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A Short History of Green Investing

When David Blood told his colleagues in 2003 that he was resigning to start a sustainable investment company, they laughed at him. Blood was a senior banker, working as the head of asset management at Goldman Sachs. His clients were among the largest investors in the world. But back then, not many of them were interested in investing in climate change solutions.* Most experts at that time, Blood recalls, thought that sustainable investing meant limiting your horizons. In other words, it was about being a do-gooder rather than an investor: people could choose not to invest in fossil fuel companies, but they'd make less money as a result. 'We believed differently,' he says.

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* Goldman Sachs would later achieve notoriety in the wake of the global financial crisis of 2008 after a scathing article in *Rolling Stone* magazine likened it to a great 'vampire squid' whose aim was to create 'pure profit for rich individuals'.

Blood joined forces with Al Gore, the former vice president of the United States, who in 2000 had narrowly lost the presidency to George W. Bush. Gore was fast becoming a leading figure in the climate change debate. In 2006, he released a critically acclaimed and widely watched documentary, *An Inconvenient Truth*, which warned about the dangers of climate change. The following year, he won the Nobel Peace Prize for helping to raise awareness of global warming.* The rest of the world – consumers and, importantly, investors – was waking up to climate change, both to the risks it posed, and then to the opportunities. Now, Gore sees investment as key to unlocking some of the problems of cutting carbon emissions. 'We believe that the world is in the early stages of a sustainability revolution,' he says.

The company that Blood and Gore founded, Generation Investment Management, is now one of the most successful investors in climate change solutions. In fact, it is one of the most successful investment managers full stop. Its flagship global equity fund returned more than 11 per cent a year on average to investors between its launch in 2005 and March 2020, compared to an average 6 per cent a year from its benchmark, the MSCI World Index. And it has been followed by countless other sustainable investment specialists. Investing with the

* Gore was a joint winner with the Intergovernmental Panel on Climate Change (IPCC). The prize was awarded for their efforts to 'build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change'.

environment in mind has become extremely popular, with investment houses falling over themselves to market new products to consumers – or, as they are known, retail investors.

What has changed between the turn of the century and now? Until very recently, sustainable investment was seen as a specialist, niche area. It was assumed that investing responsibly meant that you wouldn't make as much money. Investing ethically was more of a hobby, or a philanthropic pursuit. A serious investor who wanted to make real money shouldn't be troubled too much by morals, went the thinking. Things could hardly be more different now.

Ethical investing in its modern form can be traced back decades: from investors shunning companies profiting from South African apartheid in the 1970s and 80s to those dumping tobacco holdings in the 90s. Investing with the environment in mind started as a niche area in broader ethical investment, but it shared a key characteristic: it was about avoiding things – in this case, fossil fuel companies. As it became obvious that the world needed more renewable energy, investors started to see positive opportunities too. The first years of this century saw venture capitalists and private equity funds pour millions into solar and wind energy technologies.

This proved to be an early setback for the environmental investment movement, however. First, government subsidies made it hard to value the market properly and oversupply led prices to fall. And then came the global

financial crisis of 2008. The collapse in financial markets heaped pressure on a sector that had already been struggling. Lots of renewable energy companies went bust, and investors lost millions. Big oil majors like BP and Shell who had tentatively dipped a toe in the water of solar energy rapidly pulled out, believing it to be unprofitable. Some people reverted to their view that investing sustainably was a mug's game.

Since then, however, there have been major changes in the way mainstream investors think about the environment, and crucially in how they think about risk. From government pension funds to billion-dollar investment funds to hedge fund tycoons, everyone in finance is waking up to the fact that climate change is going to change the world, so we had better change our investment portfolios as well. The recent explosion in interest in sustainable investment can be traced back to two key moments in recent history: the 2015 Paris Agreement, and the publication of the UN sustainable development goals the same year.

In September 2015, the United Nations published 17 sustainable development goals as part of its 2030 Agenda for Sustainable Development. All UN members signed up to implement the goals, which range from no poverty and zero hunger to climate action and responsible consumption and production, and are intended to be achieved by 2030.

Later that year, representatives from all corners of the globe met at the UN climate change conference in Paris to discuss ways to combat the growing climate crisis.

