

# Putting Cryptocurrency in Its Place: The Case for Why ESG Funds Should Exclude Cryptocurrency-Exposed Companies

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## ABSTRACT

Recent converging events have created a potential turning point as to both the future of ESG investing and the mitigation of harm from cryptocurrencies. Key investing demographics have shown an increasing interest in ESG investments. Legislators have demonstrated an interest in regulations for both cryptocurrencies and ESG funds, which has sparked a powerful lobbying effort from cryptocurrency advocates. States such as Florida, Louisiana, and West Virginia have divested from all ESG funds. Newly elected legislators have vowed to investigate ESG funds, attacking them as “a cancer within the U.S. economy.” We are at a potential point of no return regarding environmental protection, of which cryptocurrencies pose a great threat. Finally, the legitimacy of ESG investing criteria has been called into question by recent, seemingly inconsistent decisions such as excluding Tesla and allowing Exxon Mobile.

Among this backdrop, this first-of-its-kind Article provides a much-needed assessment of the harms and benefits of cryptocurrencies. Societal harms include the environment; facilitation of illegal transactions; the diversion away from traditional stocks and bonds, which produce positive externalities; and the harm from providing an alternative to those who hold the U.S. dollar internationally. And properly understood, the alleged societal benefits of cryptocurrencies are highly exaggerated. These include protections from oppressive regimes, investment portfolio diversification, currency conversion fee avoidance, and ability to scale for consumer transactions. An honest weighing of these factors points conclusively to the harms far outweighing the benefits. Therefore, this Article concludes that ESG funds should exclude cryptocurrency-exposed companies. Inaction on this matter would be inconsistent with the stated goal of ESG investment funds. Fortunately, this standard would be relatively simple to implement, and relatively easy for businesses to comply with, therefore maximizing positive change. The novel framework provided in this Article is applicable to a broad range of applications regarding ESG determinations

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specifically and ethical considerations more broadly. Consequently, this Article will likely serve as a valuable catalyst for future scholarship into this and related areas.

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## INTRODUCTION

The purpose of this Article is to analyze the case for excluding cryptocurrency-exposed companies from Environmental, Social, and Governance (ESG) funds. The significant societal harms from cryptocurrencies include environmental harms,; facilitation of illegal transactions,; the diversion away from traditional stocks and bonds (, which produce positive externalities),; and the harm from providing an alternative to those who hold the U.S. dollar internationally. The alleged benefits of cryptocurrency use, properly understood, fail to outweigh these harms. The decentralized nature of cryptocurrencies potentially does more harm than good, benefits to refugees are exaggerated due to their limited access to secure internet connections and vendors who accept cryptocurrencies in the places they flee to and t. There are better alternatives to using cryptocurrencies as investment portfolio diversification because cryptocurrencies are not an attractive alternative for avoiding currency

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conversion fees, and cryptocurrencies are not nor are they effective for large-scale payment processing.

Weighing the benefits against the harms leads to the clear conclusion that cryptocurrencies produce far more harm than they do benefit. When comparing the cryptocurrency industry to other companies that have been excluded from ESG funds, it becomes even clearer that their exclusion is not only justified, but necessary to avoid unjustifiable inconsistency in who should be allowed to be included in ESG funds.

Finally, the through which crypto-exposed companies could be excluded from ESG funds, including the advantages of such an objective and easily ascertainable standard and recent Securities and Exchange Commission (SEC) actions. Note that while other investments, such as non-fungible tokens (NFTs), use similar blockchain technology as cryptocurrencies, this Article focuses exclusively on the ethics of cryptocurrencies, although many of the same principles would apply to NFTs.<sup>1</sup> The novel framework provided in this Article for determining whether corporations with cryptocurrency holdings should be excluded from ESG funds is applicable to a broad range of applications regarding ESG determinations specifically and ethical considerations more broadly. Consequently, this Article will likely serve as a catalyst for future scholarship into this and related areas. The timing of this Article is highly beneficial, as society appears to be at a critical convergence of increasing interest in ESG investments among key demographics, a heightened focus from regulators, a potential tipping point in environmental action, and attacks from newly elected lawmakers against ESG investing altogether.<sup>2</sup>

### I. CRYPTOCURRENCIES

Cryptocurrency is digital money based on blockchain technology.<sup>3</sup> The blockchain is an open source, distributed ledger that records all holdings and transfers of a particular cryptocurrency.<sup>4</sup> In this way, cryptocurrencies rely on a consensus mechanism among the users to verify transactions and holdings.<sup>5</sup> While cryptocurrency is sometimes used as a currency in exchange for goods and services, it is primarily held as an investment.<sup>6</sup> The decentralized nature of

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1. A non-fungible token is essentially a unique digital code representing something. See Mitchell Clark, *NFTs, explained*, THE VERGE (Aug. 18, 2021), <https://www.theverge.com/22310188/nft-explainer-what-is-blockchain-crypto-art-faq>. It can represent digital art, a video of a sports highlight, or even a tweet.

2. Jessica Guynn, *GOP vs. ESG: Why Florida Gov. Ron DeSantis, Republicans Are Fighting 'Woke' ESG Investing*, USA TODAY (Dec. 19, 2022), <https://www.usatoday.com/story/money/2022/12/19/what-are-esg-investments-businesses/10898841002/>.

3. Kate Ashford & John Schmidt, *What Is Cryptocurrency?*, FORBES (Jan. 25, 2022), <https://www.forbes.com/advisor/investing/what-is-cryptocurrency/>.

4. *Id.*

5. *Id.*

6. *Id.*

cryptocurrency means that it is not controlled by a government or central bank as traditional currencies are.<sup>7</sup> To incentivize the task of validating cryptocurrency transactions—referred to as “mining”—miners are rewarded with small fractions of the currency.<sup>8</sup>

Today, there are over 9,000 different cryptocurrencies.<sup>9</sup> The two most popular cryptocurrencies are Bitcoin and Ethereum, which, at their peak, had market capitalizations of over \$1.2 trillion and over \$550 billion, respectively.<sup>10</sup> The first of these two was Bitcoin, which was created in 2009 by an unknown person—or persons—using the alias Satoshi Nakamoto.<sup>11</sup> The quantity of Bitcoin is fixed at twenty-one million.<sup>12</sup> As of September 2022, 19.14 million bitcoins were in circulation, with less than two million left to be mined.<sup>13</sup> While the number of bitcoins left to be mined has decreased from 21 million to less than 2 million in only thirteen years, the Bitcoin rewards for mining decrease exponentially, and therefore the last bitcoin is not expected to be mined until the year 2140.<sup>14</sup>

Modern companies have not ignored the meteoric rise of cryptocurrencies. Many companies accept cryptocurrencies as payment, hold cryptocurrencies on their balance sheet, or otherwise promote the use of cryptocurrencies. Major corporations such as Microsoft, AT&T, and Starbucks accept Bitcoin payments.<sup>15</sup> At one point in 2021, there were 52 companies that represented \$7 trillion worth of stock that were exposed to cryptocurrencies.<sup>16</sup> Virgin Galactic allows customers to pay for space travel using Bitcoin.<sup>17</sup> Sports franchises such

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7. *Id.*

8. *Id.*

9. *Id.*

10. For Bitcoin, which hit its highest market cap on November 9, 2021, see *Bitcoin's Market Capitalization History (2013–2023, \$ Billion)*, GLOBALDATA, <https://www.globaldata.com/data-insights/financial-services/bitcoins-market-capitalization-history/> (last visited Jan. 9, 2023); for Ethereum, which hit its highest market cap on November 9, 2021, see *Ethereum's Market Capitalization History (2015–2023, \$ Billion)*, GLOBALDATA <https://www.globaldata.com/data-insights/financial-services/ethereums-market-capitalization-history/> (last visited Jan. 9, 2023).

11. Tal Yellin, Dominic Aratari & Jose Pagliery, *What Is Bitcoin?*, CNN MONEY (Aug. 8, 2018), <https://money.cnn.com/infographic/technology/what-is-bitcoin/index.html>.

12. Adam Hayes, *What Happens to Bitcoin After All 21 Million Are Mined?*, INVESTOPEDIA, <https://www.investopedia.com/tech/what-happens-bitcoin-after-21-million-mined/> (last visited Jan. 13, 2022).

13. *Total Circulating Bitcoin*, BLOCKCHAIN.COM, <https://www.blockchain.com/charts/total-bitcoins> (last visited Jan. 1, 2023).

14. Hayes, *supra* note 12.

15. Ofir Beigel, *Who Accepts Bitcoin as Payment?*, 99 BITCOINS (Dec. 8, 2022), <https://99bitcoins.com/bitcoin/who-accepts/>; Lisa, *14 Major Companies that Accept Bitcoin*, GOBANKINGRATES (Apr. 21, 2022), <https://www.gobankingrates.com/money/business/major-companies-that-accept-bitcoin/>.

16. Carla Mozee, *There Are 52 Companies Representing \$7 Trillion Worth of Stock Exposed to Cryptocurrencies*, MARKETS INSIDER (Oct. 14, 2021), <https://markets.businessinsider.com/news/currencies/52-companies-7-trillion-stock-exposed-cryptocurrencies-msci-bitcoin-esg-2021-10>.

17. Beigel, *supra* note 15.

as the Miami Dolphins and Dallas Mavericks accept Bitcoin for the purchase of tickets.<sup>18</sup> KFC Canada created a “Bitcoin Bucket” product that could be purchased with Bitcoin.<sup>19</sup>

## II. ESG

“‘ESG’ describes a set of environmental, social, and governance factors used to measure sustainability and long-term value beyond traditional financial measures.”<sup>20</sup> There is no universally agreed upon definition of ESG, or even what is considered an environmental, social, or governance factor; t. The often-used line is that ESG means different things to different people. This Article looks at some of the factors most commonly associated with ESG.

