

EXPLORING ETHICAL AND SUSTAINABLE INVESTING

Quintin Rayer, B.Sc (Hons), ARCS, DPhil, CPhys, Chartered FCSI,
Chartered Wealth Manager, SIPC

Lyn Financial Services

quintin_rayer@compuserve.com

ABSTRACT

Ethical investment can be seen as falling into the 'nice-to-have' but not essential category. This paper seeks to raise awareness of the fundamental importance of ethical investing and to increase familiarity with the concept of 'sustainable' investment. It includes a brief history of the topic and outlines a number of approaches that can be used to help counter assumptions that it simply involves excluding 'sin stocks'. In practical terms, ethical investors may benefit from an awareness of resources available as well as some suggestions to help differentiate committed ethical investment fund managers from those seeking a marketing advantage from a green makeover. Finally, the logic behind assumptions that ethical investments must underperform due to 'the price of conscience' is challenged, with emphasis on the interplay between ethical investing, risk and competitive advantage.

INTRODUCTION

Although ethical investment can be seen as desirable but not essential, this paper outlines its fundamental importance and outlines 'sustainable' investing, a more recent development. Having established sustainable investing's significance, implementation approaches are outlined, moving beyond common assumptions that it only involves avoiding investment in companies carrying out unacceptable activities ('sin stocks'). In practice, ethical investors can benefit from awareness of resources available as well as approaches to help identify committed ethical investment fund managers from those seeking a marketing advantage from appearing ethical ('greenwashing'). Finally, investors may believe that ethical restrictions placed on the investment opportunity set must result in inferior performance, the so-called 'price of conscience'. This logic is challenged by exploring the interplay between ethical investing, risk and competitive advantage.

ETHICAL INVESTING MATTERS

The relationship between sustainability and finance usefully sets the background to ethical investing.

Unsustainable human activities have generated threats including climate change,¹ resulting in damage, loss of life, and disruption to food and fresh water supplies. The human life-span is increasing, so demographics will impact healthcare and pension costs. An expanding proportion of a growing world population will demand improved living standards as less developed countries modernise. Proponents of responsible investment argue that behaving in an unsustainable manner will cease to be an option.

Corporations are ubiquitous and powerful, spanning the globe. Humanity needs them to end unsustainable behaviours and tackle future challenges, which may include environmental challenges, climate change and social issues. Regrettably, part of industry's dynamism has been (and still can be) the externalisation of costs on to the environment, communities, employees or future generations [1]. Financial markets help support and control corporate behaviour;

markets reward ingenuity, efficiency, talent and productivity through the ability to raise funds and by share pricing (thereby valuing companies). Companies making far-sighted investments tackling these problems will benefit in either the short or longer-term, making them valuable investments.

Since corporate activity is an essential part of human activity and development, sustainable investment also requires that companies generate economically sustainable long and short-term returns. This counters short-termism, where immediate profits are made at the expense of damaging profitability at a later date.

In today's environmentally and socially aware business environment, there is appreciation that:

- Companies taking environmental risks have caused disasters (eg, oil spills, deforestation, mining pollution).
- Social costs of business practices can no longer be ignored, as in previous eras.² Public tolerance of unacceptable worker conditions has diminished (eg, labour conditions in mines and child labour).
- Companies require effective governance to confidently develop, meet legal and ethical requirements, and be accountable to stakeholders, including owners and shareholders. Corruption facilitates losses and sub-optimal decision-making. Poor oversight encourages high-risk behaviours and damaging scandals, potentially undermining reputations of entire industry sectors.³

In the modern technologically-enabled world, environmental, social and governance failures are readily exposed by media and achieve global coverage rapidly. Such failures can easily result in financial losses, adverse litigation, reputational damage and clients taking business elsewhere. This has the potential to cause enormous damage to a company's value, share price and even its long-term survival.

Thus ethically and sustainably orientated companies have the opportunity to target higher long-term profits by addressing necessary challenges while avoiding failures. At the same time they should accumulate marketing advantages and loyal customers as a result of their ethical behaviour.