Nearly every country in the world agreed to limit the increase in the global average temperature to well below 2 degrees Centigrade above pre-industrial levels, with an aim of limiting the increase to just 1.5 degrees. The 2 degrees target would require carbon dioxide emissions to peak by 2020 then be reduced to 'net zero' before the end of the century. Net zero doesn't mean that there wouldn't be any carbon dioxide emissions, but that any remaining emissions would be offset through other measures, from planting trees on the low-tech end to carbon capture and storage on the high-tech end. To limit warming to 1.5 degrees, net zero needs to happen by 2050. Various countries and companies have set themselves net zero targets by 2050 as a result, including the United Kingdom, Norway and New Zealand, and oil companies BP and Shell.

The year the world woke up to climate change

Developments since 2015 have hastened the interest in climate change solutions, as global warming has led to volatile weather conditions, economic damage and increasing species extinction. According to analysts at UBS, 2019 was the year the world really woke up to climate change, following a report from the UN Intergovernmental Panel on Climate Change (IPCC) the previous year, which set out a stark difference in outcomes for people around the world even in the event of a 2 degrees change versus a 1.5 degrees change. This growing sense that climate change, far from being a

niche concern, was the most important problem the world faced thrust it into the mainstream. Politicians and celebrities alike burnished their green credentials. New poster children for the movement emerged – literally, in the case of Greta Thunberg, the Swedish environmental activist who shot to fame at the age of just 15, having pioneered the movement for school students to strike over the climate in 2018, and who told attendees of the 2019 Davos summit that 'our house is on fire'.

Waking up to climate change in the investment world means looking to see where risks can be avoided and profits can be made. A report by Bank of America declared that the 2020s 'are shaping up to be the decade of climate opportunity', predicting that what it calls the climate solutions market could double in value from $1tn to $2tn by 2025.

The general public has taken note. More and more people want their investments to be sustainable and are conscious of where their money is going. A report by the UK's Department for International Development found that 68 per cent of UK savers wanted their investments to consider the impact on people and planet alongside financial performance. Record sums of money were poured into sustainable investment funds in 2019 by US investors alone, with nearly four times as much – $20.6bn – ploughed into US sustainable investment funds as in the previous year, according to Morningstar, the data provider. Appetite was even stronger in Europe, where European investors pumped more than

twice as much cash into sustainable funds in 2019 as in the previous year, totalling a record €120bn.

Ethical investing used to be about avoiding things. But green or sustainable investing is now about finding opportunities as well. The investment world is on the cusp of a huge transformation in the way it thinks about risks and making money. Because this change in mindset is taking place right now, though, the sands are still shifting on a lot of important things, such as what sustainable investing really is, or should be, how regulators should define it and how investors should do it.

When retail investors – that's you and me, as opposed to institutional investors, who run things like pension funds – say they want to invest to save the planet, they usually mean one of two things: they want to avoid certain companies, usually oil and gas companies; or they want to invest in companies, usually smaller, newer ones, that are explicitly helping to reduce carbon emissions. These could be wind farm companies like Vestas, alternative meat companies like Beyond Meat, or green transport companies like Tesla. But when institutional investors offer you a sustainable fund, they might mean something quite different. They could just be investing in 'best in class' companies in their sector, for example, so you might find yourself owning companies that seem to have nothing to do with the environment, like Starbucks or Microsoft. Or they could be investing in companies in transition, so you might find yourself still owning oil and gas companies. As we'll see later in the book, this misalignment between institutional and retail

investors in terms of their understanding of sustainable investing can sometimes be a problem.

The alphabet soup

The fund management industry does not help itself with its alphabet soup of terminology. The terms 'sustainable investing', 'ethical investment' and 'socially responsible investing' (SRI) are often used interchangeably and usually refer to investments that are made not just with financial returns in mind, but take account of an investor's values and morals as well. SRI is the older term, and people who have already dipped a toe in the water of sustainable investing will probably recognise it. In the past, it didn't necessarily have anything to do with climate change – if you didn't want to hold tobacco stocks, for example, that would class you as an ethical, or socially responsible, investor.

