

Schrooten, Mechthild

Article

Sustainable Finance – Divestment as a Tool to Reach the SDGs?

Vierteljahrshefte zur Wirtschaftsforschung

Provided in Cooperation with:

German Institute for Economic Research (DIW Berlin)

Suggested Citation: Schrooten, Mechthild (2021) : Sustainable Finance – Divestment as a Tool to Reach the SDGs?, Vierteljahrshefte zur Wirtschaftsforschung, ISSN 1861-1559, Duncker & Humblot, Berlin, Vol. 90, Iss. 4, pp. 7-18, <https://doi.org/10.3790/vjh.90.4.7>

This Version is available at:

<https://hdl.handle.net/10419/270633>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Sustainable Finance – Divestment as a Tool to Reach the SDGs?

MECHTHILD SCHROOTEN

Mechthild Schrooten, Hochschule Bremen, e-mail: mechthild.schrooten@hs-bremen.de

Abstract: This paper synthesizes the literature on sustainable divestment. Nowadays, divestment seems to be a popular strategy to sanction harmful industries or socially not desired outcomes of economic activities. However, in practice for a long time many firms which were known for harmful technologies did not face divestment or a loss in value. Seminal theoretical work was done by Heinkel et al. (Heinkel, Kraus, & Zechner, 2001). Recent theoretical studies based on this approach show that divestment has huge limitations. Theory explains that “voice” (engagement in the company) is superior to “exit” (divestment).

Nevertheless, the divestment movement and campaigns are of considerable social size. The effects of divestment on the financial market seems to be small in monetary terms. However, there are a lot of side effects, such increasing social awareness concerning the wasteful lifestyle. The divestment movement is gaining importance and actors. Therefore, the divestment movement is a supporting tool to reach SDGs. Not directly via the impact on the financial market, but by raising the social awareness.

Zusammenfassung: Dieses Papier bereitet die gängige Literatur zum Thema „Divestment“ auf. Über eine lange Zeit konnten viele Firmen, die für den Einsatz umweltschädlicher Technologien bekannt waren, lange Zeit davon ausgehen, dass sie nicht über den Finanzmarkt sanktioniert werden. Heutzutage scheint Divestment eine verbreitete Strategie zu sein, um umweltschädliche Unternehmensaktivitäten zu sanktionieren. Grundlegende theoretische Arbeiten zum Thema Divestment wurden von Heinkel et al. (Heinkel, et al., 2001) veröffentlicht. Jüngste theoretische Studien, die auf diesem Ansatz basieren, zeigen, dass die Wirksamkeit von Divestment begrenzt ist. Vielmehr scheint „Voice“ (Engagement im Unternehmen) dem „Exit“ (Divestment) überlegen zu sein.

In der Praxis jedoch stoßen die Divestment-Kampagnen auf eine beachtliche gesellschaftliche Resonanz. Die Auswirkungen von Divestment auf den Finanzmarkt scheinen dagegen eher gering zu sein. Es gibt jedoch viele indirekte Effekte von Divestment, wie z. B. ein zunehmendes gesellschaftliches Bewusstsein für den umweltschädliche Unternehmenspolitik und Konsumgewohnheiten. Daher kann Divestment als indirektes wirkendes Instrument zur Erreichung der SDGs betrachtet werden. Divestment entwickelt demnach seine Strahlkraft nicht direkt über die Auswirkungen auf den Finanzmarkt, sondern durch die Sensibilisierung der Gesellschaft.

→ JEL classification: G11, Q54, B59

→ Keywords: Investment Decisions, Divestment, Campaigns, CO₂ reduction

I Introduction

The so-called Sustainable Development Goals (SDGs) are rather fundamental, challenging and revolutionary. Despite the fact that the member states of the United Nations are heterogeneous in many respects, all of them adopted a common set of goals for a sustainable future in 2015. The SDGs are covering a wide range of topics – from “no poverty” over “zero hunger” to “climate action”. Basically, the SDGs address different harmful consequences of capitalism and market failures.

Most of the 17 Sustainable Development Goals (SDGs) can be easily linked to finance. Their realization requires a certain allocation of financial resources. Some of the goals can be reached only by innovation. Innovation means not only invention of new technologies. Innovation means divestment in traditional technologies, too. This might be reflected in additional costs for companies and consumers – and might drive inflation. The SDGs are getting more important for companies by the increasing public interest in the incorporation of environmental, social and governance (ESGs) considerations of the different industries. There exists a huge rating industry for ESGs criteria (Escrig-Olmedo, et al., 2019). The SDGs are closely related not only to the ESGs but also to the field of sustainable, responsible and impact investment (SRI).

