Future of finance

Bitcoin ETFs: A new era of access

How traditional finance and the bitcoin ecosystem evolved to enable mainstream investor access to bitcoin

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Mega forces

Demographic divergence | Digital disruption and AI | A fragmenting world | **Future of finance** | Low-carbon transition

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Executive summary

The investing industry has arrived at an historic moment: the introduction of spot bitcoin exchange-traded funds in the U.S. This development has enabled increased mainstream access to bitcoin, a notable evolution from its beginnings as a niche internet-native form of money.

In this paper, we explore the significant shifts in investor interest, industry infrastructure, and the regulatory environment that have brought us to this moment, and the implications ahead for investors.

Key takeaways

- The launch of spot bitcoin ETFs in the U.S. represents a scalable bridge from traditional finance into bitcoin, helping to broaden access to bitcoin for mainstream investors.
- Bitcoin's characteristics as a store of value and its potential to reimagine payment methods, even while exhibiting volatility, have helped it become the most widely adopted cryptoasset and the first form of internet-native money to gain broad global adoption.
- Three shifts have taken place to create the conditions for this moment:

  1. Global forces have accelerated interest
  2. Bitcoin's ecosystem infrastructure has developed
  3. The regulatory atmosphere has evolved as policymakers in numerous jurisdictions enact or consider regulatory and other policy changes to more directly address aspects of the digital asset ecosystem.

- These shifts have helped enable the launch of spot bitcoin ETFs in the U.S. We believe that for many investor types, the ETF could represent the preferred holding vehicle for bitcoin and this launch represents a new era that will be characterized by more choice and convenience.
- Bitcoin's exact path is unknown, but we believe this enhanced access, catalyzed by the convenience of U.S. ETFs, may further boost bitcoin's adoption as a potential store of value by a wider investing audience.

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Introduction

Bitcoin's story has been one of innovation and growth. The world's leading cryptoasset has been on a journey since its launch 15 years ago, rising in terms of access, use cases, and market value, to become the most widely adopted digital asset, holding over 50% of the $1.7 trillion market.[1]

Now, with the launch of spot bitcoin exchange-traded funds in the U.S., mainstream access across more investor archetypes is opening up to an asset that was once considered a niche financial technology. We believe that these increased access points via the convenience and utility of ETFs give more choice to investors, and, potentially, bolster bitcoin's place in the future financial system as an alternative store of value.

Bitcoin has been culturally relevant for years, giving rise to memes and attracting, at first, a fringe investor base, often made up of younger adopters, who are comfortable transacting their lives in an increasingly digital way. The world's population, in many parts, is skewing younger, and the Millennial and Gen Z generations are now an increasingly significant part of the workforce and more predominant in the investing world, as both self-directed and institutional investors. As investors and adopters, they are increasingly interested in bitcoin.

At the same time, there has been an acceleration of growth in the digital asset ecosystem, leading to more adoption by a broader group of investors. This widening group includes institutional investors.

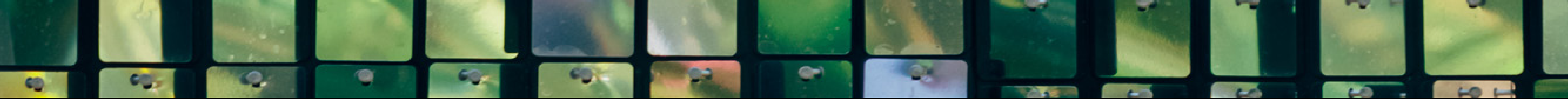
1 CoinGecko, as of Dec. 31, 2023. Bitcoin predominance based on its market cap of $860 billion, which accounts for 51% of the $1.7 trillion total market cap of all cryptoassets, excluding stablecoins.

The industry now stands at this historic moment. Access to bitcoin is broadening through the introduction of spot bitcoin exchange-traded funds (ETFs), which are helping to bridge traditional finance with bitcoin. This is quite an evolution from bitcoin's beginnings as a niche technology. But how did we get to this point? What has changed in bitcoin and the traditional finance world to enable access to bitcoin in the ETF wrapper? And what does this mean for bitcoin and investors?

None of this has happened by accident. We believe three shifts have combined to create the conditions for spot bitcoin ETFs to launch:

1. Global forces that have accelerated investor interest
2. The development of ecosystem infrastructure
3. Evolution in the regulatory atmosphere

In this paper, we will discuss these shifts, bitcoin's journey as an asset, what a new era of access, choice, and convenience could mean for investors, and what unique bitcoin attributes to consider for those weighing portfolio allocation.



Understanding bitcoin's breakthrough

Before considering what the future may hold for bitcoin, it's important to first understand its significance. The idea of digital money has been around for decades; it was a known, missing component of early internet browsers. The internet provided information connectivity, but what was missing was payments. Previous attempts to create digital money lacked community adoption, were ahead of their time, or didn't have the right architecture.

When bitcoin was launched on Jan. 3, 2009, it represented a confluence of decades of research in ideas across computer science, cryptography, and peer-to-peer networks. The resulting breakthrough was the first successful implementation of a decentralized digital asset in which transactions can be conducted directly between two parties without the need for an intermediary, anywhere in the world.

As such, bitcoin brought forth for the first time an asset that was digitally native, global, scarce, decentralized, and resistant to censorship. Since then, several factors have driven the adoption of bitcoin, including its characteristics as a store of value, and its potential to reimagine payment systems for a global audience, even while it has exhibited volatility. The properties enabled by bitcoin are notable in the context of certain long-standing challenges (many centuries-old) that money and payment systems have faced.