Environmental factors describe a business’s impact on the environment. This can include its greenhouse gas (GHG) emissions, carbon footprint, energy efficiency, renewable energy, water usage, water pollution, waste management, resource depletion, changes in land use, and biodiversity.<sup>21</sup> Social factors focus on how a business manages its relationship with its employees, customers, and other stakeholders. This can include human rights, pay equity, diversity (on the board of directors and among employees), inclusiveness, access to healthcare, employee health and safety, product quality and safety, customer privacy, data security, responsible supply chain management, child labor, and community relations.<sup>22</sup> Governance factors address a business’s approach to management and decision-making. This can include internal controls, risk management, crisis management, legal and regulatory issues, business ethics, transparency and reporting practices, stakeholder interaction, shareholder rights, executive compensation, managerial diversity, political contributions, and lobbying.<sup>23</sup>

### A. ESG investing

ESG investing involves considering ESG factors in conjunction with traditional financial analysis to make an investment decision.<sup>24</sup> ESG investing is distinguishable from other forms of sustainable investing because it incorporates the non-financial factors of ESG with that of traditional financial information when analyzing an investment opportunity.

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18. *Id.*

19. *Id.*

20. *ESG Terminology*, ESG & L. INST., <https://www.esglawinstitute.com/esg-terminology/> (last visited Jan. 5, 2023).

21. *See ESG Lexicon*, ESG & L. INST., <https://www.esglawinstitute.com/2021/09/esg-thought-leadership/> (last visited Jan. 5, 2023).

22. *Id.*

23. *Id.*

24. *ESG Terminology*, *supra* note 20.

Common ESG investments range from owning shares of stock in an individual company to owning shares in an ESG-oriented fund. Multiple types of public and private securities are now held out as ESG focused, or are at least scored according to their ESG impact. These include bonds, real estate, and other asset classes. The number of ESG investments, especially exchange-traded funds and mutual funds, has significantly increased in the last couple of years along with the amount of assets invested. The Forum for Sustainable and Responsible Investment identified 645 registered investment companies in 2022, including 444 mutual funds and 177 exchange-traded funds that consider ESG criteria in making investment decisions.<sup>25</sup> The increased demand by investors along with the ability of fund managers to make money marketing these specialized funds has led to the proliferation of ESG-oriented investments.<sup>26</sup>

Regulatory and Demographic changes in the United States will likely contribute to ESG investing continuing to gain prominence. At the end of 2022, the Department of Labor issued a final rule permitting retirement plan fiduciaries to consider climate change and other ESG factors in selecting plan investments and exercising shareholder rights.<sup>27</sup> This makes it easier for investors to now incorporate ESG-oriented funds within their retirement accounts, such as like their 401(k)s. This has the potential to further increase demand going forward.

In 2022, the Rock Center for Corporate Governance, the Hoover Institution at Stanford University, and the Stanford Graduate School of Business jointly surveyed 2,470 individual fund investors with average investments of \$198,900 in retirement and taxable accounts.<sup>28</sup> The survey showed that 70% of millennial and Generation Zz (18-to-41-year-old) investors said they were very concerned about environmental issues (such as carbon emissions goals and renewable energy sourcing), 65% were very concerned about social issues (such as workplace diversity, income inequality, and workplace conditions), and 64% were very concerned about social issues (such as CEOs serving as board chairs, independence of the board, and board members not being overly busy in terms of outside obligations).<sup>29</sup> This interest by younger investors is especially important when one considers that millennial and Generation Zz members account for approximately 49% of the global population, and that they stand to

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25. *Sustainable Investing Basics*, THE F. FOR SUSTAINABLE & RESPONSIBLE INVESTMENT, <https://www.ussif.org/sribasics> (last visited Jan. 9, 2023).

26. See Kenneth Pucker and Andrew King, *ESG Investing Isn't Designed to Save the Planet*, HARV. BUS. REV. (Aug. 1, 2022), <https://hbr.org/2022/08/esg-investing-isnt-designed-to-save-the-planet>.

27. Prudence and Loyalty in Selecting Plan Investments and Exercising Shareholder Rights, 87 Fed. Reg. 73822 (Dec. 1, 2022) (to be codified at 29 C.F.R. pt. 2550).

28. Stephen H. Haber, John D. Kepler, David F. Larcker, Amit Seru & Brian Tayan, *ESG Investing: What Shareholders Do Fund Managers Represent?*, STAN. CLOSER LOOK SERIES (Nov. 3, 2022), <https://www.gsb.stanford.edu/faculty-research/publications/esg-investing-what-shareholders-do-fund-managers-represent>.

29. *Id.*

inherit trillions of dollars over the ensuing years.<sup>30</sup> If their current investing preferences continue, ESG investments will continue to grow. Particularly relevant to this Article is how ESG investing often correlates to cryptocurrency investing. A 2022 survey found that 80% of investors who held ESG-themed investments also held crypto investments.<sup>31</sup>

ESG investors include individuals, institutions, pension funds, universities, foundations, and nonprofit organizations.<sup>32</sup> The ESG goals of these investors vary. One of the most referenced goals of ESG investors is to mitigate risk in order to improve long-term investment results.<sup>33</sup> If an ESG investor's primary goal is to reduce risk associated with increased laws and regulations, then limiting or eliminating exposure to cryptocurrencies is prudent.

Defining what should be classified as an ESG investment depends on the evaluating party's criteria. Individual investors and asset managers frequently rely upon third parties, such as rating agencies and index providers, to evaluate ESG aspects of an investment.<sup>34</sup> These third parties must look at data from multiple sources, such as company disclosures—which are discussed later—to formulate their ratings or guide their decision to include an investment within an index. These third parties face the difficult task of sourcing data, measuring ESG factors, and assessing their impact.<sup>35</sup> While most ESG factors are unquantifiable, ownership or dealings with cryptocurrencies is quantifiable. For example, diversity initiatives are subjective and difficult to measure, as they would require nuanced information, such as the racial diversity of different geographic regions and the racial diversity of qualified applicants. The social harms are likewise difficult to quantify, as products such as firearms, oil and gas, and alcohol have highly subjective costs and benefits that must be weighed in order to render a final judgment as to how they affect society. Conversely, determining which publicly traded companies accept and hold cryptocurrencies is easy to ascertain and an objective, binary measure not subject to personal opinion.

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30. Chris Versace & Mark Absy, *How Millennials and Gen Z Are Driving Growth Behind ESG*, NASDAQ (Sep. 23, 2022), <https://www.nasdaq.com/articles/how-millennials-and-gen-z-are-driving-growth-behind-esg>.

31. *Retail Investors and ESG: Assessing the Landscape*, BETTERMENT (2022), <https://www.betterment.com/hubfs/PDFs/b4c/betterment-retail-investors-esg-survey.pdf>.

32. *Sustainable Investing Basics*, THE F. FOR SUSTAINABLE & RESPONSIBLE INVESTMENT, <https://www.ussif.org/sribasics> (last visited Jan. 9, 2023).

33. Society usually thinks of risks as negatives and investments with less risk can generate more reliable long-term returns. However, some investments are situated to take advantage of ESG risks. For example, some businesses may be susceptible to risks associated with carbon pricing, while other businesses may be able to capitalize on such risk due to their ability to sell carbon credits.

34. See Quinn Curtis et al., *Do ESG Mutual Funds Deliver on Their Promises?*, 120 MICH. L. REV. 393, 397 (2021).

35. See Brian Tayan, *ESG Ratings: A Compass Without Direction*, HARV. L. SCH. F. ON CORP. GOVERNANCE (Aug. 24, 2022), <https://corpgov.law.harvard.edu/2022/08/24/esg-ratings-a-compass-without-direction/>.

### B. ESG investing strategies

There are numerous strategies for incorporating ESG factors into investment decision-making. Five primary strategies include 1) exclusionary screening, 2) positive screening, 3) ESG integration, 4) impact investing and 5) active ownership.<sup>36</sup> These strategies are not mutually exclusive, meaning multiple strategies can be used at the same time in making an investment decision. Moreover, variations of these five strategies exist, and depending upon the evaluator, may vary to such a degree that variations should be treated as a stand-alone strategy.<sup>37</sup>

Exclusionary screening (also called negative screening) is used to omit certain businesses or sectors as an investment based upon specific criteria that correlates to ESG factors. For example, an equity fund or investment portfolio may exclude all businesses that generate more than 5% of their revenue from the sale of oil and gas.<sup>38</sup> Positive screening (also called best-in-class screening) refers to selecting the most highly ranked investments within individual industries based upon specific criteria that correlate to ESG factors. For example, an equity fund or investment portfolio invests in the top five oil and gas businesses deemed the least carbon intensive.<sup>39</sup> Variations of this strategy include screening for businesses that outperform their peers according to ESG criteria (“best in class”), businesses that are improving faster than their peers according to ESG criteria (“ESG momentum”), and businesses engaged in addressing a specific ESG concern (“thematic investing”).<sup>40</sup> This positive screening relies heavily upon ESG scores and ratings. Exclusionary screening and positive screening are common strategies used by equity funds, especially passively managed index funds.