SUSTAINABLE INVESTING

For current purposes, little distinction is made between ethical investment, socially responsible investing or sustainable investing.⁴ Companies are encouraged to promote practices including environmental stewardship; consumer protection; human rights and support the social good [2], [3]. One focus is on environmental, social justice and corporate governance issues (ESG). In sustainable investing, funds are directed into companies with business practices capable of being continued indefinitely without causing harm to current or future generations, or exhausting natural resources (ie, not 'unsustainable'). Sustainability is often defined as ensuring development meets the needs of the present without compromising the ability of future generations to meet their own needs [4].

ESG identifies three key dimensions of sustainable investing (see Figure 1).

1. Environmental, including CO₂ emissions, or carbon-intensity; forest and woodland degradation (important for absorption of atmospheric CO₂); airborne, water-borne or land-based pollution; usage of scarce resources, including water and living creatures as well as minerals, oil and natural gas; mining activities which generate toxic byproducts; over-fishing, intensive agricultural methods and so on.

2. Social, including corporate social responsibility (CSR); child labour; modern-day slavery; payment of non-living wages; hazardous, exploitative and/or coercive working conditions;⁵ structures that reduce corporate taxation bills to levels incommensurate with the profits and activities taking place in those countries; anti-social working hours or conditions; displacement of indigenous peoples.
3. Governance; companies with weak internal controls may have management not following company policies, increasing risks of irresponsible behaviours, corruption and bribery. At board level, weak governance may mean that non-executive directors (NEDs) are unable to hold powerful executive directors in check, with possible damage to the company as well as the owners' (shareholders') interests, and increased risk of excessive executive remuneration.

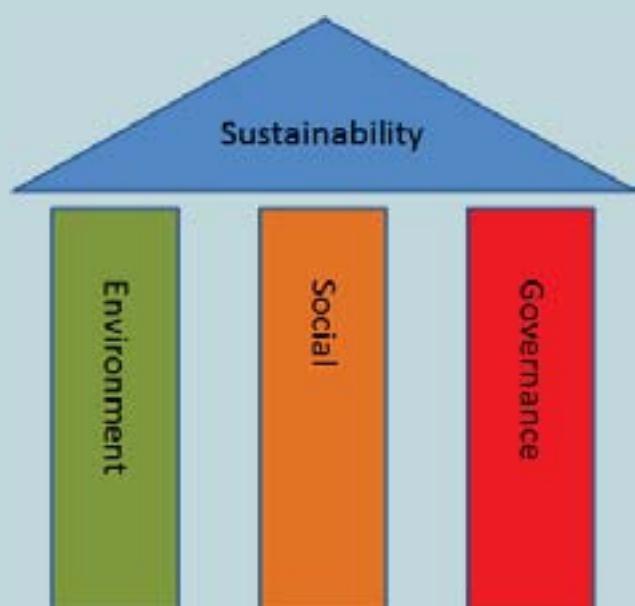


Figure 1: The three pillars of sustainability

Companies may outsource production to countries or other companies operating without meaningful sustainability practices. A company might claim ethical operations, while not looking too deeply into its suppliers' practices. Best practice requires companies to scrutinise their resource chains and monitor the entire production process, from origin through to ultimate disposal of products after use.

Companies may externalise costs of production [1]. Companies consume resources and create waste products. Ideally all costs associated with resources consumed and waste product disposal during manufacture would be included in the price of goods created; including disposal after use.

A company with energy-intensive production, burning fossil fuel, may release significant quantities of atmospheric⁶ CO₂. The build-up of atmospheric CO₂ is leading to global warming and climate change. This is unsustainable, yet it is generally unlikely that the company releasing CO₂ will be paying significantly towards atmospheric CO₂ reduction, or pricing the cost of CO₂ removal into the finished product. The costs of climate change adaptation will fall to society as a whole, often with poorer countries suffering greater damage (and costs) than richer, industrialised countries.⁷ This typifies externalised costs:

the company that emitted the CO₂ has not paid for its consequences. Generally consumers buying that company's goods may not pay a price reflecting the true cost of dealing with the CO₂ involved in production.

