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Equity portfolio divestment leads to lower CO₂ emissions

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At a glance

- To achieve climate goals, financial flows must be redirected from climate-damaging to climate-friendly economic activities.
- A key approach is divestment, i.e., the systematic sale of stocks of climate-damaging companies to decarbonize investment portfolios by private, institutional, and public investors.
- Theoretical research suggests a link between divestment, lower stock prices, and lower CO₂ emissions.
- A recently published study is the first to empirically analyze the effects of divestments by European and US equity funds on the share prices and CO₂ emissions of companies.
- The result is that large-scale divestments by funds have reduced the share prices of climate-damaging companies by an average of about 7%.
- These declining prices led the affected companies to reduce their CO₂ emissions by an average of around 10% compared to control group.
- Therefore, private, institutional, and public investors may use divestment to effectively mitigate climate change.

A [video](#) summarizing the study can be found on YouTube



The global challenge: Redirecting financial flows toward climate-friendly economic activities

The financial system is seen as playing a key role in combating climate change, as it has to provide the capital needed to transform the economy. However, the current level of investment is not sufficient to achieve the international climate targets. Therefore, a much stronger redirection of financial flows towards climate-friendly economic activities is needed.

A key approach to sustainable investing: Divestment

In recent years, many asset managers have committed to sustainable investing. Their aim is to increase the pressure on companies to align activities with international climate targets and to initiate the necessary transformation process.

A popular instrument used by shareholders to exert pressure is divestment, i.e., the systematic sale of shares of companies that are detrimental to the climate goals. For example, the Portfolio Decarbonization Coalition, which is sponsored by the United Nations, promotes the decarbonization of investment portfolios.¹ Divestments are intended to encourage climate-damaging companies to make investments in low-carbon activities and technologies to reduce their CO₂ emissions.²

A critical mass of investors is required to exert enough selling pressure on share prices through divestment to have an effect (Halcoussis/Lowenberg, 2019). This critical mass may already have been reached today, as more than 14 trillion US dollars in assets and over 1,300 institutions have publicly committed to divestment.³

In addition to the direct impact on share prices, carbon-intensive companies could face increased reputational costs, as the sale of shares also reflects investor dissatisfaction with the environmental performance of companies

¹ See PORTFOLIO DECARBONIZATION COALITION: 3RD ANNUAL PROGRESS REPORT DETAILS BENEFITS OF LOW-CARBON APPROACH ([available online](#), last access November 12, 2021). This also applies to all other online sources of this report, unless stated otherwise).

² For a systematic explanation of potential impact channels of sustainable investments, see a report for The Federation of German Consumer Organisations (Bundesverband der Verbraucherzentralen) by Wilkens/Klein (2021) ([available online](#)).

³ See the [website](#) of the Global Divestment Commitments Database.

(Mitchell/Agle/Wood, 1997). Thus, already the mere announcement of divestments could have effects on share prices (Dordi/Weber, 2019).

Theoretical considerations and models already exist on the effectiveness of such divestments (e.g., Heinkel/Kraus/Zechner, 2001; Pastor/Stambaugh/Taylor, 2021). So far, however, there have not been any empirical studies to provide evidence that divestments also lead to the desired effect in practice.

Empirical study: Divestments affect share prices and CO₂ emissions

Rohleder/Wilkens/Zink (2021) are the first to investigate the impact of divestments by European and US equity mutual funds on the share prices and CO₂ emissions of companies.⁴ Equity mutual funds are a particularly suitable object of investigation, since many investment companies have committed to decarbonizing their portfolios and mutual funds manage a very high amount of capital, so that an effect is more likely.⁵