Instead of using specific screening criteria like with exclusionary screening and positive screening, ESG integration treats ESG data the same as any other data used to evaluate an investment.<sup>41</sup> ESG becomes part of the selection process for every investment, with the focus on increasing returns and less focus rather than exclusively on making an impact. ESG scores and ratings are also very important, as they relate to ESG integration. Actively managed funds are more likely to utilize this strategy. Impact investing usually involves a narrowly tailored investment intended to accomplish a specific ESG-oriented outcome that

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36. RAKHI KUMAR ET AL., *Understanding & Comparing ESG Terminology*, STATE ST. GLOB. ADVISORS (Sept. 30, 2019), <https://www.ssga.com/investment-topics/environmental-social-governance/2018/10/esg-terminology.pdf>.

37. For example, portfolio tilting describes “tilting” an investor’s portfolio toward ESG investments compared to non-ESG oriented investments while maintaining the traditional sector weightings of a particular index.

38. KUMAR ET AL., *supra* note 36.

39. *Id.*

40. *Id.*

41. See Catherine Cote, *7 ESG Investment Strategies to Consider*, HARV. BUS. SCH. ONLINE’S BUS. INSIGHT BLOG (Sept. 15, 2022), <https://online.hbs.edu/blog/post/esg-investment-strategies>.



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can be measure<sup>42</sup>—for example, micro financing for small businesses owned by women. Active ownership broadly refers to investors’ direct engagement with a business, often in the form of voting shares of stock to effect a change in the business.<sup>43</sup> Direct engagement can occur by existing shareholders or when investors purchase shares for the express purpose to change the business based upon an ESG-oriented opportunity.<sup>44</sup>

### C. History of ESG investing

ESG investing and the use of investment strategies like those outlined above are not new. History is filled with examples of investment decisions based upon ESG factors, even long before the term was coined. Early examples of ESG-related decision-making in the United States involved religious values. For instance, the Religious Society of Friends (also known as the Quakers) formally prohibited members from owning slaves and discouraged investment in the industry even earlier in 1758 Philadelphia.<sup>45</sup>

In 1928, an ecclesiastical group established the pioneer fund, which was the first publicly traded fund to screen out certain investments based on social issues like alcohol, tobacco, and gambling—later referred to as “sin stocks.” The 1960s saw the rise of “socially responsible investing,” which lent a formal title to the practice of avoiding certain businesses or entire industries based upon their engagement in specific behaviors. Businesses were commonly scrutinized based on civil rights issues and the Vietnam War. In the 1980s, investors influenced businesses to pull out of South Africa over apartheid. The 1990s introduced the environmental term of “sustainability” to reflect the growing recognition of climate change.

A more systemic approach to ESG investing began in the 2000s, with some of the most progressive developments coming from overseas. The term “ESG” is said to have been introduced to our modern lexicon in 2005 with its use in the “Who Cares Wins” report, which was the result of a joint initiative of financial institutions invited by the United Nations Secretary-General.<sup>46</sup> In 2005, the United Nations Environment Programme issued a report stating a manager’s fiduciary duties owed to a client are not violated if the manager incorporates ESG factors into his or her decision-making.<sup>47</sup> In 2006, the United Nations, in

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42. KUMAR ET AL., *supra* note 36.

43. *Id.*

44. Cote, *supra* note 41.

45. Gary Antonacci, *Sustainable Momentum Investing: Doing Well by Doing Good*, SEEKING ALPHA (Mar. 29, 2015), <https://seekingalpha.com/article/3036226-sustainable-momentum-investing-doing-well-by-doing-good>.

46. THE GLOB. COMPACT, *Who Cares Wins: Connecting Financial Markets to a Changing World* (2004), [https://d306pr3pise04h.cloudfront.net/docs/issues\\_doc%2FFinancial\\_markets%2Fwho\\_cares\\_who\\_wins.pdf](https://d306pr3pise04h.cloudfront.net/docs/issues_doc%2FFinancial_markets%2Fwho_cares_who_wins.pdf).

47. *See Fiduciary Duty in the 21<sup>st</sup> Century*, PRINCIPLES FOR RESPONSIBLE INVESTMENT,

conjunction with global investors that represented more than \$2 trillion in assets, launched the Principles for Responsible Investment (PRI) initiative. The PRI consists of six principles supported by 35 possible actions investors can take to incorporate ESG considerations into their decision making.<sup>48</sup>

ESG investing has continued to gain momentum in recent years. According to a survey conducted by PwC, “[a]sset managers globally are expected to increase their ESG-related assets under management (AuM) to US\$33.9 trillion by 2026, from US\$18.4 trillion in 2021.”<sup>49</sup> ESG assets are on pace to constitute 21.5% of total global AuM in less than 5 years.<sup>50</sup> ESG-oriented AuM in the United States alone is expected to more than double from \$4.5 trillion in 2021 to \$10.5 trillion in 2026.<sup>51</sup>

#### *D. Disclosures and reporting*

A lot of ESG-oriented data is derived from company disclosures. Currently, in the United States, these disclosures are currently voluntary. Naturally, there is a lack of consistency in what information companies are disclosing. Data gleaned from these disclosures is then used by third parties to generate ESG ratings or scores for companies or funds. These ratings and scores vary depending upon the criteria each third party uses to evaluate a security. The inconsistency of what information is being disclosed and what criteria or ESG factors are being measured has led many to question the accuracy of ESG investments.

Numerous bodies have introduced disclosure or reporting “frameworks” to help companies determine what information to disclose and how to disclose it.<sup>52</sup> These frameworks have the benefit of introducing some degree of standardization in what is being disclosed, along with making information available in a way that investors can verify. The three leading disclosure frameworks include the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD).

All of these three frameworks rely upon the concept of “materiality.” Materiality enables companies to focus on those ESG topics that have the greatest impact on their specific business. The GRI framework is used by 82%

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<https://www.unpri.org/download?ac=9792> (last visited Jan. 9, 2023).

48. Press Release, United Nations Secretary-General, Secretary-General Launches ‘Principles for Responsible Investment’ Backed by World’s Largest Investors, (April, 27 2006), <https://press.un.org/en/2006/sg2111.doc.html>.

49. *ESG-Focused Institutional Investment Seen Soaring 84% to US \$33.9 Trillion in 2026, Making up 21.5% of Assets Under Management: PwC Report*, PwC, (Oct. 10, 2022), <https://www.pwc.com/gx/en/news-room/press-releases/2022/awm-revolution-2022-report.html>.

50. *Id.*

51. *Id.*

52. More precisely, the term “framework” is frequently associated with “how” a disclosure is structured. The term “standards” is usually associated with “what” should be disclosed.

of the largest global companies.<sup>53</sup> GRI has three sets of interconnected reporting standards: GRI Universal Standards that apply to all organizations, GRI Topic Standards for each topic and their corresponding disclosures, and GRI Sector Standards which are applicable to specific market sectors.<sup>54</sup> These three sets of standards work in concert to identify and prioritize an organization's impact "on the economy, environment, and people."<sup>55</sup>

The SASB framework establishes standards for ESG issues that are deemed most relevant to the financial performance within seventy-seven identified industries.<sup>56</sup> These "standards focus on sustainability issues expected to have a material impact on the company's financial performance."<sup>57</sup> TCFD focuses on climate-related financial disclosures that can be included in mainstream financial filings. Disclosures are organized according to governance, strategy, risk management, and metrics and targets concerning climate-specific related risks and opportunities.<sup>58</sup> Companies can utilize multiple frameworks in crafting their disclosures.

Some countries have already adopted mandatory ESG reporting rules, while others are in the process. For example, in April 2022 the United Kingdom enacted two mandatory disclosure laws to the Companies Act 2006; these laws, that require large companies and large limited liability partnerships to include climate-related financial disclosures in their strategic report.<sup>59</sup> The European Union already requires companies to disclose ESG-oriented information under the Non-Financial Reporting Directive (NFRD),<sup>60</sup> which will be replaced in 2023 by the Corporate Sustainability Reporting Directive (CSRD),<sup>61</sup> making more companies subject to such disclosures.

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53. *Comparison of ESG reporting frameworks*, BLOOMBERG L. (Aug. 11, 2022), <https://pro.bloomberglaw.com/brief/comparison-of-esg-reporting-frameworks/>.

54. *A Short Introduction to the GRI Standards*, GLOB. REPORTING, <https://www.globalreporting.org/media/wtafl14tw/a-short-introduction-to-the-gri-standards.pdf> (last visited Jan. 6, 2023).

55. *See id.*

56. *Standards Overview*, SASB, <https://www.sasb.org/standards/> (last visited Jan. 9, 2023).

57. *SASB Standards & Other ESG Frameworks*, SASB, <https://www.sasb.org/about/sasb-and-other-esg-frameworks/> (last visited Jan. 6, 2023).

58. *TCFD Recommendations*, TASK FORCE ON CLIMATE-RELATED DISCLOSURES, <https://www.fsb-tcfd.org/recommendations/> (last visited Jan. 6, 2023).

59. The Companies (Strategic Report) (Climate-Related Financial Disclosure) Regulations 2022, SI 2022/31 (UK); The Limited Liability Partnerships (Climate-related Financial Disclosure) Regulations 2022, SI 2022/46 (UK).

60. Directive 2014/95/EU, of the European Parliament and of the Council of 22 October 2014 Amending Directive 2013/34/EU as Regards Disclosure of Non-Financial and Diversity Information by Certain Large Undertakings and Groups Text with EEA Relevance, 2014 O.J. (L 330).

61. *Proposal for a Directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as Regards Corporate Sustainability Reporting*, COM (2021) 189 final (Apr. 4, 2021).