Externalising production costs applies not only to pollution; similar arguments relate to forcing labour to subsidise activities, and saving money with potentially health-damaging practices or inadequate wages. Failure to invest in appropriate governance and management structures can result in company staff undertaking activities boosting earnings, but with the tab ultimately being picked up by society or taxpayers. The company saves money on management and governance, while the taxpayer pays the cost of dealing with problems that may arise as a result. The company externalises these costs to the taxpayer when it should pay them itself.

Having identified some concerns motivating ethical investing, investors want, broadly speaking, to see capital put to an ethically good use. Not merely maximising investment return, but also causing benefit (or at least doing no harm) while generating a decent return, 'doing well while doing good'.

Ethical investors wish to allocate resources to areas they feel deserve investment and to avoid businesses that (directly or indirectly) do not. Typically avoiding the so-called 'sextet of sin', which generally refers to alcohol, tobacco, gambling, pornography, armaments and nuclear power [3]. Different investors may wish to avoid different or more sectors than these.

Exclusions, or 'screening' is only one strategy of several. Consider:

- Do investors wish to avoid unethical companies, but accept ethically-neutral companies doing neither good nor harm? (Negative screening.)
- Do investors wish to invest only in ethical companies, avoiding both unethical and ethically-neutral companies? (Positive screening.)
- Do they wish to actively seek to influence corporate behaviours for the better? (Positive engagement, or shareholder activism.)

These questions and their implementation lead to a nuanced range of investment approaches.

HISTORY OF ETHICAL INVESTING

Malthus's 1798 'Essay on the principles of population' warned of population growth outpacing the planet's ability to support human needs [5]. Including social aspects to business activity dates from the 1700s, with mutual societies and Quaker philanthropists such as Cadbury's. In the 1800s the Quakers prohibited members from participating in the slave trade. Ethical investing also traces thinking from Methodism.⁸ Its religious roots meant investors were asked to avoid companies encouraging 'sin'. Association with guns, liquor and tobacco were to be avoided.

Over time, the list of excluded business widened to include social and environmental problems [6]. The 1972 Stockholm Conference on the Human Environment named the environmental assessment component of its action plan 'Earthwatch', recommending environmental assessment as an operational area of the UN Environment Programme (UNEP). Business pioneers such as The Body Shop (1976) and Ben & Jerry's ice cream (1978) placed ethical and social considerations deep within their offering [7]. The Stockholm recommendations were elaborated in the 1980 World Conservation Strategy – a collaboration between the International Union for the Conservation of Nature, the World Wildlife Fund and UNEP. In 1983, growing realisation in national governments and

multilateral institutions of linkage between economic development and environmental issues lead to establishment of the World Commission on Environment and Development by the UN General Assembly. Depletion of the atmospheric ozone layer by chlorofluorocarbons lead to the 1989 Montreal Protocol ban. In 1992, leaders set out sustainable development principles at the UN Conference on Environment and Development in Rio de Janeiro, Brazil.⁹ Later in 1992, the UN General Assembly officially created the Commission on Sustainable Development. The 2006 Stern report [8] concluded that the benefits of decisive early action on climate change outweighed the costs. In 2007, the International Panel on Climate Change declared “it is no longer a question of whether climate change policy should be understood in the context of sustainable development goals; it is a question of how”.

Ethical investing’s history means several excluded sectors derive from religious roots, while civil nuclear power’s association with atomic weapon development may taint that sector, despite its ability to reduce CO2 emissions. Sustainable (ESG) investment may be a useful development: by emphasising the need for sustainability, ethical investment can be placed on a more scientific basis, without the need to lean upon its religious roots.¹⁰ The identification of ESG factors gives clarity of focus, provides structure, and potentially the addition of further factors if desirable.¹¹

INVESTMENT APPROACHES

Investments tend to focus on activities that are seen as generating desirable or undesirable outcomes. Sustainability is helpful when it comes to determining where an activity should be seen as having a positive or negative impact, based on ESG factors.

Ethical investing means different things to different people and institutional investors may answer to stakeholders that differ amongst themselves. Despite the range of approaches available, some investors may feel that none of the main methods fit their requirements. Approaches commonly use screening, but can also use ‘best-in-class’, tilting, or influence and engagement.

Screening

Screening appears to be the commonest approach. Investments are tested against several requirements aligned with positive and negative impacts, or other criteria. Companies’ impacts are identified

as positive, negative, or ‘ethically-neutral’ (broadly doing neither good nor harm).

