

## Crypto, Meet ESG; ESG, Meet Crypto

July 15, 2021

---

### Introduction

The blockchain technology that powers cryptocurrency originated in an obscure white paper, anonymously published under the name Satoshi Nakamoto in 2008. In the 13 years following its publication, the cryptocurrency industry has exploded and is now valued at over \$2 trillion.<sup>1</sup> The increasing interest from investors in Bitcoin (which accounts for over 50 percent of the cryptocurrency market capitalization),<sup>2</sup> DogeCoin, Ethereum and other cryptocurrencies has brought significant public and regulatory interest to the space. In particular, members of the public and regulators have increasingly focused on the degree to which cryptocurrencies either positively or negatively impact the broader communities in which they operate.

Environmental, Social and Governance (ESG) criteria are standards for a company's operations that investors have begun using to either screen out potential investments that have deleterious effects (according to the criteria), or to modify the criteria for making new investments in a manner harmonious with the ESG criteria.<sup>3</sup> Environmental considerations include, for example, a company's energy use and pollution. Social criteria often examine how a business carries out its relationships, including with clients and suppliers or among its employees. Governance concerns generally relate to how transparent a company is, the composition of its board and holding boards accountable for the promises that they make to their shareholders. ESG's popularity continues to grow alongside crypto assets. Last year, the more than \$50 billion invested in sustainable mutual funds and ETFs set a new record.<sup>4</sup> This growth comes as the Biden administration recently issued an executive order seeking to revise rules that limited investments focused on ESG factors in retirement accounts.<sup>5</sup> Wealth managers across the country have acknowledged that a focus on ESG investments can offer long-term stable returns and enhance sustainability.

While ESG and crypto assets have both been independently gaining popularity, investors have yet to draw significant links between ESG and crypto assets. This advisory discusses these links and will focus on the relationship between ESG investing considerations and the future of cryptocurrencies and crypto assets.

### Environmental

The growing focus on preventing climate change has brought intense scrutiny to Bitcoin and other cryptocurrencies' energy usage. BlackRock recently announced that all investments the company makes moving forward will be

---

<sup>1</sup> Cryptocurrency market cap tops over \$2 trillion for the first time, <https://www.cnbc.com/2021/04/06/cryptocurrency-market-cap-tops-2-trillion-for-the-first-time.html>.

<sup>2</sup> *Id.*

<sup>3</sup> Environmental, Social, and Governance (ESG) Criteria, <https://www.investopedia.com/terms/e/environmental-social-and-governance-esg-criteria.asp>.

<sup>4</sup> Fidelity Is Offering More ESG Funds as Sustainable Investing Attracts Cash, <https://www.barrons.com/articles/fidelity-esg-etfs-mutual-funds-retirement-51623956037>.

<sup>5</sup> Executive Order on Climate-Related Financial Risk, <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/05/20/executive-order-on-climate-related-financial-risk/>.

---

partially evaluated based on how they plan to address the climate challenge.<sup>6</sup> The question remains whether Bitcoin and other cryptocurrencies will be seen as being a part of the new green economy, or a global threat to meeting climate targets.

## Energy Use

Climate change concerns have led to a growing focus on the significant amount of energy needed to mine various cryptocurrencies. China recently banned crypto mining operations in inner Mongolia due to concerns about hitting climate change targets, and Iran also cracked down on mining after blackouts hit its electrical grid in Tehran.<sup>7</sup> A single transaction of bitcoin has the same carbon footprint as 680,000 Visa transactions or 51,210 hours of watching YouTube.<sup>8</sup> At the same time, the energy wasted by plugged-in but inactive home devices in the US alone could power bitcoin mining for 1.8 years, according to the Cambridge Bitcoin Electricity Consumption Index.<sup>9</sup>

The attention on Bitcoin's energy use does not take into account the numerous other cryptocurrencies in existence. Researchers at MIT and the Technical University of Munich found that Bitcoin accounts for about 68.4 percent of the total power usage of the top 20 mineable cryptocurrencies by market capitalization.<sup>10</sup> Other well-known coins such as Ethereum, Litecoin and Monero account for 11.5 percent, 2.6 percent and 3.4 percent respectively.<sup>11</sup> (This data is from 2020, prior to the explosion of DogeCoin, which likely alters these statistics).