Especially, responsible consumption and production (SDG goal number 12) and climate action (goal number 13) gained attention over the last decade. To reach the goal “responsible consumption and production” not only investment in adequate technologies is required, but there seems to be a need for a more fundamental change. By this a new and commonly used indicator for harmful economic actions emerged: the CO₂ emission. Responsible investment means investment with zero CO₂ and can be distinguished from irresponsible investment with high CO₂ emissions. Nevertheless, the EU commission defines sustainable finance in a broader sense: “Sustainable finance refers to the process of taking *environmental, social and governance (ESG) considerations* into account when making investment decisions in the financial sector, leading to more long-term investments in sustainable economic activities and projects” (European Commission, 2022). Responsible consumption – in this context – can be defined in the same way as responsible investment (United Nations, 2022). Within this context, the terms “responsible and “sustainable” is used synonymously.

Here, we focus on just one aspect of sustainability: CO₂ emissions. In practice, over the last decade CO₂ emissions have become a profile issue for many firms. In 2015 the binding Paris Agreement was signed by 195 nations. This agreement ends the long period of free carbon dioxide pollution. By addressing the climate change via pricing, governments end the long period of costless externalities by CO₂ emissions for both, consumers and producers. At the core of this agreement there is the “goal is to *limit global warming* to well below 2, *preferably to 1.5 degrees Celsius*, compared to pre-industrial levels” (United Nations, 2022). CO₂ emission goes back to a huge degree to fossil fuel industries.

Regulation and governmental interventions are gaining power, in both the academic and the political sphere. The last decades made it clear: Neoliberal assumptions on the healing powers of markets might be fulfilled in a world of perfect markets – but not in a reality. Market failures are part of the existing economic systems. With both, the SDGs and the Paris Agreement it can be argued that we are at the eve of a new legal framework for all business models. This step does not result from the market, neither from global firms – it results only from the changes in (international)

regulation and the cooperation of governments. Thus, it results from global environmental policies. What is the role of investors and the international financial market in this setting?

All in all not only for the activist movement but also for responsible financial investors many questions arise: (1) What is the recent size of divestment? (2) What is the social impact of divestment? (3) Do financial investors have a chance for signaling? (4) Can divestment result in socially desired outcomes? (5) Is the financial market responsible for signals, or is the regulation? Here, we offer a literature-based study on the size and the success factors of divestment focusing on fossil fuel divestment. Fossil fuel consumption and production is closely linked to the general SDGs and the ESG considerations of companies and is one of the major concerns for the future development.

2 Background – Stylized Facts

The history of divestment seems to be as old as the one of investment. Basically, we can distinguish between the strategic decision of a company for divestment and the financial market evaluation of this decision. In an early study Durhaime and Grant (1984) come to the result that firms which decide for divestment are in relatively weak position compared to their competitors (Durhaime & Grant, 1984). Thus, from the perspective of a firm divestment is an indicator for weakness. Divestment can be part of the foreign direct investment decisions. With divestment firms are focusing on their core business. However, this kind of divestment goes back to strategic decisions. If the divestment is part of the overall strategy Montgomery et al. come to the result that this leads to a positive development of the stock market (Montgomery, Thomas, & Kamath, 1984). Both findings can be compromised to: divestment occurs in times of low performance and leads in some cases to a gain of market value (Montgomery & Thomas, 1988). From the perspective of a firm divestment might lead to focusing on core and efficient operations and production.

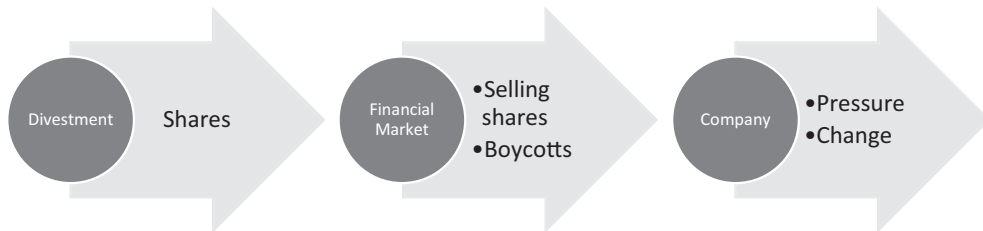
However, modern divestment is more than just moving money from one sector to the other for generating higher profits. Today, socially responsible investment and divestment is a hot topic. Activist investors want to prevent harmful production, injustice or political unrest. The sustainable investor wants to reach a socially desirable result – not just profits. By this, divestment might be closely linked to the questions of corporate social responsibility (CSR) (Kitzmueller & Shimshack, 2012). However, there are many differences since CSR covers a broad range of activities (Schoenmarker & Schramade, 2019). Sustainability or CO₂ reduction is only one of the large set of topics. In general, it can be assumed that CSR addresses sustainability issues from a strategic perspective of a company in the long-term (Christensen, Hail, & Leuz, 2019). Christensen et al. show the huge differences in measuring CSR activities by ESG-rating agencies. These conceptual differences make it difficult to compare the results – this signaling for the financial market is rather diffuse.