Transacting across jurisdictions

The evolution of money reflects progressively more efficient mediums of exchange with which to transact. Today, the world's domestic payment systems are increasingly digital and efficient; yet the challenges of transacting across borders – the bridging of different currencies and banking networks – remain substantial. Users of today's system still incur significant frictions, cost, and time delays to move money.

Meanwhile, bitcoin and its blockchain-based framework brought forth for the first time the possibility of a global "internet of value," where assets can be moved frictionlessly at low cost, in near real-time.

Fixed supply not subject to inflation

Government-issued fiat currencies have become the *de facto* global standard on which the world's monetary system runs. While this type of money has many advantages, including its ability to handle immense transaction volumes at speed and scale, it comes with the drawback that its supply can be arbitrarily increased. Throughout history, when fiscal challenges arise, governments have often used this flexibility to increase the supply of money as a more palatable alternative to directly raising taxes on the population. But this "indirect taxation" can carry a significant economic cost to savers to the extent it produces inflation.

Bitcoin's technological design enables its maximum supply to be fixed in its code at 21 million units, of which 19.6 million are already circulating.[2]

2 Bitcoin White Paper "Bitcoin: A Peer-to-Peer Electronic Cash System" (2008), and CoinGecko, as of June 2023. Forward looking estimates may not come to pass. There is no guarantee that the current 21 million supply cap for outstanding bitcoin, which is estimated to be reached by approximately the year 2140, will not be changed. **Past performance does not guarantee future results.**

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While scarcity of a particular asset on its own is meaningless, the network effects from bitcoin having gained significant adoption as the clear preeminent cryptoasset make its scarcity relevant – analogous to how gold commands a monetary premium in ways other metals do not.[3]

An open access financial system

Bitcoin is available to anyone with a mobile phone and an internet connection. Its open access nature means that bitcoin can help enable more people to participate in the global financial system who may not have full access to traditional banking networks, or who are limited by their own country-specific infrastructure. This is important as there are approximately 1.4 billion people globally who do not have access to a bank account, despite there being a larger number of phones than people in the world.[4]

For citizens of countries with authoritarian regimes or perennially unstable currencies, access to a global, permissionless monetary network can represent a critical protector of economic freedom and independence.

3 Boston Consulting Group ("What does the future hold for crypto exchanges"), as of July 2022. The report estimates there are 400 million crypto users worldwide, measured by analyzing on-chain data from Bitcoin, Ethereum, and other blockchains assuming all on-chain users own some crypto. **4** World Bank, Global Findex Database, 2021. Worldwide account ownership was 76% in 2021, leaving 24% of the world's adults, or 1.4 billion, without access to accounts at banks or other financial institutions; Statista (with data from International Telecommunication Union, World Bank, UN Population Division), April 3, 2023, reports there were an estimated 8.59 billion cellular phone subscriptions worldwide in 2022, and the population was estimated at 7.95 billion.

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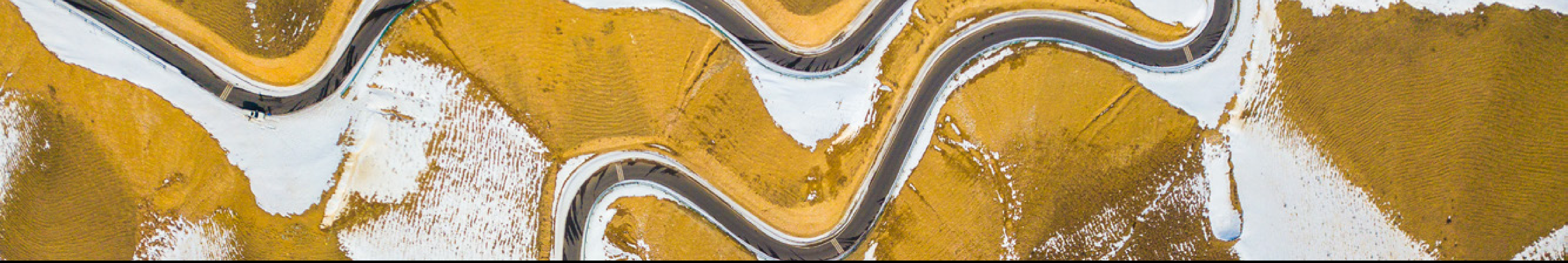

How we got to this moment

A new era of access to bitcoin through ETFs is now unfolding. In our view, three significant shifts have taken place to create the conditions for this moment.

Global forces accelerate interest

As the world changes, particularly in the post-COVID-19 era, we believe several global, interrelated, long-term trends, or mega forces, have been and will continue to elevate bitcoin's appeal and drive this accelerated adoption.