Another key factor in the energy use of cryptocurrencies is whether the mining devices are designed to utilize Application-specific integrated circuits (ASIC). Bitcoin's mining algorithm allows for use of ASIC-based devices, which are considerably more energy efficient than conventional graphic processing units (GPUs).<sup>12</sup> Ravencoin, as an example, does not use an ASIC-based algorithm and accounts for 4.32 percent of the total rated power usage, but only constitutes 0.06 percent of the market capitalization of the top 20 coins.<sup>13</sup>

## Proof of Stake's Growing Environmental Appeal

A Proof of Work (POW) model, used by a substantial percentage of all cryptocurrencies, employs a consensus mechanism that requires computers to solve complex mathematical problems and consume large amounts of power in the process. Ethereum recently announced it was aiming to shift to a Proof of Stake (POS) model, which allows the validation of block transactions based on the amount of coins a miner holds. Since it does not require mining, transactions can be processed with the same energy requirements as an ordinary computer network. The Ethereum Foundation estimates that if the switch to POS is successful, it could reduce Ethereum's energy use by up to 99.95 percent.<sup>14</sup> A POS Ethereum theoretically could use as little as 2.62 megawatts per year, compared to an estimate of 5.13 gigawatts currently used per year to mine Ethereum for its POW model.<sup>15</sup>

---

<sup>6</sup> Bitcoin's Climate Problem, <https://www.nytimes.com/2021/03/09/business/dealbook/bitcoin-climate-change.html>.

<sup>7</sup> In Coinbase's Rise, a Reminder: Cryptocurrencies Use Lots of Energy, <https://www.nytimes.com/2021/04/14/climate/coinbase-cryptocurrency-energy.html>.

<sup>8</sup> Electricity needed to mine bitcoin is more than used by 'entire countries', <https://www.theguardian.com/technology/2021/feb/27/bitcoin-mining-electricity-use-environmental-impact>.

<sup>9</sup> *Id.*

<sup>10</sup> Energy Consumption of Cryptocurrencies Beyond Bitcoin, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7402366/>.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> Ethereum founder Vitalik Buterin says long-awaited shift to proof-of-stake could solve environmental woes, <https://fortune.com/2021/05/27/ethereum-founder-vitalik-buterin-proof-of-stake-environment-carbon/>.

<sup>15</sup> A country's worth of power, no more! | Ethereum Foundation Blog, <https://blog.ethereum.org/2021/05/18/country-power-no-more/>.

## **Green Energy Mining**

There also is a growing focus on utilizing green energy mining to reduce carbon emissions from POW model mining. The “Bitcoin Mining Council” was recently formed to standardize energy reporting, in an attempt to correctly track how much of bitcoin mining utilizes renewable energy sources.<sup>16</sup> Recent survey data indicates over 75 percent of miners use some renewable energy, but that renewables only account for 39 percent of the total energy used by crypto mining.<sup>17</sup>

In addition, new companies are beginning to develop with commitments to utilize 100 percent green energy in their crypto mining operations. Gryphon Digital Mining recently raised \$14 million to establish US-based green energy mining operations,<sup>18</sup> and Elite Mining Inc. recently launched a Series A offering of Class B common stock to investors as it seeks to develop a model that allows clean energy to be used at scale in the United States to mine cryptocurrencies.<sup>19</sup> A white paper published by the Bitcoin Clean Energy Initiative highlights how crypto mining is an ideal complement to renewable generation and storage, as their operations can be turned on and off, providing a way to utilize energy that would otherwise dissipate.<sup>20</sup> The white paper also illustrates how this would allow solar and wind to be “overbuilt,” with the excess energy production being utilized by miners and provide a way for utility companies to generate additional revenue.

## **Demanding Direction on Disclosures**

President Biden recently issued an executive order directing financial regulators to develop a plan to improve climate disclosures.<sup>21</sup> Although climate disclosures are currently voluntary, the Securities and Exchange Commission (SEC) is soliciting public feedback on potential mandatory climate risk reporting. In response, several industry groups for investors submitted comments indicating support for the agency’s efforts to identify clear standards for climate-related disclosures.<sup>22</sup> Questions remain as to which particular metric best captures the risks associated with climate change, but SEC Chairman Gensler has expressed that addressing investors’ need for climate-related information is a top priority.<sup>23</sup> Therefore, it is likely that publicly traded companies will soon be required to disclose information about how they address climate-related threats.

