent years, a few technology firms have been responsible for a large part of investor returns. Groups of firms have been given nicknames such as “FAANG” and “Magnificent 7” to illustrate their dominance. These firms are mostly technology firms with high expectations for future growth. They also tend to have high ESG ratings. Therefore, ESG investors tend to overweight these firms and sectors while underweighting underperforming sectors such as energy.

3.4 ESG Momentum and the Impact on Performance

To verify the conjecture that ESG rating changes (ESG momentum) can be a financially significant indicator, Giese et al. (2019) compare the historical performance of the top ESG momentum quintile to the bottom ESG quintile. The ESG momentum indicator is calculated as the year-on-year change in the industry-adjusted ESG score. The study concludes that ESG momentum can be a useful financial indicator in its own right and may be used in addition to the actual ESG rating in index or portfolio construction methodologies.

It is important to emphasize that the financial value of ESG momentum is also supported in existing literature, e.g., Khan et al. (2015). The authors used MSCI ESG Ratings data to create customized ESG scores and performed a regression analysis of stock returns to ESG score changes (i.e., ESG momentum), neutralized with respect to changes in size, market-to-book ratio, leverage, profitability, R&D intensity, advertising intensity, institutional ownership, and sector membership. The authors found statistically significant predictive power of ESG momentum for stock returns.

Dimson et al. (2015) report an outperformance for activist ESG funds in terms of investor financial returns. Hong and Shore (2023) point toward the active engagement of these funds leading to positive ESG momentum as an explanation for their outperformance.

3.5 Summary

We draw the following conclusions for the relationship between ESG Performance and Investor Financial performance:

1. Good ESG performance does not necessarily lead to better investor financial returns.
2. Firms with high ESG performance have lower risk premia, leading to lower required rates of return for investors.
3. ESG investing appears to provide downside protection, especially during a social or economic crisis.
4. Investor returns of ESG are driven by several transmission channels, such as cost of capital and external factors, such as investor demand.
5. Changes in ESG performance can result in abnormal investor returns.

This makes it crucial for investors to understand how they can improve the ESG performance of firms.

4. ESG INVESTING AND IMPACT IN PUBLIC EQUITIES

4.1 From ESG Investing to Impact

The previous chapters have shown that corporate and investor financial performance is a key driver for the implementation of sustainability. This leads to the fundamental question of how ESG investing can be implemented and how investors can improve ESG performance and generate impact. The suitable approaches differ by asset class. In this section, we focus within the public market on public equities. Public debt is not included in the analysis. We start by clarifying the terminology:

ESG investing has the primary objective of achieving better long-term financial performance by incorporating environmental, social, and governance factors into investment decision-making and/or avoiding sectors that have particularly high ESG risks, such as coal mining or tobacco.

Impact, we can achieve through ESG investing by the way of capital allocation, stakeholder engagement, or other elements such as signaling. Impact, in the true sense of sustainability, means the influence of investors on companies to strategically anchor sustainability in the company and implement it there (Kölbel et al., 2020).

Impact investing is to be distinguished from ESG investing and exerting impact. Although impact investing also involves impact, this refers to the realization of social or ecological projects by companies at home or abroad, often in developing countries. Impact investments are investments made with the intention to generate positive, measurable social and/or environmental impact alongside a financial return. This is the definition by the Global Impact Investing Network (GIIN). There is potential for a trade-off between the two objectives, meaning that the impact investors might have to contend with lower returns than ESG or conventional investors (GIIN, 2017).

This definition aligns with other commonly used definitions, such as that by Bugg-Levine and Emerson (2011) and the one used by the International Finance Corporation (IFC), the funding organ of the World Bank. Standards such as ISSB and GRI have also been set for reporting on ESG issues for public firms.

4.2 What Is the Impact of an Investment?

In this section, we will discuss the general possibilities for investors to achieve impact in public equity markets. Impact can be referred to as a change in the real world that is caused by an activity. ESG impact thus describes changes in the environmental and social dimensions but can also include changes in the governance dimension. For an investor to have impact, in general, certain conditions need to be met; different sources give these conditions different names and slightly different definitions, but the criteria can be summarized as intentionality, measurability, and additionality (Kölbel et al., 2020):

- **Intentionality:** Investors must intentionally seek to achieve social or environmental benefits in addition to financial returns. They have an explicit objective to achieve a positive change.

