

# »» Nearly half of households are open to green financial investments – transparency on climate impact is crucial

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Achieving the climate targets requires substantial investment – and corresponding finance. Financial markets are becoming greener over time but they still do not fully reflect the consequences of greenhouse gas emissions. As long as the carbon price remains significantly below the social cost of carbon, market forces will be unable to optimally perform their allocation function. If regulatory requirements or additional financial incentives are also lacking, investors and financiers of climate-friendly projects must rely on further motives. These may include expectations on future yields or the desire to support action on climate change irrespective of expectations around financial returns.

The empirical analysis of financial markets provides differing assessments of what premium households are prepared to pay for financial products to be green. The present analysis based on the KfW Energy Transition Barometer brings important insights to this debate and shows that roughly half of households in Germany (44%) are open to green financial investments and that some (14%) are already using them.

The survey data also shows that the majority of these households are also willing to forego returns on capital for the sake of the climate. What is important, however, is that the investment's climate impact is credible. In order for green financial investments to fully unfold their potential, a comprehensive framework is necessary that integrates climate impact into the logic of financial markets. A coherent and transparent identification of the investment projects' climate impact is an important factor for lasting success.

## Importance of green finance for the climate transition

Achieving climate neutrality requires an enormous effort from all societal stakeholders. A study commissioned by KfW Research has found that EUR 5 trillion needs to be invested to achieve climate neutrality in Germany by the middle of the century. Around 90% of this investment must come from the private sector.<sup>1</sup>

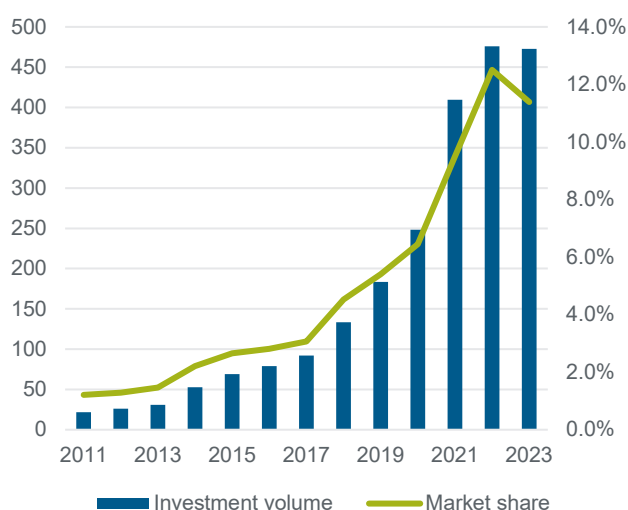
A key factor for private investment in climate action is the availability of suitable financing options and conditions. Funds can come from own resources, passive providers of capital such as banks or bond purchasers, or from active capital investors such as venture capitalists or investment funds.<sup>2</sup>

Climate investments are often financed with instruments explicitly declared as 'green finance'. Despite weaker growth in 2023, this market segment is increasingly gaining in importance. Around EUR 540 billion was recently put into sustainable investments. More than 80% of the financial market actors surveyed for the Marktbericht Nachhaltige Geldanlagen 2024 ('Market Report on Sustainable Investments 2024') expect further growth in 2024.<sup>3</sup>

In 2023, investment funds with strict environmental and social criteria already accounted for an investment volume of around EUR 470 billion in Germany. This corresponds to a 'green market share' of around 11.5%, based on the EUR 4.1 trillion under management in the German investment sector in 2023.<sup>4</sup> In 2013, it was only EUR 30 billion, or a 1.5% market share. In other words, the market share grew eightfold in just 10 years, while the volume itself was even 15 times higher than 10 years before (Figure 1).

Figure 1: Development of sustainable investment funds in Germany

Investment volume and market share of investment funds with environmental and social criteria in Germany (in EUR billion and per cent)



Source: Forum nachhaltige Geldanlagen (FNG) (2012-2024) and Bundesverband Investment und Asset Management e.V. (BVI)

This shows that there is a growing supply and demand for sustainable forms of investment, giving rise to the following question: To what extent are households in Germany able and willing to use this instrument and thereby make a contribution to financing Germany's transition to climate neutrality?

