



University of
Zurich UZH



Climate-KIC is supported by the
ETF, a body of the European Union

CSP Center for Sustainable
Finance & Private Wealth



BMW Foundation
Herbert Quandt

Florian Heeb
Julian Kölbel

The Investor's Guide to Impact

Evidence-based advice for investors
who want to change the world



“Investors can play a crucial role in helping to solve the global challenges we are facing. However, to unlock this potential we need to be clear about how investors can drive real change. This is the core of our work and this guide.”



Falko Paetzold
Assistant Professor Social Finance at EBS University
Managing Director at CSP, University of Zurich

About CSP – The Center for Sustainable Finance and Private Wealth

CSP is a research and teaching unit at the Department of Banking and Finance of the University of Zurich in Switzerland. CSP engages in multidisciplinary research to explore fundamental issues and current dynamics in sustainable finance and uses the insights from its research to advance the understanding of sustainable finance within the private wealth ecosystem. The mission of CSP is to activate private wealth and sustainable finance, at scale, as a substantial driver for sustainable development.

Contact

We are always glad to receive feedback on our work or to engage in discussions on how to optimize impact. Please get in touch with Florian via florian.heeb@bf.uzh.ch

Disclaimer

In this report, we use examples of financial products to illustrate the mechanisms of investor impact. In no way do we provide any advice for or against investing in any of these products, and we have no commercial relationship with any of them. This guide is based on the peer-reviewed paper: Kölbl, J., Heeb, F., Paetzold, F., Busch, T. (2020). “Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact,” *Organization & Environment*.

About the Authors



Florian Heeb is a researcher at CSP. Florian holds a master's degree in environmental science from ETH Zurich. Before joining CSP, Florian worked in the executive management of South Pole, a leading provider of sustainability financing solutions, where he built up and managed a global team of sustainability experts.



Julian Kölbl is a postdoc serving as the Head of Research and BMW Foundation Fellow at CSP. He holds a PhD in Management & Economics from ETH Zurich and prior to joining CSP, worked at MIT Sloan's Sustainability Initiative. Julian also serves as a member of the investment committee of the Abendrot pension fund.

Contents

Executive Summary	4
About This Guide	6
What is Investor Impact?	7
The Mechanisms of Investor Impact	12
Applying the Mechanisms to Sustainable Investing Products	28
How to put this Guide Into Action	34
Vision and Outlook	36
Sources and Further Reading	38

Executive Summary

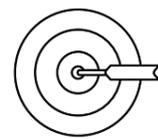
This is a guide for investors who want to change the world. It supports investors in developing an evidence-based impact strategy for their entire portfolio. Here is a summary of our key messages and recommendations.

WHAT IS INVESTOR IMPACT?

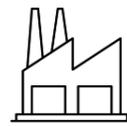
Investors have impact, whether they mean to or not. By investing in corporations, investors might principally seek a financial return, but they are implicitly and explicitly also participating in the impact of their companies on employees, communities, and the planet.

Increasingly, investors are embracing that role, desiring to create change in the world through their investments. But understanding the social and environmental impact of an investment is not as easy as simply investing in the most responsible company you can find. Your investor impact isn't the impact of the companies in your portfolio. Rather, it is the change you induce through your investment in the impact of those companies.

The challenge is to separate the impact of the company on the world from the impact of your investment, in other words, to recognize two distinct components of impact:

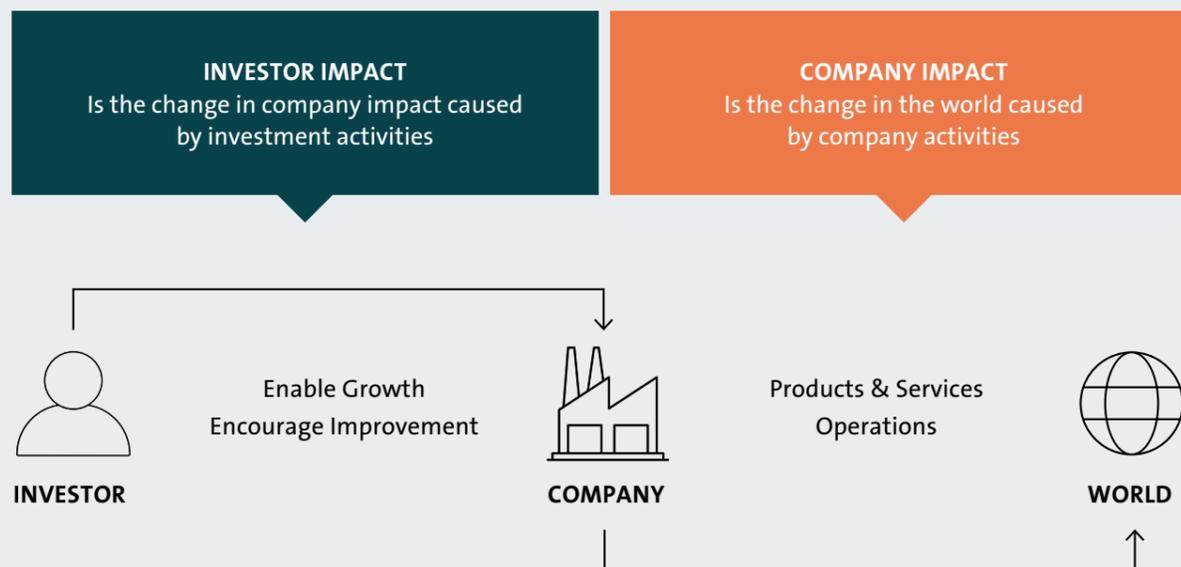


Investor impact is the change in company impact caused by investment activities.



Company impact is the change in the world caused by company activities.

What Is Investor Impact?



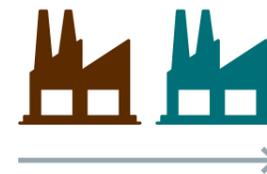
HOW CAN I HAVE INVESTOR IMPACT?

Investor impact can mean enabling *green* companies with a net-positive impact to grow faster or encouraging “brown” companies with negative (or less than optimal) impact to improve. It can also include influencing other investors by being part of a movement. Thus, based on the available evidence, we make three recommendations on how you can maximize your impact as an investor:



1 Enable impactful companies to grow.

- Typical asset classes: private equity, private debt, and venture capital
- Allocate capital to young impactful companies in inefficient financial markets, as much as your risk-bearing capacity allows. Ensure the “additionality” of your investments by choosing companies that really need your capital and cannot easily get sufficient funding from other investors.
- Consider investing in companies that require flexible or concessionary financing to scale their positive impacts. This will broaden your range of options, as many impactful companies cannot grow with financing provided at commercial terms.
- When selecting fund managers, consider their capabilities to boost the growth of companies with non-financial support (e.g., their management skills, reputations or networks).



2 Encourage improvement.

- Typical asset classes: public equity and debt
- Vote your shares and engage with the management of all of your publicly traded equities. You can either interact with companies personally, get a service provider to do it for you, or select a bank or asset manager who does it. Whichever route you choose, the keys are to focus on realistic but meaningful improvements and to track outcomes.
- Screen your public equity and debt holdings for transparent ESG criteria. Screening out companies that lag behind on widely accepted business norms (e.g., no child labor and setting climate goals) is more likely to cause companies to improve than screening out entire industries.
- Focus on specific issues that are supported by a large coalition of investors and demand changes that companies can implement at reasonable cost.



3 Influence the public discourse by being vocal about what you do.

- Be vocal about your investment decisions and why you made them. This can be a signal to other investors and to society at large.
- If you are divesting from harmful industries, communicate this publicly. Divestment may support broader political or cultural change, but only when it is done publicly.
- Enter coalitions with like-minded investors to join forces.

About This Guide

This guide provides practical advice on how to have impact as an investor, based on a synthesis of academic research.

More and more, investors want to drive positive change with their investments. This has brought new perspectives to investing and new products and services to the sector. Indeed, as more financial institutions promise impact in their offerings – from ESG ratings agencies to impact investing funds to shareholder advocacy groups – investors are finding it challenging to evaluate which strategies truly deliver on their promises.

This guide supports impact-driven investors in developing an investment strategy that accomplishes real-world change. Changing the world through investing is complex and has been studied by many academic researchers. We've reviewed existing research,¹ examined the mechanisms researchers have identified,

and synthesized the available evidence in order to offer these practical recommendations on how to maximize your impact as an investor with an evidence-based investment strategy.

Importantly, while there are already many resources that focus on assessing the impact of investee companies, this guide is focused on the impact of the investor herself. Thus, we aligned the guide as much as possible with an emerging framework established by the Impact Management Project (IMP), a broadly supported initiative to manage and measure the impact of investments.

This guide makes several contributions to complement existing tools and approaches:

- 1 We clearly define investor impact, along with a rationale for why investors who want to change the world should focus on it.
- 2 We detail a framework to qualitatively assess different mechanisms for investor impact, and their requirements and limitations, based on the evidence.
- 3 We apply our framework to common types of sustainable investing products, with concrete evaluation criteria that investors can use to compare them.