These days, the main term used by the financial industry for all socially responsible investment is ESG (environmental, social and governance). ESG investing is intended to be more financially rigorous: investors are supposed to be considering the way in which ESG risks and opportunities can affect companies' financial returns. Sustainable funds tend to have this ESG acronym somewhere in their name. In theory, an investor could select companies with high ESG ratings purely because they believe their performance is likely to be better, rather than for any ethical reason.

On a global level, the percentage of both retail and institutional investors applying ESG principles to at least a quarter of their portfolios jumped from 48 per cent in 2017 to 75 per cent in 2019, according to a report from Deloitte. This enthusiasm is only expected to grow. In February 2020, Deloitte predicted that ESG funds could make up 50 per cent of the total of professionally managed investments by 2025. But do all these ESG investors know that they're not necessarily investing to help the environment?

People who want to invest to save the planet should do their homework before picking an ESG fund, as it might invest in companies that score highly only on the social or governance side. A company might be in an ESG fund if it has a good environmental score – a renewable energy company, for example. It might be ESG if it has a good social score – it treats its workers well. And it might be ESG if it has a good governance score – it has fair bonus schemes and holds its executives to account for their actions. So just because you invest in an ESG fund doesn't mean you're investing to save the planet. While climate change solutions funds are almost certainly going to be ESG funds, not all ESG funds include companies that care about the environment. It surprises a lot of investors to learn, for example, that oil giant BP is in some ESG funds because it scores well on governance. A report by UK wealth manager SCM Direct in 2019 found that the L&G Future World ESG UK Index, for example, had nearly 11 per cent of its holdings in tobacco, alcohol, gaming and defence stocks.

But even investing in the E of ESG is not always straightforward. Some companies may be in environmental funds because they are making something that will help to change the world – like alternative meat or hydrogen fuel cells. But others may be in such funds because, for example, the fund manager is pursuing a strategy of 'best in class'. It could be a fossil fuel company, but one that is investing more in renewable energy than its peers. It could be a global car company that is investing more in electric vehicles than its rivals. How you feel about this is your personal choice, but it may not be clear in the fund labelling.

With so many investment companies keen to jump on the ESG bandwagon and profit from the trend, there have been concerns about greenwashing. A play on the term whitewashing, where problems are covered up, greenwashing happens when companies or fund managers pretend their products are more environmentally friendly than they really are. Some financial advisers and investors worry that investment firms are launching new products to try and ride the recent wave of interest without putting too much thought into them. The fact that ESG labelling is currently so confusing for investors only makes it easier to greenwash.

Many fund managers have been quick to piggyback on the Paris Agreement when marketing environmental funds to consumers with a growing interest in climate change solutions. When the UN launched its 17 sustainable development goals (SDGs) in 2015, for example, it laid them out as a series of little coloured boxes with a

logo on each one. Not all were directly climate change related – no poverty, zero hunger, and quality education were among the goals, for example. Others included climate action, affordable and clean energy, and clean water and sanitation. Fund managers now often say that their fund is investing in line with one or more of these goals. The well-designed logos have proven particularly impactful in marketing materials. 'The person who invented those icons should be given a job at [advertising giant] Saatchi, as every investment manager is using them,' jokes Michael Lewis, head of ESG thematic research at DWS, the German asset manager.

But some investors think fund houses are using these goals to try to make existing or new funds appear more relevant. Some funds have been renamed in recent years: Morningstar found that in 2019, more than 250 funds had repurposed themselves from traditional to sustainable. When it investigated, it found that in some cases fund managers had adapted a fund purely for marketing purposes, without changing the structure or investment philosophy. That doesn't mean the fund didn't change its holdings at all, but in some cases managers simply made tweaks, removing controversial companies. In October 2019, for example, the BMO European Equity fund was renamed the BMO Sustainable Opportunities European Equity. It made 'few changes', according to Morningstar, though it did remove Richemont, which owns British gunmaker James Purdey and Sons, as well as jewellery company Cartier, which was criticised by Human Rights Watch in 2018, among others, for failing

to ensure that its jewels were ethically mined. Many fund managers tweak existing funds for regulatory reasons: new rules in Europe require fund managers to offer a sustainable product to investors who want one. But there is also a view in the investment industry that some managers create products that might be compared to spaghetti – throwing them at the wall to see what sticks – in order to take advantage of a trend.