Following screening, an investor must decide whether to avoid ethically-neutral companies (see Figure 2).

- Negative screening avoids unethical companies, but invests in ethically-neutral companies.
- Positive screening only invests in ethically beneficial companies, avoiding ethically-neutral and unethical companies.

A concern with screening is that it can generate portfolio biases towards company size and sectors, limiting portfolio diversification.

Best-in-class

This approach includes companies and industries that are the best operators within the class considered, including the best companies within a sector. This can mean selecting the ‘least bad’ companies in that sector.

It can motivate companies in ethically-challenging sectors to improve. Consider the position of a fictitious mining company against some different ethical investing strategies. Suppose our mining company has a weak record with regard to environmental damage during extraction, pollution from refinery waste products, treatment of labour and of indigenous peoples displaced or harmed by its activities. If financial markets reward superior sustainable practices:¹²

- Positive screening excludes the company based on sector, which would likely be unacceptable. Management can take no action to make the company acceptable.¹³
- Negative screening would similarly exclude the company, due to its sector.
- Under best-in-class, the ‘least bad’ companies in the sector can attract investment. By comparing with peers, management can improve their environmental and social record to be amongst the best in their sector and attract investment. In a competitive market environment, this can motivate companies in a ‘race to the top’, thereby generating real improvements for those affected by the company’s activities, even if they will never be perfect.

The company could also be influenced by ethical investment styles such as ‘tilting’, if they can reduce their carbon intensity, influence and engagement or shareholder activism.

For investors seeking to actively engage, best-in-class can provide benefits to those most affected by negative company practices.

Portfolio tilting

Data providers can supply information on ESG scores or the carbon-intensity of portfolio holdings. Determining whether, for example, a portfolio is over or under-weight its benchmark in terms of carbon intensity.

In this more nuanced approach, a portfolio is tilted away from carbon-intensive sectors or companies towards lower carbon areas. For investors wishing to be somewhat ‘green’ but fearing that ethical investing might undermine performance,¹⁴ this offers a ‘light green’ approach. Some exposure towards carbon-intensive areas is permitted, provided that elsewhere, sufficient weight is given to low-carbon industries, and overall the portfolio has a lower carbon intensity than its benchmark index. The manager can allocate across a wide range of companies or sectors to help with diversification and performance.

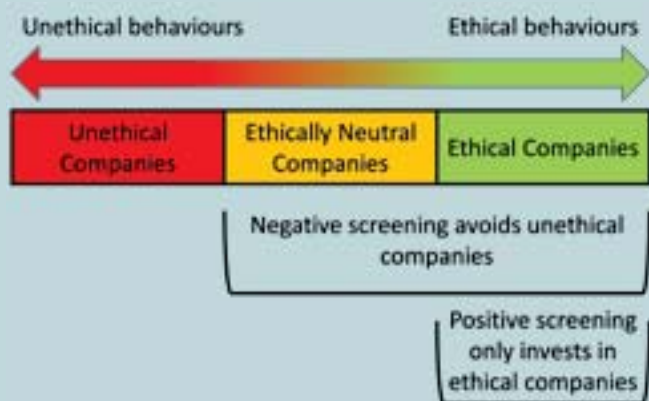


Figure 2: Positive and negative screening

Influence and engagement

This approach involves influencing company directors, where appropriate, to make improvements in matters of ethical concern [3]. Directors are encouraged and supported to improve the balance between risk and return in the best interests of long-term owners.

The process may involve management meetings, questionnaires, and collaboration with other fund managers. The intention is to influence companies to consider their responsibilities to the environment, their stakeholders¹⁵ and society as a whole.

INFORMATION SOURCES

Apart from investment approach, an investor must select ethical companies and monitor their performance. Corporate carbon emissions, social responsibility and governance quality are not easy to measure objectively. Consequently, ethical investing is often outsourced to organisations with specialist skills, with many investors employing the skills of specialist fund managers.

Information sources tend to depend on whether investing via funds or directly constructing a portfolio that meets ethical criteria.