The guide concludes with a suggestion on how to turn insight into action, as well as with a recognition of knowledge gaps. Research on the impact of investing is ongoing, and the recommendations in this guide may change as new knowledge becomes available. For now, however, this guide provides the best advice we can give.

What Is Investor Impact?

Investor impact is the change that you cause in a company's impact. Three key insights explain why.

The impact of an investment is not as clear-cut as the prospectuses of sustainable investing products make it seem. That's because it's not accurate to simply claim a company's impact as your own. A company might be doing well by doing good, but your investment only had

an impact at the margins, if at all. To truly get at what difference you made, you need to consider three insights that, when considered in turn, help to explain where and how your investment can do the most good.

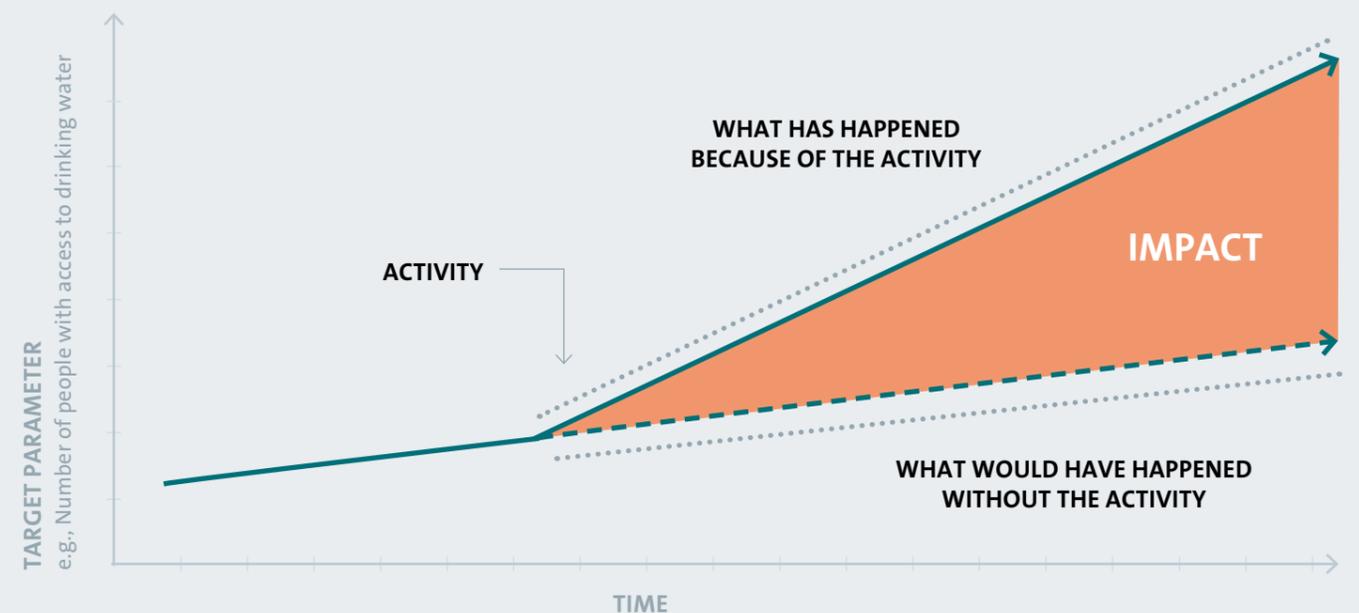
INSIGHT #1:

Impact is change in the real world that is caused by your activities

The idea of impact boils down to two things. First, something needs to change. Second, this change must be due to your activity, and not due to something or somebody else. Our simple definition for impact is this: **Impact is the change in a specific social or environmental parameter that is caused by an activity.**

- **Change:** Having impact requires that something changes in the real world. There are many things you might want to change, for example, has there been a reduction of greenhouse gas emissions? Or an increase in the number of people with access to safe drinking water? To measure impact, you need to observe whether a set parameter is changing over time.
- **Causality:** Having impact requires that an observed change is caused by your activities, and not by other factors. It's crucial to think about what would have happened in absence of your activity (i.e., the "counterfactual"). Would the amount of people with access to safe drinking water have increased anyhow? Your impact is the change going beyond what would have happened even without your actions. This aspect of causality is also referred to as "additionality" or "contribution."

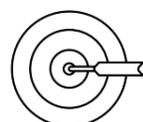
Figure 1: The impact of an activity is the change it causes above what would have happened in absence of the activity.



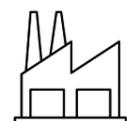


INSIGHT #2:
Your impact as an investor is the *change* in company impact that you cause.

If impact is change caused by your activities then, as an investor, you do not directly have an impact on real-world outcomes such as global carbon emissions. But you may have an impact on a company, and that company has an impact on the real world. Thus, it is helpful to distinguish investor impact from company impact.



Investor impact is the change in company impact that is caused by an investor's activity. For example, enabling a company to sell more products that reduce carbon emissions.



Company impact is the change in a specific parameter caused by company activities. For example, selling products that reduce carbon emissions.

What Is Investor Impact?

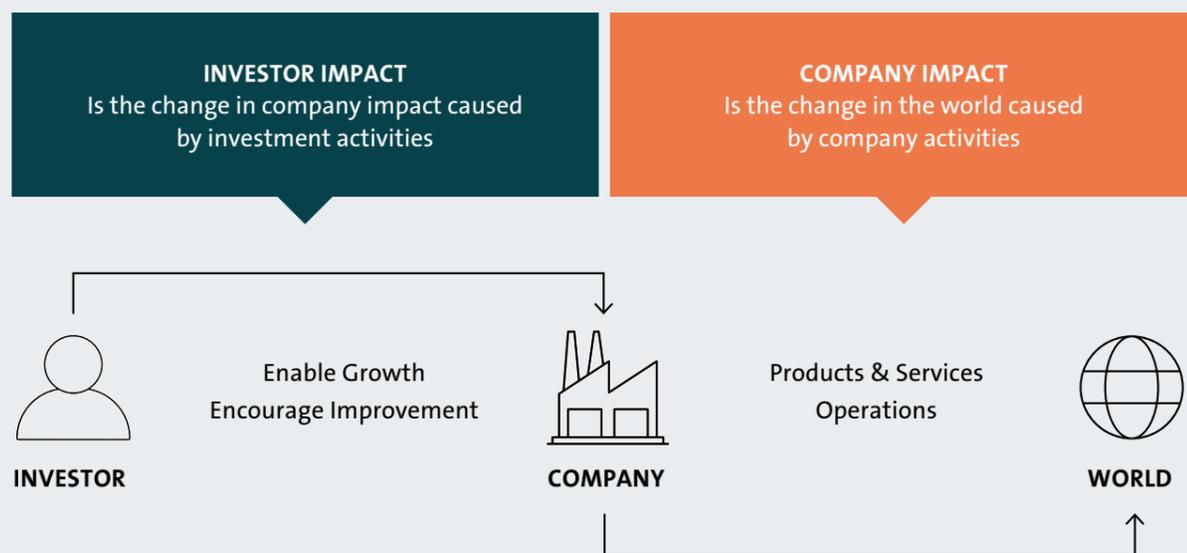


Figure 2: Investor impact is the change in company impact, caused by investment activities.

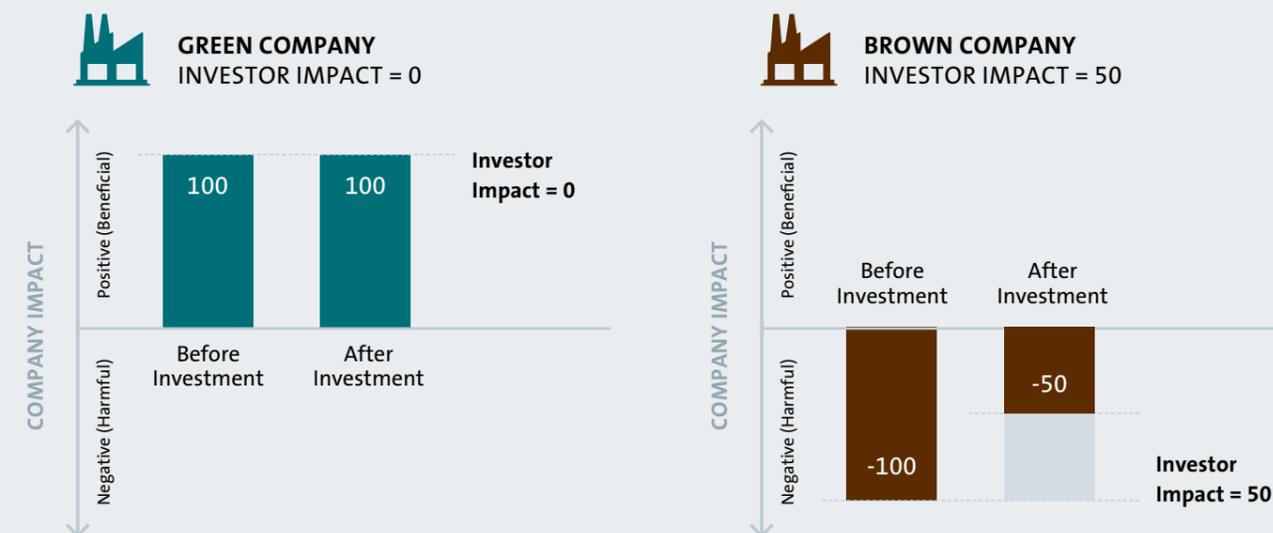


Figure 3: Investor impact is about causing change – not about owning impactful companies. For example, investing in a company with a negative impact, and convincing it to improve (Brown Company) can result in a larger change than investing in a company that already has a net-positive impact (Green Company).