- **Measurability:** Impact generated by the investment must be measurable and verifiable. ESG investors should track and report the social or environmental outcomes of their investments; the positive effects should be tangible and transparent.
- **Additionality:** Investments should contribute something that would not have occurred otherwise in a causal way and lead to outcomes that wouldn't have been possible without their involvement.

The intentionality condition is usually covered by having an impact objective. Measurability poses a challenge as not every outcome is easily measurable. Sometimes firms do not provide the data investors would need to assess their impact. However, the issue of data availability is diminishing as firms are improving their sustainability disclosure. Still, claiming impact that is not measurable and thus not verifiable is problematic, as it can be considered greenwashing. Therefore, owing to increased public and regulatory scrutiny, financial intermediaries have become reluctant to speak of an impact that is not measurable. Fortunately, several frameworks exist that support investors in defining and measuring their impact objectives (Liang et al., 2022; de Sousa Barbosa et al., 2023; Liu et al., 2023; Gutterman, 2024).

The Sustainable Development Goals (SDGs), developed by the United Nations, are a well-known framework that provides a global blueprint for addressing the world's most pressing social and environmental challenges. The SDGs consist of 17 goals and 169 indicators. The SDGs are primarily directed at sovereign countries, but investors and firms have increasingly started to align their activities to the SDGs and use the framework to benchmark company impact. The Impact Reporting and Investment Standards (IRIS+) managed by GIIN is another widely used framework offering a comprehensive catalogue of indicators for measuring impact.

This definition, with its emphasis on additionality and causality, is in line with other definitions such as the IFC (World Bank). The last of the three conditions, additionality, is the hardest to meet. As it entails both causality and showing that, without the investment, the same impact would not have occurred. How these criteria can be established is discussed separately in the next section.

4.3 Theory of Change and Impact Levers

To establish impact causality, one should distinguish between investor impact and the company impact (Brest & Born, 2013). Investors cannot directly impact the real world through their investments. Rather, they must influence the companies' activities, either by enabling companies with good ESG characteristics to grow or by encouraging companies to improve their ESG characteristics. Only investor activities causally linked to an improvement in the companies' impact have achieved a real-world impact.

How can an impact investor influence a company and thus create investor impact? The available impact levers depend on the asset class. Kölbel et al. (2020) establishes three potential mechanisms/channels through which investors can influence company activities in public equity markets: capital allocation, engagement and stewardship, and market signaling. The efficacy of these levers is constrained by the nature of public markets, the fragmented ownership of large public companies, and the alignment of investor goals with corporate strategy. The potential and limitations of the three channels in public equities are discussed in the following paragraphs.

4.3.1 Capital allocation

The capital allocation channel refers to the idea that investors influence companies by investing in high ESG firms and selling or avoiding low ESG firms. Firms with good ESG performance can attract more investors, which increases their market capitalization and lowers the cost of capital.

The efficiency of capital allocation is constrained by the nature of public markets. In public markets, investors usually trade shares with other investors. Buying shares on the stock market does not provide additional capital to the firm. Moreover, investors who are indifferent to ESG performance may view any sell-off as an opportunity to purchase shares at a lower price. This limits the effect capital allocation has on the market price, except when holders of large blocks of shares sell many shares at once.

In addition, firms have access to diversified sources of capital, including debt markets, and are not solely reliant on equity financing. Large firms can fund investments from their own cashflows and are thus quite insulated from stock market pressure. For younger and small firms, especially ones operating in less developed markets, obtaining financing is more difficult (Beck, 2006). Such companies are more likely to be influenced by the allocation of capital. Private equity funds are common investors in this segment. Their investor impact is addressed in Section 5. Overall, Kölbel et al. (2020) note little evidence for a link, especially between retail investors' capital allocation and the companies' activities for larger firms.

4.3.2 Engagement and stewardship

Engagement and stewardship (also called Active Ownership) refers to the practice of investors actively communicating with companies to encourage improvements in sustainability practices and governance. There are various forms of engagement, ranging from voting at shareholder meetings to dialogue with management to activist strategies such as exerting public pressure and taking board seats. Investors can provide firms with know-how and file shareholder resolutions to push for environmental and social reforms (Admati & Pfleiderer, 2009; McCahery et al., 2016; Amel-Zadeh & Serafeim, 2018).

The engagement and stewardship channel is most efficient for holders of shares. It relates to Hirschman's (1970) commonly referenced concepts of shareholder "voice" and "exit". Engagement and stewardship activities fall under the concept of the voice, whereas shareholders should consider an exit, thus selling their shares, if the company is unwilling to engage. A credible threat of exit can improve the chances of successful engagement (Goodman et al., 2014). An exit ties back to the capital allocation channel previously discussed. Shareholders can engage individually or collectively.