Rise in global inflation: Central banks around the globe responded to the COVID-19 pandemic by using monetary stimulus to cushion the economic shock. This increase in the money supply, combined with fiscal stimulus and supply-side pressures, contributed to a spike in inflation across much of the world, to levels not seen since the 1980s. Bitcoin's rigid monetary supply, against this backdrop, became viewed as a haven to a larger number of investors, and its price surged 10-fold from April 2020 to November 2021, where it reached an all-time high of over $67,000.[5]

Geopolitical uncertainty: Globalization is being rewired as the world splits into competing blocs, and wars continue in Europe and the Middle East. In recent history, bitcoin has tended to appreciate when geopolitical disorder rises because it is viewed as an asset insulated from country-specific risks.[6]

Banking and fiscal concerns: In March 2023, the U.S. regional banking crisis saw a period of concerns over the soundness of the U.S. banking system. Bitcoin exists outside the system, and its price jumped 29% during that crisis.[7] Later in 2023, renewed focus on the U.S.'s fiscal situation, amplified, separately, by the return of debt ceiling negotiations, caused increasing focus on bitcoin as an asset whose value tends to move inversely to the U.S. dollar.[8]

Future of finance: The future of finance represents a fast-evolving financial architecture that is changing how households and companies use cash, borrow, transact, and seek returns. Additionally, digital disruption is heightening interest in digital assets and creating new use cases across industries.

Demographic divergence: Younger populations and the middle class are expanding in selected emerging economies around the world. Younger people are more likely to be considered 'digital natives' (that they grew up with the internet) and their lives are more virtual than older generations. They live with frictionless, instantaneous technology and global communication, but money as a technology has been a laggard. Millennial and Gen Z investors are now more likely to own crypto than mutual funds, equities, or ETFs.[9]

5 Bloomberg Bitcoin Spot Price: Bitcoin traded at $6,351 in April 2020 and rose to $67,734 in November 2021. **Past performance does not guarantee future results.**
6 Bloomberg Bitcoin Spot Price: Bitcoin's price appreciated 28% one month after US tension with Iran, from Jan. 3, 2020 to Feb. 3, 2020. Bitcoin's price appreciated 15% in the month after the Ukraine war began, from Feb. 2, 2022 to March 2, 2022. **Past performance does not guarantee future results. 7** Bloomberg Bitcoin Spot Price: Bitcoin's price rose 29% from $22,006 on March 8, 2023, to $28,395 on March 30. **Past performance does not guarantee future results. 8** Based on Bloomberg Spot Price DXY and BTC: Bitcoin has had a correlation of -0.19 on average over the last three years (Jan. 2020-Jan. 2 2024). **9** CFA Institute report "Gen Z and Investing: Social Media, Crypto, FOMO, and Family," May 2023.

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Bitcoin's pace of adoption has been faster than that for mobile phones and the internet – two innovations that have sparked significant societal evolution.

Adoption of cryptoassets has outpaced growth for mobile phones and the internet

Time to adoption by 300 million users

1 The first cellular mobile phone was used in 1973. Source: NPR, Our World in Data. **2** January 1, 1983 is considered the official birthday of the internet. Source: University System of Georgia, Our World in Data. 3. Initial price of bitcoin set in 2010. Source: Bloomberg, Cambridge Center for Alternative Finance, Crypto.com.

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Development of ecosystem infrastructure

As interest in bitcoin has expanded, the ecosystem infrastructure and nature of service providers has evolved to create industry practices and standards that helped enable many institutions to participate at scale. This transformation has been catalyzed in part by the entrance of institutional investors.

Venture capital: There has been significant investment in crypto, and digital assets more broadly, with over $30 billion in venture capital flowing into the ecosystem in both 2021 and 2022.[10] Funding has been shifting away from user-facing applications and toward crypto infrastructure.[10] Alongside this has come an inflow of human capital as experienced leaders from traditional finance and technology have joined the industry in large numbers.

Trading: Bitcoin trading infrastructure has improved significantly to better meet the needs of institutional players. This includes the development of prime brokerage solutions, advanced algorithmic trading strategies, and other operational tools which have enhanced liquidity and quality of execution. For example, Coinbase, founded in 2012, has become the largest publicly traded crypto company in the world, with a broad range of service offerings across institutionally critical functions such as trading, prime brokerage, and custody.[11]

Custody: The funding and infrastructure improvements have helped bolster custody, transparency, and security – critical infrastructure given the unique security challenges associated with digitally native bearer assets. There has been a proliferation in the number of dedicated institutional “cold” storage custody platforms, in which bitcoin is kept offline and maximally safe. Several of the world’s largest traditional custodians have or are developing their own bitcoin custody capabilities. Additionally, auditing firms are now able to provide proper institutional oversight.

10 Messari State of Crypto Fundraising Report, Oct. 2023. **11** Coinbase Public Filings, as of Sept. 30, 2023. Coinbase is the world’s largest publicly traded crypto firm with $114B in assets on the platform.

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Regulatory evolution

As investor interest increased and infrastructure evolved, policymakers began assessing their existing financial regulatory frameworks to determine whether they provided adequate oversight of digital assets to ensure robust market participant protections while also allowing for growth and development of the asset class. This assessment, which has gained momentum in recent years, has led some jurisdictions to develop new or modified regulatory frameworks for digital assets to address the unique way the assets are issued, custodied, and traded.

Earlier in bitcoin's journey there were attempts to ban digital assets such as bitcoin in certain countries.[12] But by and large, regulators and governments have recognized that bitcoin and digital assets represent a technology innovation that is likely here to stay, and that need effective regulation to protect investors and markets. This shift in thinking has prompted some regulatory evolution, notably in the European Union and in certain U.S. states. Despite the progress and direction of travel, the process of establishing a full regulatory framework remains a work-in-progress. Countries are focused on how to create new, and or tailor existing, regulatory frameworks, just as they do for other parts of the financial system and other emerging technologies.