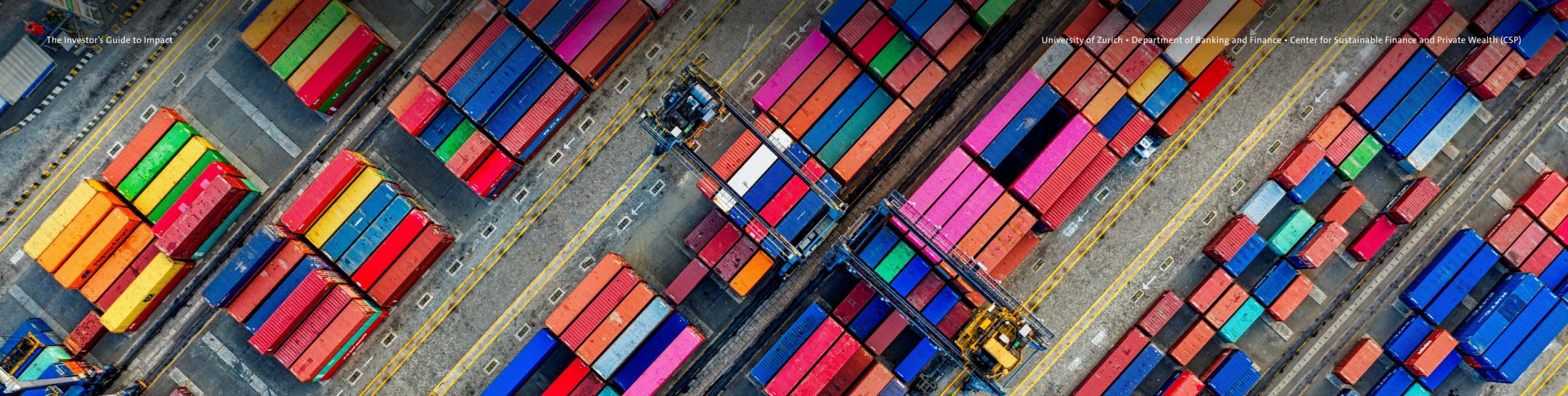
A common fallacy for investors – in terms of impact goals – is to assume that the company impact of their holdings is synonymous with their own impact. This can be misleading. To see why, consider the example illustrated in Figure 3.

There is a *green* company with a net-positive company impact and a *brown* company with a net-negative company impact. Only looking at company impact, investing in the green company seems more attractive. However, if the green company has the same impact one year later, the investor impact was zero. When an investment in the brown company causes the company to reduce its negative impact, the investor had impact, even though the brown company is still far worse than the green company. So, to assess investor impact, investors must look at the change in company impact they cause.

Example: Does investing in pharmaceuticals make people healthier?

Unfortunately, investor impact and company impact are often conflated. As an example, consider a self-proclaimed “impact mutual fund” that invests in public companies that contribute to the 17 Sustainable Development Goals (SDGs) as defined by the United Nations. One of the fund’s top holdings is Gilead Sciences, one of the largest pharmaceutical companies in the world. Gilead develops and produces drugs for severe diseases, such as HIV. One might reasonably argue that the company has a positive impact on SDG Goal 3, Good Health and Well-Being.

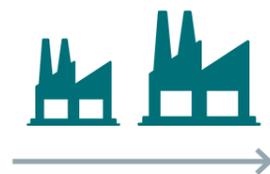
The number of HIV patients treated with the drugs produced by Gilead Sciences would be a reasonable measure of company impact. However, investors seeking impact should ask themselves, “If I invest in this fund, will more HIV positive patients receive treatment?” The answer is unlikely to be, “Yes,” given that Gilead can easily access capital to pursue the projects that management decides to pursue. But the only way to really answer this question is to think through the mechanisms of investor impact.



INSIGHT #3:

Investors can change company impact by enabling impactful companies to *grow* or encouraging companies to *improve*.

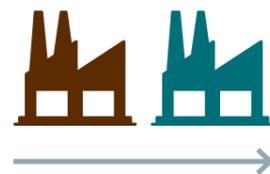
There are two fundamentally different types of investor impact. Investors can either enable the growth of impactful *green* companies or encourage the improvement of *brown* companies that have potential to improve. There are various mechanisms to achieve these types of impacts, but both types ultimately result in an increase of company impact.



ENABLING GROWTH

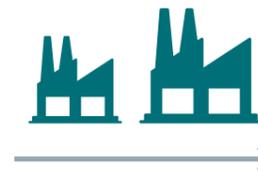
Investors can have impact by enabling impactful companies to grow. For example, an investment in a start-up that has found a way to make solar panels more efficient could have a big impact if the company is struggling to raise the capital it needs to scale.

While our guide puts a strong emphasis on investor impact, it is important to look at company impact as well. But depending on whether you intend to enable growth or encourage improvement, you might look at company impact in different ways. Here, we explain how company impact is relevant and point to several tools that go into more depth.



ENCOURAGING IMPROVEMENT

Investors can have impact by encouraging companies to improve their company impact. For example, investors may encourage a large manufacturer of snacks to stop using palm oil linked to deforestation.

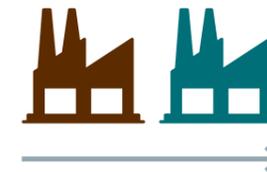


CHOOSING COMPANIES TO GROW

If you want to enable growth, focus on companies that have significant positive impact on people and the planet. It would be counterproductive to help grow a company that has some positive, but also lots of negative, impact. Also, the positive impact of companies can differ by orders of magnitude, so picking the right ones is crucial. What you would look for is a robust estimate of the overall level of a company's impact.

The Impact Management Project (IMP) provides a broadly endorsed framework on how to assess the impact of companies. This framework differentiates between five dimensions of company impact: *What, Who, How Much, Contribution and Risk*. The Contribution dimension is crucial: If a company does not cause any change above what would happen anyhow, all other dimensions become obsolete.

The [Global Impact Investing Network's \(GIIN's\) IRIS+](#) offers a comprehensive catalogue of indicators that can be used to assess company impact. In addition, several providers offer databases on company impact. A recent [report by the DVAf](#), the Association of Investment Professionals in Germany, provides a useful overview of these databases.



CHOOSING COMPANIES TO IMPROVE

If your goal is to encourage improvement, you want to focus on those companies that have the greatest potential for improvement. Rather than measuring the overall impact of the firm, you need reliable information on specific environmental, social and governance (ESG) criteria.² This enables you to evaluate which companies have room to improve and whether companies are indeed improving. The challenge is to find criteria that are actionable for the company, easily observable by outsiders and widely adopted by investors.

ESG rating agencies provide information that can be used to identify improvement potential. The more detailed and industry-specific indicators used by the rating agencies offer suitably comparable criteria on, for example, a company's greenhouse gas emission intensity in comparison to industry peers, or the company's revenues coming from SDG-aligned product categories. Controversy assessments published by data providers are an additional data source that can complement the company's own disclosures.

The Mechanisms of Investor Impact

There are different mechanisms of investor impact. We assess the effectiveness of each mechanism based on available evidence and identify key requirements and limitations.

There's more than one way to make a difference through your investments. Our starting point is the [Impact Management Project \(IMP\)](#)'s classification of four mechanisms of impact (see Table 1), which we've mapped to current academic research and modified modestly. To be sure, we also use some different wording than the IMP.³

In the section that follows, we look at the effectiveness of the different mechanisms of investor impact. For each mechanism, we give a concrete example, discuss the existing academic evidence for its effectiveness, and review its key requirements and limitations, as summarized in Table 3.

Investor Impact Mechanism (based on IMP classification)	Description
Grow new/undersupplied capital markets	Allocating capital to impactful companies whose growth is limited by access to financing.
Provide flexible capital	Allocating capital to impactful companies that require flexible financing conditions to grow.
Engage actively	Provide non-financial support Provide resources beyond capital that enhance the growth of impactful companies (e.g., know-how, reputation, network).
	Shareholder engagement Encouraging management to improve as an active owner (e.g., management dialogue, voting).
Signal that impact matters	Market signals Sending price signals to the entire market that encourage improvement (e.g., screening based on ESG criteria).
	Non-market signals Sending signals to society at large that influence the public discourse on pressing challenges.

Table 1: The mechanisms of investor impact.

LEVELS OF EVIDENCE

Theories about investor impact abound, so we compiled as much evidence as we could to separate theory from reality. We reviewed academic studies that have investigated the effectiveness of different investor impact mechanisms and placed them within the IMP classification. Assessing how much impact you will have with an investment is prone to uncertainty.

The academic research, as described in Table 2, cuts through some uncertainty. However, evidence levels vary. We found convincing empirical evidence for some mechanisms but not all of them. Investors should consider the level of empiricism behind a given mechanism for achieving investor impact as they gauge confidence in their own potential impact.