One fund manager gives the example of water funds that say they invest in line with the SDG goal of clean water and sanitation. The goal is to address the lack of sanitation and improve access to safe drinking water, mainly in poor countries. Yet many water funds are stocked with Western utility companies, which, the manager says, 'are processing rich people's sewage when the problem is a lack of drinking water in the Third World. That dislocation and hypocrisy is important to avoid.'

A 2019 report from market researcher Cicero found that 97 out of 100 financial advisers were either very or fairly concerned about the possible mis-selling of products marketed as having strong ESG credentials as consumer interest in the responsible investment sector surged. Neville White, head of sustainable research at EdenTree, the asset manager that sponsored the research, told the *Financial Times* at the time that 'The language in this part of the market has become dense and confusing. There is little regulation over what you label a product.'

We'll look more at this issue of greenwashing in the course of the book.

Regardless of whether they're institutional or retail, investors around the world are starting to realise that they need to take climate change risk into account when considering whether to invest in a particular company or sector. There are various movements among professional investors to achieve this, which we'll look at later. Thousands of pension funds, foundations and institutional investors, for example, have signed up to the UN Principles for Responsible Investment (PRI), which require signatories to publicly report on their responsible investment activity.

Many professional investors are becoming increasingly outspoken on climate change – and, in a sign of how mainstream the issue has become, they are not necessarily running climate change funds or specialising in sustainable investment. Take Christopher Hohn, one of the world's best-known hedge fund managers. In an unusual crossover between the financial world and that of the eco-warrior, he backed the climate change movement Extinction Rebellion, which rose to prominence in 2019 after its supporters held sit-ins at key sites across London, blocking off major bridges and shutting down traffic. Hohn gave the movement £50,000 of his own money, making him its biggest individual donor, and contributed even more through his philanthropic fund. In December 2019, he said his activist hedge fund, TCI – which is not a sustainable investment specialist – would

vote against directors at companies that failed to disclose their carbon dioxide emissions. As the *Financial Times* drily put it: 'When a hedge fund manager worries about the rest of humanity, you know it must be serious.'

The biggest investment manager in the world, BlackRock, caused headlines in January 2020 when its chief executive, Larry Fink, wrote to the heads of the companies BlackRock invested in saying that there was about to be a 'significant reallocation of capital' as investors around the world considered how they should invest wisely given climate change. 'Every government, company, and shareholder must confront climate change,' he wrote – adding that BlackRock would be increasingly likely to vote against companies on sustainability grounds.

Whether promises by professional investors to consider climate change seriously can be taken at face value is something we will explore in this book. It is notable, for example, that Hohn has been one of BlackRock's most vocal critics, accusing the fund manager before its January letter of being 'full of greenwash'.

The muddy waters of 'green' billionaires

Finding solutions to climate change has proven to be a far cry from the philanthropic activity it was once believed to be. In fact it has made, and continues to make, some individuals extremely wealthy. Just as the Industrial Revolution of the nineteenth century created

family dynasties like the Rockefellers and the Vanderbilts, today a new wave of entrepreneurs is accumulating wealth that is likely to last for generations. In January 2020, Bloomberg published a list of 'green billionaires' and predicted that there would be many more to follow in the next decade.

The most recognisable person on the list is Elon Musk, the founder of electric car company Tesla. But many of the new wave of green billionaires are not – or not yet – household names. Topping the list, one place ahead of Musk, are four shareholders in Chinese electric battery maker CATL, which supplies firms including Toyota and BMW: Zeng Yuqun, Huang Shilin, Pei Zhenhua, and Li Ping, who between them have a combined wealth of $16.7bn. Germany's Aloys Wobben, founder of Enercon, one of the world's largest wind turbine companies, made the list, as did Australia's Anthony Pratt of Pratt Industries, the world's largest privately held 100 per cent recycled paper and packaging company. Also on the list is Trevor Milton, founder of US start-up Nikola Motor, which develops hydrogen-powered trucks; and Spain's José Manuel Entrecanales, whose Acciona company is a huge renewable energy provider.