CSR activities might be in line with the shareholders' interests, it can increase the value of a firm. However, CSR gives the firm a purpose broader than profit or market value maximization. Basically, we can distinguish between voluntary and mandatory CSR activities of firms. The mandatory CSR activities have to be published in CSR reports, which offer information to both, investors and consumers. According to the literature, different CSR activities can lead to mixed results with respect to the firm's value or profit (Christensen, Hail, & Leuz, 2019).

Financial investment is closely linked to buying shares on the stock exchange. The shareholders are partial owners of company. Partial ownership is linked to a proportional voting right. Multinational companies are issuing a large number of shares. Typically, the influence of each individual shareholder on the decision making of the firm is neglectable. Thus, in practice only large groups of investors with a common interest or institutional investors such as pension funds or (large) investment funds might be able for significant divestment. From the perspective of the responsible investor divestment is part of her shareholder’s strategies. In recent times shareholders might have preferences for goals such as CO₂ reductions even at the expense of profits. Consequently, divestment seems to be a popular strategy to sanction harmful industries or socially not desired outcomes of economic activities.

Figure 1

Divestment: A simple idea



Source: Own.

The decision for divestment goes not only back to moral reasons. It is supported by growing risk of harmful investments. However, the increasing risk of harmful technologies is well reported since many years. Nevertheless, for a long period of time this kind of operational risk was not priced in the financial market. The World Bank provides examples about the scope of environmental harmful investments, nearly all traditional industries are affected (The World Bank, 2017).

3 Theory: What Does the Literature Tell?

Even within traditional neoliberal theoretical models CO₂ emissions are considered as negative externalities. For a long period of time these emissions were not priced. By changing this private investment decisions have to be revaluated. In addition, nowadays, investment and divestments in environmentally objectionable companies are attracting a lot of public attention – not only in the media but on the financial market. The fossil fuel divestment campaign is an important example for the increasing moral and political power of financial funds and investors (e.g. McKibben, 2018). From the perspective of companies and investors which are engaged in an objectionable project this might induce an asset price shock – or a stop of credit lines. From the perspective of a potential investor the engagements in such industries is getting riskier. The divestment movement is focusing on the financial market. However, the buying and selling shares of the company on the stock market are rarely financing a firm (Orr, 2022). At the moment of the “initial public offering” (IPO) of share the company is getting directly fresh money from the market. After IPO the shares are traded on the stock market without a direct effect on the financial situation of a given firm.

However, indirectly the stock price of the share will influence the access of the company to additional financial resources, such as loans or successfully issued bonds.

Most of the theoretical literature on divestment is focusing on the case that the potential investor is buying shares. Typically, it is assumed that there are at least two different groups of investors – selfish investors (not aware of ESGs) and investors with social preferences (aware of ESGs). It seems to be trivial that as long as the group of selfish investors is large enough, the investors with social preferences will not succeed. This goes back to the fact, that the strength of the voice of the socially responsible investor is proportional to the value of the asset invested. In the seminal work of Heinkel et al. it is shown that the impact of divestment is not proportional to the value of the asset (Heinkel, Kraus, & Zechner, 2001)! There is always the risk, that the seize of divestment is too small to be significant for the decision making within the firm. In addition, Heinkel et al. show that profit seeking investors act as a substitute for divested capital.