Evidence Level	Description
A: Scientific consensus	Systematic reviews of the empirical evidence document a scientific consensus on effectiveness of the mechanism.
B: Empirical evidence	Empirical studies show that the mechanism has been effective in specific settings. Yet, it remains unclear how far these findings can be generalized.
C: Model-based prediction	Economic models predict that the mechanism should be effective under certain assumptions.
D: Narrative	There are narratives that rationalize why the mechanism could be effective.

Table 2: Classification of the level of evidence for the different mechanisms of investor impact.

REQUIREMENTS AND LIMITATIONS

Each mechanism is dependent on specific conditions – the requirements and limitations in Table 3. Evidence of impact is dependent on those requirements and limitations; there is only support for the impact potential of an investment if the requirements are met and the limitations do not apply.



Investor Impact Mechanism (based on IMP classification)	Type of Change	Evidence Level	Requirements	Limitations	Typical Asset Classes
Grow new/undersupplied capital markets	Enabling Growth 	B: Empirical Evidence	<ul style="list-style-type: none"> Investments in companies with net-positive impact Companies' growth is limited by external financing conditions. This is more likely: <ul style="list-style-type: none"> For small and young companies For companies with mainly intangible assets In immature financial markets 	<ul style="list-style-type: none"> Not suited for investments in large, established companies, which have sufficient access to external financing 	Private markets: <ul style="list-style-type: none"> Private equity Private debt Venture capital
Provide flexible capital	Enabling Growth 	B: Empirical Evidence	<ul style="list-style-type: none"> Investments in companies with net-positive impact Companies' growth depends on access to flexible capital 	<ul style="list-style-type: none"> Not suited for companies that have sufficient access to philanthropic or commercial capital 	
Engage actively	Provide non-financial support Enabling Growth 	B: Empirical Evidence	<ul style="list-style-type: none"> Investments in companies with net-positive impact. Investors with know-how, reputations or networks that help companies grow faster 	<ul style="list-style-type: none"> Only suited for early-stage investments, where investors can directly influence the company 	
	Shareholder engagement Encouraging Improvement 	B: Empirical Evidence	<ul style="list-style-type: none"> Focus on meaningful improvements that companies can achieve at reasonable cost Investor with strong influence on a company. Influence increases with: <ul style="list-style-type: none"> The number of shares held by investor The cultural proximity with the company Size and reputation of the investor 	<ul style="list-style-type: none"> Limited to incremental improvements; unlikely to transform industries 	Public markets: <ul style="list-style-type: none"> Public equity Public debt
Signal that impact matters	Market signals Encouraging Improvement 	C: Model-Based Prediction	<ul style="list-style-type: none"> Transparent ESG criteria that companies can meet at reasonable cost Substantial portion of the market screening out or underweighting firms that don't meet the ESG criteria 	<ul style="list-style-type: none"> Effect unlikely for industry exclusion Disagreement on how to measure ESG criteria 	
	Non-market signals Growth or improvement 	D: Narrative	<ul style="list-style-type: none"> High level of public visibility of signals 	<ul style="list-style-type: none"> Impact is difficult to evaluate as it is indirect and depends on political action or cultural change 	

Table 3: The mechanisms of investor impact. For each mechanism the table lists the level of evidence for its effectiveness as well as the key requirements and limitations.

Grow New or Undersupplied Markets

Allocate capital to impactful companies whose growth is limited by access to financing.

Investors can make a difference by enabling the growth of impactful companies. One way to do that is to invest in profitable companies whose business models contribute to solving the world's problems, but whose growth is constrained by limited access to external financing. This kind of impact is directly caused by an investor's capital allocation decisions and is often referred to as *additionality*. Investors may even create this additionality without making concessions on risk-adjusted returns.

The mechanism is effective if the capital provided to a company causes the company to grow faster than it would have without this capital. The mechanism thus only works for companies that are restricted in their growth by their access to external financing.

EVIDENCE LEVEL:

B. EMPIRICAL EVIDENCE

A large body of literature shows that investors can promote the growth of companies under the right circumstances. Many studies make use of unexpected shocks in capital supply to a sample of companies. These studies identify the circumstances where such shocks affect corporate investment and growth – and under which circumstances they do not.

REQUIREMENTS:

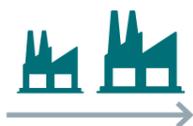
1. Investee companies need to have a net-positive company impact so that a company's growth results in greater positive impact.
2. Investee companies' growth needs to be limited by access to external financing. This is more likely for small and young companies, for companies with a lot of intangible assets, or for those in immature financial markets, such as in developing countries. This does not mean that every young company in a developing country is restricted in its growth; investors would want to assess conditions on a case by case basis.

LIMITATIONS:

There is no empirical support for investors' capital allocation influencing the growth of large, established companies. These companies usually have sufficient access to capital markets and are more constrained in their growth by product demand and competition than by access to capital. This is why the mechanism is oriented toward growing new/undersupplied markets.

TYPICAL ASSET CLASSES:

- Private equity
- Private debt
- Venture capital



Example: Bill Gates investing in Impossible Foods

Meat production is a major source of greenhouse gas emissions and the subject of ethical concerns. In 2011 Stanford biochemistry professor Patrick O. Brown started Impossible Foods to tackle this challenge. In 2013, Bill Gates invested 25 million US dollars in Impossible Foods – at a time when the prospects of the company were still extremely uncertain. Besides relishing the prospect of a handsome gain should Impossible Foods complete an initial public offering or IPO as expected in 2020, Gates arguably made a vital contribution to Impossible Food's impact by enabling its rapid initial growth.

The venture is now experiencing commercial success and has had an impact on carbon emissions and animal welfare. When Burger King rolled out an Impossible Burger across the United States in 2019, artificial meat entered the mainstream.

This example shows that investments have the highest potential to enable impactful growth where financial markets have the highest frictions – for example, due to the high level of information asymmetries and uncertainty of investments in early-stage start-ups. But it's also important to consider that not every start-up is limited in its growth by access to capital. By now Impossible Foods has demonstrated its potential and many investors stand ready to invest additional capital.



Provide Flexible Capital

Allocate capital to impactful companies that require flexible financing conditions to grow.

Growth may also be constrained not by access to capital per se, but rather by access to capital at the right price. Some impactful companies cannot grow with financing provided at commercial terms, so investors might provide them growth capital with flexible conditions. Companies whose business models resolve externalities not priced by the market (think cleaning up pollution where polluters don't have to pay) or that focus on bottom-of-the-pyramid customers instead of more profitable market segments are less attractive to capital markets.

There are different ways investors can offer beneficial financing. For example, they can accept below-market risk-adjusted returns, take subordinated debt or equity positions, or accept longer terms before exit. Investors offering flexible capital can also help companies steer clear of *mission drift* by lowering the pressure that capital markets often impose on growing companies to sacrifice impact for income. The additionality of a flexible investment, i.e., whether it has a causal effect on growth, needs to be assessed on a case-by-case basis. For example, it is important to make sure that the investment is not crowding out other sources of capital, including philanthropic capital or other impact-oriented investors.

EVIDENCE LEVEL:

B. EMPIRICAL EVIDENCE

A range of empirical studies shows that flexible capital provided by governments, multi-lateral agencies and philanthropies have enhanced companies' investment and growth. Several studies argue that private investors can promote impactful growth by providing similarly flexible capital.

REQUIREMENTS:

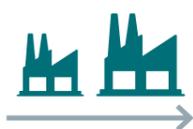
1. Investee companies need to have a net-positive company impact so that a company's growth results in greater, positive impact.
2. The investee companies need to be limited in their growth by a lack of access to flexible capital. This requires two things. First, a company needs to have sufficient opportunities to grow, given the right financing. Second, flexible capital makes a difference only if a company is unable to grow with market-rate financing.

LIMITATIONS:

The main drawback of this mechanism is that investors may need to compromise on risk-adjusted return compared to non-flexible investment opportunities. This may not be an option for all investors – either due to their financial preferences or due to requirements related to their fiduciary duty.

TYPICAL ASSET CLASSES:

- Private equity
- Private debt
- Direct investments



Example: Root Capital financing the Musasa Coffee Cooperative

Most smallholder coffee farmers in rural Africa sell their raw beans to local intermediaries and receive only a fraction of the coffee's value-add. Connecting farmers directly to global specialty coffee markets can increase the farmers' revenues and thereby substantially improve their living conditions. Yet, producing for global markets requires large production volumes and expensive equipment and machinery, representing substantial upfront capital expenditures. This is a crucial hurdle for most smallholder farmers, as they do not have access to commercial sources of credit.

The nonprofit social investment fund Root Capital covers this gap and provides loans to coffee farmer cooperatives, like the Musasa Coffee Cooperative in Rwanda. Since Root Capital's initial investment in 2004, the number of farmers exporting their coffee over the Musasa Cooperative has grown more than fivefold. The loans provided by Root Capital generate positive returns. However, these are below the market rate for comparable commercial investments.

This example shows that capital allocation may have the strongest effects where financial markets are weakest – and that investors may need to be able to make a cut in their risk-adjusted return expectations to reach these places.