## **The EU Is a Step Ahead on Disclosures**

The European Union (EU) recently passed the Sustainable Finance Disclosure Regulation (SFDR), which requires funds to classify their products in one of the following ways: (1) products that support ESG goals in a binding way; (2) products that invest purely in sustainable or other ESG initiatives; or (3) products that fall under neither category.<sup>24</sup> However, cryptocurrency is not currently covered under the existing taxonomy classifying investments. Therefore, unlike traditional financial products, cryptocurrencies need not be scored to be sold in the EU and are

---

<sup>16</sup> Bitcoin Mining Council Debuts as Energy Backlash Increases, <https://www.bloomberg.com/news/articles/2021-06-10/bitcoin-mining-council-makes-debut-as-energy-backlash-increases>.

<sup>17</sup> See Appendix 1.

<sup>18</sup> US Bitcoin Mining Venture Raises \$14M for All-Renewable Energy Mining, <https://www.coindesk.com/us-bitcoin-mining-venture-raises-14m-for-all-renewables-mining>.

<sup>19</sup> Green Crypto Mining Company Launches Digital Assets Security Offering, <https://www.prnewswire.com/news-releases/green-crypto-mining-company-launches-digital-assets-security-offering-301293602.html>.

<sup>20</sup> Bitcoin is Key to an Abundant, Clean Energy Future, [https://assets.ctfassets.net/2d5q1td6cyxq/5mRjc9X5LTXFFihlITt7QK/e7bcba47217b60423a01a357e036105e/BCEI\\_White\\_Paper.pdf](https://assets.ctfassets.net/2d5q1td6cyxq/5mRjc9X5LTXFFihlITt7QK/e7bcba47217b60423a01a357e036105e/BCEI_White_Paper.pdf).

<sup>21</sup> Executive Order on Climate-Related Risk, <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/05/20/executive-order-on-climate-related-financial-risk/>.

<sup>22</sup> MFA Comment Letter Re: Public Input Welcomed on Climate Change Disclosures, [https://www.managedfunds.org/wp-content/uploads/2021/06/MFA-Comments-on-Climate-Disclosure.final\\_6.11.21.pdf](https://www.managedfunds.org/wp-content/uploads/2021/06/MFA-Comments-on-Climate-Disclosure.final_6.11.21.pdf) (March 15, 2021).

<sup>23</sup> *Id.*

<sup>24</sup> EU aims to stamp out greenwashing with disclosure requirements for sustainable investing funds, <https://fortune.com/2021/03/10/eu-esg-sustainability-investing/>.

largely unregulated.<sup>25</sup> To address this gap, the EU has proposed a regulatory framework specific to cryptocurrency called the Markets in Crypto-Assets Regulation (MiCA); however, market watchers do not expect any regulatory framework to pass before 2024.<sup>26</sup>

## Social

Cryptocurrencies were developed, in part, to be decentralized and facilitate relationships traditional currency or investments could not. The use of blockchain to validate transactions, rather than relying on government oversight, was promised to have revolutionary effects for millions of people, many of whom were previously unable to access financial or banking services. The growth of cryptocurrencies worldwide has led government regulators to put greater scrutiny on the decentralized networks while also recognizing that cryptocurrencies are here to stay.

### Ransomware

Colonial Pipeline's ransomware payment of \$4.3 million in cryptocurrency to DarkSide brought heightened attention to the growing number of ransomware payments requested in cryptocurrency. Chainalysis, a crypto analytics firm, found a massive spike in the amount of cryptocurrency ransomware attackers received last year, from over \$412 million in 2020 compared to just \$93 million in 2019.<sup>27</sup> Victims in 2021 have sent \$127 million so far, but there are likely more unreported paid crypto ransoms.<sup>28</sup> Total ransomware damages were estimated at around \$20 billion in 2020, meaning crypto ransomware still only accounts for approximately two percent of the total.<sup>29</sup>

The government is taking the threat associated with cryptocurrency ransomware payments seriously. The US Department of Justice was able to seize 63.7 bitcoins valued at approximately \$2.3 million from DarkSide, and *Bloomberg* reported that, "Toward the end of 2020, the US Treasury Department proposed rules that would require banks, exchanges and anyone else dealing in Bitcoin to make a greater effort to discover the true identities of people trying to withdraw the currency – and, in some cases, to figure out to whom they're sending the currency," in an effort to prevent the continuing growth of cryptocurrency ransomware payments.<sup>30</sup>

Ransomware and fraud have drawn the attention of SEC Chairman Gary Gensler. In remarks to the Financial Services and General Government subcommittee of the House of Representatives, Chairman Gensler noted, "There are many challenges and gaps for investor protection in [crypto asset] markets."<sup>31</sup> He also noted that the SEC should provide investor protections for crypto assets similar to those on the NYSE or NASDAQ.<sup>32</sup>

### Human Rights Concerns

China's crackdown on cryptocurrency mining comes at a time when heightened scrutiny is being directed at Xinjiang Province's purported human rights abuses, as nearly 20 percent of new bitcoin was mined there; China has denied all such allegations.<sup>33</sup> In July 2020, more than 190 organizations called on clothing brands to cut ties with suppliers that sourced materials from Xinjiang due to concerns of alleged forced labor and other claimed violations of human rights.<sup>34</sup>

<sup>25</sup> ESMA Sees High Risk Investors in Non-Regulated Crypto Assets, <https://www.esma.europa.eu/press-news/esma-news/esma-sees-high-risk-investors-in-non-regulated-crypto-assets>.