Two others who are not on the list but who have made hundreds of millions, if not (yet) billions, are Ethan Brown, the founder of Beyond Meat, the alternative meat company that floated on the stock market in 2019 and attracted huge interest from investors looking to ride the vegan wave; and Patrick Brown (no relation), founder of rival company Impossible Foods.

Some critics argue that there is an inconsistency in the idea of a climate billionaire. People who care about the environment also often believe in social justice and equality. Many billionaires have made their money directly through oil and are now among the leading lobbyists against climate change, a phenomenon prompting *GQ* magazine to argue that 'Billionaires Are the Leading Cause of Climate Change'. Advocates of a wealth tax argue that revenues from such a policy could be funnelled into schemes that would help cut emissions across societies: for example, clean energy and infrastructure projects. When New York billionaire Michael Bloomberg announced that he was donating $500m to a new campaign, Beyond Carbon, which aimed to close every coal-fired power plant in the US, the *Guardian* newspaper argued that philanthropy was nice, but due to the propensity of Bloomberg's billionaire peers to hoard cash and lobby for fossil fuel interests, 'it would be much better for the planet if billionaires like him didn't exist at all'.

But the oil billionaire who lobbies for more fossil fuel extraction is a dying breed. Cynically speaking, those hoping to get rich quick these days are less likely to look to the oil industry to achieve it. As our understanding of risk and climate change evolves, investors are increasingly arguing that it is risky, in ways we may not yet be able to completely measure, to invest in polluting companies, and that the best way to make money in future will be to back climate change solutions and companies that are preparing for a zero-carbon world. While some

oil billionaires with the ear of government officials are certainly contributing to climate change, other billionaires like Bloomberg and Bill Gates are actively seeking to mitigate it.

A lot of billionaires do see climate change as a risk. Respondents to the 2020 Global Risks Report, produced in advance of the World Economic Forum in Davos, an annual gathering of some of the world's most influential billionaires and policymakers, listed environmental worries as the five main risks to the global economy – the first time the environment had taken all five top slots. The top three risks were deemed to be extreme weather, climate action failure, and natural disasters – as they had been in 2019 as well.

The boom in wealth

While the push for a low-carbon economy is already creating climate change billionaires in the corporate space, there is also a new wave of wealthy individuals who aren't themselves climate change entrepreneurs but who are looking to invest their money in climate change solutions. Since the global financial crisis of 2008, there has been a boom in wealth. The top 1 per cent have been getting richer, as low interest rates in the past decade incentivised them to invest more, while savers earned less on their money. According to the Knight Frank wealth report, the number of so-called ultra-high-net-worth individuals around the world – those with a net

worth of $30m or more – rose by 6.4 per cent in 2019 to 513,200, an extra 31,000 people from the year before alone.

Extreme wealth is helpful when it comes to backing new technologies, as this involves greater risk, though with the potential for greater reward. Some of the most innovative solutions to climate change – emission-friendly meat grown in labs; hydrogen-powered aircraft; eco-friendly air conditioners – are thought up by entrepreneurs and are still only at the start-up stage. Private companies like this depend on early-stage investors, whether venture capitalists in San Francisco, enlightened institutional investors, or high-net-worth individuals looking to back the next big thing.

Some families are so wealthy that they set up family offices. These are investment companies, often with $1bn or more in assets, that have only one client: the family. Think of a billionaire and they are very likely to have their own family office: George Soros has Soros Fund Management; Google founder Sergey Brin has Bayshore Global Management; Bill Gates has Cascade Investments. Many others belong to families that are less well known: the quiet billionaires who made money not through the glamour of Silicon Valley but via industrial or manufacturing routes. And family offices will often have influential younger members – those belonging to the millennial generation, or the generation beyond that, known as Gen Z, who typically care more about the environment. Their influence is helping family offices to be an important class of investors in climate

change solutions, as they are in a position to back entrepreneurs.