In their more recent theoretical paper Broccari et al. analyze the welfare effects of divestments (exit). They compare it to the effects of active engagement of investors in the firm (“voice”). Basically, it is assumed that a higher degree of environmental consciousness leads to higher costs for the firm and thus lower profits and monetary benefits for the shareholder (Broccardo, Hart, & Zingales, 2020). According to the model, clean investment makes only sense if the ecological damage of production is higher than the additional fixed cost of firm. In addition, Broccari et al. assume that the welfare effect of this decision is influenced by the weight of preferences for green investment λ of the individual investor. To a certain degree, their model is an augmentation of the Heinkel et al. paper (Hart & Zingales, 2017). This strand of literature is taking the individual preference for sustainable production as a public good. Thus, there are high incentives for free-riding – the burden for sustainable investment would be covered only by responsible investors, anyway. Within such a model, the welfare effect of the divestment decision of a single investor is neglectable (marginal effects). Furthermore, there might be a difference between individual and social preferences for divestment. According to this arithmetic model, at least two interesting situations might occur: (1) There could be the one pivotal marginal investor being responsible for a change of the whole investment process. (2) Regulation (the authors call it “the benevolent planner”) could devalue harmful technologies. In such a case the question arises to what degree clean technologies are required by the regulator. It can be shown that the decision of existing firms to invest in new “clean” technologies depends on the difference between (fixed) cost for new investment and the cost for damage. The whole model can be summarized as follows: The success of divestment (“exit”) depends on the intensity of preferences for divestment, the cost of clean technology and the cost of ecological damage. According to this class of models, regulation is much more effective than divestment. In addition, the authors show that “voice” is more effective than divestment. By this they support the ideas of Hirschman that in general investors have to decide between “exit” and engagement (“voice”) the organization. Hirschman argued that “voice” as strategy to change the behavior of the organization is superior (Hirschman, 1970).

A second strand of literature is analyzing the impact of divestment on the financial performance of a firm. Oehmke et al. show that: “Impact requires a broad mandate, in that socially responsible investors need to internalize social costs irrespective of whether they are investors in a given firm. Impact is optimally achieved by enabling a scale increase for clean production.” (Oehmke & Opp, 2020). Taking a similar approach as Broccario et al. the authors focus on “voice” rather than on radical divestment. According to Oehmke et al. socially responsible investors could act effectively by financing the clean investment of a firm. Within such models it usually assumed that “clean”

investment is “expensive” investment and reduces the profit of a given firm. The authors distinguish between financial investors and socially responsible investors. Basically, underinvestment in clean investments is one important precondition for a successful cooperation between financial and social investors. The other is that the damage generated by the firm attracts the action of social investors. From the perspective of the socially responsible investor the preference for a single firm depends on a Social Profitability Index (SPI) which is ranking the firms. It is assumed that the socially responsible investor is confronted with scarcity of capital. Thus, there is a selection process and the firm selected by the responsible investor must fulfill minimum conditions to be attractive for social investment. As Broccorro et al. Oehmke et al. show that divestment is less effective than engagement from the perspective of the socially responsible investor.

A different approach is taken by Lagandier and Lovo (2020). The authors consider the effects of an ESG funds on financing. It is assumed that funds are maximizing market size, firms are maximizing profit and investors are maximizing returns. The authors show that in such a world the ESG funds has an impact on the investment decision. According to their argumentation the funds would be engaged in harmful firms and support them to shift to green technologies. Again, as in the models mentioned above engagement of funds is important for the implementation of green technologies (Landier & Stefano, 2020).

All in all, this kind of recent theoretical literature shows a huge tendency to support the view that divestment is a less effective strategy. According to these papers a change to a green world needs investment which is more expensive than traditional investment. This is why the socially responsible investor is so important. Based on her preferences she is willing to accept a lower return on investment.

4 Empirical Considerations

Is divestment or engagement of responsible investors is more sufficient to reach socially desired outcomes? Several existing theoretical papers on divestment are focusing on this question. Usually, it can be shown that the most efficient tool to reach sustainable development is regulation. This fact is well known in practice, too. However, regulation is often lagging. Some authors argue that we are not only confronted with market failures, but policy failures too (Broccardo, Hart, & Zingales, 2020).

Some of the papers combine theoretical considerations with empirics. In the seminal work of Heinkel et al. a larger set of firms is taken the impact of divestment is analyzed. Nowadays, there is a public movement of activists all around the world voting for divestment. An increasing number of campaigns are advocating for sustainable investment the and divestment from companies with harmful production technologies. Some activist even put their lives on social justice and see intervention in financial markets an appropriate tool to foster the change (Orr, 2022). These movements are strong in western societies. They could gain power by cumulative effects and the size of the funds– however often the indirect effects on sustainability are neglected (Ritchie & Dowlatabali, 2014). Those campaigns are often lacking from distinguishing between divestment and defunding. Since only defunding is limiting the financial resources of the company. However, in terms of public consciousness the divestment movement in western societies can be called a success. In the next section we take a look at the campaigns which can be considered as to part of the overall fossil fuel divestment movement.