The SEC is expected to issue a final rule soon requiring covered companies to disclose climate-related risks, including GHG, in their registration statements and periodic reports.<sup>62</sup> More specifically,

[t]he proposed rule changes would require a registrant to disclose information about (1) the registrant’s governance of climate-related risks and relevant risk management processes; (2) how any climate-related risks identified by the registrant have had or are likely to have a material impact on its business and consolidated financial statements, which may manifest over the short-, medium-, or long-term; (3) how any identified climate-related risks have affected or are likely to affect the registrant’s strategy, business model, and outlook; and (4) the impact of climate-related events (severe weather events and other natural conditions) and transition activities on the line items of a registrant’s consolidated financial statements, as well as on the financial estimates and assumptions used in the financial statements.<sup>63</sup>

The proposed rule would also

require a registrant to disclose information about its direct greenhouse gas (GHG) emissions (Scope 1) and indirect emissions from purchased electricity or other forms of energy (Scope 2). In addition, a registrant would be required to disclose GHG emissions from upstream and downstream activities in its value chain (Scope 3), if material or if the registrant has set a GHG emissions target or goal that includes Scope 3 emissions.<sup>64</sup>

While the proposed rule does exempt smaller companies from Scope 3 emission disclosures and offers a safe harbor for liability, it has been criticized because some public companies will have to disclose GHG emissions of other businesses merely because those businesses are within their supply chains. The SEC likened such disclosures to already existing frameworks like the TCFD and the Greenhouse Gas Protocol.<sup>65</sup>

### III. ETHICAL ARGUMENTS AGAINST CRYPTOCURRENCIES<sup>66</sup>

Opinions on the ethics of investing in cryptocurrency are as diverse as opinions on the future profitability of such investments. Some opine on the positive benefits cryptocurrencies bring to those in third-world countries who are desperate for an alternative currency outside the control of their oppressive and fiscally imprudent regimes.<sup>67</sup> Others, such as renowned economist Paul Krugman, point to volatility, ineffectiveness as everyday currency, and potential harm to central banking, and conclude that “Bitcoin [i]s [e]vil.”<sup>68</sup> Even countries

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62. SEC Proposes Rules to Enhance and Standardize Climate-Related Disclosures for Investors, U.S. SEC. & EXCH. COMM’N (Mar. 21, 2022), <https://www.sec.gov/news/press-release/2022-46>.

63. *Id.*

64. *Id.*

65. *Id.*

66. Many topics from this section were originally discussed in Michael Conklin & Ruben Cabellos, *The Ethics of Investing in Cryptocurrencies*, 21 FLA ST. BUS. REV. 69 (2022).

67. Toby Hazelwood, *Bitcoin Could Be a Force for Social Good—Here’s How*, GITCONNECTED: LEVEL UP CODING (Mar. 3, 2021), <https://levelup.gitconnected.com/bitcoin-could-be-a-force-for-social-good-heres-how-2a4150f2a1e>.

68. Paul Krugman, *Bitcoin Is Evil*, N.Y. TIMES: CONSCIENCE LIBERAL (Dec. 28, 2013, 2:35 PM), <https://krugman.blogs.nytimes.com/2013/12/28/bitcoin-is-evil/>.

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are weighing in. The Canary Islands recently sold off their Bitcoin holdings for ethical reasons.<sup>69</sup> Meanwhile, El Salvador became the first country to require businesses to accept Bitcoin in 2021.<sup>70</sup> The decision was allegedly due to the positive impact Bitcoin has on the poor.<sup>71</sup>

### A. Negative environmental impacts

Despite being completely virtual, the practice of mining cryptocurrencies requires significant energy expenditures that result in the release of greenhouse gases.<sup>72</sup> Considering only the single cryptocurrency of Bitcoin, mining generates over sixty million tons of CO<sub>2</sub> every year.<sup>73</sup> This is the equivalent of burning 66 billion pounds of coal.<sup>74</sup> Because cryptocurrency mining requires the latest specialized computer hardware to be efficient, this hardware is frequently replaced and not easily repurposed.<sup>75</sup> As a result, Bitcoin mining creates 11,500 tons of hazardous electronic waste annually.<sup>76</sup>

The environmental harm caused by cryptocurrency mining is even more poignant when one considers how easily avoidable it is. To illustrate this point, consider an investment in Exxon stock, which is often regarded as violating the principles of ethical investing.<sup>77</sup> While it is certainly true that burning fossil fuels produced by Exxon is bad for the environment, doing so allows for certain beneficial outcomes, such as low-cost air travel, life-saving backup generators, and large-scale heating and air conditioning.<sup>78</sup> Therefore, while the negative effects of pollution from fossil fuel consumption must be considered, they are to be weighed against the positive effects. Unlike Exxon, the environmental harm

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69. Arnab Shome, *Canary Islands to Liquidate Bitcoin Investments for Ethical Reasons*, FIN. MAGNATES (Mar. 30, 2021), <https://www.financemagnates.com/cryptocurrency/news/canary-islands-to-liquidate-bitcoin-investments-for-ethical-reasons/>.

70. Kaelyn Forde, *Is El Salvador's Bitcoin Embrace a Cold Shoulder to the US?*, AL JAZEERA (June 11, 2021), <https://www.aljazeera.com/economy/2021/6/11/is-el-salvadors-bitcoin-embrace-a-cold-shoulder-to-the-us>.

71. *Id.*

72. *See Bitcoin Energy Consumption Index*, DIGICONOMIST, <https://digiconomist.net/bitcoin-energy-consumption> (last visited Jan. 1, 2023).

73. *Id.*

74. *Greenhouse Gas Equivalencies Calculator*, ENV'T PROT. AGENCY, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results> (last visited Jan. 7, 2023).

75. Peter Howson, *Bitcoin Isn't Getting Greener: Four Environmental Myths About Cryptocurrency Debunked*, THE CONVERSATION (Feb. 17, 2021), <https://theconversation.com/bitcoin-isnt-getting-greener-four-environmental-myths-about-cryptocurrency-debunked-155329>.

76. *Id.*

77. *See* Leo Nelissen, *ESG Cannot Break Exxon*, SEEKING ALPHA (June 13, 2021), <https://seekingalpha.com/article/4434583-esg-cannot-break-exxon> (“Exxon Mobil has recently been under attack from ESG-focused investors with support from some of the world’s largest asset managers.”).

78. This is based on the current limitations of renewable energy production and utilization. Future developments in renewable energy may allow for things such as solar-powered commercial air travel.

from Bitcoin mining is not offset by any significant benefit.<sup>79</sup> Halting the environmental harm from Bitcoin mining would not result in the cessation of air travel, life-saving backup generators, or large-scale heating and air conditioning.

In September 2022, environmental rights groups Earthjustice and the Sierra Club published *The Energy Bomb: How Proof-of-Work Cryptocurrency Mining Worsens the Climate Crisis and Harms Communities Now*.<sup>80</sup> The thirty-seven page report documents how cryptocurrency mining operations seek out locations with minimal regulation and cheap energy, often by re-starting defunct coal and gas plants.<sup>81</sup> Furthermore, the explosive growth of cryptocurrencies incentivizes mining operations to ramp up production as soon as possible, with little interest in long-term sustainability.<sup>82</sup> In 2022, Democrats in Congress started focusing pressure on cryptocurrency mining operations due to the environmental harm.<sup>83</sup> This increased scrutiny from the likes of Elizabeth Warren and the House Energy and Commerce Committee has resulted in cryptocurrency miners hiring lobbyists to represent their interests.<sup>84</sup> Even ardent cryptocurrency advocate Elon Musk cited environmental harm for Tesla's decision to stop accepting Bitcoin.<sup>85</sup>

### B. *Illegal transactions and unregulated nature*

The anonymous nature of cryptocurrencies renders them ideal mediums for numerous illegal transactions, including human trafficking, murder for hire, illegal drugs, illegal weapons, terrorism, and identity theft.<sup>86</sup> Ethicists may disagree on the ethical nature of some of these issues. For example, some argue that the distribution of illegal drugs is ethical.<sup>87</sup> And it could be argued that it is

79. See Howson, *supra* note 75 (explaining that Bitcoin does not encourage investment in clean energy, does not replace the need to mine rare earth minerals like gold, and is not becoming more efficient).

80. *The Environmental Impacts of Cryptomining*, EARTHJUSTICE, <https://earthjustice.org/features/cryptocurrency-mining-environmental-impacts> (last visited Jan. 7, 2023).

81. *Id.*

82. *Id.*

83. Sam Sutton, *Bitcoin Is Next Climate Fight for Democrats*, POLITICO (Jan. 20, 2022), <https://www.politico.com/news/2022/01/20/bitcoin-climate-democrats-527431>.

84. *Id.*

85. @elonmusk, TWITTER (May 12, 2021, 6:06 PM), <https://twitter.com/elonmusk/status/1392602041025843203> (

“Tesla has suspended vehicle purchases using Bitcoin. We are concerned about rapidly increasing use of fossil fuels for Bitcoin mining and transactions, especially coal, which has the worst emissions of any fuel.”). This decision was later amended so that Tesla could accept Bitcoin payments if there is evidence that at least 50% of the mining is powered by renewable energy; see also Emma Newbery, *Musk Says Tesla Will Accept Bitcoin Payment Again. But There's a Catch*, ASCENT (Nov. 10, 2021), <https://www.fool.com/the-ascend/cryptocurrency/articles/musk-says-tesla-will-accept-bitcoin-payments-again-but-theres-a-catch/>.

86. Matthew E. Gladden, *Cryptocurrency with a Conscience: Using Artificial Intelligence to Develop Money that Advances Human Ethical Values*, ETHICS IN ECON. LIFE (Dec. 2015), at 85, 86.

87. See, e.g., Daniel Denvir, *We're All Being Used: No, It's Not Immoral to Use Illegal Drugs—Because It's the War on Drugs that's to Blame*, SALON (Sept. 29, 2016, 9:59 AM), <https://www.salon.com/2016/09/29/were-all-being-used-no-it-is-not-immoral-to-use-illegal-drugs-because-it-is-the-war-on-drugs-that-is-to-blame/>.

