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CRYPTO & ESG WHITE PAPER



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ABSTRACT

The future of finance and investments leans toward sustainability and social responsibility. ESG investing, or Environmental, Social, and Governance-focused investing, aims to facilitate the marriage between corporations and a more sustainable, equitable world.

Otherwise known as Responsible Investing, ESG assets under management (AUM) made up one third of the total US-domiciled AUM by the end of 2020,¹ and this measure is only growing. Rising in parallel, cryptocurrencies were the best performing asset class of the last decade² and are strongly aligned with the ESG mission of sustainability, social-benefit, and community governance efforts.

Through the decentralized nature of cryptocurrencies and blockchain technology, the crypto ecosystem is taking cutting edge approaches to sustainability in order to achieve its mission of unifying the global economy with universally sovereign financial access. Together, ESG strategies and cryptocurrencies are equipped to build a more sustainable and equitable world.



THE THREE TENETS OF ESG

What is ESG?

ESG investing is a practice that seeks to drive returns by backing ventures with conscientious environmental, social, and governance-focused initiatives. In equity capital markets, ESG criteria are used to evaluate the broader ethical impacts of a company's operations. Today's investors are sensitive to ESG considerations because of growing public awareness of environmental, social, and governance-related issues originating from both private and public entities. Accordingly, investment fund mandates increasingly require ESG investment exposure.³

ESG is not the only trending asset class, however. In a mere decade, crypto assets have transitioned from an experimental fringe technology to a multi-trillion dollar market.⁴ With an inherent ethos of decentralization, transparency, and fairness, crypto's multidirectional growth in applications is creating new vectors toward achieving ESG goals.

At Sarson Funds, we help bridge Wall Street with emergent blockchain economies. We believe we are uniquely situated to offer perspective into the future of crypto assets as they relate to environmental, social, and governance considerations. In light of our position, we have created the following whitepaper in an effort to share our analysis on the confluence of crypto assets and ESG-driven investing.

Environmental Considerations

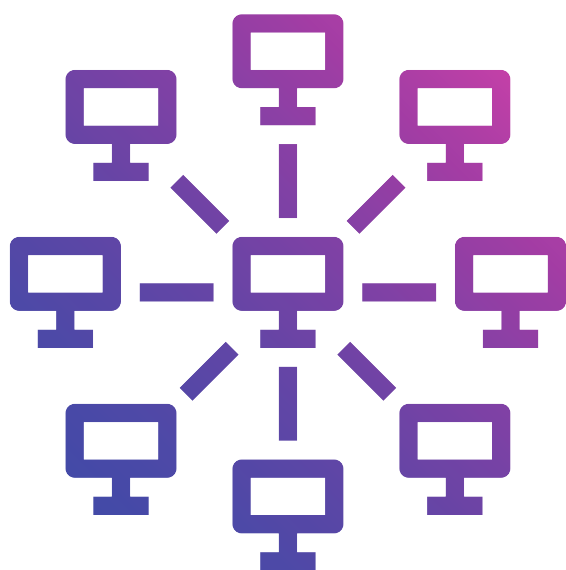
Since crypto assets are inherently digital, their environmental impacts are primarily confined to two buckets: energy consumption and energy mix. Energy consumption refers to the absolute amount of electricity expended to maintain a given blockchain network. Energy mix is more nuanced, as it refers to the blend of energy sources powering the network.



THE THREE TENETS OF ESG

Social Considerations

Social criteria seek to measure the extent to which a crypto asset reduces asymmetric friction between groups. Underpinned by a core ethos of decentralization, crypto asset whitepapers often cite the empowerment of an otherwise disenfranchised group as part of their value proposition. For example, a popular narrative for Bitcoin is its ability to “bank the unbanked” – or, to provide financial services to those who are unprofitable customers for traditional financial entities, which drives positive effects for disadvantaged communities.



Governance Considerations

Blockchain-enabled governance use cases have applications in both private and public entities. In the private sector, ESG-investable crypto assets may include enhancements to equity-based decision making. Decentralized autonomous organizations (DAOs) could enable equity ownership of businesses to be fully represented through governance tokens. With an open-source codebase, governance tokens can give holders voting rights, dividends, or other customizable rights with unparalleled transparency. Further, governance tokens can be freely exchanged over the blockchain, heightening liquidity and democratizing access for investors.

WHY ESG?