Engagement can lead to incremental improvements. For example, Climate Action 100+ (2023) is a large shareholder initiative engaging with public firms on climate. It publishes case studies and annual progress reports using outcome-based indicators to monitor progress, such as whether an engaged firm discloses GHG Emissions, whether it has GHG reduction targets, or whether it allocates capital to the issue. Engagement and stewardship can also be delegated to stewardship overlay services such as Columbia Threadneedle, Federated Hermes, Robeco, and Sustainalytics. All of them track their engagement progress using milestones and offer case studies of successful engagements. Robeco exemplifies impact-focused engagement, using the SDGs to guide investments and setting specific targets for portfolio companies. These targets range from tangible reductions in CO₂ emissions to the formulation of a carbon strategy. Robeco regularly reports on progress (see Robeco, 2023).

Research by Hoepner et al. (2011), Dyck et al. (2019), and Barko et al. (2022) shows that shareholder proposals lead to subsequent increases in the ESG ratings of firms. Hoepner et al. (2024) show that successful engagement on environmental topics leads to a significant reduction in downside risk.

A key challenge in engagement and stewardship is power asymmetry. Most investors hold only a small stake in large firms, limiting influence. Hence, Dimson et al. (2015; 2023) and Barko et al. (2022) show that engagement is more effective when shareholders hold larger stakes or collaborate. Success also depends on sustained dialogue, expertise, and resources, which many investors, especially passive ones, lack. Effectiveness varies by sector and region, with ESG engagement more impactful where regulation and culture is supportive.

Despite limitations, engagement and stewardship offer a way for investors to influence corporate behavior in public equities, though often through incremental rather than transformative change. Impact investors can amplify their influence by choosing funds with strong engagement strategies.

4.3.3 Signaling

Market signaling occurs when investors influence corporate behavior by reflecting and voicing sustainability preferences in investment decisions, signaling other investors to follow. If enough investors reward strong ESG performance, company valuations may rise, incentivizing better sustainability practices. Conversely, avoiding low-ESG firms or fossil fuel companies can stigmatize them, prompting change. Investors can also signal positively by publicizing sustainability-driven investments. Non-market signaling aims to raise awareness and shape public discourse for broader political and social change.

However, the signaling channel faces challenges. Stock prices are influenced by many factors, and short-term concerns often overshadow longer-term ESG concerns. Greenwashing further complicates the issue, as firms may adopt superficial ESG measures to avoid negative signaling without substantive change. Firms in stigmatized sectors may deem the cost of changing their business model too high. Moreover, market and non-market-based signals affect firms' behavior indirectly. For this reason, to date, there is no empirical evidence that confirms the effectiveness of the signaling channel (Kölbel et al., 2020).

Ultimately, achieving impact through equity investments in public markets is challenging. The mechanisms available to investors—capital allocation, engagement and stewardship, and market signaling—are constrained by the nature of public markets, diffuse ownership, and the varying degrees of influence that investors can exert over companies.

4.4 Difference Between Impact and Impact Alignment

The biggest challenge for an impact investor in public equities is influencing the listed company. If the investor cannot influence the activities of the firm, the impact of the firm on society and the environment, or any change therein, cannot be reliably attributed to the investors. This is where the concept of impact alignment becomes relevant. Buying shares in a listed company that itself has a positive impact by contributing toward, for example, an SDG is referred to as impact alignment (Paetzold et al., 2022; Busch et al., 2024). The investment does not create additional impact as the stock is bought on the secondary market, but it aligns the investor with the SDG. In practice, investors and financial intermediaries often speak of

impact even when they are only aligning with a sustainability goal and not directly and measurably contributing toward it (Kölbel et al., 2020).

The SDG alignment of companies is not easy to measure. However, several specialized firms such as MSCI ESG, RobecoSAM, and Morningstar Sustainalytics have developed methodologies to measure alignment. Their approaches are similar. MSCI ESG is used as an illustrative example. It assesses a company's product and operational alignment dimensions separately for each of the 17 SDGs (MSCI, 2024). Product alignment is derived from the share of revenue of a firm that is aligned or misaligned with a certain SDG. The operational alignment considers factors such as a firm's policies, initiatives, and controversies that relate to an SDG. The results for the two dimensions are subsequently merged to calculate a net alignment score for each SDG. In practice, most firms have positive alignment with some SDGs and negative alignment with others.