4.1 Divestment: Actors

The divestment idea is promoted by a broad set of actors. Today, campaigns for climate protection are part of the overall social, economic and political life. The idea of climate protecting divestment campaigns gained power after activist Bill McKibben published his article on climate math in the *Rolling Stone* 2012 (McKibben, 2012). A broad climate justice movement was born and supported by McKibben's 350.org platform. The platform explains its goals: "(1) A fast & just transition to 100% renewable energy for all, (2) No new fossil fuel projects anywhere and (3) Not a penny more for dirty energy" (350.org, 2022). At least goal 3 is closely linked to divestment. In recent days, the goals of the divestment campaigns were not only shared by activists but also by organizations like pension funds and profit-oriented companies.

The database on Global Fossil Fuel Divestment (<https://divestmentdatabase.org/>) gives an impression about the size of this kind of divestment (Figure 2). The database explains that today the size of fossil fuel divestment is about 40 trillion USD by 1507 institutions. Since 2014 the size of divestment has grown by 75 percent. This might go back to achievements in the context of the Paris Agreement. Interestingly, the largest share of the overall amount goes back to faith-based organizations¹ followed by educational institutions. The 2021 report on fossil fuel divestment explains: "Major new divestment commitments from iconic institutions have arrived in a rush over just a few months in late 2021, including Harvard University, Dutch and Canadian pension fund giants PME and CDPQ, French public bank La Banque Postale, the U.S. city of Baltimore, and the Ford and MacArthur Foundations." (Global Divestment Commitment Database, 2021)

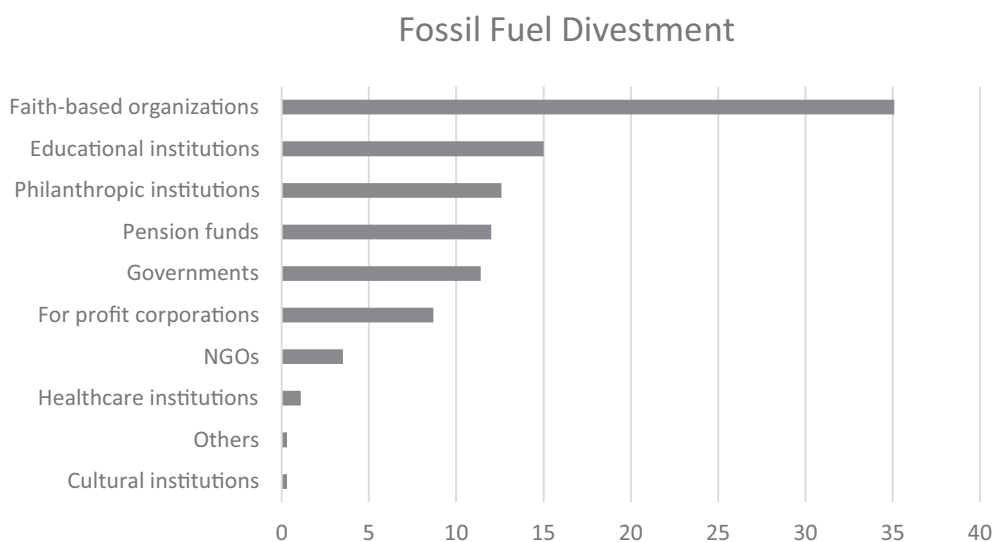
Today the divestment movement is gaining public interest and speed. However, a decade ago divestment seemed to be not attractive. CO₂ emissions were not priced. Thus, the industries could realize externalities at a zero cost. Only in the more recent time, pricing and shifts in the legal framework put some cost on CO₂ emissions. From the perspective of an investor rising costs or legal bans are increasing the risk. By this a certain endogeneity of less or non-investment occurs, even in a fully-fledged financial market economy. Even within this framework it does not make huge sense to invest in markets which undermine the living conditions on the planet.

Pollin and Hansen are offering a broad data set on fossil fuel divestment commitments (Hansen & Pollin, 2020). In the database about 800 organizations are listed. Today, the largest organizations committed to divestment are profit oriented companies (Table 1). Many of them committed to a certain field of divestment like coal.

At the beginning this divestment movement was focused on universities (Ayling & Gunningham, 2015). In the educational sector climate issues are addressed by implementing new standards like climate commitment for many years. By this most universities committed to carbon neutrality and developed zero waste programs, used environmentally friendly construction, implemented programs to saving energy, adopted sustainable purchasing policies and, and, and ... Additionally, many universities introduced new curricula or lectures addressing questions of climate change. According to the Global Divestment Database about 15 percent of the overall divestment activities go back to educational institutions – many of them are located in the US or in the United Kingdom.