**German households with large financial assets that can be aligned with climate action**

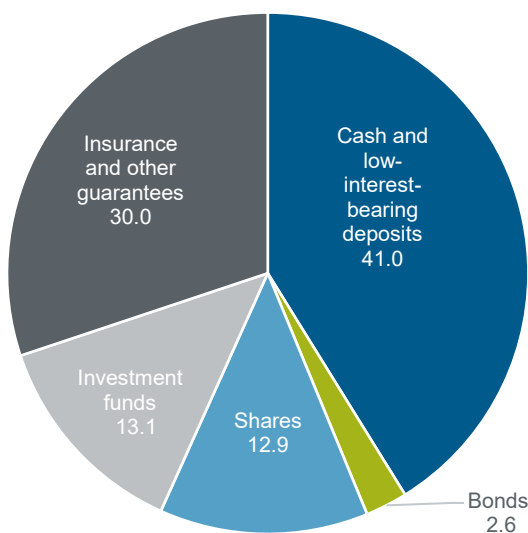
At the end of the year 2023, households in Germany held financial assets in excess of EUR 7.9 trillion.<sup>5</sup> The largest portion of this, 41%, was cash and low-interest-bearing deposits such as sight deposits, term deposits or savings certificates (Figure 2). In this regard, Germany is well above the European average of 34%.<sup>6</sup> These assets are held mainly for meeting the need for security, but they can also contribute to financing the energy transition. Thus, for example, customers could hold accounts with 'green' banks whose investment policy generally follows ecological principles. Moreover, conventional banks also offer investment products that deliver an additional benefit for environmental protection and climate action.<sup>7</sup>

A further 29% of households' financial assets are currently invested in security instruments such as shares, investment funds and bonds. This share of financial assets may potentially be made green, for instance through green shares, funds or bonds.

Insurance, pension and standard guarantees account for just over 30%. These are mostly life insurance policies and assets from retirement plans but also accumulated profit shares held with insurance companies. This component is often less of a topic in the debate around green finance but the capital tied up here can be used for green investment projects as well.

**Figure 2: Distribution of household financial assets in Germany**

In per cent of total assets of EUR 7,946 trillion



Source: Bundesbank (2024)

**One in seven households have made climate-friendly financial investments**

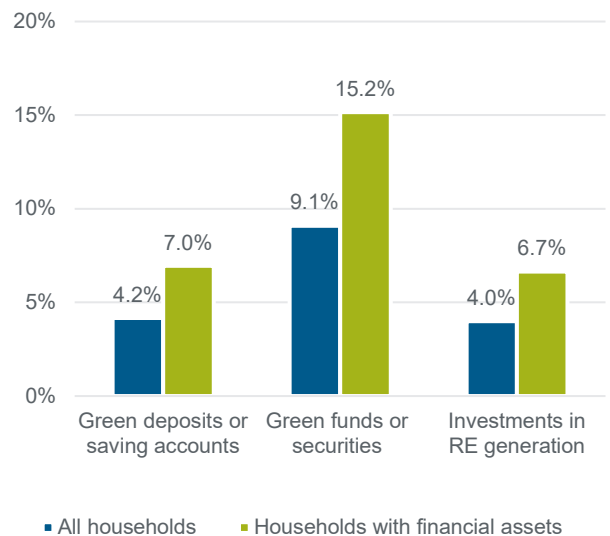
To what extent do households use these financial assets to support green investments? In the KfW Energy Transition Barometer 2024, households were surveyed on their experience and assessments of green financial investments.<sup>8</sup>

Around 4% of households have deposits in green (savings) accounts and just as many have investments in renewable energy (RE) generation. Some 9% of households have experience with green funds or securities (Figure 3).

Taking into account multiple mentions, roughly one in seven households (14%) use green financial investments. However, only those households that are in a position to put money aside in the first place are able to invest. Around 40% of households in Germany stated that they were unable to do so. The remaining households that have financial assets use green financial investments more frequently. Around 15% of these households have put some of their money into green funds or securities. If we add financial investments in RE and green savings products, around 23% of affluent households make use of at least one of the three green investment forms.<sup>9</sup>