An investor looking for alignment with SDG 3 (Good Health & Well-Being) could buy shares in a large pharmaceutical company such as Pfizer, Novo Nordisk, or Roche. These companies have high alignment scores with SDG 3, as they derive a large share of their revenue from medical products. The transaction on the secondary market is unlikely to influence the companies in any meaningful way as these firms have large market capitalizations and are difficult to engage with. It will thus not create investor or real-world impact.

An investor looking to create impact in SDG 3 could positively influence a firm to improve its alignment with SDG 3. For example, a mining firm that is polluting a river could be convinced to make its operation less harmful. However, this is difficult due to the limited effectiveness of the investor impact channels in public equities. Alternatively, the investor enables a firm to scale up that has products with positive SDG 3 alignment. This can be done through Private Equity investments, such as Venture Capital and Growth Capital. Private Equity offers more direct means to influence firm behavior, and this establishes causality for the impact investor (Bugg-Levine & Emerson, 2011; Kölbel et al., 2020). A potential for private equity to create impact is explored in the next chapter.

4.5 Summary

Investor impact needs to be intentional, measurable, and additional. Real-world impact is created when the actions of the investor cause a change in the firm's impact on the planet or society. Investors have three mechanisms available to influence the firms: capital allocation, engagement and stewardship, and signaling. Engagement and stewardship is the most promising mechanism. It is most effective for large shareholders, smaller firms, or when exercised collectively.

Overall, the effectiveness for all three impact mechanisms is limited in listed equities. Investors can instead settle for impact alignment, thus buying shares in firms which already have a positive impact, or look at other asset classes, such as private equities, if they want to generate real-world impact.

5. ESG INVESTING AND IMPACT IN PRIVATE EQUITIES

In the previous section, we highlighted the challenges and limitations for investors to generate impact in public equity markets. Private equity offers an alternative for investors looking to

generate impact. Accordingly, ESG considerations are becoming increasingly important for private equity investors (Barber et al., 2021).

This is reason enough for us to look at ESG in private equity and compare it to public equity in terms of opportunities for impact. In this section, we focus specifically on private equity within the private market and, with reference to Section 4, compare it to public equity within the public market to highlight the differences and opportunities for ESG impact between the two equity asset classes. Private and public debt are not included in the analysis.

When it comes to managing ESG factors effectively, private equity investors have inherent corporate governance advantages compared to their public market peers. These provide opportunities to implement superior sustainable investment strategies and to enhance investment returns. Private equity investors are increasingly recognizing the expectation and opportunity for them to invest sustainably and are leveraging these inherent advantages. Currently, nearly 300 signatories to the UN PRI invest in private equity (Heltzer, 2018).

ESG integration in private equity is a relatively new phenomenon, as the movement to integrate ESG issues into the private equity industry really took off in 2009 with the adoption by the United States Private Equity Council rules of conduct covering ESG issues, followed by the creation of numerous working groups in professional organizations and within the United Nations Principles for Responsible Investment and the development of formal ESG disclosure.

5.1 ESG in Private Equities

ESG research has so far been primarily focused on public markets and only to a lesser extent on private markets. Only a few studies that meaningfully contribute to the topic of ESG in private markets exist (Abraham et al., 2024; Campbell et al., 2023; Markarian et al., 2023; Böni & Joos 2024). Nevertheless, there is great potential within the private market for private equity (PE) and thus the opportunity to utilize this for sustainability. Private markets have grown substantially over the last two decades. They represent a market volume with approximately \$15 trillion in AUM (Preqin, 2023), dominated by PE funds, that represent about 64.3% of assets under management, followed by private debt (12.3%), real estate (12.3%), infrastructure (9.3%), and natural resources (1.8%).

The growth of these asset classes has been paralleled by an increased interest in the concept of sustainable investing, in that of corporate social responsibility, and more recently in the concept of ESG investing (Böni & Joos, 2024). Private markets are increasingly investing in climate solutions to combat climate change and decarbonize their portfolios. Data provider Preqin (2024) forecasts an average annual growth rate of over 13% through 2027. A particularly high number of upcoming projects is concentrated in renewable energy. Given the demand for broadcast towers and data centers, an increase in transactions within the digital space—specifically in telecommunications—is likely.