Providing Non-Financial Support

Provide resources beyond capital that enhance the growth of impactful companies.

Investors commonly support early-stage companies with more than their checkbooks. Indeed, enhancing the growth of portfolio companies by providing non-financial support is a key value proposition for many traditional venture capital and private equity firms. They may share their expertise as board members and help to improve governance structures. They may also directly provide management support or technical assistance. Also, by using their reputations and networks, investors can enhance companies' ability to raise additional capital or gain initial customers.

EVIDENCE LEVEL:

B. EMPIRICAL EVIDENCE

Several empirical studies looking at private equity or venture capital funds show that non-financial support by fund managers can affect the performance of investee companies. However, there is a relatively high level of variation among the results of these studies. A set of qualitative studies shows that both investors and entrepreneurs attribute considerable importance to non-financial support.

REQUIREMENTS:

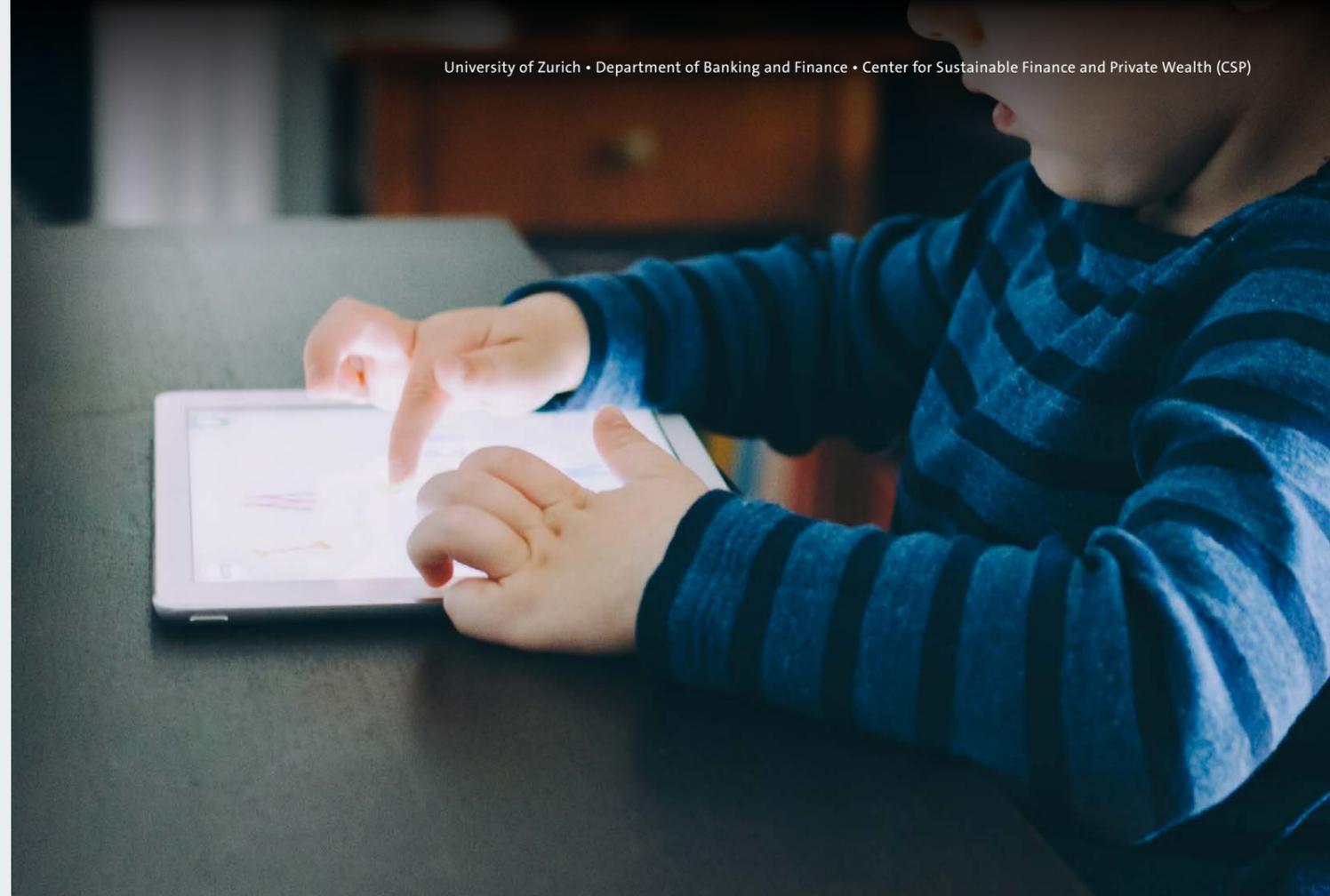
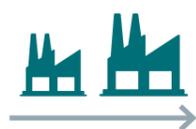
1. Investee companies need to have a net-positive company impact so that a company's growth results in greater, positive impact.
2. To provide effective non-financial support, an investor needs to offer resources besides capital that help portfolio companies grow faster. This includes governance or management know-how, a strong reputation, or an extensive network that helps the company cut regulatory red tape, find additional investors or access new customers.

LIMITATIONS:

Non-financial support is unlikely to further the growth of large, established companies with dispersed ownership. So far, there is no evidence of the effectiveness of non-financial support other than for early-stage venture capital investments and private equity portfolios. For large companies with dispersed ownership, investors may still encourage management to improve their ESG practices (see next mechanism: Shareholder Engagement). However, they are unlikely to affect growth.

TYPICAL ASSET CLASSES:

- Private equity
- Venture capital



Example: Owl Ventures helping ed-tech companies to scale

With many students forced to learn at home, the COVID-19 crisis has put education technology (ed-tech) into the spotlight. Silicon Valley-based Owl Ventures is one of the largest venture capital funds focusing on ed-tech. It has invested in companies such as Remind, an online platform facilitating communication among students, teachers and parents, which has seen demand spike during the COVID-19 crisis.

Thanks to its relatively narrow focus, Owl Ventures has built substantial sector and technology expertise. This enables the fund to support its investee companies to scale, for example, by helping investees gain access to customers and talent as well as by helping them navigate the complex procurement processes associated with serving public sector customers like schools and universities.

The example shows that investors can help impactful companies grow using more than their capital. However, it also shows that doing so requires fund managers who have unique non-financial resources that are of value to the companies they invest in.



Shareholder Engagement

Be an active owner and encourage management to improve.

Investors may use their privileged position and access to influence the companies they are invested in. 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. As an impact mechanism, the objective is to improve a firm's environmental or social performance, by clearly expressing shareholders' expectations, or by providing knowledge and expertise.

EVIDENCE LEVEL:

B. EMPIRICAL EVIDENCE

Several empirical studies show that shareholder engagement has resulted in improvements of ESG practices. Shareholder engagement in these studies consists of a specific request and a continued dialogue with management over a period of about six months to three years. The studies establish causality by contrasting engaged firms with comparable firms that have not been engaged. Effectiveness is measured as the success rate of engagement requests.

REQUIREMENTS:

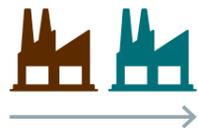
1. Shareholder engagement needs to focus on practices that result in meaningful improvements of company impact but have, at the same time, reasonable implementation costs – in other words, “low-hanging impact fruits.” Studies suggest that engagement is less successful when the requested changes are too demanding or costly.
2. Shareholder engagement hinges on investor influence. Unsurprisingly, the chances of success are higher if an investor holds a larger share of the company. Also, the ability of an engaging investor to build up a relationship with the company matters. It helps when the engaging investor is culturally close to the company and when large and internationally renowned investors support engagement.

LIMITATIONS:

Shareholder engagement is unlikely to transform industries because it is only promising when targeted at low-cost improvements. Thus, fundamentally problematic industries will continue to be problematic while improving at the margin. On the other hand, small improvements at large corporations quickly add up to substantial progress. There is plenty of low-hanging fruit in many industries, and engagement is a good approach to harvest them.

TYPICAL ASSET CLASSES:

Public equity, increasingly also public debt

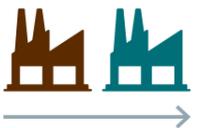


Example: Hermes engaging Sinopec on climate change

Methane is a potent greenhouse gas; its effect on global warming is 28 times stronger than that of CO₂ over the course of a century. In oil and gas production, methane leaks are common, even though technical measures to reduce such leaks are available.

Asset manager Hermes EOS provides shareholder engagement services. In 2014, Hermes EOS initiated a dialog with the management of Sinopec, a large Chinese oil and gas company. Since then, Sinopec has introduced a methane-reduction program, among other initiatives. According to Sinopec, the program saved an equivalent of roughly 3 million tons of CO₂ emissions in 2017. This is an impressive figure; it corresponds roughly to the annual CO₂ emissions of the Bahamas.

Hermes EOS's engagement and Sinopec's methane-reduction program are an example of the impact potential of shareholder engagement. On the other hand, the mechanism may promote incremental improvements that have substantial impact, but it is unlikely to transform businesses fundamentally: Sinopec is still producing just as much oil and gas.



Market Signals

Send price signals that encourage improvement to the entire market.