According to a survey⁵ taken of 2,800 Chartered Financial Analysts (CFAs), the key drivers of the rise of ESG investing are that ESG portfolios help manage financial risks, uplift reputation, improve financial returns, clients and investors demand them, and because of the fiduciary responsibilities of investment managers.

Risk Management

Companies that are ESG compliant are believed to be on the right side of anticipated future environmental, social, and governance corporate regulation. When companies lack sustainable practices, are ignorant toward their social impact, and have self-interested executives, they risk susceptibility to regulation if governments move to enforce ESG standards, potentially harming the financial standing, reputation, and investment viability of a company.

Improve Financial Returns

ESG standards are set by industry opinion leaders such as MSCI and the Sustainability Accounting Standards Board (SASB) who establish standards for businesses worldwide through the lens of sustainability, social-welfare, and fair corporate governance. When corporations work toward sustainable practices, positive employee experiences, greater social impact, and executive accountability, better work environments are created that may lead to superior financial performance.

Clients Demand ESG

In recent years, the birth of online stock marketplaces and smartphone applications has made investing more accessible, shifting the age demographics of investors to include millennials and younger generations, not just the ultra wealthy. This shift in age demographic has brought with it an added demand for environmentally and socially-minded investments. Investors are demanding products with the future in mind, and for many, the future of investing leans towards ESG.

Fiduciary Duties

It is the fiduciary duty of an investment advisor to drive the highest returns possible for their investors. As such, portfolio managers who believe that ESG exposure will produce long term returns to a portfolio treat it as their fiduciary responsibility to provide exposure to ESG strategies.

MILESTONES & MARKET GROWTH

ESG investing and cryptocurrencies are two of the fastest growing sectors of investments. In the last decade, ESG assets under management grew from humble beginnings to about one third of all US assets under management,⁶ while Bitcoin was the best performing asset in the 2010s, recording over 20,000,000%⁷ return. With the future of finance and investing leaning towards sustainability, it is a natural progression for both ESG and cryptocurrencies to converge as multipurpose investments, considering crypto's deep relationship with energy use, social impact, and community governance narratives.

ESG Growth in the Last decade

In the 2010s, responsible investments rose from near irrelevance to a must-have in the product suites of investment managers. Inspired by several monumental environmental and societal events over the last decade, the importance of bringing purpose and passion to investing has never rang more wide and true. Now more than ever, values are a critical consideration for investors, and investors are realizing the power that their money can have on corporate decision making to generate positive impacts. Widespread awareness is surfacing toward global warming alongside racial, gender, and sexual disparities, and investors have been inspired to put their money where their mouth is and turn their investments into tools for financial activism.

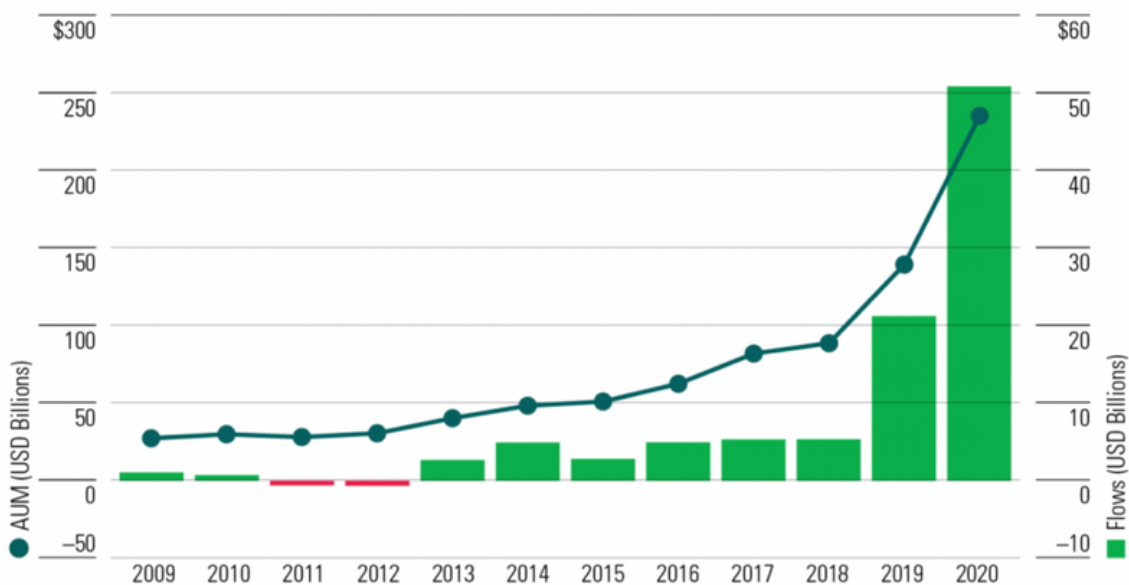
The influx of funds into ESG strategies over the last decade has been exponential. The rising popularity of conscientious investing has ignited ten-fold growth over the last five years,⁸ raising the net new capital⁹ allocated to ESG products from roughly \$5 billion in 2015 to \$51.1 billion by the end of 2020. The new capital allocation to ESG in 2020 was 25% of all new capital invested in the year, 25-times the new capital allocated to ESG in 2014, which was then only 1% of all new capital investments.