- The European Union will become the first major jurisdiction with a comprehensive crypto framework, the Markets in Cryptoassets (MiCA) licensing regime, when it takes effect at year-end 2024.[13]

- In the U.S., the BitLicense implemented by the state of New York and overseen by the New York State Department of Financial Services has become an important regulatory baseline for many companies operating in this space. At the federal level, there have been efforts in Congress on a bipartisan basis to create measures aimed at regulating and providing greater market structure to the digital asset industry, though none have been enacted as yet.

- Regulation is encouraging development of digital assets infrastructure in places such as Singapore, Switzerland, United Arab Emirates, and Hong Kong.

Addressing illicit finance concerns related to bitcoin is a critical focus of both regulators and digital asset market participants. While bitcoin is a notably imperfect vehicle for illicit actors because of the public nature of the digital transaction history the blockchain leaves, it is still used in various contexts for certain types of illicit activity today. While digital assets are already subject to anti-money laundering restrictions, as adoption grows we expect that regulators, law enforcement, and the industry will work together to effectively deploy additional capabilities enabled by blockchain analytics so that it will become progressively more difficult to use crypto for illicit activities.

12 China, Qatar, and Saudi Arabia have bans on trading cryptoassets. India's banking system prohibited its financial services entities from facilitating the sale and purchase of cryptocurrencies in 2018, but the country's Supreme Court ruled the prohibition was unconstitutional in 2020. PricewaterhouseCoopers report "PwC Global Crypto Regulation Report" published Dec. 19, 2022. **13** Associated Press article "Crypto rules get final approval to make Europe a global leader on regulation," May 16, 2023, European Parliament Briefing: "Markets in Crypto-Assets (MiCA)", Sept. 9, 2023.

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Key ecosystem milestones

Oct. 2008
Satoshi Nakamoto publishes white paper "Bitcoin: A Peer-to-Peer Electronic Cash System"

Jan. 2009
Bitcoin launches

July 2013
First proposal for a spot bitcoin ETF goes to Securities and Exchange Commission (SEC)[1]

Sep. 2015
U.S. Commodity Futures Trading Commission (CFTC) classifies bitcoin a commodity[11]

Sep. 2015
New York State Department of Financial Services (NYSDFS) approves first "BitLicense" application. The license, the first of its kind, placed regulations on state users of cryptocurrencies[12]

Dec. 2017
Cboe, CME launch first bitcoin futures contracts[2]

Feb. 2018
Robinhood allows users in select U.S. states to trade bitcoin, ether on platform[3]

July 2020
Office of the Comptroller of the Currency (OCC) issues guidance confirming national banks, federal savings associations may provide banking services to crypto companies[13]

Jan. 2021
Estimated global crypto users passes 100M[4]

Feb. 2021
BNY Mellon announces plans to offer crypto custody[5]

Apr. 2021
Coinbase IPOs, becoming first publicly listed cryptocurrency exchange in U.S.[6]

Oct. 2021
First bitcoin futures ETF launches in U.S.[14]

Dec. 2021
Annual crypto venture funding exceeds $30B for first time[7]

Jan. 2022
Estimated global crypto users passes 300M[4]

Aug. 2022
BlackRock announces Aladdin partnership with Coinbase[9]

Aug. 2022
BlackRock launches private bitcoin trust[8]

May 2023
EU legislators agree on the crypto framework known as Markets in Crypto Assets, or MiCA[15]

June 2023
Charles Schwab, Citadel, Fidelity partner to launch crypto exchange EDX Markets[10]

Jan. 2024
First bitcoin ETFs launch in U.S.[16]

2008 2009 2013 2015 2017 2018 2020 2021 2022 2023 2024

- **Industry evolution**
- **Regulatory changes**

1 SEC Archives: Winklevoss Bitcoin Trust, S-1, July 1, 2013. **2** Cboe news release "Cboe Bitcoin Futures (XBT) Close First Day of Trading" Dec. 11, 2017; CME Group news release "CME Group Self-Certifies Bitcoin Futures to Launch Dec. 18" Dec. 1, 2017. **3** Coindesk "Investing App Robinhood Launches Crypto Trading in 5 US States" Feb. 22, 2018. **4** Crypto.com **5** BNY Mellon news release "BNY Mellon Forms New Digital Assets Unit to Build Industry's First Multi-Asset Digital Platform" Feb. 11, 2021. **6** New York Times "Coinbase's Public Listing Is a Cryptocurrency Coming-Out Party" April 15, 2021. **7** Messari State of Crypto Fundraising Report, Oct. 2023. **8** Reuters "BlackRock launches spot bitcoin private trust for U.S. clients" Aug. 11, 2022. **9** Financial Times "Coinbase forges deal to give BlackRock clients access to crypto" Aug. 4, 2022. **10** EDX Markets news release "Digital Asset Platform EDX Markets Begins Trading and Completes New Funding Round" June 20, 2023. **11** CNBC "Bitcoin now classed as a commodity in the US" Sept. 18, 2015. **12** NYDFS news release "NYDFS Announces Approval of First Bitlicense Application From a Virtual Currency Firm" Sept. 22, 2015. **13** OCC news release "Federally Chartered Banks and Thrifts May Provide Custody Services For Crypto Assets" July 22, 2020. **14** CoinDesk "SEC Approves Bitcoin Futures ETF, Opening Crypto to Wider Investor Base" Oct. 15, 2021. **15** Associated Press article "Crypto Rules Get Final Approval to Make Europe a Global Leader on Regulation" May 16, 2023. **16** Bloomberg "Bitcoin ETFs Take Wall Street by Storm With Historic Debut" Jan. 11, 2024.