Investors can send signals to the entire market (not only to the companies they are invested in) by allocating capital toward companies with positive impacts and withholding it from companies with negative impacts. While this may not necessarily affect the growth of companies, it may create share price incentives for companies to improve. When green investors tilt their investments toward *green* companies, the valuations of green companies may go up, and the valuations of brown companies may go down. As a result, managers of *brown* companies would have an incentive to implement changes to become green. This mechanism is at the heart of the most popular sustainable investing approaches, such as ESG integration, best-in-class screening, norms-based or conduct-based screening, and industry exclusion.

EVIDENCE LEVEL:

C. MODEL-BASED PREDICTION

There is relatively scarce evidence for the impact of this mechanism so far. Several theoretical models predict that the price effect of market signals could incentivize improvements. While parts of this mechanism have been empirically verified, it remains unclear whether the pricing effects are relevant in practice and whether the mechanism actually drives companies to implement reforms.

REQUIREMENTS:

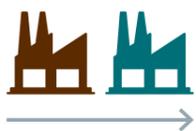
1. A focus on ESG criteria that companies can meet at reasonable cost holds more promise than demanding fundamental changes, because it's not clear that the scale of incentives is large enough to drive wholesale changes to a company's practices.
2. Influencing the market will require a considerable fraction of the market to use the same criteria, and exclude (or substantially underweight) companies that do not meet the criteria. While it's hard to know what this fraction needs to be to produce a meaningful effect, most models point to meeting a minimum threshold of *green* investors before there is any meaningful impact.

LIMITATIONS:

There is no evidence that industry exclusions incentivize improvement. The cost for a firm to change its industry or core business model is likely to be prohibitive compared to share price movements caused by sustainable investors. Thus, the case for norms-based/conduct-based exclusions or best-in-class approaches (see Applying the Mechanisms to Sustainable Investment Products) seems more promising. Disagreement among investors about the selection and measurement of ESG criteria dilutes the effect of this mechanism. Given that there is ample divergence among ESG ratings, and different investment products implement a wide range of different screens, disagreement is likely to be relevant whenever this mechanism is used.

TYPICAL ASSET CLASSES:

- Public equity
- Public debt

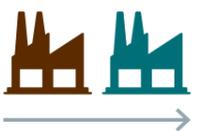


Example: Vanguard ETF screening out ESG sinners

The ESG International Stock ETF offered by the investment company Vanguard invests passively in a wide range of international equities. The portfolio excludes several industries, such as tobacco and fossil fuels, and it also excludes companies that do not fulfill the standards of the UN Global Compact, a public commitment to adhere to 10 principles of good business conduct.

The fund itself makes no statement about the impact of its investment policies on companies. A key difficulty is that the fund's impact depends on whether other funds apply the same screen.

If many other funds are implementing the same screen, the stock prices of excluded companies should decrease to some extent. If the decrease is noticeable, managers of excluded companies may consider signing the UN Global Compact to increase their share prices. Yet, even when the decrease is substantial, it is unlikely that tobacco companies will stop selling cigarettes to avoid the screen.



Non-Market Signals

Send signals to society that influence the public discourse on pressing challenges.

Investors can also send signals that do not directly affect financial markets but may influence public agenda-setting or business culture. Investors can signal that they value company impact in ways that do not have direct asset pricing implications. This includes stigmatization (publicly stating opposition to certain companies or industries) and benchmark effects (the fact that companies tend to want to look good in ESG rankings for reputational reasons). Although non-market signals do not have a direct influence on companies, they may indirectly support systemic change, for example, by supporting political processes and governmental regulation.

EVIDENCE LEVEL:

D. NARRATIVE

There is no scientific evidence for the effectiveness of non-market signals to date. There are, however, compelling narratives. For example, the divest fossil fuel movement, argues that by stigmatizing the fossil fuel industry, divestment paves the way for political and cultural change.

REQUIREMENTS:

1. Non-market signals need publicity. Thus, to spur political or cultural responses, divestment decisions must be publicly announced. They are also much more newsworthy when undertaken by a reputable institution or famous individuals.

LIMITATIONS:

Non-market signals depend on political action or cultural change to ultimately achieve impact. The signals need to be translated into actions, political or otherwise, that have a tangible effect on companies. However, due to their indirect nature, such effects are difficult to verify.

TYPICAL ASSET CLASSES:

- Public equity
- Public debt



Example: Stanford's coal divestment

In 2014, Stanford University announced the decision to divest coal companies from its endowment of over 20 billion US dollars. The University took this stance following persistent student activism and protests. While the announcement of Stanford's coal divestment seemed not to have hurt the prices of coal stocks, it has gained widespread global media attention. Stanford's decision was followed by fossil fuel divestment decisions by a growing number of institutions, including Norway's sovereign wealth fund and the Rockefeller Brothers Fund. Proponents of the divestment movement argue that it has helped to stigmatize the fossil fuel industry, dismantling its social license.

Stanford's coal divestment shows that excluding entire industries does not create impact through capital markets. Rather, divestment may have an impact if it manages to gain visibility and send a prominent signal in the public discourse.



Applying the Mechanisms to Sustainable Investing Products

We map the mechanisms of investor impact to typical sustainable investing products and highlight criteria to look for when assessing impact potential.

In the market for sustainable investing, there are seven commonly recognized approaches that most banks and asset managers use to describe their sustainable investing products. Table 4 lists the seven approaches and indicates which impact mechanisms each typically covers. For some approaches the evidence for impact is more compelling than for others. How each approach is implemented will enhance or reduce the potential impact of each approach.

	Sustainable Investing Approach							
	Industry Exclusion	ESG Integration	Norms-/Conduct-Based Screening	Best-In-Class Screening	Shareholder Engagement	Thematic Investing	Impact Investing	
Impact Type	Influence Discourse 	Encouraging Improvement 					Enabling Growth 	
Impact Mechanism	Non-market signals	Market signals			Shareholder Engagement	Grow new/undersupplied capital markets	Provide flexible capital	Provide non-financial support
Evidence Level A (Scientific consensus)								
Evidence Level B (Empirical evidence)					1. History of successful engagements leading to substantial improvements 2. Influential institution	1. Portfolio companies with net-positive impact 2. Portfolio companies experience enhanced growth due to investment 2. Portfolio companies experience enhanced growth due to flexible conditions 2. Investor provides effective non-financial support		
Evidence Level C (Model-based prediction)		1. Transparent ESG criteria that companies can meet at reasonable cost 2. Portfolio differs substantially from the benchmark, due to ESG criteria 3. Focus on ESG criteria considered by many other investors as well						
Evidence Level D (Narrative)	1. Public visibility of exclusion decision							
No evidence for impact	No public visibility	Non-transparent ESG criteria Portfolio is similar to the market benchmark ESG criteria that most other investors ignore			Unsuccessful engagements Superficial improvements Non-influential institution	Portfolio companies with unknown or net-negative impact Portfolio companies with sufficient access to capital (e.g., large cap public equity) Portfolio companies with sufficient access to capital Ineffective non-financial support		
Typical Asset Classes	Public markets: public equity, public debt					Private markets: private equity, private debt, venture capital		

Table 4: This table lists the most common sustainable investing strategies and how each can have impact through a certain mechanism. The definition of the strategies is based on the Global Sustainable Investing Alliance's 2018 classification.

Industry Exclusion

Industry exclusion is one of the oldest and most popular approaches, where specific industries or products are excluded from a portfolio. Some of the most frequently excluded industries are tobacco, alcoholic beverages, and weapons manufacturing. The exclusion of fossil fuel and coal producers is increasingly popular.

ESG Integration, Norms or Conduct-Based Screening, and Best-in-Class Screening

ESG integration, norms- or conduct-based screening, and best-in-class screening are approaches that consider ESG criteria in portfolio construction. ESG integration is the most flexible, requiring ESG criteria to merely be considered next to financial criteria, without articulating how they affect investment decisions. Norms- or conduct-based screening excludes companies that do not comply with certain norms set by international bodies, such as the UN Global Compact or International Labour Organisation standards or that show undesirable conduct, e.g., contributing to deforestation. Best-in-class usually reduces the set of investable companies based on a comprehensive assessment of ESG criteria. All three approaches result in a portfolio that is tilted by ESG criteria.

Mechanism of Investor Impact

The main impact mechanism of industry exclusion is **non-market signals**. While industry exclusion may also send market signals, the effect of these signals tends to be weak. The effectiveness of this mechanism is hence not clear and is mainly based on the narrative that it will shift the public discourse on the excluded industry. Note that industry exclusion is often used to align portfolios with investors' values. Values alignment is a legitimate objective, but it is different from the objective of maximizing impact.