ESG in PE can be applied across all investment stages, such as deal sourcing, investment decision, ownership, and exit. A PE firm manages one or more funds. Each fund raises capital from a group of limited partners (LPs), typically pension funds and other institutional investors. The firm serves as the general partner (GP) of the fund, which is typically organized as a 10-year limited partnership. The fund uses the capital to acquire private assets, and the fund's type is determined by the nature of these assets.

Two common types of PE funds are venture capital funds that acquire equity stakes in young start-ups and buyout funds that acquire equity stakes in more mature companies. Note

that the term “private equity” is sometimes used to refer to either the entire private equity asset class, encompassing venture capital, growth, buyout, and distressed investing, or to buyout investing alone, which is the largest category of private equity in terms of assets under management (Sorensen & Yasuda, 2023). In recent years, an increasing share of LPs who invest in PE funds have integrated ESG issues into their investment analysis.

In light of the diminished capacity of governments to invest public capital in infrastructure, there emerges a potential opportunity for the utilization of private capital. Infrastructure is the second-fastest-growing area based on assets under management. Institutional investors can assume a pivotal role in this context. By investing in sustainable assets, they can simultaneously satisfy sustainability requirements and capitalize on the correlation between sustainability and long-term value creation. Against this backdrop, the outlook for infrastructure investments is exceptionally promising.

5.2 Generating Investor Impact Through Private Equity

In the following, we address the question of how investors can exert an impact on private markets by investing in PE funds. We refer to the three areas of capital allocation, stakeholder engagement, and indirect impact, such as signaling, which were already used in Section 4 when analyzing public markets and the investor’s impact there.

For start-up companies, allocating capital is a key component of scaling up within PE strategies. The firms need capital, and a large share of the equity investment goes directly to the firm. The company impact generated from this scaling up is thus attributable to the activities of the investor. Venture Capital and Growth Equity funds can therefore screen for firms that have innovative products or services with a positive impact on the environment and society. A PE fund that intentionally looks for such investments and measures the impact can credibly link the impact to its own investment.

Leveraged Buyouts usually target firms with stable cashflows that are in no need of additional funding. Moreover, the money primarily goes toward buying out the existing shareholders. Leveraged buyouts are therefore not well-suited for investor impact generation through the capital allocation channel. Distressed equity invests in firms that are in decline and distressed. These firms usually need restructuring and are in need of capital. Hence, if the PE firm raises additional capital for the distressed company, this can affect the company’s impact. If this capital leads to a turnaround for a company with a positive impact, then this impact can be attributed to the investment. However, in most cases, the turnaround involves restructuring and mass redundancies, which create an adverse social impact. The capital allocation lever is thus best used in VC and growth equity funds.

In terms of stewardship and engagement, private equity funds have much more influence on the companies in which they invest than public investors (Abraham et al., 2024; Gompers et al., 2016). The smaller information asymmetry combined with the greater level of control equips PE firms with more efficient tools to help firms to become more sustainable and generate a positive impact. Besides capital, PE firms also provide their holdings with strategic support, expertise, and connections that can help impactful companies grow or reduce the negative impact of the company. The stewardship and engagement channel is effective for all PE strategies to generate investor impact. But most non-sustainable PE funds exercise this channel only as far as it directly improves financial performance.

The evidence for investor impact through signaling for public equities is very limited. In private markets, there is less potential for market signaling. Generally, PE firms do not need indirect signaling to influence their investee firms. Still, PE can issue public statements to increase the pressure on management or to influence the more general public discourse. To the best of our knowledge, there is no research regarding the effectiveness of such signaling efforts.

In terms of signaling, PE could have had a negative effect on its efficiency in public markets. Public pressure on listed fossil fuel companies has grown in recent years. PE has emerged as buyers for the polluting assets of fossil fuel companies, as they do not suffer the same level of public scrutiny (Nikolaeva et al., 2024). No real-world impact is achieved when the polluting assets simply move from the balance sheet of a public to that of a private company.

However, the PE model can help to alleviate the agency problems of public companies with management by involving investors more closely (Jensen, 1989). It could act as a potential solution to the ESG monitoring problem of responsible investors in the face of the ambiguity of the relationship between private equity ownership and the impact on stakeholders. The recent push by institutional investors to incorporate ESG factors into their investment process thus creates an opportunity for the PE management model to offer a differentiated outcome for ESG investors.