**Figure 3: Share of households that have made a climate-friendly investment**

Percentage of responses, multiple responses possible



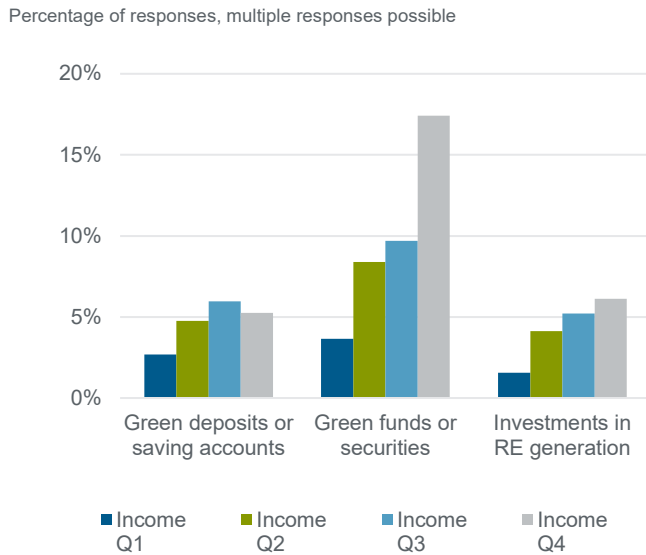
Source: KfW Energy Transition Barometer 2024

**Young, higher-income households are most likely to make use of green investments**

With a view to net household income, the findings show that green financial investments are much less common in the bottom income quartile than in households with higher incomes. This applies in particular to green funds and securities, which are used by 18% of households in the highest income quartile (4% in the bottom quartile). A clear income effect is also identifiable for financial investments in renewable energy (2% in the bottom vs. 6% in the top quartile). For green accounts and savings deposits, the trend points in the same direction (3% in the bottom vs. 5% in the top quartile) but the difference is much less pronounced (Figure 4).

In households with below-average incomes the share of households with financial assets is also lower, as was to be expected. More than half (56%) of households with below-average incomes generally have no financial scope for a capital investment.

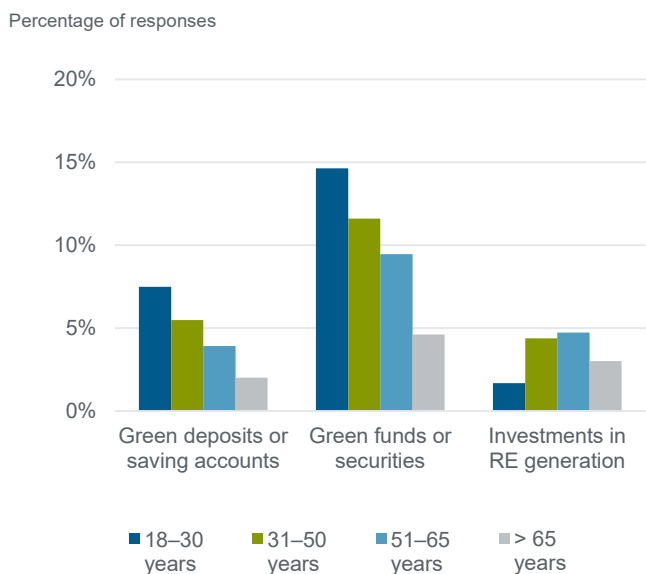
**Figure 4: Share of households that have made a climate-friendly investment by income**



Source: KfW Energy Transition Barometer 2024

Clear patterns also emerge with respect to age. The group of 18 to 30-year-olds is around three times more likely to use green funds and securities than the group of over 65-year-olds (15 vs. 5%). The picture is similar for green bank accounts and savings deposits (7 vs. 2%). Investments in RE, however, are more likely among middle-aged people (Figure 5).

**Figure 5: Shares of households that have made a climate-friendly investment by age**



Note: Years refer to age of respondent.

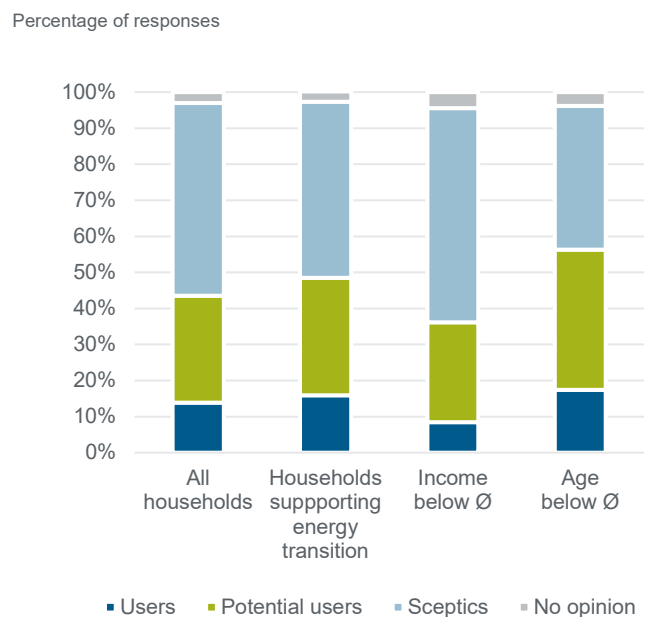
Source: KfW Energy Transition Barometer 2024