<sup>26</sup> Europe is Considering Crypto Regulation, <https://www.europeanbusinessreview.com/europe-is-considering-crypto-regulation/>.

<sup>27</sup> See Appendix 2.

<sup>28</sup> State of Crypto: Ransomware Is a Crypto Problem, <https://www.coindesk.com/ransomware-is-a-crypto-problem>.

<sup>29</sup> See Appendix 3.

<sup>30</sup> Crypto's Anonymity Has Regulators Circling After the Colonial Pipeline Hack, <https://www.bloomberg.com/news/articles/2021-05-12/crypto-s-anonymity-has-regulators-circling-after-colonial-ransomware-hack>.

<sup>31</sup> Testimony Before the Subcommittee on Financial Services and General Government, U.S. House Appropriations Committee, <https://www.sec.gov/news/testimony/gensler-2021-05-26>.

<sup>32</sup> Securities and Exchange Commission Oversight Hearing (EventID=112692), <https://www.youtube.com/watch?v=g5i8OR5Rb2g&t=987s>.

<sup>33</sup> Bitcoin Mining Is Big in China. Why Investors Should Worry, <https://www.barrons.com/articles/bitcoin-mining-in-xinjiang-china-could-be-a-red-flag-for-regulators-51613764881>.

<sup>34</sup> Coalition Brings Pressure to End Forced Uighur Labor, <https://www.nytimes.com/2020/07/23/fashion/uighur-forced-labor-cotton-fashion.html>.

In June 2021, China ordered miners at the Zhundong Economic Technological Development Park, which houses some of the largest mining facilities in the Xinjiang region, to cease all mining activities.<sup>35</sup> This follows a report that China's State Council had called for a crackdown on crypto mining across the country.<sup>36</sup> While the impact of China's desire to halt crypto mining activities remains to be seen, the expressed human rights concerns of the Xinjiang region must continue to be considered as the region remains responsible for a large portion of new cryptocurrency. Again, China has denied all allegations.

### **Banking the Un- and Under-Banked**

Some proponents of cryptocurrency believe that it can facilitate greater levels of financial inclusion. While discussions regarding people who lack access to banking services tend to focus on the developing world, recent US Census data indicates that 17 million adults in the United States are unbanked, meaning that they do not use banks or credit unions at all for their financial transactions.<sup>37</sup> An additional 43 million adults in the United States are reported to be underbanked, meaning they have a checking or savings account but also rely on alternative financial services, like non-bank money orders or non-bank check-cashing services, payday loan institutions, rent-to-own agreements or pawn shops on a regular basis.<sup>38</sup> Globally, 1.7 billion adults are claimed to be unbanked.<sup>39</sup>

Blockchain technology and cryptocurrencies can mitigate several of the barriers to accessing banking services. Unlike the requirement of a physical banking location to conduct at least some type of banking transactions, anyone can access cryptocurrencies solely with a smartphone or laptop and Internet connection.<sup>40</sup> In addition, in certain parts of the world, transaction fees for cryptocurrency transactions are frequently lower than the cost of intermediary-coordinated money transfers.<sup>41</sup> The security within blockchain networks means that the technology can set up financial transactions both quickly and efficiently with no need for any intermediaries to become involved for cross-border payments and transfers.<sup>42</sup> However, it also is important to note that many systemic problems preventing people from accessing banking services cannot be addressed through access to cryptocurrencies. For instance, many people who are unbanked indicate that they simply do not have enough money to open an account or do not believe that they have a need for a bank account.<sup>43</sup>

Notably, El Salvador approved a proposal to make Bitcoin legal tender in June 2021. President Bukele indicated that requiring businesses to accept bitcoin (unless they cannot procure needed technology) would "bring financial inclusion, investment, tourism, innovation and economic development" to El Salvador.<sup>44</sup> He also emphasized that making Bitcoin legal tender could help the 70 percent of the country's population that is unbanked access financial services, and could also facilitate the \$4 billion in payments that Salvadoreans living abroad make each year to relatives still living in El Salvador.<sup>45</sup>

---

<sup>35</sup> Some Xinjiang Bitcoin Miners Instructed to Shut Down: Report, <https://www.coindesk.com/some-xinjiang-bitcoin-miners-instructed-to-shut-down-report>.