Ethical funds

Several fund management houses run ethical investing strategies. Some specialist houses only run ethical funds, while others include ethically-orientated funds as part of their wider offering.

A concern for investors is whether fund managers lack ethical investing experience, but want to 'jump on the bandwagon', launching a fund to appeal to the ethical market. Examination may reveal that although promoted as such, a fund's ethical credentials are slender, potentially including holdings (or an approach) that clients would not regard as particularly ethical. A company lacking experience may launch a new ethical fund, but fail to reach required assets under management (AUM) targets to make it economically viable. This could result in a merger with a conventional fund, closure, or a shift away from ethical objectives. Inexperience with ethical investing could mean insufficient resources (such as databases on ethical activities and carbon intensity) have been allocated to develop the fund or insufficient investment in experienced staff with the necessary training and qualifications. This could result in inability to deliver the performance expected, resulting in gradual erosion of interest in the fund, with consequences such as closure, merger and change of objectives.

These concerns can be partially addressed by selecting funds from specialist ethical management houses. Their objectives and track record are likely to be more clear-cut. Good questions to ask when selecting an ethical fund might include:

- Does the fund house specialise in ethical investing, or does it manage other conventional funds?
- How deeply embedded is ethical investing culture in the organisation? What specific ethical initiatives does the fund management house undertake? How ethical are its own corporate values? Does it practice what it preaches?
- How long have they been running ethical funds for? What is their style and track record like?
- How long has the fund been running? What ethical investing style does it use?

- What resources do the managers have access to? What databases are used to investigate companies for investment? Are analysts proactive in contacting companies? Are shares' voting rights used to influence companies invested in?
- What ethical investing experience and qualifications do staff have? Fund management houses may find clients like to hear them talk positively about ethical investing, and may do so for marketing benefits. Questions that explore the genuine level of staff experience may help detect those with only 'skin deep' commitment. Ethical investing qualifications appear in relatively short supply; only organisations and staff seriously committed are likely to have individuals with specific qualifications from recognised training institutions and accepted by industry bodies.¹⁶

A number of organisations and companies offer resources that can assist investors in determining the ethical credentials of specific funds and fund management houses (such as Morningstar and SRI Services).¹⁷

Individual companies, corporate standards and initiatives

A manager constructing a portfolio of ethical companies faces different challenges. Portfolio construction may use both ethical funds and individual stocks; requiring additional perspective on funds¹⁸ or companies.¹⁹

When considering a company for portfolio inclusion, apart from return, risk and diversification aspects, the manager must consider whether it meets ethical investment objectives. Although some criteria (like screening and carbon intensity) might be straightforward, other requirements could be sector specific.

Portfolio managers are assisted by corporate standards introduced in different countries over several years, including some ISO standards.²¹ Many are voluntary, but confirm that certain activities have been conducted meeting defined standards. While such standards are helpful, the sheer number can be difficult, and requirements vary. Often sustainably-orientated companies seek to meet requirements and be audited for several standards, even if related; thus adoption of multiple standards covering a company's operations can provide some reassurance. However, the portfolio manager might be well advised to explore the differences between standards and how they are independently audited before reaching final conclusions. Other questions regarding standards are whether they provide symbolic or real value and whether they are strong but voluntary [5].

Independent organisations have launched initiatives encouraging companies and organisations to behave more responsibly, ranging from auditable quasi-official standards to reporting initiatives encouraging companies to publicly report emissions, achievements and progress to motivate them and others to improve.

One information source is company annual reports and accounts. These should reveal not only the company's stated ethics,²² sustainability, CSR, environmental objectives and corporate standards, but also information about corporate governance²³ [9], [10]. Several years' of reports and accounts should be examined, exploring such aspects as tenure and role of NEDs, board turnover, expertise, genuine level of independence, ability to challenge executive decision-making, and composition and independence of the remuneration committee. Resources covering environmental factors cover issues related to environmental concerns,²⁴ including agriculture,²⁵ emissions,²⁶ energy,²⁷ and water.²⁸

For CSR, apart from resources covering labour²⁹ and social issues,³⁰ one test is to compare the salary of the highest paid staff member to the lowest paid as a measure of labour equality within an organisation [1].