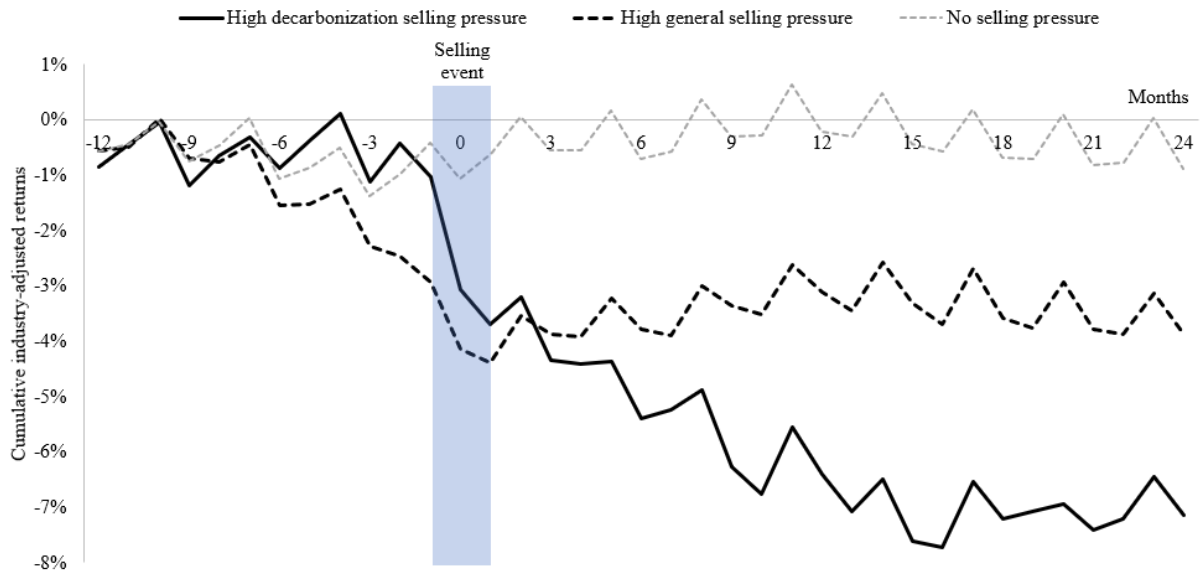
The starting point of this study was to identify the mutual funds that decarbonized most strongly over the observation period. The number of stocks sold by these mutual funds for the purpose of decarbonization were then aggregated to identify the stocks that were most heavily divested by the overall fund market ("high decarbonization selling pressure"). Event studies were then used to examine whether these companies experienced notable changes in stock prices and CO₂ emissions.

The first event study compares the share price development ("cumulative industry-adjusted returns") of the group of divested companies ("high decarbonization selling pressure") with the share price developments of two reference groups ("high general selling pressure", e.g., for financial reasons, and "no selling pressure") before, during, and after the divestments.

⁴ This study was recently published in the Journal of Banking & Finance ([available online](#)).

⁵ See the [website](#) of the investor initiative Principles for Responsible Investment (PRI).

Figure 1: Development of cumulative industry-adjusted returns before, during and after divestments