¹ One important advocate is Nobel prize winner Archbishop Tutu (Carrington, 2014). The fossil fuel divestment movement often refers to the experience of the apartheid divestment campaign in South Africa in the 70s and 80s.

Figure 2

Which institutional actors are divesting?

Source: Global divestment database.

Table 1

Who is divesting?

Rank	Name	Type	Country	Commitment	Size - Billion USD
1	Government Pension Fund Global	Pension Fund	Norway	Coal Only	890
2	AXA I.M.	For Profit Corporation	France	Coal Only	782
3	Allianz SE	For Profit Corporation	Germany	Coal Only	668
4	AXA S.A.	For Profit Corporation	France	Coal Only	589
5	Aviva	For Profit Corporation	UK	Coal Only	572
6	Aegon N.V.	For Profit Corporation	Netherlands	Coal Only	382
7	Lloyd's	For Profit Corporation	UK	Coal Only	378
8	California Public Employees' Retirement System (CalPERS)	Pension Fund	USA	Coal Only	290
9	Nordea Asset Management	For Profit Corporation	Sweden	Coal Only	228
10	New York City Pension Fund System	Pension Fund	USA	Full	189

Source: Global Divestment Database.

The largest university participating is the University of California (98 billion USD) (Table 2). One very well-reported case is the American University's Fossil Free campaign (Bratman, Brunette, Shelly, & Nicolson, 2016). In their unconventional case study, the authors show that the result of the campaign the authors explain how this campaign has been affected by the questions of standards, market size and the decision between "voice" and "exit". The effects of the limiting factors the authors mention are more or less those factors which are considered as to be crucial in

the theoretical literature on financial divestment. In addition, the authors mention one very important aspect of this campaign:

“One thing that has become abundantly clear during the campaign is the extent to which a new generation of activists is eschewing older understandings of conservation and nature protection in favor of a growing focus on climate justice. This evolution of environmental activism has been much noted and certainly warrants greater attention. Climate change is becoming less abstract a notion as identifiable people and populations, visible to those in power, experience directly some of the impacts associated with a warming world. The FFAU campaign suggests that such experiences can drive people to move beyond important first steps like tackling personal energy consumption and move on to sustained, focused, and impactful political action” (Bratman, Brunette, Shelly, & Nicolson, 2016).

An interesting case is given by the Havard University which had a well noticed debate on the impact on divestment (Havard University, 2022). So far, the Havard University is not in the list of universities which claimed for divestment. The Havard University already at an early stage of movement encouraged for “voice” not for “exit” (for details: <http://www.divestharvard.com/>).

Table 2

Divestment - Universities

	Name	Country	Billion USD
1	University of California	USA	98
2	Yale University	USA	25,6
3	Stanford University	USA	22,1
4	University of Cambridge	UK	9,7
5	Birmingham City University	UK	6,6
6	Johns Hopkins University	USA	3,4
7	Oxford University	UK	2,6
8	University of Washington	USA	2,6
9	Boston University	USA	1,6
10	Georgetown University	USA	1,5

Source: Global Divestment Database.

4.2 How to Measure the Impact of Divestment?

Divestment is a non-governmental action. Modern divestment campaigns are transnational. However, the goal of the different climate related campaigns may differ. Therefore, it is difficult to measure the general impact of such campaigns. In general, it is reported that these campaigns contributed in many respects to the overall climate debate and the awareness of the SDGs. NGOs and campaigns are important for lobbying, consumer and investor education, shareholder engagement (“voice”), lobbying for the reduction of emissions, initiatives to introduce sustainable supply chain policies (boycotts, shaming), commitments to standards, such as certification regimes and voluntary principles. However, these different (transnational) campaigns do not have a common strategy or a common measurable goal (Ayling & Gunningham, 2015).

Especially, at the beginning the divestment movement developed fast and could attract relatively huge investors not only from the educational sector. The financial *size* of listed actors in the Divestment Commitment Data set is considerable – however, compared to overall international financial market size it remains small.

Most of the important actors committed only to divest in just one industry: coal (Table 1). This might go back to the fact that today any investment in the coal industry is sanctioned by legal and *regulatory framework* and less attractive. Investment in the coal industry seems to be very risky. Divestment to coal seems to be part of a rational decision making. Thus, the membership in the list and the commitment would not have an extra effect on reaching the SDGs.