Investors must dig beneath superficial statements regarding company achievements in these areas, since many companies desire a 'green makeover', while reluctant to absorb the costs and challenges required for genuine change [3]. The finance sector has come under scrutiny following scandals in recent years, and has a crucial role to play in encouraging sustainable investment, with organisations promoting such activities.³¹ It is also worth exploring the wider topic of sustainability for economies and businesses.³²

INVESTMENT PERFORMANCE

Investors seeking a performance yardstick for ethical funds or portfolios can use ethical indices, including those run by Dow Jones³³ and FTSE indices.³⁴ A major question is how ethical and conventional investments compare, with concerns about underperformance, further clouded by worries that 'ethical' or 'green' labels have been applied for marketing advantage. The problem is distinguishing between fund providers with only superficial commitment to ethical investing and those with genuine commitment and skills. Careful examination of fund and provider is required to help determine whether there has been a 'green makeover' for marketing purposes, or whether it can really deliver the ethical requirements desired.

Beyond ensuring selection of genuine ethical funds, there remain questions about whether such funds must underperform in the wider market. Investors often perceive ethical investing as positive or negative screening. Since this reduces the number of companies available for investment, the smaller 'opportunity set' reduces diversification possibilities, resulting in worse returns, higher risk, or weaker risk-adjusted portfolio performance. The following sections propose arguments challenging this perception, not by data analysis (it can be difficult to prove persistent performance tendencies from finite datasets), but by raising counter-arguments intended to widen debate. The counter-arguments relate to sustainable investing and risk, and whether sustainable investment can give competitive advantage [1], [11].

Sustainable investing and risk

It can be difficult to prove that one investment style or another is superior over an extended period. Proponents of sustainable investing argue that unethical corporate behaviour and unsustainable practices lead to increased risk [3], [11]. Harmful behaviour by companies eventually leads to negative consequences for them, generally having a detrimental effect on growth, profits and share price, leading to market underperformance, thereby running risks that are not well reflected in share price (not 'priced in' by the market). By excluding these companies, an investor is removing sources of unrewarded risk from their portfolio.

Such practices can increase the likelihood and consequence of litigation against the company, cause reputational damage to brand or products, or make customers decide they do not wish to be associated with the company and take business elsewhere. Other risks that can be very real in a competitive corporate environment may include:

- Poor industry standards stimulating increased government regulation in affected sectors, increasing business costs to all companies in that sector [12]. Those firms that have invested least in meeting, maintaining or raising standards will be most affected, as they are forced to improve.

- National or international environmental issues, such as climate change causing CO2 emissions restraints or carbon permit trading [8], [12]. Companies investing in appropriate technologies are better placed to adopt new standards and avoid heavy redesign costs, while those continuing harmful emission practices may require significant investment or higher ongoing business costs.
- Ethical behaviour gives a company a social 'licence to operate', being accepted as a valued community asset, avoiding opposition or resentment about activities [11]. Community, government and NGO opposition can upset projects and damage company brands. Brand risk can be significant – oil-spills can cause reputational damage lasting decades.
- Poor sustainability records can increase insurance premiums, increase the cost of capital, or make it unavailable. Investor concerns about sustainability can increase the cost of debt and equity (lower share prices) [11].
- Unethical supply-chain partners can tarnish the reputation of a company's brand [5].
- Energy usage reduction and waste minimisation helps optimise corporate processes, increasing efficiency and reducing costs.

Other business risks include [11]:

- Operating risks involving emissions and waste discharges, risks involved with product liability, permit costs and 'eco-taxes'. Particularly affecting companies in the mining, oil, gas and forestry sectors.
- Balance sheet risks. Historical and contingent liabilities can negatively impact corporate market value. Decommissioning mines and cleaning up derelict industrial sites can be burdensome without suitable preparations. Litigation threats can damage stock price.
- Capital cost risk, involving pollution control expenditures, product redesign and other outlays following changing environmental standards, regulations and customer expectations.
- Business sustainability risk. Companies may face risks associated with the intrinsic lack of sustainability of their activities. Examples include coal mining, especially high-sulphur coal producers.