**Around half of households can imagine making a green investment or already have one**

Besides the current users, what is also interesting is the group of households that can generally imagine having a green financial investment but have not yet become active ('potential users'). That is 30% of all households in Germany. Around half of households, however, cannot imagine having one (53%), while a further 3% are undecided (Figure 6).

That means just under half of households (44%) are open to or already use green financial investments. This share is higher among households to which the energy transition is important (49%) and younger households (56%), while it is lower among households with below-average incomes (36%).

**Figure 6: Household attitudes towards green forms of investment**



Source: KfW Energy Transition Barometer 2024

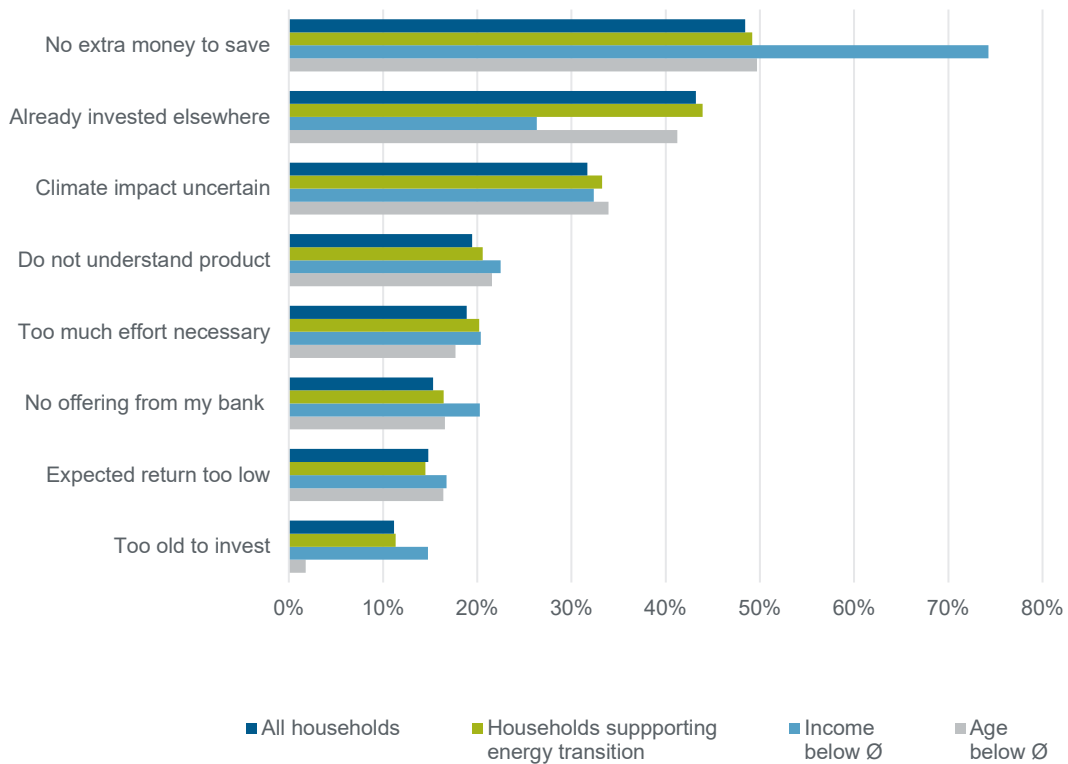
**Personal commitment mainly hampered by uncertainty about climate benefit**

In a next step, the question arises why the group of potential users has not yet taken action. For one thing, half of these households do not have the necessary economic means, with 48% stating that they have no extra money to save and 43% have already invested their money elsewhere (Figure 7). As expected, a particularly large share of households with below-average income have no money left for a financial investment (74%).