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Bitcoin's uneven journey

Throughout bitcoin's journey, its value has increased over extended time horizons – even as its volatility garnered headlines. In all, bitcoin has experienced four major price cycles. Corrections from cycle peaks have typically been severe, and yet in each cycle the trough at its conclusion has been higher than the prior cycle's peak.

Looking at the past 10 years, bitcoin has exhibited annualized returns of 124%, with a disproportionate number of extreme positive return periods, where large price increases significantly outweighed price drawdowns.[14] Bitcoin has outperformed all major asset classes on an annualized return basis over the last 10 years, despite three significant bear markets, while gold has annualized returns of 2% over the same period. Certain sectors and markets perform exceptionally well based on current market conditions. Achieving such exceptional returns involves the risk of volatility and investors should not expect that such results will be repeated.

14 Bloomberg, BlackRock calculations as of Jan. 2, 2024. Bitcoin returns and drawdowns calculated using Bloomberg Bitcoin Spot Price. **Past performance does not guarantee future results.**

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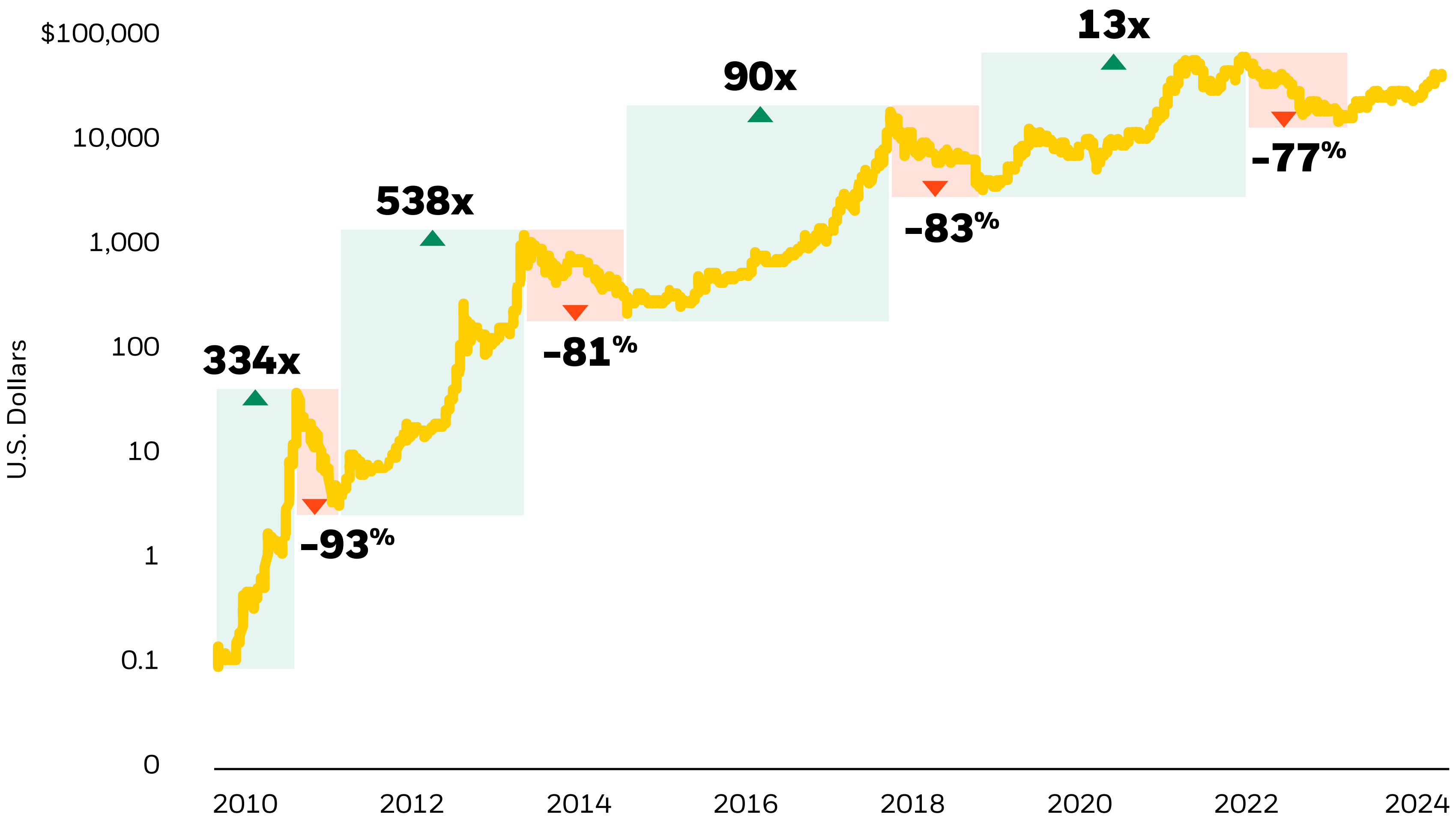
Long-term price history

Bitcoin price since inception[1]



Total length (months)

163

Since inception return

531,348x

Past performance does not guarantee future results. As illustrated by Bloomberg Spot Bitcoin Prices and BlackRock calculations, there have been four price cycles in bitcoin's history. Bitcoin price cycle is defined as a period in which the price of bitcoin reached a new all-time high and was followed by a correction ending at its max drawdown. **1** The Inception date of this analysis is July 18, 2010, which is the date the bitcoin exchange Mt. Gox launched. Sources: CoinDesk, Bloomberg, as of Dec. 31, 2023. Note: dollar values shown are USD.