<sup>36</sup> Bitcoin Falls as China Calls for Crackdown on Crypto Mining, Trading, <https://www.coindesk.com/bitcoin-slips-37k-china-vicecrackdown-mining>.

<sup>37</sup> In-Depth: Reaching the Unbanked and Underbanked, <https://www.stlouisfed.org/publications/central-banker/winter-2010/reaching-the-unbanked-and-underbanked>.

<sup>38</sup> *Id.*

<sup>39</sup> The Unbanked, [https://globalfindex.worldbank.org/sites/globalfindex/files/chapters/2017%20Findex%20full%20report\\_chapter2.pdf](https://globalfindex.worldbank.org/sites/globalfindex/files/chapters/2017%20Findex%20full%20report_chapter2.pdf).

<sup>40</sup> Cryptocurrencies — the perfect solution for unbanked people., <https://medium.com/@Bank4youGroup/cryptocurrencies-the-perfect-solution-for-unbanked-people-55a4baab9bd>.

<sup>41</sup> *Id.*

<sup>42</sup> Blockchain and the unbanked: Changes coming to global finance, <https://www.ibm.com/blogs/blockchain/2020/03/blockchain-and-the-unbanked-changes-coming-to-global-finance/>.

<sup>43</sup> Stop Saying You Want To Bank The Unbanked, <https://www.forbes.com/sites/yayafanusie/2021/01/01/stop-saying-you-want-to-bank-the-unbanked/?sh=4d436900456a>.

<sup>44</sup> BBC, Bitcoin: El Salvador makes cryptocurrency legal tender, <https://www.bbc.com/news/world-latin-america-57398274>.

<sup>45</sup> *Id.*

## The Metaverse and Non-Fungible Tokens

Non-fungible tokens (NFTs) are digital assets verified by the blockchain identically to other digital assets that are intended to provide purchasers proof of both authenticity and ownership of an underlying asset. NFTs are now being used to evidence ownership or rights to other digital assets, as well as physical assets, as highlighted by a \$69.3 million dollar sale of digital art by Mike Winkelmann, otherwise known as “Beeple.” These assets are stored in the “Metaverse,” a combination of the physical and digital world. This is the “new economy of blockchain-based virtual worlds where land, buildings, avatars and even names can be bought and sold as NFTs, often fetching hundreds of thousands of dollars.”

Though NFTs have begun to pervade many cultural spaces, including the arts and entertainment,<sup>46</sup> they are perhaps most easily adapted and understood in the video gaming world.<sup>47</sup> In the gaming community, NFTs serve as a permanent digital ledger evidencing ownership of certain characters or other in-game, digital possessions. By making such items NFTs, players can control what they buy, earn or craft, as well as create in-game marketplaces.<sup>48</sup> However, video games have been fraught with their own ESG issues, and have been criticized as engendering negative social consequences like increasing aggressive tendencies in players and reinforcing negative gender and racial stereotypes.<sup>49</sup> Epic Games, the creator of the popular game Fortnite, has announced \$1 billion in funding to develop its vision of the Metaverse. But, to the extent that crypto assets like NFTs are inextricably linked to gaming, investors should be cognizant of the potential compounding negative effects of two industries that face challenges associated with their social impact growing in such an intertwined manner.

## Governance

Cryptocurrency’s explosion has led to a boom of companies targeting the crypto space. As institutional players like banks, hedge funds and other financial institutions enter the competition, the governance of crypto companies will begin to take center stage. In addition, the need for highly skilled technical workers for both blockchain and cryptocurrency will place additional focus at the educational level to ensure equal opportunities exist for those interested in developing the skills necessary to be a part of the crypto field.

## Diversity Concerns

The nonprofit Diversity in Blockchain released an initial report at the end of 2019 highlighting the lack of diversity in the blockchain and cryptocurrency space. The percentage of women employees in the sector, including developers, investors and casually interested individuals, hovers usually between 4 percent and 6 percent, although 2019 has seen Bitcoin community engagement by gender hit 90 percent male and 10 percent female.<sup>50</sup> Of the 378 venture-backed crypto and blockchain companies founded around the world between 2012 and 2018, only one had an all-female founding team, and only 31 (8.2 percent) had a combination of male and female founders.<sup>51</sup> As a matter of comparison, only 17.7 percent of all technology companies during that time period had at least one female founder.<sup>52</sup> There is a

---

<sup>46</sup> For a discussion about the role that NFTs play in the arts, see The Daily: Cryptocurrency’s Newest Frontier, <https://www.nytimes.com/2021/04/13/podcasts/the-daily/nft-bitcoin-cryptocurrency.html>.