Alongside the growth in ESG capital inflow, the rising demand has been met with a four-fold growth in the total number of ESG funds available to investors in the last decade. With just 100 funds available in 2010, 400 were available in 2020. This growth indicates that investment managers are awakening not only to the changing demands of investors but also the potential profits of ESG strategies.

MILESTONES & MARKET GROWTH

Heightened awareness, capital allocation, and strategy expansion have each contributed to the exponential rise of total sustainable funds under management over the last decade. Looking at inflow growth, total new annual assets under management for ESG strategies rose⁹ from around \$30 billion in 2010 to nearly \$250 billion in 2020, helping the industry achieve a near \$17.1 trillion total AUM,¹⁰ which amounted to one third of the \$51.4 trillion¹¹ total U.S.-domiciled AUM. ESG's growth over the last decade is demanding attention from investors as the investment class of the future.

Exhibit 14 Sustainable Funds Annual Flows and Assets



Source: Morningstar. Data as of 12/31/2020. Includes Sustainable Funds as defined in Sustainable Funds U.S. Landscape Report, Feb. 2020. Includes funds that have been liquidated; does not include funds of funds.

Source: Morningstar¹²

Crypto Growth in the Last Decade

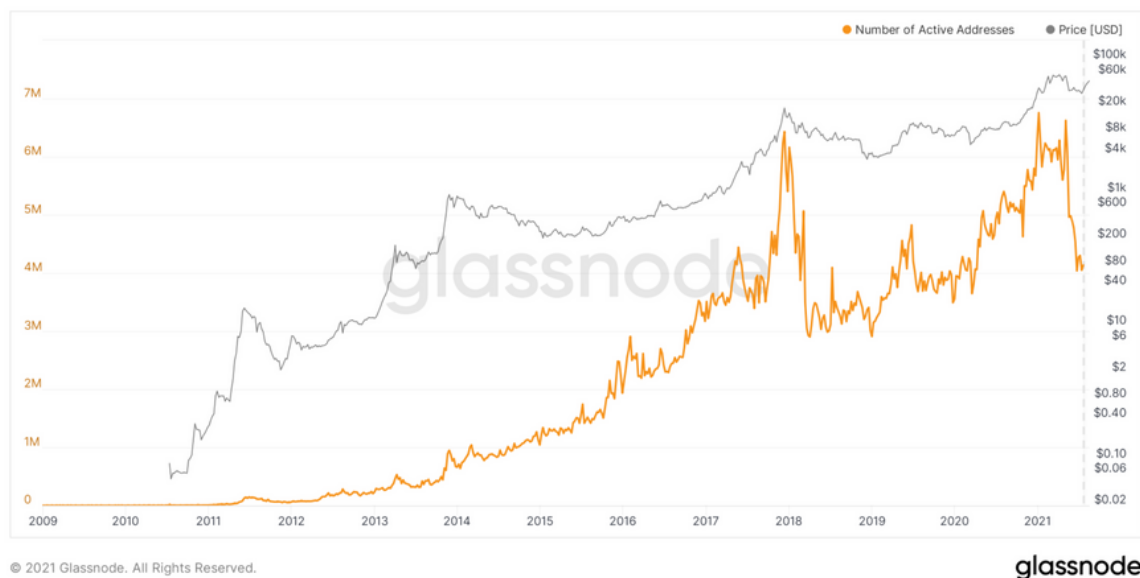
Bitcoin (and more broadly, all crypto assets) is the fastest growing asset class of the past decade.¹³ So far in 2021, the industry's peak valuation reached ~\$2.465 trillion, only 12 years since Bitcoin's launch in early 2009. Dollar-denominated daily crypto trading volumes are creeping their way into the billions,¹⁴ opening immense revenue streams to exchanges like Coinbase.¹⁵