Conditions

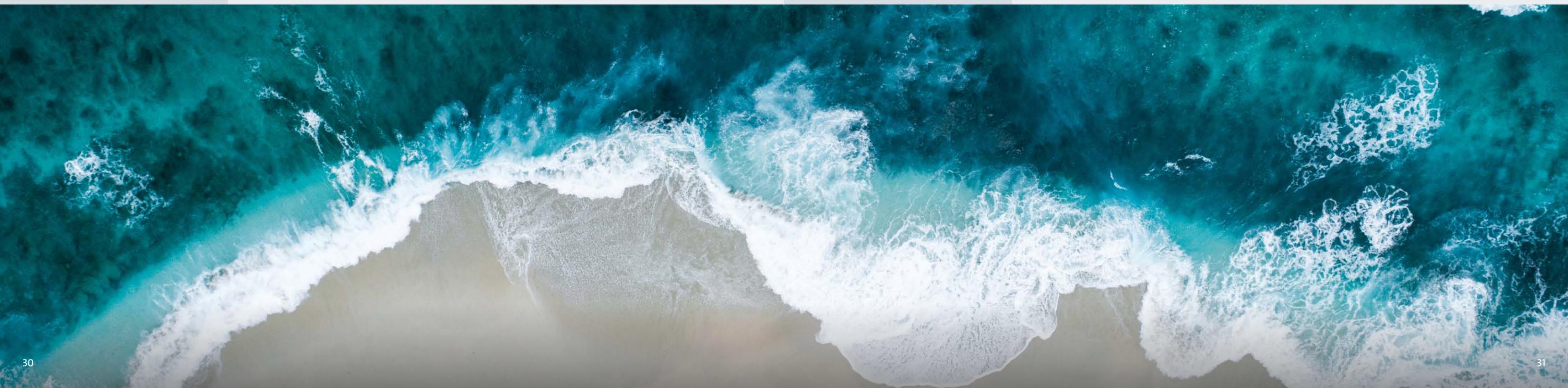
1. Investors must publicize their decision not to invest in a specific industry in the most salient way possible. Investing silently in a product that features industry exclusion (as with Vanguard's ESG International Stock ETF) does not send a non-market signal and might have no impact.

Mechanism of Investor Impact

ESG integration, norms- or conduct-based, and best-in-class screening may have an impact through **market signals** that reward companies that comply with ESG criteria with higher share prices. Theoretical models predict that this could incentivize companies to comply with ESG criteria.

Conditions

- To realize this potential impact, an investment product needs to fulfill the following conditions:
1. The product should use ESG criteria that are transparent and understandable to all investable companies. Otherwise, corporate managers wouldn't know how they are supposed to improve. Furthermore, companies should be able to meet these ESG criteria at a reasonable cost. Criteria that target incremental change are more likely to spur improvement than criteria that compromise a company's core business.
 2. The product's mandate should allow the portfolio to be different than its benchmark. After all, the portfolio needs to exclude or substantially underweight companies that don't meet the ESG criteria. If it can't do that, as, for example, a benchmark index can't, it has no ability to have an impact through the ESG criteria.
 3. The ESG criteria that inform the product's portfolio need to be considered by a substantial proportion of all investors to send a noticeable price signal. Being part of investor coalitions and alliances or relying on standardized criteria helps. If the investment product uses non-standard ESG criteria that are only considered by a few investors, the price signal will be weak.



Shareholder Engagement

An ownership stake in a company comes with having a say in governance. Investors who want to change the world are increasingly finding their voice and attempting to influence practices through the boardroom and at shareholder meetings. Many sustainable investing products use shareholder engagement in combination with other approaches.

Sustainability Themed Investing and Impact Investing

Sustainability themed investing and impact investing refer to products that concentrate their portfolios on companies with positive impact. Sustainability themed funds offer investors exposure to sustainable sectors or companies providing solutions to global challenges often in public markets, such as SDG funds. Impact investing funds intentionally aim to solve global challenges, mainly with private market investments. For example, a thematic fund may invest specifically in renewable energy companies, whereas an impact investing fund may invest in social entrepreneurs. Either approach fosters the growth of impactful companies.

Mechanism of Investor Impact

There is a reasonable amount of empirical evidence that **shareholder engagement** can achieve investor impact. Many ESG products only vote shares according to ESG guidelines, but do not actively engage in shareholder advocacy. The impact potential of “voting only” is not known. However, ensuring that voting guidelines take a clear stance on ESG issues and that past votes are disclosed are good starting points.

Conditions

To have impact, products pursuing shareholder engagement should fulfill the following conditions:

1. Shareholder engagement activities should focus on ESG improvements that are both realistic and meaningful. An impactful engagement product should ideally have a history of successful engagement requests that have led to improvements in company impact. Past shareholder campaigns have convinced companies in the computer industry to recycle electronics and to acknowledge, if not address, gender pay gaps, for example. When past engagement requests have led only to trivial adjustments or when there is no documentation of engagement success, the impact of the product is questionable.
2. Engagement is more likely to yield results when the engaging institution is influential, which can come from the institution's size, reputation, or cultural proximity to the engaged companies. Engagement can also be more influential through a coalition of investors; asset managers with little experience or resources may have more impact by outsourcing engagement to service providers that pool the engagement mandates of many investors.

Mechanism of Investor Impact

Both approaches rely on the mechanism to **grow new and undersupplied capital markets**. Impact investing funds may also **provide flexible capital** or **provide non-financial support**.

Conditions

There is a common condition that all sustainability themed investing and impact investing products need to fulfill:

1. Portfolio companies must have net-positive company impact. The fund should have a method to estimate the positive contribution that each portfolio company is making. This may take different forms, including a qualitative assessment, or a measure of improvement in concrete indicators. Either way, there should be a process to ensure and monitor that company activities result in positive change.

For products aiming at growing **new or undersupplied capital markets** by providing growth capital the following condition applies:

2. The product must enhance portfolio companies' growth through the fund's investment. This means that the company would have grown less, or may not have survived, without the fund's investment. While this is extremely difficult to demonstrate, the fund should at least offer arguments or examples that make this case. Funds have a greater chance to enhance the growth of portfolio companies when they invest in start-ups, small and medium-sized enterprises, or in companies in underdeveloped financial markets. If the portfolio consists only of large established companies that are based in developed countries, a fund is unlikely to have investor impact.

For products that make concessions on risk adjusted returns and **provide flexible capital** the following condition applies:

3. Portfolio companies need the flexible capital to grow or survive. Many impactful companies need capital to scale but cannot offer returns on par with commercial investments, for example, companies that address the needs of the poorest of the poor or externalities such as ocean pollution. Yet, offering flexible conditions is no guarantee for impact. Fund managers should ensure that companies have organizational structures that ensure that flexible conditions are not just to the benefit of founders or other investors. Also, they should have processes to avoid “mission drift” – the risk that companies reduce their positive impact as they grow.

For products where asset managers aim to boost portfolio companies by **providing non-financial** support the following condition applies:

4. The product should demonstrate that its non-financial support is effective and leads to improved operational performance and growth. In the absence of a track record, investors should scrutinize the fund manager's experience and make sure that the fund manager actually brings resources to the table that portfolio companies are lacking. For example, the fund's team should have relevant knowledge, a network that brings advantages to the portfolio companies, and/or a reputation that helps to bring in more investors or customers.

How To Put This Guide Into Action

The framework presented in this guide enables you to increase the investor impact of your portfolio. Here is a step-by-step explanation on how to use it.

This guide offers a framework to qualitatively assess investor impact. It focuses on investor impact as the core concern of investors who want to drive change. The framework is evidence-based and thus ideally suited for forward-looking investment planning. We suggest the following process to optimize your intended investor impact.



Step 1: Understand Your Baseline Investor Impact

Map portfolio holdings to the framework, in order to get a baseline understanding of your investor impact. You can map holdings either to impact mechanisms (using Table 3) or to product types (using Table 4). This mapping exercise tells you what percentage of overall wealth is allocated to which impact mechanisms.

Going one step further, you can check whether investments also fulfill the necessary requirements to have impact. This helps to identify opportunities for increasing investor impact. For example, you may discover that existing exclusion policies are not publicized, which would be an easy step to take toward maximizing the investor impact of activities you have already implemented.

Step 2: Integrate Investor Impact into Your Investment Strategy

Next, you can integrate investor impact into your broader investment strategy. The baseline assessment gives you an overview of the actions you might take to increase your investor impact. Some of these actions mean replacing products (e.g., switching a traditional equity fund for one that does shareholder engagement). Other actions mean re-allocating assets (e.g., increasing investments in private equity).

The framework gives you a structure to evaluate these options in terms of impact potential and weigh this impact potential against traditional financial dimensions such as risk, return and liquidity. Finally, the framework can serve as a reference point when integrating investor impact formally in investment policy statements. For example, the policy may state whether concessionary investments are allowed and under what circumstances.

Step 3: Make Impactful Investment Decisions

Based on your strategy, you can use the framework to make well-informed investment decisions that continuously improve your investor impact. When evaluating new investment opportunities, you can use the framework to guide due diligence on investor impact. New opportunities can be mapped against impact mechanisms and checked for requirements.

For example, can a fund investing in social businesses credibly demonstrate that it enables its investee companies to grow faster? Using the framework ensures that the issues that matter most for investor impact are thoroughly discussed.

A CAVEAT: It is important to understand that the framework does not provide a quantitative measure of investor impact. Thus, it is not suited to support claims about the investor impact of certain products or a portfolio. However, it enables you to do a prospective, qualitative assessment of the investor impact of investment options, and can help you to make better investment decisions.

Vision and Outlook

This guide provides a framework for how investors can have impact, based on what we know today. However, research on investor impact is ongoing. We identify five key questions that should be researched to give investors more precise guidance going forward.