Competitive advantage

A businessman (or investor) may question whether ethical behaviour is profitable, or assume ethical behaviour has a cost.³⁵ However, an ethical company should be able to build a good reputation, bringing financial rewards [13], [14]. Ethics encourages businesses to earn legitimate profits, contributing to society, avoiding coercive, exploitative or illegal practices (after all, a protection racket is a type of business). Internationally this relates to countries with lesser standards for human rights, labour, bribery and the environment [15].

An honest and trustworthy reputation attracts customers and potential business partners, creating economic opportunities [16]. Staying within the letter of the law is insufficient to protect reputation: not everything immoral is illegal. Laws can be slow to respond to new social concerns. An ethical climate within an organisation helps protect it from unethical or illegal staff conduct, since strong ethical principles help limit abuses by staff who may be tempted to circumvent regulation. Individuals in a modern international workforce have differing backgrounds, cultures and perceptions of what constitutes acceptable behaviours. They may be under pressure, while facing decisions that affect their own interests.

To trade and deal effectively, companies require trust, quality of goods and services, employees' rewards, and a return on investors' capital. Many financial products depend upon standardised contracts and deliverable

product, including terms associated with futures contracts, which are highly standardised. Additionally, companies with stronger ethical reputations should command higher PE ratios for their stock and borrow at lower rates in bond markets [17].

A 2010 study [18] concluded that positive CSR strategies were initially perceived as being value-destroying by analysts but have moved to being value-creating, with positive impacts on stock recommendations. Analysts are now more likely to recommend a stock 'buy' for strong CSR firms.

Other sources of competitive advantage for superior ethical performance, which can add value, ultimately being reflected in market pricing include [11]:

- Attracting, retaining and motivating top talent.
- Anticipating changes in the regulatory and business environments ahead of competitors.
- Generating revenue growth through new products, services and technologies.
- Increasing customer and investor loyalty.
- Improving relations with regulators, local suppliers, communities and key stakeholders.

- Securing, retaining and enhancing a 'social licence to do business', particularly in emerging market countries.
- Reducing operating expenses through improved energy efficiency and waste minimisation.
- Reducing the risk of legal liabilities and fines.
- Accessing and affording greater investment capital (through enhanced share prices and reduced cost of debt).
- Improving innovation and adaption within the corporate culture.

SUMMARY

To raise awareness and promote discussion around ethical investment, this paper outlines the fundamental importance of the topic before introducing sustainable investing and ESG factors. Following a brief history, it overviews approaches that can be used to help counter assumptions that it only involves excluding 'sin stocks'. It also outlines resources available to ethical investors and suggestions to help identify committed ethical fund managers. Finally, the assumption that ethical investments must underperform due to 'the price of conscience' is challenged by considering ethical investing in terms of risk and competitive advantage.