According to on-chain analytics provided by blockchain data and intelligence provider Glassnode, active Bitcoin addresses climbed to 6,429,860 in 2017's

MILESTONES & MARKET GROWTH

market cycle top, and set a new all time high of 6,756,342 again in January 2021.¹⁶ Active addresses can be used to evaluate network growth, as peak activity tends to correspond with all-time highs driven by retail inflows:

Bitcoin: Number of Active Addresses



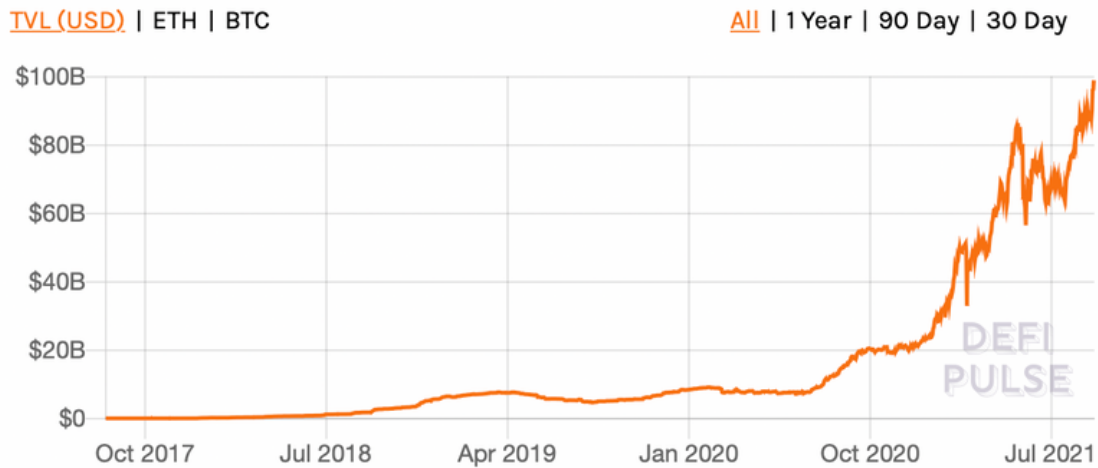
Source: glassnode¹⁷

Even as Bitcoin’s market cap continues to grow, its share of the overall crypto market is generally declining.¹⁸ While Bitcoin’s network growth has solidified the asset as the premium digital store of value, the 2015 advent of decentralized application networks like Ethereum gave rise to tokens with increasingly specific and frequently speculative applications. Tokens for these applications tend to attract the most risk-tolerant capital in crypto.

Decentralized applications on the Ethereum network experienced tremendous price appreciation in summer 2020, coined the “DeFi Summer” after years of low-profile development following the 2017 ICO boom.¹⁹ Short for Decentralized Finance, “DeFi” refers to the category of on-chain protocols that offer borrowing, lending, trading, derivatives contracts, and other financial products and services. Total value locked, or “TVL”, is an on-chain metric that measures the amount of capital held in smart contracts, which “has been used as the de facto metric to show the growth of decentralized finance”, according to research hub Messari.²⁰ DeFi Pulse, a DeFi analytics site, demonstrates this growth in the chart below:

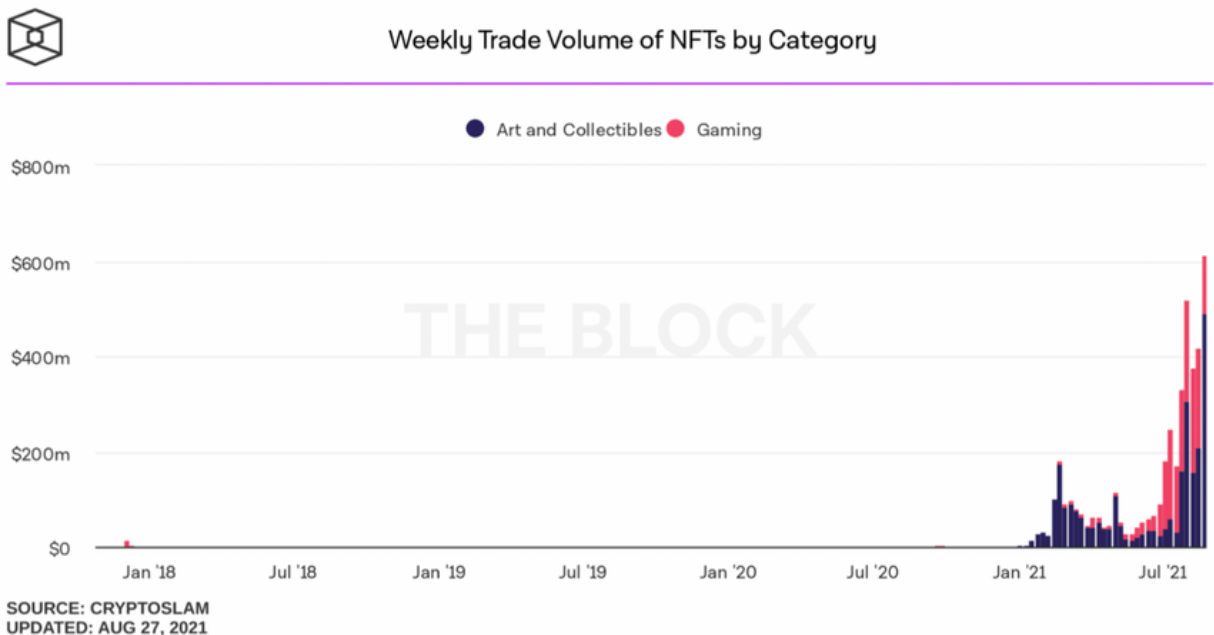
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Total Value Locked (USD) in DeFi