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not unethical for someone who lives under an oppressive regime to use cryptocurrency to purchase a movie that has been banned. Utilizing a utilitarian framework to analyze the overall impact of illegal transactions procured through cryptocurrency payments, however, produces a strong argument that such activities are responsible for far more harm than good.<sup>88</sup> The U.S. fentanyl crisis, which has resulted in nearly 5,000 deaths per month,<sup>89</sup> was facilitated by Bitcoin purchases from Chinese labs.<sup>90</sup> Ransomware cyberattacks are on the rise, with devastating consequences to U.S. infrastructure.<sup>91</sup> This rise was in part due to cryptocurrencies that help facilitate such transactions.<sup>92</sup>

It is perhaps telling that the first place Bitcoin gained widespread use was on the Silk Road, a website on the dark web that facilitated illegal transactions.<sup>93</sup> The dark web is an unregulated area of the internet that offers near-anonymity.<sup>94</sup> Not surprisingly, this contributes to the dark web being most well-known for illegal activity.<sup>95</sup> Sellers on the dark web sell illegal, fully automatic rifles,; stolen credit cards,; counterfeit clothing,; fake IDs,; counterfeit currency,; illegal drugs, ; and child pornography.<sup>96</sup> Cryptocurrencies play a key role in facilitating these transactions.<sup>97</sup>

Moreover, cryptocurrencies do not merely facilitate payment for illegal transactions. Their unregulated nature is also a catalyst for fraud, theft, and manipulation.<sup>98</sup> There have been violent robbery attempts to acquire

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88. Note that this conclusion is exclusively from weighing the harms of illegal transactions with any benefits. The separate assessment of whether cryptocurrencies overall provide more harm than benefit is considered elsewhere.

89. Jesse C. Baumgartner & David C. Radley, *The Spike in Drug Overdose Deaths During the COVID-19 Pandemic and Policy Options to Move Forward*, COMMONWEALTH FUND (Mar. 25, 2021), <https://www.commonwealthfund.org/blog/2021/spike-drug-overdose-deaths-during-covid-19-pandemic-and-policy-options-move-forward>.

90. See Nathaniel Popper, *Opioid Dealers Embrace the Dark Web to Send Deadly Drugs by Mail*, N.Y. TIMES: DEALBOOK (June 10, 2017), <https://www.nytimes.com/2017/06/10/business/dealbook/opioid-dark-web-drug-overdose.html>.

91. Samara Lynn & Catherine Thorbecke, *Why Ransomware Cyberattacks Are on the Rise*, ABC NEWS (June 4, 2021), <https://abcnews.go.com/Technology/ransomware-cyberattacks-rise/story?id=77832650>.

92. *Id.*

93. *See* Julia Finch, *From Silk Road to ATMs: The History of Bitcoin*, GUARDIAN (Sept. 14, 2017), <https://www.theguardian.com/technology/2017/sep/13/from-silk-road-to-atms-the-history-of-bitcoin>.

94. Louis DeNicola, *What Is the Dark Web?*, EXPERIAN (May 12, 2021), <https://www.experian.com/blogs/ask-experian/what-is-the-dark-web/>.

95. *Id.*

96. Jamie McKane, *17 Things You Can Buy on the Dark Web*, MYBROADBAND (Mar. 14, 2020), <https://mybroadband.co.za/news/internet-of-things/342077-17-things-you-can-buy-on-the-dark-web.html>; *see also* *Police Bust Dark Web Child Porn Site Used by More than 400,000 Members*, CBS NEWS (May 3, 2021), <https://www.cbsnews.com/news/child-pornography-germany-boystown-removed/>.

97. *See* Fiammetta Piazza, *Bitcoin in the Dark Web: A Shadow over Banking Secrecy and a Call for Global Response*, 26 S. CAL. INTERDISC. L.J. 521, 521-22 (2017).

98. *See* Cole Petersen, *Bitcoin Traders Beware: Group of Robbers Gruesomely Torture Netherlands-Based Crypto Trader*, NEWSBTC, <https://www.newsbtc.com/news/bitcoin/bitcoin-traders-beware-group-of-robbers-gruesomely-torture-netherlands-based-crypto-trader/> (last visited Jan. 1, 2023); *see also* Claus Dierksmeier & Peter Seele, *Blockchain and Business Ethics*, 29 BUS. ETHICS 348, 351 (2020).

cryptocurrency wallet passcodes.<sup>99</sup> Cryptojacking—a process in which a hacker unlawfully uses the computers of others to mine for cryptocurrency—is on the rise.<sup>100</sup> More people investing in cryptocurrencies drives a higher value for the currency, thus creating more lucrative robbery and cryptojacking opportunities.

Even law-abiding holders of cryptocurrencies run the risk of being implicated in illegal activities. For example, the cryptocurrency distributed ledger typically requires that the entire transaction history for each node be stored.<sup>101</sup> This sometimes includes “arbitrary blockchain content” from the computers of past users.<sup>102</sup> A 2018 study found that this occasionally includes not only sensitive information, but also illegal pornography, now unwittingly stored on others’ computers.<sup>103</sup> Even worse, this unfortunate feature of the cryptocurrency distributed ledger could be exploited for blackmail purposes.<sup>104</sup>

The November 2022 collapse of Sam Bankman-Fried’s FTX demonstrates the dangers of such an unregulated market. Once heralded by regulators and investors as one of the most transparent cryptocurrency operations, it is now estimated that at least \$1 billion of customer funds are missing.<sup>105</sup> John Ray, who helped guide Enron through its bankruptcy, explains regarding FTX that he has “never in [his] career seen such a complete failure of corporate controls and such a complete absence of trustworthy financial information as occurred here.”<sup>106</sup> On the topic of cryptocurrency regulation inadequacy and its consequences, it is relevant that Sam Bankman-Fried contributed more than \$70 million to election campaigns in an eighteen-month period.<sup>107</sup> While there is no evidence of quid pro quo corruption, it is unlikely he used this influence to request regulation of cryptocurrencies. Campaign donations from the cryptocurrency space exceed those of the auto and defense industries combined.<sup>108</sup> Finally, it is of note that

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99. Petersen, *supra* note 98.

100. Prasad Banerjee, *Cryptojacking Attacks Rise as Hackers Try to Exploit Boom*, MINT (June 5, 2021), <https://www.livemint.com/market/cryptocurrency/cryptojacking-attacks-rise-as-hackers-try-to-exploit-boom-11622892050042.html>.

101. *See* Dierksmeier & Seele, *supra* note 98, at 351.

102. *Id.*

103. *See id.*

104. *See id.* (meaning, someone could intentionally insert illegal images to be unwittingly downloaded by others and then attempt to use this to extort money from people).

105. *See* Bailey Schultz & Riley Gutierrez McDermid, *What is the FTX Scandal? How the Celebrity-Endorsed Crypto Giant Collapsed Into Chaos*, USA TODAY (Nov. 22, 2022), <https://www.usatoday.com/story/money/2022/11/16/ftx-bankman-frieds-crypto-bankruptcy/10710734002/>.

106. Elizabeth Napolitano & Brian Cheung, *The FTX Collapse, Explained*, NBC NEWS (Nov. 18, 2022), <https://www.nbcnews.com/tech/crypto/sam-bankman-fried-crypto-ftx-collapse-explained-rcna57582>.

107. Nik Popli, *Here’s What We Know About Sam Bankman-Fried’s Political Donations*, TIME (Dec. 14, 2022), <https://time.com/6241262/sam-bankman-fried-political-donations/>.

108. *Id.*



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such scandals in the cryptocurrency space disproportionately hurt more vulnerable populations, thus exacerbating inequalities.<sup>109</sup>

The harm that comes from the relatively unregulated nature of cryptocurrencies is likely exacerbated by inapplicable criminal and civil law precedent. The novel nature of cryptocurrencies and the blockchain mean that existing criminal laws—most written before the blockchain was even conceived—are largely inadequate for enforcement of cryptocurrency-related crimes.<sup>110</sup> For example, there is widespread disagreement as to whether cryptocurrencies are securities and would therefore fall under SEC protections.<sup>111</sup> The Commodity Futures Trading Commission has claimed authority to regulate cybersecurities as commodities under the Commodities Exchange Act, but it is unclear if the courts will uphold such authority.<sup>112</sup> A 51% majority attack poses another example of how the novel nature of cryptocurrencies and the blockchain produce unique challenges for law enforcement.<sup>113</sup> This is when 51% of the mining power for a given cryptocurrency colludes to alter the blockchain ledger, thus redistributing the cryptocurrencies as they see fit.<sup>114</sup> Setting aside jurisdictional and enforcement authority issues, applying existing criminal statutes and tort law precedent to the attackers who took the cryptocurrencies from others would be challenging.<sup>115</sup> This is because such a 51% attack would not involve the conversion of any physical property, or even conversion of the digital code.<sup>116</sup> Additionally, the perpetrators of a 51% attack could posit a consent defense alleging that the very nature of blockchain technology entails the risk of a 51% attack, and therefore anyone who invests in cryptocurrency has implicitly consented to the risk of such an attack.<sup>117</sup> This uncertainty surrounding the prosecution and punishment of nefarious cryptocurrency-related behavior is another reason that the practice should not be allowed in ESG investing.

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109. Paulina Cachero, *Crypto Collapse Threatens to Leave Black, Hispanic Investors Further Behind*, BLOOMBERG (July 7, 2022), <https://www.bloomberg.com/news/articles/2022-07-07/crypto-collapse-threatens-to-leave-black-hispanic-investors-further-behind?leadSource=uverify%20wall>.