<sup>47</sup> NFTs and Gaming: A Match Made in Heaven?, <https://www.nasdaq.com/articles/nfts-and-gaming%3A-a-match-made-in-heaven-2021-07-08>.

<sup>48</sup> The DeanBeat: How non-fungible tokens (NFTs) will change games, <https://venturebeat.com/2021/02/26/the-deanbeat-how-non-fungible-tokens-nfts-will-change-games/>.

<sup>49</sup> Do Stereotypic Images in Video Games Affect Attitudes and Behavior? Adolescents’ Perspectives, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4343312/>.

<sup>50</sup> State of Diversity and Inclusion in Blockchain, <https://static1.squarespace.com/static/5a7f13828a02c7e2df8e6c68/t/5e00f58ccf118b46b6fdb32c/1577121230490/The+State+of+Diversity+and+Inclusion+in+Blockchain.pdf>.

<sup>51</sup> *Id.*

<sup>52</sup> *Id.*

“surprising lack of information” regarding the racial and ethnic makeup of blockchain companies.<sup>53</sup> However, a report from Forbes indicated that each of the 19 richest people in crypto were all white or East Asian men.<sup>54</sup>

Education plays a role in the lack of diversity as well. A recent CoinDesk study that surveyed top university programs in blockchain in the US shows that at the top 10 universities listed, only 20 percent of the professors/faculty are women.<sup>55</sup> The lack of gender diversity may subside as more attention is focused on cryptocurrency and blockchain technology and educational programs develop nationwide.

To address this issue, industry participants have founded several organizations aimed at diversifying the space. Groups like Diversity in Blockchain, The NYC Blockchain Center, Women in Blockchain, National Policy Network of Women of Color in Blockchain and others provide support to women and people of color who want to learn more about or get involved in the cryptocurrency industry. Almost universally, advocates champion education as the key to enabling inclusion, and emphasize that industry veterans can catalyze change by ensuring that information is broadly accessible. In addition, building diverse teams by setting and achieving measurable goals for women and people of color in leadership, taking steps to account for unconscious bias in the hiring process, developing an inclusive culture to retain diverse employees, making women and people of color visible in the media, and paying all employees equally for equal work have each been identified as important steps to addressing the diversity gap in the industry.

## Conclusion

The SEC, Commodity Futures Trading Commission (CFTC) and other government agencies – both in the US and internationally – are rapidly recognizing that crypto assets need new or better-defined regulations. The SEC continues to delay numerous crypto ETFs,<sup>56</sup> and recently filed a major action against a global unregistered digital asset securities offering that raised more than \$2 billion.<sup>57</sup> SEC Chairman Gary Gensler has explicitly called for more investor protection in crypto markets, meaning future regulatory guidance should be expected.<sup>58</sup>

As new regulatory guidance continues to be released, cryptoassets must also contend with the growing interest in ESG investing objectives.

---

<sup>53</sup> Black Blockchain Meetup Addresses Lack of Diversity in Crypto, <https://breakermag.breaker.io/black-blockchain-meet-up-addresses-lack-of-diversity-in-crypto/>.

<sup>54</sup> *Id.*

<sup>55</sup> *Id.*

<sup>56</sup> As the SEC delays bitcoin ETFs, other choices emerge for crypto-hungry investors, <https://www.cnn.com/2021/06/22/as-the-sec-delays-bitcoin-etfs-other-choices-emerge-for-investors.html>.

<sup>57</sup> SEC Charges U.S. Promoters of \$2 Billion Global Crypto Lending Securities Offering, <https://www.sec.gov/news/press-release/2021-90>.

<sup>58</sup> SEC Chairman Gary Gensler says more investor protections are needed for bitcoin and crypto markets, <https://www.cnn.com/2021/05/07/sec-chairman-gary-gensler-says-more-investor-protections-are-needed-for-bitcoin-and-crypto-markets.html>.