Source: DeFi Pulse²¹

The proliferation of crypto tokens in 2021 continued not only through DeFi, but in the emerging sectors of non-fungible tokens (NFTs), metaverses, and gaming. NFTs offer transparent, digitally verifiable ownership to be represented on the blockchain.²² Though tokenization has virtually limitless applications by enabling asset fractionalization,²³ this year's surge in NFT valuations has been driven by retail interest in NFT art, video game items, and metaverse real estate. Digital asset researcher The Block demonstrates this sector's explosive growth in the chart below:



Source: The Block²⁴

CRYPTOCURRENCIES: THE FUTURE OF SUSTAINABLE INVESTING

With its historic triple-digit Compound Annual Growth Rate (CAGR),²⁵ Bitcoin and its contemporaries are seeing unprecedented demand from institutional investors. Spot trading & custody, private placement in passive funds, publicly traded shares, futures, and actively traded funds are all channels for Bitcoin exposure, and institutional demand for SEC-approved ETFs is ongoing.²⁶ However, as investment managers seek to offer crypto exposure to their clients, they must also remain compliant with their ESG mandates.

Because Bitcoin is the oldest, most popular, and largest crypto token by market cap, it is usually the first blockchain token investors consider. Bitcoin is also arguably the most fiercely debated. A May 2021 report by Galaxy Digital Mining estimated that the Bitcoin network's annual electricity consumption is 113.89 TWh/yr.²⁷ In comparison, Norway produced a record 154.2 TWh in 2020²⁸—a figure Bitcoin critics often cite to demonstrate the network's massive draw from the global energy supply. In reality, there are environmentalists on both sides of the Bitcoin debate. Bitcoin's appetite for low-cost electricity makes certain renewable energy opportunities profitable through energy arbitrage.²⁹ Furthermore, Bitcoin mining's energy mix may improve as China loses its leading share of global hashrate³⁰ and miners become increasingly cooperative in addressing ESG concerns through initiatives like the Bitcoin Mining Council.³¹

Beyond Bitcoin, numerous token projects seek to disrupt industries through fulfilling ESG criteria. Audius's decentralized music-sharing and streaming protocol is eliminating gatekeepers and costly barriers to entry for artists, leveling the playing field for artists and offering new monetization opportunities for governance token holders.³² Through oracle tokens like Chainlink, hybrid smart contracts enable new efficiencies in industries like finance, supply chain, identification, insurance, gaming, marketing, and governance.³³ Arbol's hybrid smart contracts offer parametric insurance to businesses facing weather risk, eliminating risks associated with insurance claims through transparency.³⁴ Similarly, Helium Network's blockchain creates incentives for individual investors to deploy wireless hardware, scaling IoT network infrastructure without need from incumbent networks like Verizon or AT&T.³⁵

CRYPTOCURRENCIES: THE FUTURE OF SUSTAINABLE INVESTING

The Future of Sustainable Finance

Over the previous decade, the popularity of ESG and cryptocurrencies have been growing in parallel. However, 2021 represents the first year that ESG considerations have been forefront in the cryptocurrency space. The relationship between ESG investing considerations and cryptocurrencies is dynamic and nuanced, with varying degrees of overlap across different blockchains and decentralized applications. Recently, environmental concerns surrounding cryptocurrencies have been met with widespread criticism, however, crypto's alignment with ESG considerations is deeper than energy usage might suggest.