The *diversity of companies and institutions* which are committed to divestment is huge. Even institutions which earned their money from oil are on the list. One example is given by the Pension Fund from Norway, another example is given by the Rockefeller Fund (Size: 801 million USD). However, all these actors apply different definitions of what divestment means for them. It is not necessarily mean that they will sell all their shares which they own in just one moment.

Divestment campaigns *raise public interest*. Today the marketing effect of offering green products is huge. This might be one factor behind the membership of several well know large players on the list for commitment. Often these organizations choose only a soft-landing transformation process towards low emissions. A radical change in the supply-chain is usually not foreseen. Only in the moment from which these organizations see that the risk to invest in such industries is to high they will change the business model. Thus, divestment might be even contra-productive as long as harmful industries can maximize profits.

The divestment movement was able to raise *the public consciousness* concerning climate change. It is important not only to explain the need to transition to a low-carbon economy as a matter of urgency, but also to link it to our recent lifestyle.

The divestment campaigns are not in vacuum – it is part of larger climate action movement. Some divestment initiatives make clear that a soft *transition* towards a market-oriented will not be possible. It is clear, what is not sustainable. However, what exactly is sustainable production in a market and profit-oriented society?

But is divestment the most effective way to reach CO₂ reduction? Even authors closely linked to the divestment movement come to result, the divestment is a long road and its effects are very complicated to analyze (Hansen & Pollin, 2018). The time is running and cannot be lost by long-term action plans. It can be easily shown, that as long as profit-seeking investors continue to see profit opportunities in owning fossil fuel industries they will investment and buy the shares offered by the divestment movement. Thus, for reaching the SDGs divestment has huge disadvantages, since it is not directly linked to funding of companies.

5 Conclusions

Divestment is a hot topic today. Sometimes divestment is considered to be similar to defunding. However, divestment is only selling shares or ownership rights. Selling ownership rights has not much in common with the idea of financing firms. Usually, the operations of firms financed by bonds, credits, cash-flow and only under extraordinary circumstances by issuing new shares.

Selling shares on the financial market is rather easy. If the responsible investor is selling the shares of fossil fuel company there is usually enough demand for those shares – as long as the company works profitable. Thus, externalities produced by the company cannot be addressed by divestment.

Only appropriate policies can help to price the externalities. As long as market failure is accompanied by policy failure and the price for the externalities is too low the financial market is the wrong address to reach socially responsible goals (Hansen & Pollin, 2018). Thus, there could be detected a strong ranking of strategies to reach and support the SDGs by movements. The best tool is regulation if this would be able to price any externalities. Regulation is binding and an accepted part of the “rules of the game” in a market economy. If policy is not able or willing to adjust the framework the second best solution will be “voice” – engagement within the system. Divestment is only weak tool to reach the SDGs.

Nevertheless, indirect effects of the divestment movement should not be neglected. The awareness of climate change and the need of appropriate policy measures is increasing. These “awareness”-effects already today influence policy actions – and by this in a second round the regulatory framework tends to be changed. However, these indirect effects take time which we do not have. Urgent action is required.

References

- 350.org. (2022): *About*. <https://350.org/about/>.
- Ayling, J. and N. Gunningham (2015, October): Non-state governance and climate policy: the fossil fuel divestment movement, pp. 131–149. https://www.tandfonline.com/doi/full/10.1080/14693062.2015.1094729?casa_token=LLvazlmvkH4AAAAA%3AgobLjrUKC_yBRz-Awmkwel3z_938o-XXhrGQ2myjYaxqxlZCTiL7ABGAK2Eii7F-xos19uoHqnr5qw.
- Bratman, E., K. Brunette, D. C. Shelly, and S. Nicolson (2016, February): Justice is the goal: Divestment as climate change resistance. *Journal of Environmental Studies and Sciences*, pp. 677–690. <https://link.springer.com/article/10.1007/s13412-016-0377-6>.
- Broccardo, E., O. Hart, and L. Zingales (2020): *Exit vs Voice*. ECGI Working Paper.
- Carrington, D. (2014): Desmond Tutu calls for anti-apartheid style boycott of fossil fuel industry. *The Guardian*. <https://www.theguardian.com/environment/2014/apr/10/desmond-tutu-anti-apartheid-style-boycott-fossil-fuel-industry>.
- Christensen, H. B., L. Hail, and C. Leuz (2019): *Adoption of CSR and Sustainability Reporting Standards: Economic Analysis and Review*. Working Paper, BBER. https://www.nber.org/system/files/working_papers/w26169/revisions/w26169.revo.pdf.
- Durhaime, I. M. and J. H. Grant (1984, October–December): Factors influencing the divestment decision-making. *Strategic Management Journal*, pp. 301–318. <https://onlinelibrary.wiley.com/doi/10.1002/smj.4250050402>.
- Escrig-Olmedo, E., M. A. Fernández-Izquierdo, I. Ferrero-Ferrero, J. M. Rivera-Lirio, and M. J. Muñoz-Torres (2019, February): Rating the Raters: Evaluating how ESG Rating. *Sustainability*. https://mdpi-res.com/d_attachment/sustainability/sustainability-11-00915/article_deploy/sustainability-11-00915-v2.pdf.
- European Commission (2022): *Overview of sustainable finance*. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/overview-sustainable-finance_en.
- Global Divestment Comittment Database (2021): *Invest-Divest*. <https://divestmentdatabase.org/wp-content/uploads/2021/10/DivestInvestReport2021.pdf>.
- Hansen, T. and R. Pollin (2018): *Economics and Climate Justice Activism: Assessing the Fossil Fuel Divestment Movement*. PERI. https://peri.umass.edu/economists/robert-pollin/item/download/776_c9b3639c9a90abc599a4df058541cddb.