110. Michael Conklin, Brian Elzweig & Lawrence J. Trautman, *Legal Recourse for Victims of Blockchain and Cyber Breach Attacks*, 23 U.C. Davis Bus. L.J. 135, 169-179 (2023) (considering the problems with various attempts at punishing cryptocurrency-involved behavior).

111. *Id.* at n.176 and accompanying text.

112. *See* *Digital Assets*, COMMODITY FUTURES TRADING COMM'N, <https://www.cftc.gov/digitalassets/index.htm> (last visited Jan. 4, 2023).

113. Conklin et al., *supra* note 110, at 169–179 (explaining that a 51% attack is sometimes referred to as a “Goldfinger attack”).

114. *Id.* at 170.

115. *Id.* at 169–79.

116. *Id.*

117. *Id.*

*C. Diverts resources away from more productive alternatives*

Money invested in a cryptocurrency cannot simultaneously be invested in traditional stocks or bonds. Therefore, one of the effects of increased investing in cryptocurrency is a decrease in other investments, all else being held constant. Consequently, any ethical consideration of cryptocurrency investing must take into account the corresponding decrease in traditional stock and bond investments. Such ethical considerations do not bode well for cryptocurrency investing.

When people invest in stocks and bonds, companies are able to engage in numerous desirable activities because it allows investors to semi-democratically voice their opinions on how corporations should behave. For example, people may choose to invest in companies that focus on sustainability and workplace conditions, while refusing to invest in those that do not. If enough people behave in this way, a strong message is sent to corporations through the mechanism of stock price.

In addition, increased investment in a company could allow the company to hire more workers, which produces many positive effects on society, such as increasing the tax base, decreasing reliance on government aid, improving mental health,<sup>118</sup> and decreasing the likelihood of criminal activity.<sup>119</sup> Increased investment could also allow a company to purchase goods and services it needs. This benefits other companies that sell such goods and services. Furthermore, this likely results in more efficient production, allowing for less expensive products. Finally, increased investment could allow a company to increase research and development expenditures. This results in new products that benefit society, such as vaccines, safer cars, less expensive food, and crime-prevention tools. Improvements from increased research and development could also improve environmental conditions. Examples include more efficient vehicles, better home insulation, smart thermostats, product packaging with reduced waste, and communication improvements that allow for virtual meetings, thus reducing the need for travel.

The long list of benefits from investing in stocks and bonds is not present with cryptocurrency investments. Due to its decentralized structure, Bitcoin does not directly hire workers, create jobs, or result in the creation of new products.<sup>120</sup> Not only does investing a dollar in a cryptocurrency result in one less dollar that can be invested in the stock market, but by contributing to the performance of

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118. Robert E. Drake & Michael A. Wallach, *Employment is a Critical Mental Health Intervention*, 29 EPIDEMIOLOGY AND PSYCHIATRIC SCIENCES 1 (2020).

119. See Steven Raphael & Rudolf Winter-Ebmer, *Identifying the Effect of Unemployment on Crime*, 44 J.L. & ECON. 259, 259 (2001).

120. However, it could be argued that cryptocurrencies do indirectly create some jobs. For example, Bitcoin mining centers would require information technology experts to maintain. But when compared to the jobs created from a traditional company that is publicly traded, this number would be negligible.

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cryptocurrencies, stocks become a less attractive investment to other investors by comparison, thus further reducing the societal benefits mentioned in this section.

### *D. Ineffectiveness as international currency*

Any ethical analysis of cryptocurrency investment must consider its ability to function as a currency. This is because many of the purported benefits that cryptocurrency has to offer comes from its ability to serve as a currency. There are four generally recognized conditions for an effective international currency:

- (1) It must have a stable, long-term value.<sup>121</sup>
- (2) There must be sufficient volume to meet international demand.<sup>122</sup>
- (3) There must be high liquidity with low transaction costs.<sup>123</sup>
- (4) There “must be a stable issuer who guarantees the currency.”<sup>124</sup>

Cryptocurrencies arguably fail all four of these conditions. Using Bitcoin as an example, it is decentralized, highly volatile, limited to twenty-one million units, and limited in its ability to scale.<sup>125</sup> Bitcoin’s volatility was displayed in May 2021, when it lost almost 50% of its value.<sup>126</sup> Further, Bitcoin’s inefficient transaction processing means that it is limited in its ability to scale. While Visa and Mastercard can process over 5,000 transactions a second, Bitcoin takes ten minutes to finalize a single transaction.<sup>127</sup>

It could even be argued that replacing the current financial system, which is based in part on trust in a system of exchange that uses computer-based verification, with cryptocurrencies could result in negative externalities.<sup>128</sup> This is because it could have the unintended consequence of eroding trust and reliability in society.<sup>129</sup> A potential tradeoff of cultural capacity for commercial efficiency could do more harm than good, as societal trust is relevant to a well-functioning society.<sup>130</sup>

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121. Roger Svensson, *Bitcoin Lacks a Solid Foundation as an International Currency*, FIN. TIMES (June 7, 2021), <https://www.ft.com/content/ae87c1d-b00f-4c22-ab97-97bb2b042342>.

122. *Id.*

123. *Id.*

124. *Id.*

125. *Id.*

126. Charles Bovaird, *Bitcoin Price Volatility Reached Its Highest in a Year During May*, FORBES (June 2, 2021), <https://www.forbes.com/sites/cbovaird/2021/06/02/bitcoin-price-volatility-reached-its-highest-in-a-year-during-may/?sh=67960fac39e7>.

127. Ryan Vlastelica, *Why Bitcoin Won't Displace Visa or Mastercard Soon*, MARKETWATCH (Dec. 18, 2017), <https://www.marketwatch.com/story/why-bitcoin-wont-displace-visa-or-mastercard-soon-2017-12-15>.

128. Dierksmeier & Seele, *supra* note 98, at 353.

129. *Id.*

130. *Id.*

### *E. Unique U.S. considerations*

American investors have an additional factor to consider regarding the ethics of cryptocurrency investing. This stems from how the U.S. dollar is the current standard currency for international transactions.<sup>131</sup> This affords American investors a unique and substantial benefit because:

It functions as a type of seal of approval for U.S. markets, institutions, and policies.<sup>132</sup>

Large amounts of U.S. currency are held abroad, which effectively functions as interest-free loans to the U.S. government.<sup>133</sup>

Physical U.S. dollars held by people in other countries may be lost or destroyed, thus functioning as a gain to the United States.<sup>134</sup>

It slightly reduces the amount of exchange-rate risk U.S. firms face in international transactions.<sup>135</sup>

Investing in Bitcoin will increase its attractiveness as an alternative to the U.S. dollar, potentially minimizing these benefits. One could even argue that non-U.S. citizens should also favor the continued supremacy of the U.S. dollar, on the basis that U.S. foreign policy is preferable to that of China and Russia. Of course, along these same lines, one could argue that the U.S. dollar's current position as the international standard currency is a net negative if U.S. international policies are considered undesirable.

## IV. ETHICAL ARGUMENTS IN FAVOR OF CRYPTOCURRENCIES<sup>136</sup>

### *A. Decentralization*

Cryptocurrency advocates often champion its decentralized nature.<sup>137</sup> But this also results in the very democratic structure which could result in unfortunate outcomes. For example, this allows for a majority attack on the system. If 51% of the computer mining power agreed, they could make any change to the ledger they desired, including taking away millions of dollars' worth of cryptocurrency from some and giving it to others.<sup>138</sup> The decentralized nature of cryptocurrencies

131. See Kimberly Amadeo, *Why the US Dollar Is the Global Currency*, THE BALANCE (updated Mar. 16, 2022), <https://www.thebalance.com/world-currency-3305931>.

132. Ben S. Bernanke, *The Dollar's International Role: An "Exorbitant Privilege"?*, BROOKINGS (Jan. 7, 2016), <https://www.brookings.edu/blog/ben-bernanke/2016/01/07/the-dollars-international-role-an-exorbitant-privilege-2/>.

133. *Id.*

134. For example, if someone in another country were to accidentally have 10,000 physical U.S. dollars destroyed, this would reduce the supply of U.S. dollars, which therefore increases the value of remaining dollars, disproportionately held by Americans.

135. Bernanke, *supra* note 132.

136. Many topics from this section were originally discussed in Michael Conklin & Ruben Cabellos, *The Ethics of Investing in Cryptocurrencies*, 21 FLA ST. BUS. REV. 69 (2022).

137. See, e.g., Frederick Reese, *7 Benefits of Decentralized Currency*, BITCOIN MARKET J. (April 29, 2019), <https://www.bitcoinmarketjournal.com/decentralized-currency/>.

138. See James J. Angel & Douglas McCabe, *The Ethics of Payments: Paper, Plastic, or Bitcoin?*, 132 J. BUS. ETHICS 603, 606–07 (2015) ("However, [the majority] are unlikely to do so because they

could also result in hyperinflation of that cryptocurrency. For example, Bitcoin hyperinflation could result from the nefarious implementation of a protocol to increase the number of bitcoins to anything past the current twenty-one million issuance limit.<sup>139</sup>

### *B. Anonymity and oppressive governments*

Another argument in favor of investing in cryptocurrency is that the anonymity it provides could be beneficial to those living under oppressive governments. For example, a government may attempt to seize bank accounts from its political opposition. Use of cryptocurrencies would make this far more difficult. Cryptocurrencies could also provide protection against hyperinflationary monetary policies.<sup>140</sup> This is a valuable function, as, in extreme cases, hyperinflation can effectively erase one's purchasing power in a week.<sup>141</sup> Cryptocurrencies would likewise protect against the governmental practice of banning the use of an existing currency in favor of a new currency. Even in prosperous countries like the United States, cryptocurrencies could help the disadvantaged gain access to financial services that they otherwise lack due to immigrant status or a problematic past with traditional banking institutions.