Apart from having no funds to invest, these households refrain from using green financial investments mainly because they have doubts as to whether the money is indeed invested in a climate-friendly manner. For almost one third of potential users (32%), that is the main reason not to invest. A further 19% admitted that they did not understand the product. The same share responded that dealing with such products involved too much effort.

Figure 7: Reasons households have not yet made climate-friendly financial investments despite being generally receptive

Percentage of responses of potential users, multiple responses were possible.



Source: KfW Energy Transition Barometer 2024

If we combine these three categories, more than half (54%) of potential users of green financial investment are deterred from going ahead with it because they have difficulty understanding it or doubts over its effectiveness. International research findings also confirm that the availability of information on the climate benefit of individual investment projects plays a key role in mobilising private capital.<sup>10</sup>

Insufficient offerings from households' regular bank also play a role, although they were mentioned slightly less often, at 15%. Thus, from the households' perspective, accessing the market seems to be as less of a barrier than accessing information on the financial products' impact. This view is also underpinned by the fact that a large portion of existing sustainable financial investments are in investment funds and investment certificates. Around half of all sustainably invested capital stock – EUR 260 billion alone – is in public funds, which are accessible through almost any custodian bank.

Potentially lower yields also appear to play only a secondary role. Around 15% of all surveyed households stated this as an argument against climate-friendly financial investments. In households with below-average incomes, that share was a slightly higher 17%. In households that can generally imagine green financial investments, the age of the investor was the barrier mentioned least often, at 11%.

**General rejection is often driven by doubts about effectiveness – and the respondent's age**

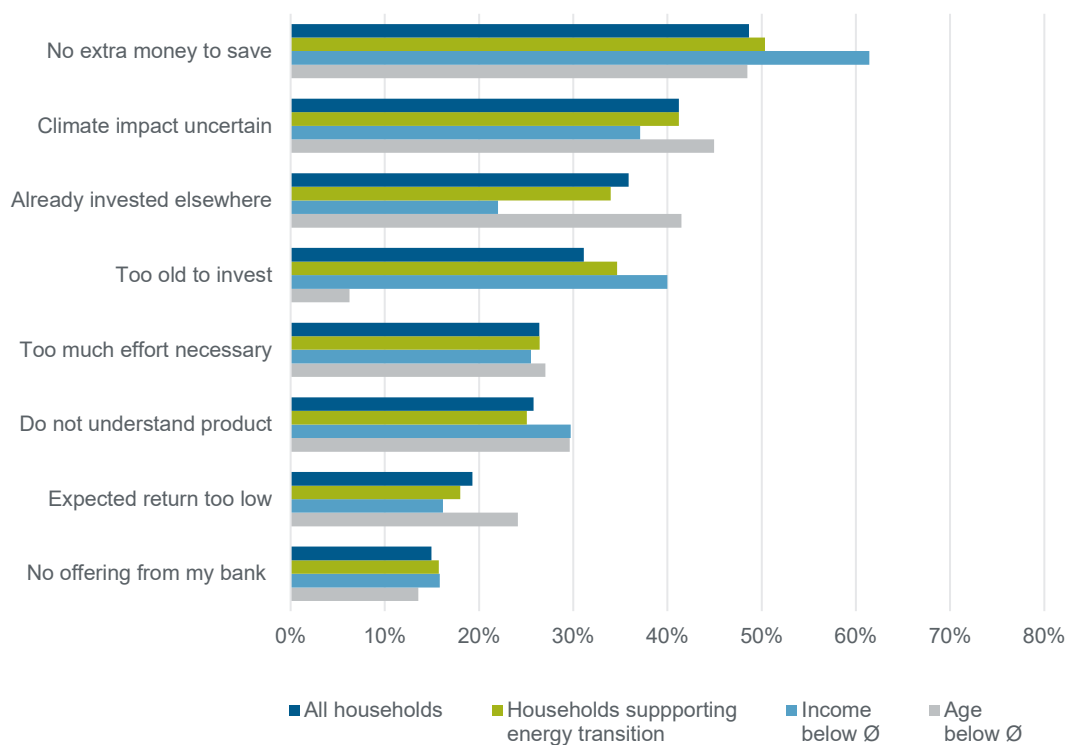
In households that generally oppose green financial products, a similar pattern was evident, but with two differences. First, they had more concerns about the climate benefit (41%) and mentioned the remaining informational deficits more often, at 26% each. Second, concerns around their own age were significantly more important in this group (31%) and were actually the third most frequently stated reason. The patterns are evident across all of the different subgroups, with few exceptions such as the insignificant proportion of younger households which regard their own age as an impediment (Figure 7).