How are financial constraints measured?

A key requirement for several impact mechanisms is that a company that has positive company impact is financially constrained. If this is the case, investors can unlock additional growth when providing capital that eases the constraints. How can investors determine whether a company has such financial constraints?

A versatile method to estimate financial constraints would allow investors to gauge their potential investor impact when comparing investment options.



How are engagement skills assessed?

Based on empirical studies, shareholder engagement is a promising mechanism. However, it is difficult to evaluate and compare engagements by different asset managers or service providers. The criteria in this guide offer some guidance on what to look for. A more elaborate method to assess or benchmark the investor impact of different engagement providers or products would help investors reach impactful investment decisions.



What is the real-world impact of ESG?

Theoretical models predict that when many investors focus their investments in green firms, brown firms will start to improve. Whether this holds true in reality remains unclear. Empirical studies that determine whether this effect is meaningful in practice are urgently needed. Otherwise, the impact of a large part of the sustainable investment market hinges on untested theoretical predictions.



Does it pay (in terms of impact)?

The current knowledge on investor impact enables investors to make informed investment decisions. However, it does not allow them to evaluate the cost effectiveness of different impact products. For example, are the fees that asset managers charge for engagement services justified by the impact they achieve? Or would it be more cost effective to pursue the same impact with donations?



Is there one metric to rule them all?

Ideally, impact investors would have a single metric that indicates for each potential investment the amount of positive change that they can realize by investing. This would allow them to build portfolios with the exact impact and financial return expectations that they prefer. This score does not exist yet, and it may never be perfect, but we and others continue to work toward this vision.

Sources and Further Reading

This guide relies on valuable insights from the following sources, listed in alphabetical order.

- 2° Investing Initiative (2020), "A Large Majority of Retail Clients Want to Invest Sustainably."
- 2° Investing Initiative (2020), "EU Retail Funds' Environmental Impact Claims Do Not Comply with Regulatory Guidance."
- Brest, P., & Born, K. (2013), "Unpacking the Impact in Impact Investing," *Stanford Social Innovation Review*, 1–14.
- GSIA (2018), "Global Sustainable Investment Review 2018".
- Impact Management Project (2019), "Investor Contribution in Public and Private Markets."
- Kölbel, J.K., Heeb, F., Paetzold, F. & Busch, T. (2020). "Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact," *Organization & Environment*.

The following resources offer valuable extensions and complements to this guide

- The Impact Management Project is an NGO that promotes an industry consensus on how to manage the impact of investments. Its website provides many practical tools and resources that can help you to assess and manage your impact as an investor.
- IFC: Operating Principles for Impact Management provide a verifiable standard on how to manage impact of investments. Maybe you can convince your bank to adopt it?
- The IMP+ACT Directory categorizes sustainable investing products according to their investor and company impact. You may be able to find more information on the impact of your portfolio holdings there.
- Finally, check out the CSP's website for training opportunities as well as our latest research on investor impact.

Footnotes

- 1 To learn more, see the peer-reviewed paper upon which this guide is based: Kölbel, J., Heeb, F., Paetzold, F., Busch, T. (2020). "Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact." *Organization & Environment*.
- 2 For more on this, see for example Berg, Florian and Kölbel, Julian and Rigobon, Roberto, "Aggregate Confusion: The Divergence of ESG Ratings" (May 17, 2020). Available at SSRN: <https://ssrn.com/abstract=3438533>
- 3 What we refer to as "investor impact," is called "investor contribution" in the IMP framework. The mechanisms of investor impact in this guide can be viewed as equivalent to the different strategies to make an investor contribution. What we call "company impact" is called "impact of underlying assets/enterprises." In principle, our insights might apply to assets that are not companies, such as real estate, but it is not something that we have thoroughly reviewed.

We gratefully acknowledge feedback provided on this document by:

- Paolo Fresia, 100% Sustainability
- Adam Bendell, Toniic
- Sam Bonsey, The ImPact
- Stanislas Dupre, 2Degrees Initiative
- Pablo Felmer-Roa, 2Degrees Initiative
- Michael McCreless, Impact Management Project
- James Hicks, Impact Management Project
- Timo Busch, University of Hamburg
- James Gifford, Credit Suisse
- Jonathan Harris, Total Portfolio Project

Impressum

Florian Heeb,
Julian Kölbel (2020),
The Investor's Guide to Impact.

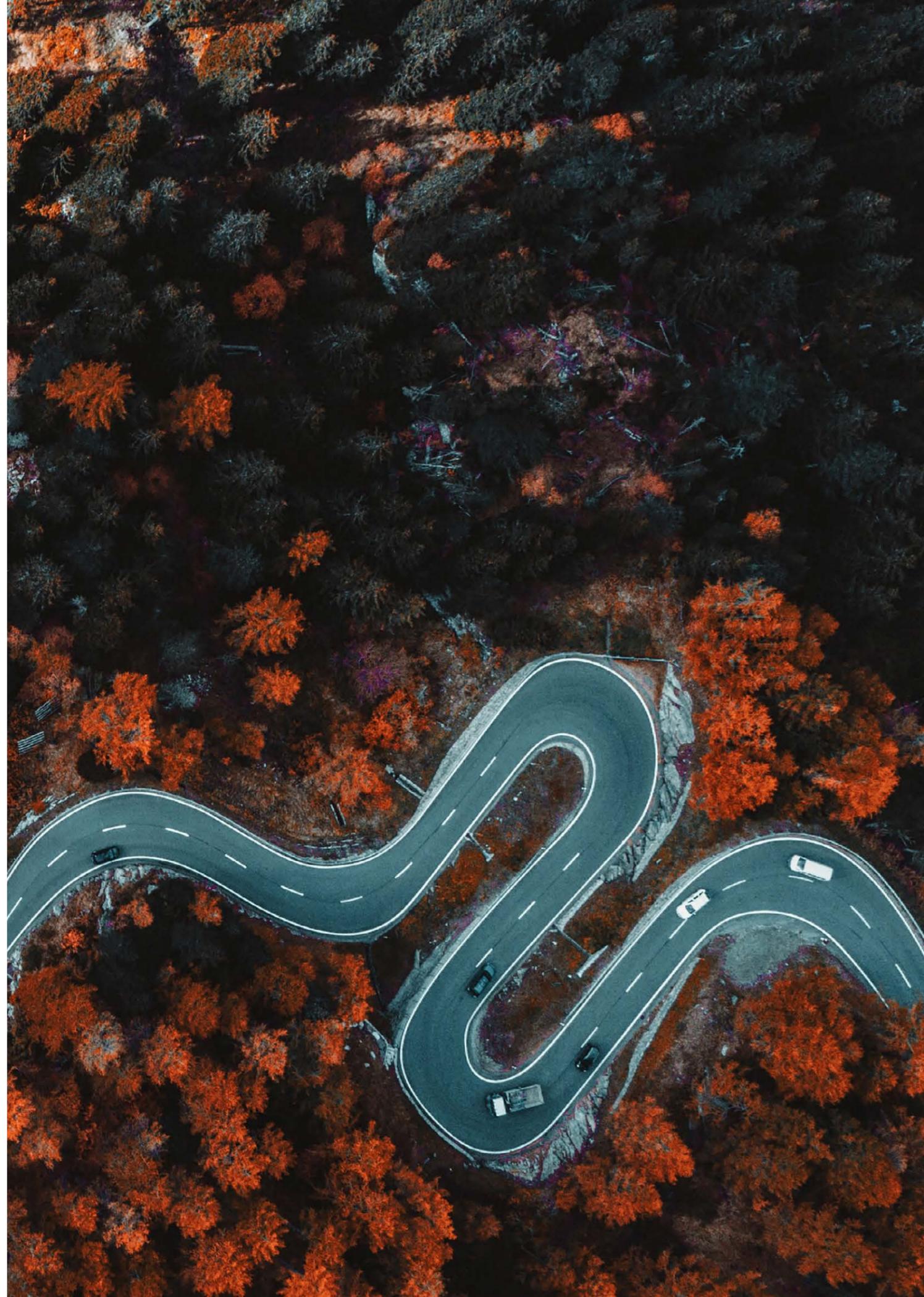
Cover image by Eberhard Grossgasteiger
Page 2 image by Tom Fisk
Page 8 image by Tom Fisk
Page 10 image by Tom Fisk
Page 12 image by Hugo
Page 17 image by Oliver Sjöström
Page 19 image by Rodrigo Flores
Page 21 image by Kelly Sikkema
Page 23 image by Vitaly Vlasov
Page 25 image by Basil MK
Page 27 image by Markus Spiske
Page 30 image by Nattu Adnan
All images downloaded from Unsplash or Pexels

Icons from The Noun Project by
Dron Desain: Target, Megaphone, World
Icon Cheese: Factory
And from Envato Elements



The illustrations and content of this report are published under a Creative Commons License. If you have any questions regarding the use of the content of the guide, reach out to florian.heeb@bf-uzh.ch

Universität Zürich
Department of Banking and Finance
Center for Sustainable Finance
and Private Wealth (CSP)
Plattenstrasse 32
8032 Zürich
Switzerland



MORE INFORMATION AT
www.csp.uzh.ch