While these are legitimate benefits offered by cryptocurrencies, the extent to how many people would receive such benefits is likely small. People in third-world countries with oppressive governments may also lack access to a safe internet connection, which is necessary to use cryptocurrency as a hedge against hyperinflation of the country's currency. Furthermore, it is this same internet access issue in these third-world countries that means venders are unlikely to accept cryptocurrencies. This means that a holder of a cryptocurrency who effectively avoided hyperinflation would ultimately find it difficult to purchase much needed food and other goods with the cryptocurrency. Likewise, people fleeing for their lives from an oppressive regime may not have access to safe internet protection, and venders in the place they fled to may not accept cryptocurrency. Finally, perhaps the greatest harm from being denied access to the traditional banking system in the United States is the inability to cash checks, something cryptocurrencies do not rectify. Also, encouraging the disadvantaged to invest in cryptocurrencies is likely not ideal, given their wildly volatile nature

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would damage the trustworthiness of the network and thus destroy the value of the bitcoins that they own as well as their own ability to earn mining revenue.”)

139. Tobey Scharding, *National Currency, World Currency, Cryptocurrency: A Fichtean Approach to the Ethics of Bitcoin*, 124 BUS. & SOC'Y REV. 219, 233 (2019).

140. See Ron Shevlin, *Bitcoin or Ethereum: Which Cryptocurrency is the Best Hedge Against Inflation?*, FORBES (Dec. 28, 2021), <https://www.forbes.com/sites/ronshevlin/2021/12/28/bitcoin-or-ethereum-which-cryptocurrency-is-the-best-hedge-against-inflation/?sh=7f79583a1d22>.

141. See Matthew Johnston, *Worst Cases of Hyperinflation in History*, INVESTOPEDIA (July 31, 2021), <https://www.investopedia.com/articles/personal-finance/122915/worst-hyperinflations-history.asp>.

and the lack of any recourse in the event an exact sixteen-character-long key is lost or forgotten.

### C. *Investment diversification*

The value of cryptocurrency does not rely solely on its ability to be used as currency. Because cryptocurrencies have a low correlation with traditional investments, such as stocks, they can play a valuable role in diversifying investment portfolios.<sup>142</sup> This enhanced diversification may result in less overall volatility in investment portfolios—thus reducing the likelihood of a catastrophic result—which could be viewed as a more ethical outcome. However, there are already numerous, proven methods for investment portfolio diversification.<sup>143</sup> Therefore, cryptocurrencies provide limited benefit as being an additional option. Finally, the extremely volatile nature of cryptocurrencies makes it a peculiar choice for conservative investors wanting to stabilize their investment portfolio through diversification.

### D. *Traditional currencies and illegal activities*

A pro-cryptocurrency advocate would likely compare cryptocurrencies to the U.S. dollar in an attempt to rebut accusations of their unethical nature. Namely, since U.S. dollars are also used for illegal transactions, someone holding cryptocurrencies is no more unethical than someone holding U.S. dollars. This is a clever comparison, but it ultimately fails due to the numerous differences between the two. Cryptocurrencies provide unique advantages not available with U.S. dollars, such as increased anonymity. While physical U.S. dollars may have some anonymity, physical currency creates logistical problems not present with digital cryptocurrencies, reducing its viability as a medium for conducting transactions on a global scale. Furthermore, robbing someone of millions in cryptocurrency by forcing them to give up their wallet passcode is preferable to attempting to force someone to transfer U.S. dollars from one bank to another, a transaction that can be more easily corrected.<sup>144</sup>

Pro-cryptocurrency advocates could also point out that even widespread refusal to invest in cryptocurrency would do little to diminish its use for illegal activity.<sup>145</sup> As a digital currency, there is no logistical difficulty imposed on the

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142. See Emmanouil Platanakis & Andrew Urquhart, *Should Investors Include Bitcoin in Their Portfolios? A Portfolio Theory Approach*, 52 BRIT. ACCT. REV. 1, 2 (2020).

143. See, e.g., Hersh Shah & Aashika Jain, *Beginner's Guide: 12 Tips for Diversifying Your Investments*, FORBES (Mar. 3, 2021), <https://www.forbes.com/advisor/in/investing/beginners-guide-12-tips-for-diversifying-your-investments/>.

144. For example, the victim may have to physically go to the bank to complete such a transaction, the account he transferred the money into could be used to identify the criminal, and a successful withdrawal of millions in physical U.S. dollars would result in logistical problems and be difficult to spend due to “currency transaction report” requirements.

145. See Nathaniel Popper, *Bitcoin Has Lost Steam. But Criminals Still Love It.*, N.Y. TIMES (Jan. 28, 2020), <https://www.nytimes.com/2020/01/28/technology/bitcoin-black-market.html>.

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user from inflation as there would be with a physical currency. A hacker can just as easily demand 100 Bitcoins as they could ten Bitcoins, and someone selling fentanyl can just as easily change their price from one Bitcoin to ten Bitcoins. This principle was illustrated in 2019, when, despite a steadily declining price of Bitcoin, the use of Bitcoin for illegal transactions was at an all-time high.<sup>146</sup>

### *E. No currency conversion fees*

It is estimated that corporations move over \$23 trillion internationally every year.<sup>147</sup> This requires wholesale cross-border payment processing services, which charge fees and sometimes result in delays.<sup>148</sup> The transaction costs could surpass \$120 billion annually.<sup>149</sup> Pro-cryptocurrency advocates can therefore argue that cryptocurrencies such as Bitcoin are universal regardless of geographic borders and therefore do not have currency conversion fees, which could they offer cost savings to corporations.

It is true that cryptocurrencies do not have any currency conversion fees, but every cryptocurrency has transaction fees, and unlike currency conversion fees, cryptocurrency transaction fees are highly volatile.<sup>150</sup> Also, not every international transaction requires a currency conversion. The U.S. dollar is held by many international companies, and there, when two of these companies engage in a transaction using U.S. dollars, no conversion is necessary.<sup>151</sup> The argument about how beneficial cryptocurrency payments are often overlooks how there are over 5,000 different cryptocurrencies.<sup>152</sup> For example, a U.S. company holding Bitcoin that needs to pay a German company that only holds Ethereum will likely find it easier—and perhaps also more cost efficient—to simply convert U.S. dollars to Euros to make the payment. Finally, the highly volatile nature of cryptocurrencies would likely cause most companies to hold the U.S. dollar or Euro instead of cryptocurrencies. Trying to draft and negotiate

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146. *See id.*

147. Jason Ekberg, Tek Yew Chia, Michael Ho & Laura Liu, *Unlocking \$120 Billion Value in Cross-Border Payments*, OLIVERWYMAN, <https://www.oliverwyman.com/our-expertise/insights/2021/nov/unlocking-120-billion-value-in-cross-border-payments.html> (last visited Jan. 8, 2023).

148. *Id.*

149. *Id.*

150. *See* Anders Bylund, *How Much Are Cryptocurrency Transaction Fees?*, MOTLEY FOOL (June 30, 2022), <https://www.fool.com/investing/stock-market/market-sectors/financials/cryptocurrency-stocks/transaction-fees/> (“[T]he fees can skyrocket when the blockchain network is unusually busy.”).

151. REBECCA M. NELSON & MARTIN A. WEISS, CONG. RSCH. SERV., *IN FOCUS: THE U.S. DOLLAR AS THE WORLD’S DOMINANT RESERVE CURRENCY* (2022), <https://crsreports.congress.gov/product/pdf/IF/IF11707>.

152. Ashford & Schmidt, *supra* note 3.

contracts using Bitcoin as payment when the price could fall 10% in a single day, as it did in 2022, is not ideal for corporate stability.<sup>153</sup>

## V. EXCLUDING CRYPTOCURRENCIES FROM ESG FUNDS

As with all ESG criteria, the benefits and harms of the behavior in question must be weighed. The reality that cryptocurrencies incur numerous societal harms does not per se mean it should be excluded. However, as demonstrated in this Article, the arguments in favor of cryptocurrency use, properly understood, fall far short of what would be required to justify all of the harm it inflicts. The environmental damage of cryptocurrency mining alone is enough to outweigh the benefits. The CO<sub>2</sub> emitted from mining just one cryptocurrency, Bitcoin, is the equivalent of burning 66 billion pounds of coal every year.<sup>154</sup> Additionally, Bitcoin mining produces 11,500 tons of hazardous electronic waste annually.<sup>155</sup>

It is difficult to even imagine the level of benefit cryptocurrencies would have to offer society to outweigh this amount of environmental harm. Whatever level that is, it is clear that the actual benefits from cryptocurrencies fall far short. Any benefits from its decentralized nature are largely outweighed by how decentralization allows for 51% attacks and hyperinflation of the cryptocurrency.<sup>156</sup> The benefits cryptocurrencies offer to those fleeing oppressive regimes is overstated because these people are unlikely to be able to access a secure internet connection and they are unlikely to be able to find vendors that accept cryptocurrencies in the countries they flee to.<sup>157</sup> Benefits from using cryptocurrencies for investment portfolio diversification are minimal due to the existence of proven diversification alternatives and the high volatility of cryptocurrencies.<sup>158</sup> Finally, the benefits from avoiding currency conversion fees are minimal given that cryptocurrencies all have transaction fees, the highly volatile nature of cryptocurrencies, and the widespread use of the U.S. dollar in international transactions.<sup>159</sup>

The analysis in this section so far has only utilized the one harm of environmental damage to outweigh all of the alleged benefits. There are still other significant harms that further demonstrate how the harms far outweigh the benefits. Widespread adoption of cryptocurrencies helps facilitate illegal activity such as human trafficking, the fentanyl crisis, murder for hire, and terrorism.<sup>160</sup>

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153. Low De Wei, *More Than \$200 Billion Wiped Off Cryptocurrency Market in a Day*, BLOOMBERG (May 12, 2022), <https://www.bloomberg.com/news/articles/2022-05-12/more-than-200-billion-wiped-off-cryptocurrency-market-in-a-day?leadSource=uverify%20wall>.