In the group of green finance sceptics as well, at 19%, expectations of lower yields are a rather less important reason not to use climate-friendly financial investments. Absence of offerings from their regular bank was mentioned even less often as a barrier (15%).

Thus, apart from households that no longer preoccupy themselves with investment options for age reasons, opportunities appear to also exist here for channelling capital into climate-friendly projects by providing reliable and comprehensible documentation on their climate benefits.

Figure 8: Reasons for not considering climate-friendly financial investments

Percentage of responses of green finance sceptics, multiple responses were possible



Source: KfW Energy Transition Barometer 2024

### Many households would be willing to accept lower yields from climate-friendly financial products

A key argument for the effectiveness of green financing instruments is the assumption that a transformative effect can be achieved by investors accepting lower returns for green investments. This would result in lower financing costs of green projects (referred to as 'greenium') which enable sustainable real investments that would be unprofitable by market standards to be carried out nonetheless.<sup>11</sup>

There are no empirical findings yet to demonstrate that it is indeed possible to incentivise a significant volume of real transformative investments with more favourable green financing instruments. After all, the performance of sustainable capital investments to date has been very close to the performance of comparable conventional capital investments.<sup>12</sup> What is undisputed, however, is that a sufficiently high renunciation of returns by sustainability-oriented providers of capital can in principle incentivise recipients of capital to invest more in climate-friendly and socially sustainable projects.

In order to shine a light on this channel of action in Germany, households were surveyed under the KfW Energy Transition Barometer whether they would in principle be willing to forego yields. A capital investment of EUR 10,000 bearing 3% interest, that is, a return of EUR 300 per year, was assumed as a base scenario for all households surveyed. They were then divided randomly into four groups, each facing a climate-friendly investment with a different 'greenium': returns being 0.1 percentage points (EUR 10), 0.5 percentage points (EUR 50), 1.0 percentage points (EUR 100) and 1.5 percentage points (EUR 150) lower than the return on a base scenario investment.

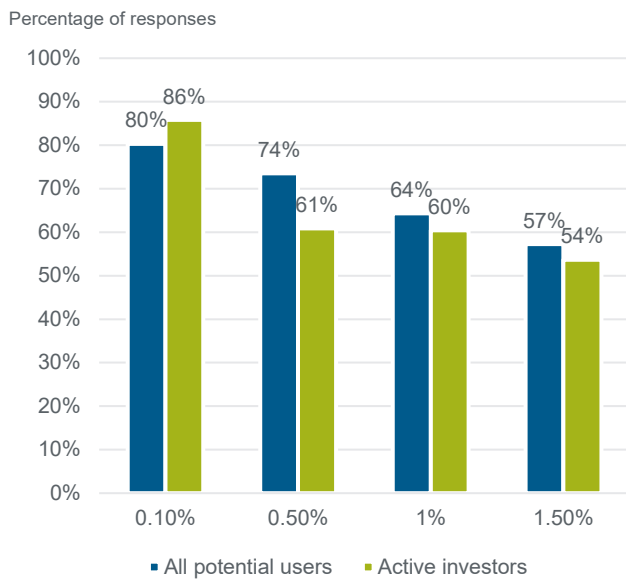
The households were then requested to assess whether they would prefer the climate-friendly financial investment over the base scenario investment. The results of this experiment are presented in Figure 9.

As expected, the less households have to sacrifice in returns, the greater their preference for climate-friendly financial investments. Assuming they would forego 0.1% of the yield, around 80% of all households that can generally envision making a green financial investment would prefer the climate-friendly investment. In households that already have a green financial investment, that share even sits at 86%.

To put it into perspective: this greenium level is definitely within a realistic range. The Green Bond issued by the Federal Government in September 2020, for example, has not yet suffered a yield haircut of more than 0.1% over its term.<sup>13</sup> At the same time, even assuming a relatively high yield sacrifice of 0.5 or even 1.5%, more than half of households would still generally prefer a climate-friendly form of financial investment. This corroborates the previous finding that a yield difference is not the main consideration in the decision of households on green investments.<sup>14</sup>

Thus, households in Germany are likely to become another able and willing group of investors for sustainable investments who, in an enabling environment, can contribute to the transformation of Germany and the world.