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Bitcoin has outperformed all major asset classes in many years, while underperforming in others

Bitcoin performance compared with other select major asset classes.[1]

Returns for 2013-2023 Period, %

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Cumulative return	Annualized return
BTC 5,516%	SPX 12%	BTC 37%	BTC 119%	BTC 1,300%	AGG 0%	BTC 92%	BTC 302%	BTC 58%	CMT 20%	BTC 156%	BTC 315,678%	BTC 124%
SPX 26%	AGG 5%	AGG 0%	HY 17%	EM 35%	HY -2%	SPX 29%	Gold 24%	CMT 30%	Gold 1%	SPX 25%	SPX 226%	SPX 13%
HY 6%	HY 2%	SPX -1%	EM 15%	SPX 18%	Gold -3%	EM 21%	SPX 15%	SPX 29%	HY -11%	HY 12%	HY 64%	HY 5%
AGG -1%	EM 1%	HY -4%	CMT 14%	Gold 12%	SPX -7%	Gold 18%	EM 14%	HY 5%	AGG -12%	Gold 12%	EM 35%	EM 3%
EM -3%	Gold -3%	Gold -11%	SPX 11%	HY 7%	CMT -9%	HY 14%	AGG 7%	EM 0%	EM -18%	EM 9%	Gold 18%	Gold 2%
CMT -9%	CMT -18%	EM -14%	Gold 7%	CMT 6%	EM -15%	CMT 10%	HY 7%	AGG -1%	SPX -20%	AGG 5%	AGG 17%	AGG 2%
Gold -29%	BTC -58%	CMT -25%	AGG 2%	AGG 3%	BTC -73%	AGG 8%	CMT -3%	Gold -6%	BTC -65%	CMT -2%	CMT -4%	CMT 0%

Past performance does not guarantee future results. Index performance is for illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Certain sectors and markets perform exceptionally well based on current market conditions and iShares and BlackRock Funds can benefit from that performance. Achieving such exceptional returns involves the risk of volatility and investors should not expect that such results will be repeated. Index performance does not represent actual Fund performance. For actual fund performance, please visit www.iShares.com or www.blackrock.com.

1. Source: Bloomberg, BlackRock calculations, as of Dec. 31, 2023. Asset classes shown include major liquid asset classes available to U.S. investors. Bitcoin returns calculated using Bloomberg Bitcoin Spot Price. SPX is represented by the S&P 500 Total Return Index (USD). EM is represented by the Dow Jones Emerging Markets Total Return Index (USD). AGG is represented by S&P U.S. Aggregate Bond Index. HY is represented by S&P U.S. High Yield Corporate Bond Index. Gold is the 1oz spot price of gold from Bloomberg. CMT is represented by Dow Jones Commodity Index. Certain sectors and markets perform exceptionally well based on current market conditions and iShares and BlackRock Funds can benefit from that performance. Achieving such exceptional returns involves the risk of volatility and investors should not expect that such results will be repeated.

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Bitcoin's growth can be traced to cycles powered by unique sets of adopters as interest in bitcoin and access to it grew.

1st Cycle 2010–2011

Niche, known by early pioneers attracted to its technology and ideological implications.

Bitcoin price
Peaks at $30, market cap reaches $187 million.

2nd Cycle 2012–2015

Community of technologists notice, adopt, develop early infrastructure for bitcoin. First bitcoin exchange (Mt. Gox) launches; its collapse precipitates the end of this bull cycle.

Bitcoin price
Peaks at $1,137.

3rd Cycle 2016–2018

Steady rise in mainstream awareness and network activity causes price to appreciate, meaningful number of investors start to adopt bitcoin; this cycle collapses when over-exuberant speculation activity proves premature.

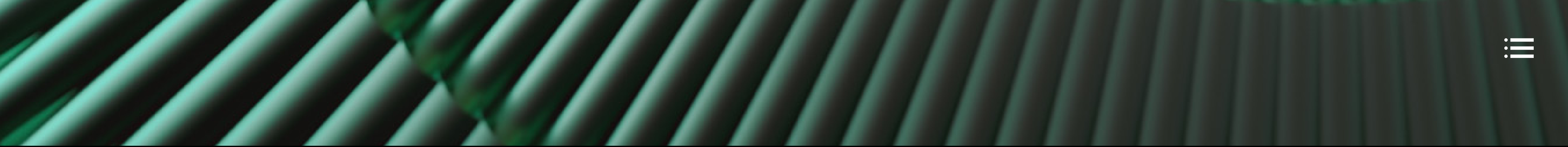
Bitcoin price
Peaks at $19,041.

4th Cycle 2019–2022

Adopted by retail investors in over 150 countries; the first institutional investors add bitcoin to their portfolios. A series of high-profile collapses, including FTX, which had been the world's second-largest crypto exchange, precipitate a severe correction.

Bitcoin price
Peaks at $67,734, market cap reaches $1.26 trillion.

Source Bloomberg Bitcoin Spot Price, Dec. 31 2023. Bitcoin market cap according to CoinGecko, Dec. 31 2023.