154. *See supra* note 74.

155. *See supra* note 76.

156. *See supra* notes 138–139 and accompanying text.

157. *See supra* notes 140–141 and accompanying text.

158. *See supra* notes 142–143 and accompanying text.

159. *See supra* notes 147–153 and accompanying text.

160. *See supra* notes 86–92 and accompanying text.



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It is true that much of this activity would continue in the absence of cryptocurrencies, but regardless, the absence of cryptocurrencies would make these transactions more difficult to conduct and easier for law enforcement to investigate. An overlooked harm from cryptocurrency use is how it diverts resources away from more traditional investments, such as corporate stocks and bonds—investments that lead to hiring workers and creating better products.<sup>161</sup> Additionally, investments in corporate stocks and bonds allow investors to democratically hold corporations accountable on issues such as pollution, diversity, anti-union sentiment, and overseas working conditions. Finally, for U.S. investors cryptocurrencies offer another harm, as they are an alternative to holding U.S. dollars internationally, a practice that offers numerous benefits to the United States.<sup>162</sup>

When comparing the cryptocurrency industry to other companies that have been excluded from ESG funds, it becomes even clearer that their exclusion is not only justified, but necessary to avoid unjustifiable inconsistency in who should be allowed to be included in ESG funds. [For example, Tesla Inc. is an innovative company that makes electric vehicles along with commercial and residential batteries that support electric grids and solar-power systems. In the interest of helping automotive competitors enter the electric vehicle space, Tesla famously promised not to enforce any of its patents against any good faith use.](#)<sup>163</sup> [Such a company may seem like the posterchild for embodying ESG principles. However, Tesla was excluded from the S&P 500 ESG Index in 2022 based on a low ESG score.](#)<sup>164</sup> [The S&P 500 ESG Index is a market-cap-weighted index that incorporates sustainability metrics in a way that preserves each industry's overall weightings existing in the general S&P 500 Index.](#)<sup>165</sup> [Tesla was supposedly surpassed in the index by other automobile manufacturers because of its lack of a carbon strategy, code of business conduct, and the result of a media and stakeholder analysis.](#)<sup>166</sup> [Given the net benefit that the Tesla corporation has offered, and the net harm that cryptocurrencies cause, it would be highly suspect for ESG funds to turn a blind eye to the latter while scrutinizing the former.](#)<sup>167</sup>

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161. See *supra* notes 119–120 and accompanying text.

162. See *supra* notes 131–135 and accompanying text.

163. Elon Musk, *All Our Patent Are Belong to You*, TESLA (June 12, 2014), <https://www.tesla.com/blog/all-our-patent-are-belong-you>.

164. *Tesla Is Being Booted From the ESG Index*, FORBES (May 20, 2022), <https://www.forbes.com/sites/qai/2022/05/20/tesla-is-being-booted-from-the-esg-index/?sh=523d1ba525d6>.

165. S&P DOW JONES INDICES, S&P 500 DOW JONES INDICES: INDEX METHODOLOGY (2022), <https://www.spglobal.com/spdji/en/documents/methodologies/methodology-sp-esg-index-series.pdf>.

166. Margaret Dorn, *The (Re)balancing Act of the S&P 500 Index*, INDEXOLOGY BLOG (May 17, 2022), <https://www.indexologyblog.com/2022/05/17/the-rebalancing-act-of-the-sp-500-esg-index/>.

167. It is true that Tesla has at times accepted and held cryptocurrencies and therefore could be excluded from ESG funds based on the logic of this Article. The point of the Tesla comparison, however, is that if such a company can be excluded, then surely companies that facilitate all of the harm from cryptocurrencies can be excluded as well.

Adding cryptocurrency exclusions to ESG standards is not only justified by existing ESG criteria; it has the added benefit of being easy to apply. Determining whether a publicly traded company owns cryptocurrencies on its balance sheet and accepts cryptocurrencies as payment is easily ascertainable. It is also a binary determination not dependent upon subjective personal opinion, and therefore is not ripe for the problem of regulatory capture.<sup>168</sup> Another benefit to adding cryptocurrency exclusions to ESG standards is that compliance would be relatively easy, and therefore would result in more acquiescence on behalf of companies. It would be very difficult for a manufacturer to reduce its pollution and close down overseas sweatshops, and it would be difficult for petroleum, firearm, and alcohol producers to transition into another industry. Distancing themselves from cryptocurrencies would be easy in comparison. Finally, unlike other ESG criteria, the act of a company selling off its cryptocurrency holdings and ceasing acceptance of cryptocurrency for payments is the very positive effect ESG would be seeking to change. Contrast this with other ESG criteria, such as diversity and inclusion. There, a company receives credit simply for making statements regarding these issues. But the statement in itself is not the positive effect the ESG criteria is attempting to promote. As Enron proved with its now infamous sixty-plus page code of ethics, making a statement about a topic is different from actually making a positive change in that area.<sup>169</sup> Unfortunately, research into ESG investing appears to support the claim that, under current standards, the criterion has little-to-no positive effect on corporations. For example, a 2021 collaboration between Columbia University and the London School of Economics analyzed 2,428 ESG portfolios and found that the companies in these portfolios had a worse compliance record for both labor and environmental regulations.<sup>170</sup> The study also found that companies in ESG funds did not subsequently improve labor or environmental regulatory compliance.<sup>171</sup> Therefore, focusing on more pragmatic ESG criteria, such as cryptocurrency exposure, could provide the added benefit of protecting the practice of ESG funds from losing their moral authority from being viewed as subjective, counterproductive, and at risk of corruption.

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168. “Regulatory capture is an economic theory that says regulatory agencies may come to be dominated by the industries or interests they are charged with regulating.” Will Kenton & Michael J Boyle, *Regulatory Capture Definition with Examples*, INVESTOPEDIA (Mar. 1, 2021), <https://www.investopedia.com/terms/r/regulatory-capture.asp>.

169. Sverre Rorvik, *The Enron Code of Ethics Handbook from July 2000 Is a Fascinating Read*, CFA INST. (Oct. 14, 2013), <https://blogs.cfainstitute.org/investor/2013/10/14/the-enron-code-of-ethics-handbook-from-july-2000-is-a-fascinating-read/>.

170. Aneesh Raghunandan & Shivaram Rajgopal, *Do ESG Funds Make Stakeholder-Friendly Investments?*, REV. ACCT. STUD. (May 15, 2021), <https://corpgov.law.harvard.edu/2021/05/15/do-esg-funds-make-stakeholder-friendly-investments/>.

171. *Id.*

### CONCLUSION

The timing of this Article is highly significant, as recent converging events have created a potential turning point as to both the future of ESG investing and the mitigation of harm from cryptocurrencies. Key investing demographics have shown an increasing interest in ESG investments.<sup>172</sup> Legislators have demonstrated an interest in regulations for both cryptocurrencies and ESG funds,<sup>173</sup> which has sparked a powerful lobbying effort from cryptocurrency advocates.<sup>174</sup> States such as Florida, Louisiana, and West Virginia have divested from all ESG funds.<sup>175</sup> Newly elected legislators have vowed to investigate ESG funds, attacking them as “a cancer within the U.S. economy.”<sup>176</sup> We are at a potential tipping point regarding environmental action, of which cryptocurrencies pose a great threat.<sup>177</sup> Finally, the legitimacy of ESG investing criteria has been called into question by recent, seemingly inconsistent decisions such as excluding Tesla and allowing Exxon Mobile.<sup>178</sup>

Among this backdrop, this first-of-its-kind Article provides a much-needed detailed assessment of the harms and benefits of cryptocurrencies. An honest weighing of these factors points conclusively to the harms far outweighing the benefits. Therefore, this Article concludes that ESG funds should exclude cryptocurrency-exposed companies. Doing so is consistent with the stated goal of ESG investment funds and minimizes perceived inconsistencies within the funds. Fortunately, doing so would be relatively simple to implement, and would be relatively easy for businesses to comply with, therefore maximizing positive change. The novel framework provided in this Article is applicable to a broad range of applications regarding ESG determinations specifically and ethical considerations more broadly. Consequently, this Article will likely serve as a valuable catalyst for future scholarship into this and related areas.

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172. See *supra* notes 28–29 and accompanying text.

173. See *supra* note 27 and accompanying text.

174. See *supra* note 84 and accompanying text.

175. Guynn, *supra* note 2.

176. *House GOP Likely to Begin Inquiries into Environmental, Social and Governance Issues*, NPR (Dec. 28, 2022), <https://www.npr.org/2022/12/28/1145763950/house-gop-likely-to-begin-inquiries-into-environmental-social-and-governance-iss>.

177. See *supra* notes 72–85 and accompanying text.

178. See Christiaan Hetzner, *Musk Claims S&P ‘Lost Their Integrity’ After Tesla Gets Booted from Sustainability Index While Exxon is Included*, FORTUNE (May 18, 2022), <https://fortune.com/2022/05/18/tesla-sp-esg-index-exxon-elon-musk/>.