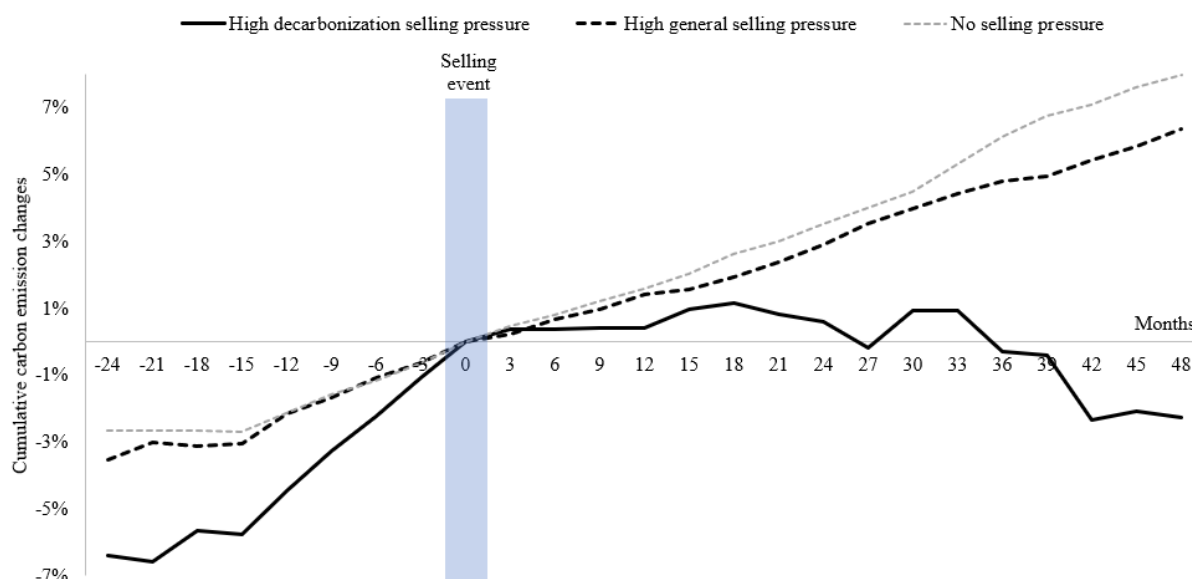


Source: Rohleder/Wilkens/Zink (2021), Figure 3A.

Figure 1 shows that the group of divested companies (solid line) suffered a significantly higher and more sustained average share price loss of 6.7% over two years than the group of companies with general selling pressure (black dashed line). As expected, the group of companies with no selling pressure showed no significant price changes (gray dashed line). Thus, divestments led to lower share prices in the long run, justifying the divestment movement.

The decline in share prices gives companies an incentive to rethink and adjust their environmental behavior to become more attractive to shareholders again. Therefore, the question arises whether these companies also reduced their CO₂ emissions after the divestments. To test this, a second event study compares the cumulative changes in scope 1+2 CO₂ emissions of the three groups.

Figure 2: Development of cumulative changes in CO₂ emissions before and after divestments



Source: Rohleder/Wilkens/Zink (2021), Figure 4A.

Figure 2 shows that the divested companies experience a reduction in CO₂ emissions of 2.3% on average (solid line). In contrast, the CO₂ emissions of the companies in the control groups increased by an average of approximately 6% and 8%, respectively. Further tests revealed that this change is independent of the economic development of the divested companies and thus does not reflect, for instance, lower production activity. This evidence suggests that the divestments by these mutual funds were able to trigger a response by the affected companies to become more climate-friendly.

Conclusion: Divestments support the fight against climate change

Rohleder/Wilkens/Zink (2021) show that institutional investors can generate a positive impact in the fight against climate change by decarbonizing their portfolios. This finding should help encourage previously skeptical private, institutional, and public investors to join divestment initiatives, which would further increase their impact.

Countries are also already decarbonizing their financial investments. For example, in 2015, the Norwegian Sovereign Wealth Fund announced its decision to divest from

coal companies.⁶ Large institutional investors are also actively decarbonizing their portfolios. For example, Allianz has announced that it will exclude coal-based companies from its investment portfolios to help achieve the 1.5 °C target.⁷

The German Sustainable Finance Strategy⁸ published in May 2021 contains rather vague mentions of divestment as an instrument. For example, the “Fonds zur Finanzierung der kerntechnischen Entsorgung (KENFO)” aims to be climate neutral by 2050, although this does not seem very ambitious. Further statements refer rather generally to exclusion criteria and best-in-class approaches. In view of the results from Rohleder/Wilkens/Zink (2021), the German government should set clear and binding targets for the rapid decarbonization of public financial investment portfolios and communicate these targets as soon as possible. In this way, the public sector could act as a role model for other investors and increase its contribution to a faster transformation of the economy.

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⁶ See the [website](#) of Fossil Free Germany.

⁷ See the [website](#) of Energiezukunft.

⁸ German Sustainable Finance Strategy ([available online](#)).

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About the project

The Sustainable Finance Research Platform is a joint project between five German research institutions conducting research on different aspects of Sustainable Finance, e.g., sustainable investments, sustainability risks and chances, and sustainability reporting. With their independent research, the project partners aim to support stakeholders in politics, the financial sector, and the real economy in understanding and shaping the central role of capital markets in achieving a net-zero economy. The researchers involved answer social, political, and business-related questions, provide established and new research findings, and participate in political and public debate. They also want to establish sustainable finance as a topic in the German research landscape and secure connections with international institutes and processes.

More information can be found on the project's website wpsf.de/en/.



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