Titans of tech are also funnelling both philanthropic and investment money into climate change solutions. Jeff Bezos, founder of Amazon, said in February 2020 that he would donate $10bn – about 8 per cent of his wealth at the time – via the newly created Bezos Earth Fund to fight climate change. (The move came shortly after hundreds of Amazon staff signed a letter attacking the company's progress on reducing its carbon footprint.) In 2015, along with other billionaires including Jack Ma, Richard Branson and Michael Bloomberg, Microsoft founder Bill Gates set up Breakthrough Energy Ventures, an investment fund aimed at supporting new technologies that could combat climate change.

In short, however one may feel about whether billionaires should be allowed to exist, they do have a role to play in the energy transition. While a lot of old-school billionaires have contributed to climate change and still lobby in favour of the polluting activities that made them rich, more modern billionaires are trying to use their wealth to help find solutions – though it would probably help their image if they took fewer private jets along the way.

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In the chapters that follow, we'll look at the different ways in which you can use your money to help combat climate change. We'll discuss emerging trends and controversial

areas of investment and demystify the jargon – all of which will empower you with the information you need to make sustainable investment decisions that are right for you.

Throughout the book we'll examine the growing issue of greenwashing, as some investment houses try to seem more climate-friendly than they really are. Some of this can be explained by confusing terms used by the financial industry and a lack of consensus on what is really meant by 'sustainable investing'. By the end of the book, you'll hopefully be able to spot greenwashed investments yourself and work out whether something is clearly labelled, and hence whether you're comfortable investing in it.

First up, in Chapter 2, we'll look at some of the basics of investing, such as how to work out your risk appetite, and why putting your money into what your friends are investing in is probably a bad idea. We'll look at some of the types of investments you can make, from equities to bonds to private equity, and explain how these different ways of investing in companies can give you different kinds of power. We'll look at pensions, as that's where it all begins and ends for a lot of smaller investors. We'll also start to look at greenwashing, and how the financial industry uses acronyms that can be off-putting for those starting out but that shouldn't deter you once you understand them.

In Chapter 3, we'll discuss divestment. Often the first port of call for sustainable investors, divestment is the choice not to invest in harmful companies or sectors,

most often fossil fuels. We'll consider its benefits and risks, whether it has worked in the past, whether it could harm your investment returns, and how effective it really is at getting companies to reduce their carbon emissions.

In Chapter 4, we'll look at the flip side of divestment, which is engagement with companies. A growing number of investors think that remaining invested in a polluting company gives you more power to effect change than if you divest entirely. We will examine this argument. We'll also look at how investment companies that manage your money are themselves shareholders of the largest companies in the world. These so-called institutional investors have huge clout to push polluting companies to change their ways. And they are increasingly banding together to put pressure on the world's largest companies to do more to combat climate change. Being a climate-conscious investor doesn't necessarily mean disengaging from polluting companies, as we'll discuss.

Chapters 5 to 8 will explore four core themes around climate change investing. Chapter 5, on energy, will look at how governments and energy companies are trying to move away from coal, oil and gas towards renewable energy sources like solar and wind, in what is known as the energy transition. There are plenty of emerging technologies here that you could use your money to support – or you could choose to invest in companies that are positioning themselves well for a low-carbon future.

Chapter 6 looks at the opportunities to invest in green

transport, from electric scooters to biofuelled aeroplanes, and at the efforts investors are making to find solutions to the problems of electric batteries still being too heavy, or taking too long to charge. Chapter 7 is all about the food revolution, from the vegan movement and alternative meat to vertical farming and new ways of growing food. Chapter 8 concentrates on energy efficiency and the circular economy, and on how even companies not directly helping to solve climate change are making efforts to cut their emissions.

In all these thematic chapters we'll look at some of the high-profile investors backing these ideas, the entrepreneurs coming up with the solutions, and ways that you can get involved, depending on your appetite for risk.

Finally, in the conclusion, we'll look at what still needs to be done by regulators and governments to make it easier for investors both big and small to support climate change solutions. We'll also look at how sustainable investments have held up during the coronavirus pandemic, and examine the case for building back better.

A note before we begin: it's important to say that this book isn't trying to tell you what to do. It assumes that you want to know more about how to invest with climate change in mind, but it also aims to help you understand the potential risks involved and make informed decisions. In discussing some of the issues, such as whether to divest, whether to engage, relative performance and risks, a balanced view has been sought.

And some reassurance: if you're reading this book,