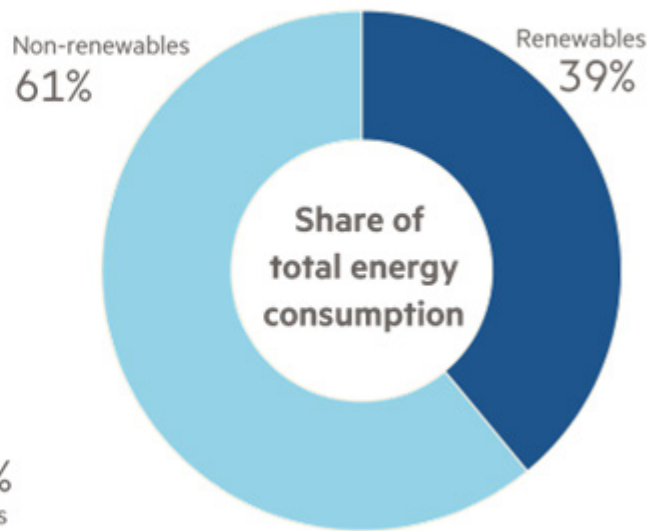
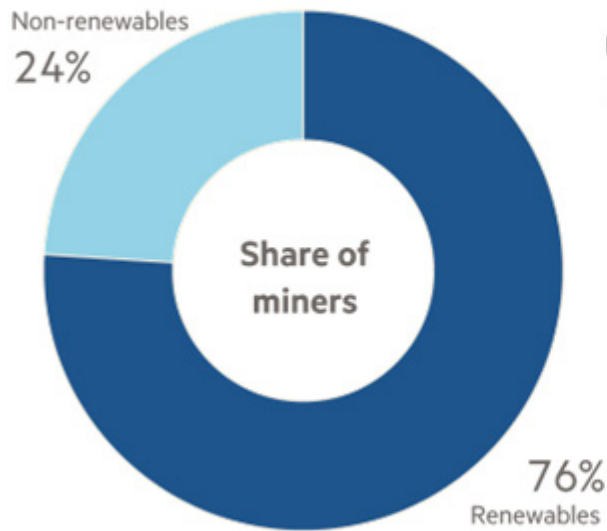
# Appendix 1

Bitcoin's growing energy problem: 'It's a dirty currency',  
<https://www.ft.com/content/1aecb2db-8f61-427c-a413-3b929291c8ac>.

## Non-renewables dominate mining

Though 76% of surveyed miners say they use renewables as part of their mix...

... only 39% of total energy consumption comes from renewables



Survey data were collected from 280 entities across 59 countries  
Source: 3rd Global Cryptoasset Benchmarking Study  
© FT