Bitcoin ETFs usher in new era of access

Shifting from niche adopters to a global scale, bitcoin has arrived at this moment of expanded access through the launch of spot bitcoin ETFs in the U.S. We believe that for many investor types, the ETF could represent the preferred holding vehicle for bitcoin, and that this era will be characterized by more access, choice, and convenience, all of which may benefit investors.

Access: The introduction of spot bitcoin ETFs expands investor access due to the very nature of these investment vehicles. In their 30-year history, ETFs have emerged as a trusted technology to provide investors efficient access in one standard wrapper to all kind of markets, asset classes, and regions. ETFs enable choice and they are transparent. Spot bitcoin ETFs, in particular, can make bitcoin more accessible by helping to reduce the complexities and operational burdens involved in owning bitcoin outright, including managing custody and often complex tax dynamics. ETFs also mean more types of accounts can hold the investment, from individual retirement brokerages to large institutional accounts. The broader availability of spot bitcoin ETFs means investors may be able to see bitcoin integrated into their holdings. This is important because investors are increasingly seeking whole portfolio solutions to view their asset allocations and risk holistically.

Transparency & Liquidity: ETFs, over time, have historically improved markets by increasing price transparency to the underlying asset classes and adding a new avenue of liquidity through the trading of ETFs on traditional exchanges. In this way, ETFs, in our view, may help expand the bitcoin trading ecosystem by bringing in a new liquidity dimension. ETFs may also act as "shock absorbers" during volatile trading sessions as buyers and sellers transact on the exchange, at real-time prices, without having to trade the underlying assets.

We believe this expanded access through ETFs may be meaningful in the evolution of bitcoin and may further solidify its dominance vis-à-vis the rest of the crypto space.

Unique Attributes: The combination of access, transparency, and liquidity via ETFs may prompt more investors to evaluate bitcoin as a prospective investment. We believe allocation decisions, including whether to invest at all and in what proportion, will vary widely across investors and investor archetypes based on individual preferences and circumstances.

We expect many investors will take attributes such as volatility, correlation, and skewness into portfolio allocation considerations:

- **Volatility:** Bitcoin has seen significant fluctuation in its price levels. From 2016 to 2023, bitcoin's one-year trailing price volatility ranged from 41% to 109%.[15] Its price volatility still remains elevated compared with other assets but has tended to decline gradually over time as its value has increased, with volatility halving from over 85% at the end of 2018 to 44% at year-end 2023.[16]

- **Correlation:** Bitcoin's correlation has varied over time from negative values to strong positive values depending on which macro forces are most active in driving asset prices. On a long-term average basis, bitcoin has maintained a low correlation to equities, similar to that of gold, with an average correlation of 0.2 since 2015.[17]

- **Skewness:** Bitcoin has historically exhibited significant asymmetric returns, or positive skewness. Over the last decade, bitcoin's returns exceeded 30% in 21 months, far exceeding the six months when bitcoin prices fell by more than 30%.[17] For comparison, monthly returns of the S&P 500 only exceeded 10% twice in the last decade.[17] There is no guarantee that this trend will continue.

15 Bloomberg, BlackRock calculations, as of Dec. 31, 2023, taking percent daily change in Bloomberg Bitcoin Spot Price and calculating the one-year trailing standard deviation, which is the annualized volatility of the fund's monthly net asset value (NAV) total returns over a specific time period. **16** S&P Global data as of Dec. 21, 2023: Bloomberg Bitcoin Spot Price volatility compares with the volatility of the S&P 500 (volatility less than 16% in 2023), and SPDR Gold Shares ETF (GLD), which had volatility of 13% over the same period. Bloomberg, BlackRock calculations, Dec. 31, 2023, comparing Bloomberg Bitcoin Spot Price volatility on the last date for each year. **17** Bloomberg, BlackRock, Average correlation of Bloomberg Bitcoin Spot Price and S&P 500 was 0.2 from April 2015 through Dec. 31, 2023.