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ENDNOTES

1. Associated with rising sea levels, extreme weather and flooding for example.
2. For example the slave trade.
3. For example, the LIBOR scandal undermining the reputation of banking and finance [19].
4. For brevity, in this article the term 'ethical' investing will generally be used interchangeably with 'socially responsible investing', 'responsible investing' and 'sustainable investing' except in cases where a useful distinction can be drawn. Definitions of these terms are offered in [2].
5. More recently in the developed world, this may also extend to the use of 'zero-hours' contracts, in which the employer is not obliged to provide any minimum working hours, while the worker is not obliged to accept any work offered. Unions have raised concerns about the possibility of exploitation since management could use these contracts to reward or punish employees for any reason, or for no reason, and whether workers would be able to adequately assert their rights.
6. And potentially other pollutants such as sulphur.
7. Which have historically benefited from the industry that generated much CO₂ in the first place.
8. John Wesley's sermon on the topic of the 'Use of Money', published in 1872, sets out the principles of social investing. He invited his fellow worshippers and investors to not harm their neighbour through their business practices and to avoid certain industries.
9. Three instruments of environmental governance were established: the UN framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD) and the non-legally binding Statement of Forest Principles.
10. A religious basis for ethical investing could create disagreements about what can be regarded as ethical. For example, Islamic finance may prohibit payment of interest, meaning that conventional interest-paying bonds would be unacceptable, although acceptable to some other religions.
11. The author notes that many current debt levels, both nationally and in companies may be regarded as unsustainable, potentially providing exclusions for sustainable investing purposes. This suggests the possibility of adding further factors beyond ESG to sustainable investing, perhaps relating to debt or corporate financing, although academics and practitioners would need to debate what level of debt should be regarded as 'unsustainable'. In a similar vein, [3] suggests five factors.
12. Perhaps with a higher price-earnings (PE) ratio compared with their sector average, or access to cheaper debt financing for example.
13. Apart, presumably, from winding the company's operations up.
14. The price of conscience.
15. Which may include, for example, staff, customers, shareholders and those living near their centres of operation.
16. Possible sources for qualifications include the [Cambridge Institute for Sustainability Leadership](#) and the [Sustainable Investment Professional Certification \(SIPC\)](#) program.
17. Examples include: [Morningstar](#); [Social Funds](#); [SRI Services](#); [Trustnet](#); [Your Ethical Money](#).
18. [Corporate Knights: Eco-Funds Rating Methodology](#), or EIRIS, an ESG research provider.
19. [Corporate Knights](#), 'The magazine for clean capitalism'. Articles have included the '2015 Best 50 corporate citizens in Canada', and an index of the global 100 most sustainable corporations, by year. [Mercer](#) offers carbon footprint analysis services through partnership with [Trucost](#). Trucost provides data on natural capital used by companies; [Sustainalytics](#) provides research to integrate ESG factors into investment processes; [Vigeo](#) assesses companies and organisations with respect to ESG issues.
20. For example, for companies using significant amounts of timber, [Forest Stewardship Council Certification](#) and the [Sustainable Forestry Initiative](#).
21. International Standards Organisation: ISO 26000 on social responsibility, ISO 14000 on environmental management, as well as standards in energy management, occupational health and safety, and anti-bribery.
22. [Good Corporation](#); [Institute of Business Ethics](#); [Ethisphere](#).
23. [The Centre for International Governance Innovation](#); [Financial Reporting Council](#), the [UK Stewardship Code](#); [Business Roundtable](#).
24. [European Ecolabel](#); [World Resources Institute](#).
25. [World Coca Foundation](#); [Principles for Great Plains Sustainability](#); [Principles for Permaculture Design for Habitats](#); [UK Food Industry Principles](#); [Fair Trade Certified](#).
26. [Voluntary Reporting of Greenhouse Gases programme](#); [Carbon Disclosure Project](#); [Greenhouse Gas Protocol](#); [Business Environmental Leadership Council](#).
27. [Leadership in Energy and Environmental Design](#); [Sanborn principles for building design and construction](#); [Guiding Principles for Biodiesel Sustainability](#); [American Petroleum Institute Environmental Principles](#); [Energy Star](#)
28. [The Todd's Principles of Ecological Design](#).
29. [Fair Labor Association](#); [Ethical Trading Initiative](#); [Business Social Compliance Initiative](#); [Fair Wear Foundation](#); [Joint Initiative on Corporate Accountability & Workers' Rights](#); and [Social Accountability International](#).
30. [Ethical Performance](#). A source for CSR industry news, with a global audience.
31. [Principles for Responsible Investing](#); [London Principles](#); [Equator Principles](#).
32. [International Institute for Sustainable development](#); [The World Business Council for Sustainable Development](#); [International Chamber of Commerce Business Charter for Sustainable Development](#); [Global Compact](#).
33. [Dow Jones Sustainability Indices](#).
34. [FTSE4Good Index Series](#)
35. The 'price of conscience'.

QUINTIN RAYER, CHARTERED FCSI, DPHIL (OXON)

Quintin Rayer, Chartered FCSI, is a Chartered Wealth Manager. He holds a Physics degree from Imperial College London and a Physics doctorate from Oxford University. Quintin has applied knowledge from nuclear and aerospace engineering to areas in finance, working for actuarial and investment consultancy firms as well as a multinational European bank for nearly ten years. Projects have included substantial and innovative development of quantitative fund selection and analysis techniques, risk monitoring and portfolio optimisation, including in-house training for analysts and relationship managers. Quintin has completed the Sustainable Investment Professional Certification (SIPC) with the John Molson Business School, becoming this programme's first graduate in the Channel Islands and the second in the UK.