5.3 ESG Disclosures and Environmental Outcomes

The studies of Abraham et al. (2024) and Campbell et al. (2023) observe a notable increase in the disclosure of ESG content over time. The growth in ESG disclosure is more substantial for PE firms based in Europe, and France is the most dynamic market in terms of the number of funds, assets under management, and ESG integration. Research on ESG integration and disclosure in the PE industry suggests that assessing a target company's ESG performance can be a negotiating tool for investors in the acquisition phase, and managing ESG issues can be a source of value enhancement during the holding phase (see Sections 2 and 3).

According to Abraham et al. (2024), ESG outcomes are improved when PE firms provide more ESG disclosures. Referring to ESG disclosures and ESG risk, Abraham et al. (2024) assess the ESG reputational risk of portfolio companies and find that it decreases by 14% after an investment by a PE firm with high ESG disclosures. Böni et al. (2023) show that portfolio-level ESG risks, as proxied by a portfolio-level sustainability accounting standards board (SASB) classification, significantly affect ESG disclosures. However, they find that regional factors (33.1%), GP characteristics (35.1%), and LP characteristics (29.4%) explain ESG transparency variation much better than portfolio-level ESG risks (2.4%).

Obviously, there is an influence of LPs on ESG disclosures. Abraham et al. (2024) find that ESG disclosures of PE firms are driven by the demand for sustainable investments from institutional investors. They show that PE firms' ESG disclosures increase by approximately 12% after an LP that is signatory to the UN PRI invests in a PE firm's fund. Böni et al. (2023) find that LPs' own ESG transparency is significantly and positively associated with a GP's ESG transparency. They also find that the composition of a GP's investor base (the percentages of endowments, foundations, and public and private pension funds) is positively associated with a GP's ESG transparency, in comparison to a benchmark LP type (of financial institutions). According to them, LP types and characteristics together explain 24% of the variation in ESG transparency.

Böni et al. (2022) find high transparency PE firms have 4.8% to 7% lower internal rates of return (IRRs) when they hold above median ESG risks in their portfolios, when they are UN PRI signatories holding above median ESG portfolio risks, and when PE firms hold low-impact potential assets in their portfolios. These findings suggest that underperforming PE firms use ESG disclosures to meet investor preferences.

The results of Böni et al. (2022) also suggest that underperforming GPs may opportunistically use ESG disclosure to cater to the preferences of investors, attract capital, and compensate for bad performance reputation. Taken together, the results of Böni et al. (2022) and Abraham et al. (2024) provide comprehensive global evidence on PE firms' ESG transparency. They document that more PE firm ESG disclosures are associated with better ESG outcomes at the portfolio company level, suggesting that voluntary ESG disclosures align with real actions for the average PE firm. This assessment is supported by the study by Markarian et al. (2023).

However, several reasons could explain why PE firms may provide voluntary public ESG disclosures in the context of their relationship with LPs. First, in the early screening phase, not all LPs have access to private communications and struggle to select PE managers in a large market with thousands of firms. Thus, PE firms' public voluntary disclosures of ESG activities can reduce economically relevant adverse selection costs, given that over 70% of the LPs, representing nearly 76% of current PE AUM, adhere to investment policies with an ESG approach.

Additionally, LPs such as pension funds, university endowments, or government investment agencies need to cater to their own stakeholders who often have ESG objectives. Voluntary disclosure theory (Verrecchia, 1983; Dye, 1985) suggests that PE firms with superior ESG outcomes will offer more ESG disclosures to differentiate from average or inferior firms. This could be a PE firm's strategy to manage perceptions and draw in capital from sustainability-conscious LPs, especially when PE firms are criticized for investing in environmentally detrimental assets that generate high financial returns. Notably, PE firms with a greater footprint in industries with high environmental risks have considerably increased ESG disclosures recently, possibly to address sustainability concerns.

5.4 Generating Financial Performance and Increasing the Profitability

One of the big questions that remains key to the spread of ESG practices is their ability to generate financial performance and increase the profitability of private equity holdings. The first element of the answer is whether there is a link between ESG and financial performance, a question that has been the subject of intense academic debate for several decades, mainly focused on listed companies.

As we explained in Section 2, the business case for ESG investing in listed companies is empirically well-founded. Roughly 90% of studies find a non-negative ESG–CFP relation. More importantly, the large majority of studies report positive findings.

In the specific case of PE investments, quantifying the economic returns of good ESG management and constructing practical recommendations come up against several technical difficulties. Measuring ESG metrics is already complicated for listed companies, which must meet regulatory transparency and reporting requirements and are often the subject of assessments by specialized agencies.