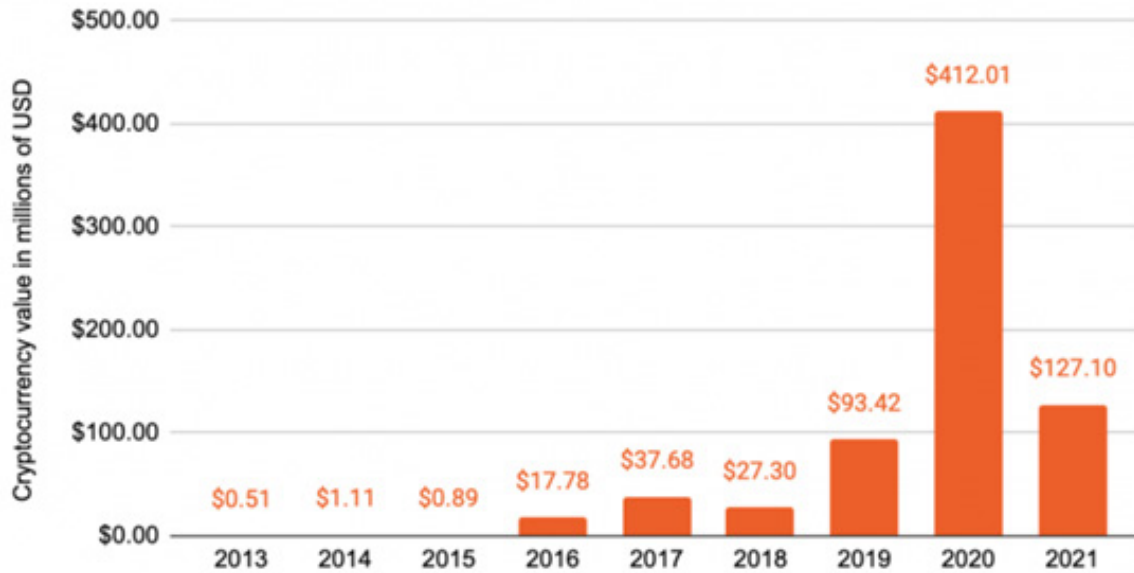


## Appendix 2

---

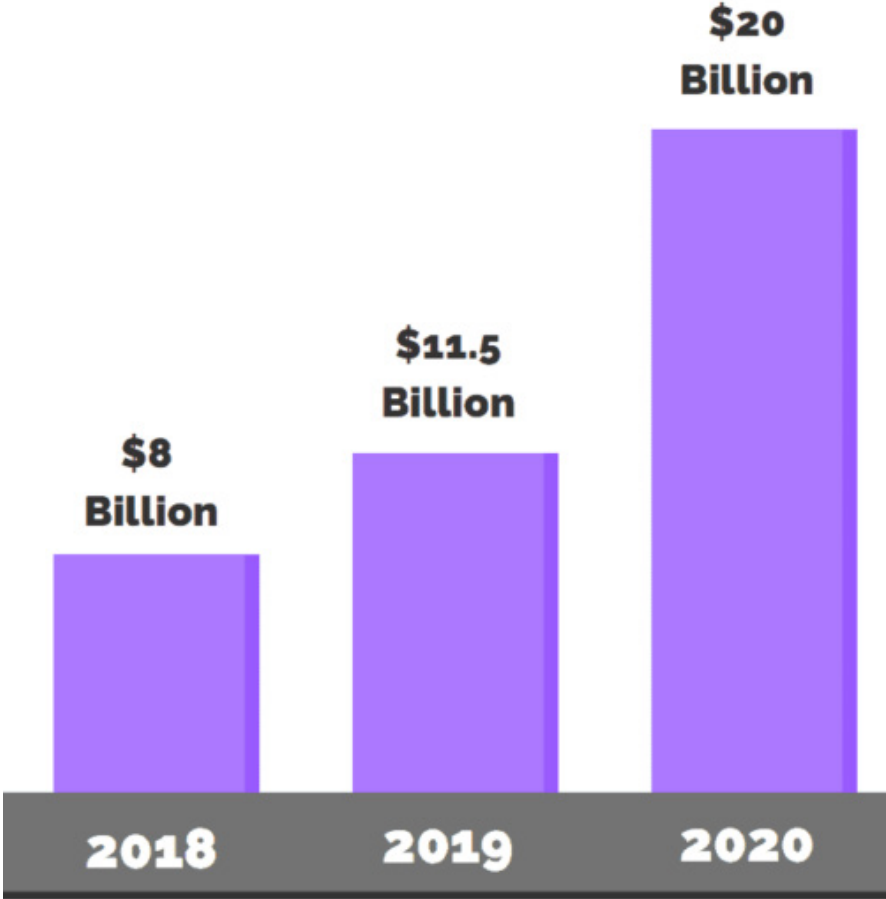
State of Crypto: Ransomware Is a Crypto Problem,  
<https://www.coindesk.com/ransomware-is-a-crypto-problem>.

Total cryptocurrency value received by ransomware addresses, 2016-2021 (YTD)



# Appendix 3

021 Ransomware Statistics, Data, & Trends,  
<https://purplesec.us/resources/cyber-security-statistics/ransomware/>.



**\*Estimated global damage from ransomware.**

---

## CONTACTS

For more information, please contact any of the following members of Katten's [Financial Markets and Funds](#) practice.



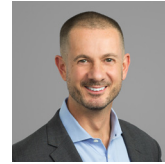
**Gary DeWaal**  
+1.212.940.6558  
gary.dewaal@katten.com



**Allison Yacker**  
+1.212.940.6328  
allison.yacker@katten.com



**Christian Hennion**  
+1.312.902.5521  
christian.hennion@katten.com



**Neil Robson**  
+44 (0) 20 7776 7666  
neil.robson@katten.co.uk

*Law students Robert Bourret and Casey McClaren, Katten 2021 Summer Associates, participated materially in the preparation of this advisory.*

# Katten

katten.com

CENTURY CITY | CHARLOTTE | CHICAGO | DALLAS | LONDON | LOS ANGELES | NEW YORK | ORANGE COUNTY | SHANGHAI | WASHINGTON, DC

Attorney advertising. Published as a source of information only. The material contained herein is not to be construed as legal advice or opinion.

©2021 Katten Muchin Rosenman LLP. All rights reserved.

*Katten refers to Katten Muchin Rosenman LLP and the affiliated partnership as explained at [kattenlaw.com/disclaimer](#).*

7/15/21