**Figure 9: Share of households who would prefer green investments despite lower yields, by yield markdowns**



Source: KfW Energy Transition Barometer 2024

**A credible and comprehensible framework is necessary for green finance to really benefit the climate**

In order for green financial instruments to really boost transformative investments, the establishment of a suitable framework is essential. What is necessary in particular is to prevent greenwashing.<sup>15</sup> In other words, climate benefits and climate risks must be transparent, and the regulatory frameworks must be coherent and manageable.<sup>16</sup> With its Green Taxonomy and disclosure regulations, the European Union has created a framework that aims to achieve precisely this.

The KfW Energy Transition Barometer demonstrates that the credibility of products is still the main barrier that deters retail investors, much more than any reduced returns. The special survey suggests that despite a general willingness to invest, the current framework and financial products currently on offer do not yet meet the needs of retail investors and that further measures are necessary to correct this discrepancy.

A broad range of possible forms of investment is available to achieve this. For example, the Federal Government’s Sustainable Finance Advisory Committee has recently proposed the introduction of a Climate Savings Plan that runs for a minimum term and should offer investment options within an officially defined framework, for instance in the form of classic savings deposits or savings certificates. The proposal suggests incentives in the form of tax relief as well as exploring an additional default guarantee for the investors.<sup>17</sup>

Innovative approaches such as these should be welcomed. This also applies to insurance, pension and standard guarantees which, after all, account for 30% of financial assets. This component is usually less well represented in the debate around green finance but the opportunity exists for contribut-

ing to climate action here as well, for instance in the form of green insurance products, the first of which are already on offer in the market.<sup>18</sup>

Ultimately, the effectiveness of green finance always rests on the trust that the regulator will systematically navigate the path to climate neutrality. An event study demonstrated that the announcement of the European Green Deal contributed to companies with high emissions being punished in the capital market.<sup>19</sup> Thus, green financial market regulation must always be considered in combination with regulation of the real economy.

**Conclusion**

Holding financial assets that recently grew again to over EUR 7 trillion, households constitute an important stakeholder with relevant influence on the financing of the green transformation. The limited capacities of public budgets make it even more important to explore all options for channelling the capital that is available in Germany into climate-friendly projects.

The population has been backing the energy transition for years now. Not only can this be used for investments in the real economy. It also provides the opportunity to give a tailwind to the transformation by greening private financial assets.

The figures of the KfW Energy Transition Barometer impressively confirm this potential. Around half of all households can imagine making a green investment or already have one. Furthermore, the majority of potential users would be willing to renounce returns. Assuming a greenium of 0.1%, which lies within the range of the empirically measured values, an impressive majority of 80% of potential users would be willing to support climate action financially.

It appears worthwhile to approach the role of households on the path to climate neutrality from a broad angle and to focus more closely on the potential of private financial assets. This form of integrating households can supplement their direct own investments, for instance in efficient buildings or electric vehicles, in a sound manner. One thing is clear: the climate is close to people’s hearts. And with climate savings, green funds and generally attractive green products, climate action can also be fun when it is not just based on actually foregoing consumption but provides people with options to shape the transformation themselves.

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**The KfW Energy Transition Barometer** is a representative survey of around 4,000 to 6,000 private households in Germany on decisions and attitudes around the topic of climate action. It is published annually.

More information on the KfW Energy Transition Barometer can be obtained at: [www.kfw.de/energiewendebarometer](http://www.kfw.de/energiewendebarometer).

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<sup>1</sup> Cf. Brand, S., Römer, D. and Schwartz, M. (2021): Investing EUR 5 trillion to reach climate neutrality – a surmountable challenge, Focus on Economics No. 350, KfW Research. Cf. also Prognos et al. (2021): Contribution of green finance to achieving climate neutrality in Germany (in German only), study commissioned by KfW.

<sup>2</sup> Cf. Schwartz, M. (2023): Green Finance: der Finanzmarkt als Hebel für die Klimatransformation? (Green finance: the financial market as a lever for the climate transition? – in German only), Focus on Economics No. 413, KfW Research.

<sup>3</sup> Cf. Marktbericht Nachhaltige Geldanlagen 2024 (*Market Report on Sustainable Financial Investments* – our title translation, in German) – Germany and Austria, Forum Nachhaltige Geldanlagen e.V. (FNG), June 2024.