How Crypto intersects with ESG

While cryptocurrencies often demonstrate strong social and governance characteristics, weakness in the environmental category has drawn recent criticism. The basis for this argument is the total energy use in proof-of-work networks, disregarding the energy mix and incentive to seek renewable sources.

Bitcoin is the largest proof-of-work cryptocurrency network, and has come under fire recently for its large energy usage. One might determine that Bitcoin's energy footprint is directly opposed to ESG goals, but this dynamic is more nuanced than it appears. While Bitcoin's total energy use is enormous, few critics will analyze the energy mix. It is estimated that Bitcoin's energy mix is at least 60%³⁶ from renewable sources. Further, the miner community that is consuming this energy is strongly incentivized to reduce energy costs. This drives miners to seek renewable sources, and sources that are subsidized and otherwise wasted, such as through natural gas flaring.

Relative to the banking industry, which consumes 263.7 TWh/year, Bitcoin's 113.9 TWh/year is less than half the consumption.³⁷ Investors who cannot appreciate this will find comfort in the use of novel token instruments that represent carbon credits as a portfolio construction tool. Further, proof-of-stake and similar non-proof-of-work models can provide exposure without the concerns for energy usage.

CRYPTOCURRENCIES: THE FUTURE OF SUSTAINABLE INVESTING

Cryptocurrencies align well with social and governance standards. Much of the technology is developed to specifically disintermediate rent-seeking middlemen, and provide unrestricted global access to software, financial services, and other products. This democratized access to goods and services is a core tenet of the social portion of ESG.

The open-source nature of blockchain software and the transparency of governance processes support strong adherence to ESG governance standards. Most blockchain networks discuss governance issues publicly within their communities, allowing anyone to participate, critique, and propose new ideas. From an ESG perspective, this is far superior to the closed-door governance approach of issuers in traditional markets.

Constructing a Crypto ESG Portfolio

Constructing an ESG portfolio in the cryptocurrency space is challenging due to nuance across the three ESG categories.

Under the **environmental** category, there are several investment approaches:

- Define exclusion criteria as proof-of-work, entirely excluding the universe of blockchains that consume significant amounts of energy to effect transactions.
- Determine that energy use in proof-of-work systems is acceptable if the energy is sourced from provably sustainable sources, and seek to buy virgin cryptocurrencies from sustainable miners, though typically at a premium
- Subordinate the drawbacks of total energy use to social and governance themes, opting to offset the carbon footprint of energy-intensive investments through the use of tokenized carbon credits

Social ESG themes are a bit more difficult to define in the context of cryptocurrencies. Social typically refers to the relationships between an entity and its community. In cryptocurrency, social aspects extend beyond these relationships in our view, encompassing the following:

- Scaling and interoperability investments seek to expand the reach of blockchain networks, improve their usability, and broaden their applicability. The success typically depends on the potential shared benefits to a number of involved communities.

CRYPTOCURRENCIES: THE FUTURE OF SUSTAINABLE INVESTING

- Social impact investments focus on driving current and potential positive effects for people and communities, typically by disintermediating restrictive centralized bodies.
- Financial inclusion is another social theme in cryptocurrencies. As decentralized finance applications deliver financial services on a permissionless and immutable basis, access to banking and financial instruments can drive benefits for underbanked communities.

Governance in traditional ESG investments typically refers to board composition and transparent decision-making. In cryptocurrencies, governance tokens allow communities to vote on decisions.

- Cryptocurrencies have exceedingly transparent and fair governance processes, allowing users to vote on issues.
- These issues are discussed publicly on forums where anyone can participate.
- Novel governance approaches, such as quadratic voting, further democratize governance by reducing the influence of larger holders.

FUTURE OPPORTUNITIES

Blockchain technology is modeling the future of sustainable corporate infrastructure. Through blockchain, individuals and corporations worldwide have an opportunity to optimize their processes with the trustless, efficient, and sustainable solutions that blockchain provides. As the world tests out the most elementary use cases for blockchain technology, from optimizing supply chains, removing intermediaries, and cutting costs, to bringing universal access to financial instruments and entertaining more equitable and fair governance structures, the best of this technology is yet to come. As the future of global affairs leans toward reliance on blockchain technology, the future of ESG investing is heavily intertwined with the progress that crypto will make to support a more sustainable and equitable future.

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