However, the case of unlisted companies, particularly SMEs, is even more complex. A great deal of data on PE is also confidential, hindering research on samples of sufficient size to tackle this issue using conventional econometric tools. Where data is available, it is still technically challenging to isolate the effects of ESG from the other factors influencing divestment values.

To isolate the effect of ESG, Crifo et al. (2015) conducted an experiment with PE professionals. In the experiment, irresponsible firm policies decreased the firm price by 11% for environmental, 10% for social, and 15% for governmental issues. Responsible policies increased the firm value by 5% for environmental, 5.5% for social, and 2% for governance issues.

Böni et al. (2023) find that brown PE firms perform significantly worse with an IRR that is lower by 2.5% to 4.4% than that of non-brown PE firms. In an additional analysis, they assess the fund performance of GPs with top tercile ESG transparency but high portfolio-level ESG risk. They find comparable results and an IRR that is significantly lower by 3.1 to 4.6% for brown GPs.

Markarian et al. (2023) find the relationship of PE funds' IRR with ESG performance to be insignificant, though they observe a relation between higher IRRs and higher social scores.

Overall, the research on ESG integration and disclosure in the PE industry suggests that the ability to assess a target company's ESG performance can be a negotiating tool for investors in the acquisition phase and that the ability to manage ESG can be a source of value enhancement during the holding phase (Krysta & Kanbach, 2022).

The PE industry already includes many conventional players who implement ESG management strategies to improve their business and operational management. However, good management of ESG issues is not trivial. Developing specific skills seems essential to turn them into a lever for long-term profitability, mainly through acquiring the human capital essential to a good grasp of these complex, multifaceted, and relatively new subjects for the private equity industry.

5.5 Impact Investing and Private Equity

Impact investing has attracted a growing amount of investor capital over the last decade by promising to target both financial returns and a social or environmental goal. It has simultaneously attracted substantial debate, especially over its financial merit. Impact funds are private equity and VC funds that explicitly pursue dual objectives of both financial return and the generation of positive (either social or environmental) externality.

GIIN (2024a) has determined that the size of the impact investing market is \$1.571 trillion. That is \$1.571 trillion in assets allocated toward the solutions needed to tackle the collective challenges and reach the SDGs. From building housing for cost-burdened families to making our air and water cleaner, impact investors don't just seek financial returns; they create a more equitable and sustainable world for social and environmental projects and people in need (GIIN, 2024a).

Impact investors allocate capital across a variety of geographies, instruments, sectors asset classes, and investee stages of business and markets. The majority of impact AUM (85%) in the sample was allocated through direct investments into companies, with the remaining 15% representing indirect investments through intermediaries. At 14% CAGR over the past five years, there is continuous growth in the assets allocated to impact investing strategies. The

dynamics between large and small investors are particularly intriguing, suggesting that investors are increasingly playing to their strengths (GIIN, 2024b).

Referring to the fund-level financial performance data, Barber et al. (2021) find that LPs accept 2.5 to 3.7% lower IRRs *ex ante* for impact funds, relative to comparable non-impact funds. The result is consistent with the view that investors derive nonpecuniary utility from investing in impact funds, thus sacrificing financial return (PitchBook, 2023).

Barber et al. (2021) document that *ex post* financial returns earned by impact funds are 4.7 ppts lower than those earned by traditional VC funds, even after controlling for a host of fund characteristics. Their results provide compelling evidence that investors are willing to pay for nonpecuniary characteristics of investments. The willingness to pay for impact varies considerably across legal and regulatory environments, investor geography, and time.

However, many impact investors reported not only good impact results but also good financial returns while fulfilling their fiduciary obligations. Ninety-four percent of respondents to the GIIN's (2024a) Impact Investor Survey said that both their financial performance and their impact performance met or exceeded their expectations, which is in line with GIIN research findings over the past 10 years.

Critics argue that constrained strategies like impact investing must have lower risk-adjusted returns than unconstrained strategies under standard assumptions (e.g., perfect and complete capital markets, rational and informed investors) (Brest et al., 2018; Barber et al., 2021). Others challenge the validity of these assumptions, especially in private markets (Burton et al., 2021). Crucially missing from the debate in private markets is an understanding of impact investing's risk exposure, which has the potential to reconcile concessionary absolute returns with a profitable strategy for some investors, depending on the risks they wish to hedge (Jeffers et al., 2024).