<sup>4</sup> Cf. the statistics of the Bundesverband Investment und Asset Management e.V. (BVI).

<sup>5</sup> Cf. Acquisition of financial assets and external financing in Germany in the fourth quarter of 2023, [Press release](#) of the Deutsche Bundesbank dated 18 April 2024. Results of the financial accounts by sector

<sup>6</sup> Cf. Eurostat (2024): [Households - statistics on financial assets and liabilities](#).

<sup>7</sup> Cf. German Federal Environment Agency (2023): [Grüne Geldanlagen dienen dem Umwelt- und Klimaschutz](#) (*Green investments protect the environment and the climate* – our title translation, in German).

<sup>8</sup> It is difficult to clearly delineate concepts such as sustainable finance, green finance and climate finance as there are overlaps between potentially relevant thematic areas, cf. Prognos et al. (2021): loc cit. The KfW Energy Transition Barometer focused on the climate impact of the financial products. Specifically, households were asked, for example: ‘Do you use one of the following climate-friendly financial products?’

<sup>9</sup> This value refers to the number of users, not to the share in the financial assets of households. The latter will be significantly lower as the 23% of households likely did not allocate all of their financial assets in green investments but only part of them.

<sup>10</sup> Cf. Steuer, S. and Tröger, T. H. (2022): The Role of Disclosure in Green Finance, *Journal of Financial Regulation*, 8(1): 1–50.

<sup>11</sup> Cf. Schwartz, M. (2023): Green Finance: der Finanzmarkt als Hebel für die Klimatransformation? (Green finance: the financial market as a lever for the climate transition? – in German only), Focus on Economics No. 413, KfW Research.

<sup>12</sup> Most empirical studies find no or only a very limited ‘greenium’, that is, lower yields on green capital investments. Cf. Schwartz, M. (2023): loc cit. and the studies by Larcker, D. M. and Watts, E. M. (2020) cited therein: Where’s the greenium? *Journal of Accounting and Economics*, 69(2–3) and Lau, P., Sze, A., Wan, W. and Wong, A. (2022): The Economics of the Greenium: How Much is the World Willing to Pay to Save the Earth? *Environmental and Resource Economics*, 81: 379–408.

<sup>13</sup> This greenium also fluctuated strongly over time, however: from around 1.5 basis points at the time of issuance to more than 7 basis points in August 2021 to less than 0.5 basis points in September 2022. Cf. GDV (2022): Greenium bei europäischen Anleihen - Analyse zu möglichen Renditeunterschieden bei grünen Anleihen (*Greenium of European bonds – Analysis of possible yield differences in green bonds* – our title translation, in German), German Insurance Association

<sup>14</sup> Households in Germany might differ here from retail investors in other countries. A current study for the US, for example, shows that retail investors do not make substantial investments in sustainable funds unless they expect them to outperform the market. This is also true of investors who invest in these funds primarily for ethical reasons. Cf. Giglio S. et al., Four Facts about ESG Beliefs and Investor Portfolios, *Journal of Financial Economics*, forthcoming.

<sup>15</sup> For a discussion of this aspect, cf. I. Wilkens, M. and Klein, C. (2021): Welche transformativen Wirkungen können nachhaltige Geldanlagen durch Verbraucherinnen und Verbraucher haben? (*What transformative effects can sustainable financial investments by consumers have?* – our title translation, in German), Federation of German Consumer Organisations (vzbv).

<sup>16</sup> Cf. Schwartz, M. (2023): Green Finance: der Finanzmarkt als Hebel für die Klimatransformation? (Green finance: the financial market as a lever for the climate transition? – in German only), Focus on Economics No. 413, KfW Research.

<sup>17</sup> Cf. Sustainable Finance Advisory Committee (2024): [Klima sparen für alle](#) (*Climate savings for all* – our title translation, in German).

<sup>18</sup> [Grüne Versicherungen: Der 1.9-Billionen-Euro-Hebel für Klimaschutz](#) (*Green insurance: the EUR 1.9 trillion lever for climate action* – our title translation, in German) ([tagesspiegel.de](https://tagesspiegel.de))

<sup>19</sup> Cf. Müller, L., Ringe, M. and Schierek, D. (2023): [Is decarbonization priced in? – Evidence on the carbon risk hypothesis from the European green deal leakage shock](#), *International Journal of Theoretical and Applied Finance*, Advance Online Publication.