- Hansen, T. and R. Pollin (2020): Data on Fossil Fuel Divestment Commitments through March 2018. *Data and Datasets* 111. <https://scholarworks.umass.edu/data/111/>.
- Hart, O. and L. Zingales (2017): Companies Should Maximize Shareholder Welfare Not Market Value. *Journal of Law, Finance, and Accounting*. <https://www.nowpublishers.com/article/Details/LFA-0022>.
- Harvard University (2022): <http://www.divestharvard.com/>.
- Heinkel, R., A. Kraus, and J. Zechner (2001): The Effect of Green Investment on Corporate Behavior. *The Journal of Financial and Quantitative Analysis*, 4, pp. 431–449. <https://www.jstor.org/stable/2676219>.
- Hirschman, A. O. (1970): *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge.
- Kitzmueller, M. and J. Shimshack (2012): Economic Perspectives on Corporate Social Responsibility. *Journal of Economic Literature*, 1, pp. 51–84. <http://www.aeaweb.org/articles.php?doi=10.1257/jel.50.1.51>.
- Landier, A. and L. Stefano (2020): Socially Responsible Finance: How to Optimize Impact. (H. R. Paper, Ed.) 1363. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3508938.
- McKibben, B. (2012, July): Global Warming’s Terrifying New Math. *The Rolling Stone*.
- McKibben, B. (2018): At last, divestment is hitting the fossil fuel. *The Guardian*. <https://www.crcresearch.org/sites/default/files/imce/jclifton/At%20last%2C%20divestment%20is%20hitting%20the%20fossil%20fuel%20industry%20where%20it%20hurts%20%20Bill%20McKibben%20%20Opinion%20%20The%20Guardian.pdf>.
- Montgomery, C. A. and A. R. Thomas (1988, Jan–Febr): Divestment: Motives and Gains, pp. 93–97.
- Montgomery, C. A., A. R. Thomas, and R. Kamath (1984): Divesture, market valuation and strategy. *Academy of Management Journal*, pp. 830–841.
- Oehmke, M. and M. M. Opp (2020): *A Theory of Socially Responsible Investment*. Research Paper, Swedish House of Finance. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3467644.
- Orr, D. (2022, January–February): Is Divestment Effective? *Dollars & Sense*, pp. 23–25.
- Pedersen, L. H., S. Fitzgibbons, and L. Pomorski (2019): *Responsible Investing: The ESG-Efficient Frontier*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3466417.
- Ritchie, J. and H. Dowlatabali (2014, October): Understanding the shadow impacts of investment and divestment decisions: Adapting economic input–output models to calculate bio-physical factors of financial returns. *Ecological Economics*, 106, pp. 132–140. <https://www.sciencedirect.com/science/article/pii/S0921800914002079>.
- Schoenmaker, D. and W. Schramade (2019): *Principles of Sustainable Finance*.
- The World Bank (2017): The Growing Role of Minerals and Metals for a Low Carbon Future. <http://documents.worldbank.org/curated/en/207371500386458722/pdf/117581-WP-P159838-PUBLIC-ClimateSmartMiningJuly.pdf>.
- United Nations (2022): *The 17 Goals*. <https://sdgs.un.org/goals>.
- United Nations (2022): *The Paris Agreement*. <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.