When we account for market risk exposure, Jeffers et al. (2024) find that although VC funds have higher absolute performance than impact funds, the risk-adjusted performance across the strategies is closer. Their results can also be understood as a decomposition of total returns. Total returns using IRRs or multiples are highest for VC funds, followed by impact funds. They show that a large part of that difference can be attributed to different market risk exposure; after accounting for market risk, the residual performance is much more similar across the two sets of funds.

With regard to financial risk, impact investing can provide diversification opportunities through engagements in populations and regions that offer largely uncorrelated returns relative to mainstream capital markets. Considering their core objective of actively seeking to contribute to positive social and environmental change while at a minimum aiming for return of their capital, impact investments represent a growing market for investors with a strong motivation to create continuous impact through their investments.

5.6 Summary

Private equity investors have governance advantages that create opportunities for superior sustainable strategies. They can fund impactful firms or push for improvements. In public equities, capital allocation has a limited impact, and progress is often incremental. PE funds, however, hold larger stakes, control boards, and exert stronger influence, enabling long-term ESG strategies unaffected by market volatility.

With longer investment horizons, PE funds support sustainable improvements and track ESG progress over time. Their incentive structures tie ESG goals to management compensation, encouraging sustainable practices. Unlike public firms, PE investors access direct company data, enabling precise ESG tracking and implementation.

PE funds are better positioned for ESG activities due to their flexibility, control, and lower sensitivity to short-term market pressures. Public companies can still pursue ESG objectives through reporting and regulation. PE firms will offer more ESG disclosures to differentiate themselves from average or inferior public companies. For PE investors looking to make a sustainable impact with their investments, impact investing is a growing market.

6. CONCLUSION

According to the results of the vast majority of studies, ESG performance is associated with a better or at least not worse financial performance of the company (Eccles et al., 2012; Friede et al., 2015). Public markets appear to price in the observable ESG performance of a company. Studies show that firms with strong ESG performance deliver returns comparable to their peers (Atz et al., 2023; Hong & Shore, 2023). Moreover, some investors are willing to accept lower returns in exchange for higher ESG performance. However, investors can go beyond investing in high ESG firms by actively influencing firms to improve their ESG performance to unlock value and/or to generate impact. Equity investors have their choice of listed equity and private equity (Chen et al., 2023). Both asset classes offer distinct advantages and disadvantages.

Listed equity is among the largest and most liquid asset classes. Historically, it has delivered strong returns for investors. In addition, listed companies have high disclosure requirements, but are also responsible for a range of positive and negative impacts on society and the environment. This makes them a good option for an investor looking to create impact.

Influencing listed firms to drive ESG improvements can be challenging. In most cases, investors must rely on stewardship and engagement to create impact (Kölbel et al., 2020). For this approach to be effective, investors need sufficient influence, whether through large holdings, collaboration with other investors, or convincing management of the economic merits of proposed ESG enhancements. Even then, measuring outcomes and attributing them to investor actions remains complex. A more straightforward way for investors to create impact is offered by the private markets.

Private market firms have the potential to play a crucial role in transforming the economy toward sustainability. This will require them to be ESG transparent. ESG disclosures at the GP-, the portfolio-, and the asset-level are key. Unfortunately, while ESG disclosures have improved over time, they are yet insufficient. On average, only the very large firms provide sufficient ESG disclosures. LPs likely affect GP's ESG disclosures and environmental outcomes. They therefore have an important role to play. Investors must be critical when assessing GP's ESG disclosures, as it is likely that disclosures are, at least partially, provided with the intent to cater to investor preferences, i.e., to attract capital, and to compensate for bad performance reputation. Importantly, the effect of environmental disclosures on capital formation is conditional on investors' views. These views differ across geographical regions and appear to significantly affect both ESG disclosures and capital flows.

The choice between listed and private equity reflects a balance between liquidity, influence, and impact. While listed equity provides broad accessibility and high liquidity, private equity offers investors a more hands-on role in driving sustainability and impact. Accordingly, the direction for future research could be to empirically validate the potential of ESG investment and impact in a comparison between public equities and private equity. This concerns the effectiveness of ESG integration, the effectiveness of capital allocation, stewardship and engagement, and signaling, as well as the control and influence on ESG results.

There are limitations to data collection and transparency, time horizon, regulatory requirements, ESG measurement, and standardization for private equity compared to the public equity sector. There is also the problem of ESG continuity after the exit, especially if sold to non-ESG-conscious buyers. However, while the field of tension is large, taken together, these asset classes offer complementary opportunities to reconcile financial returns with sustainable and impact-oriented investment goals. This opens up a wide range of design options for future research.

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