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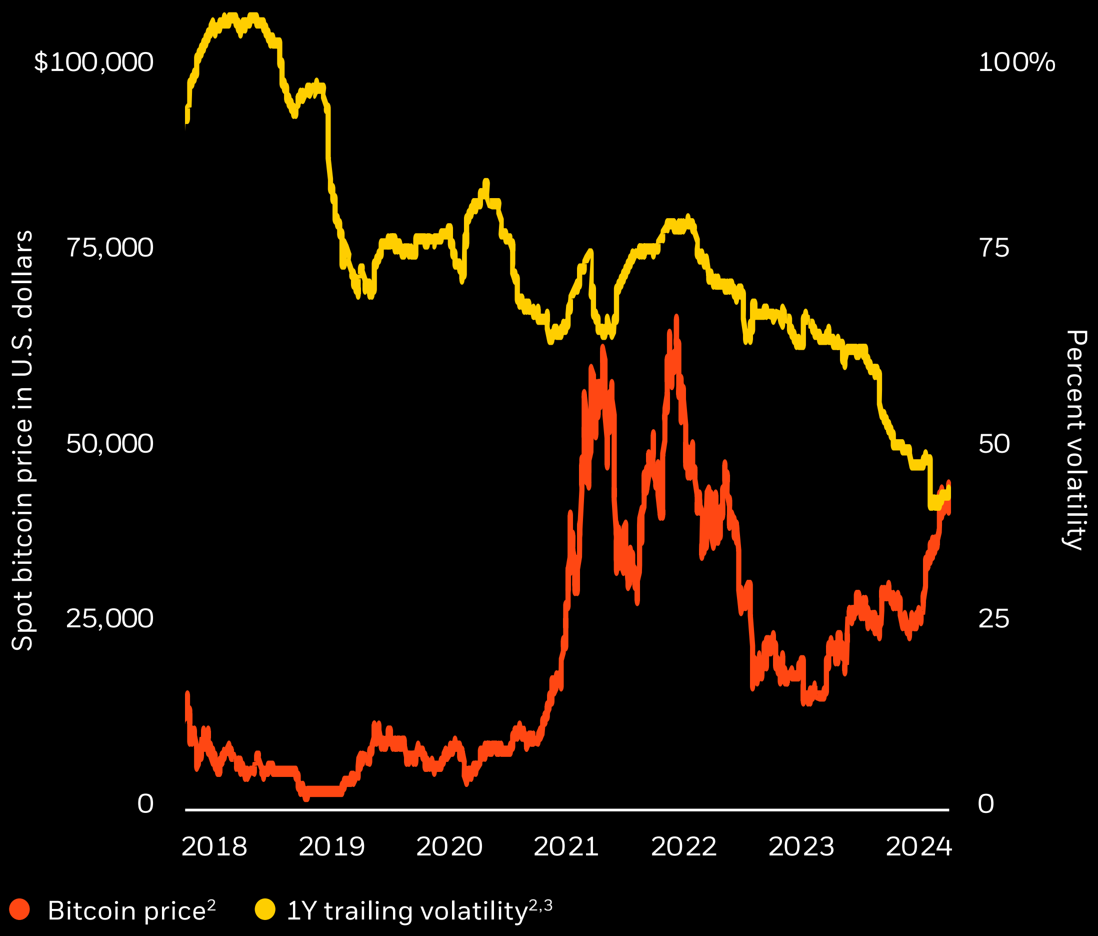
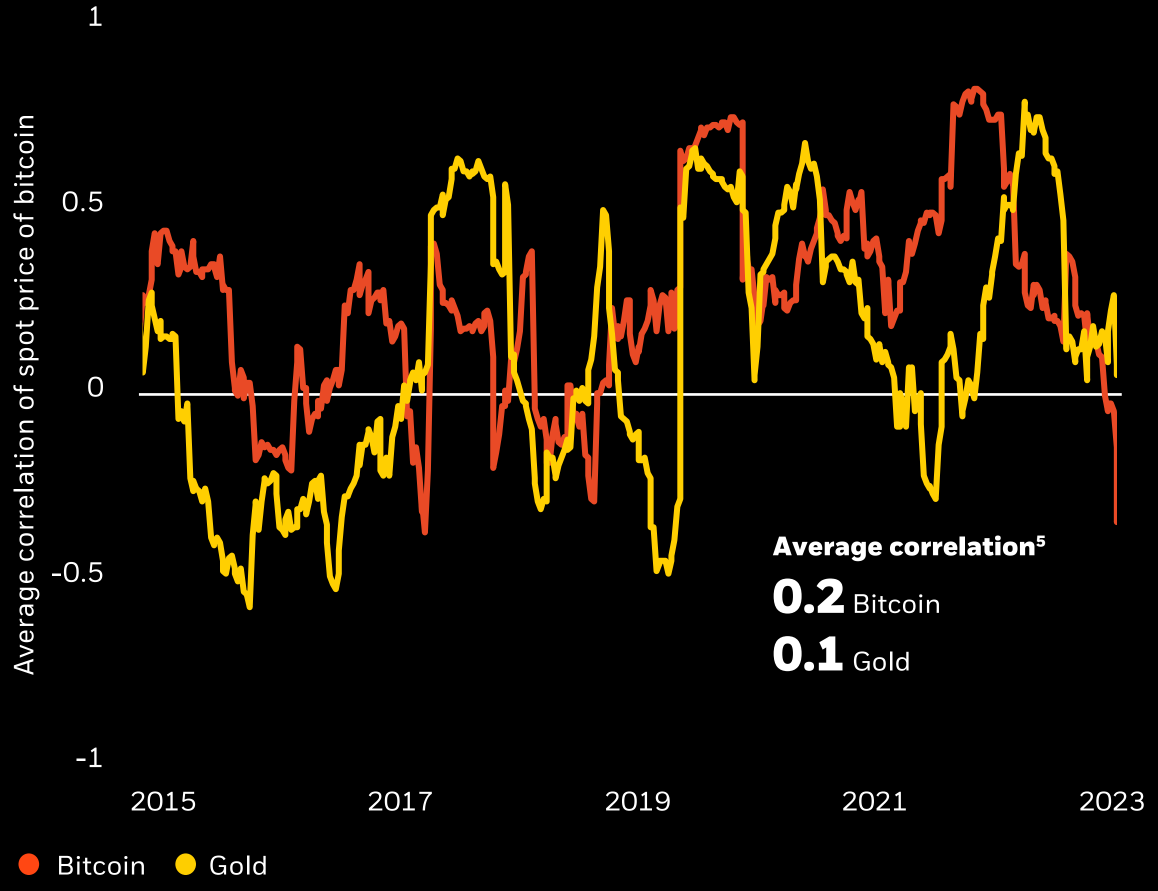
Bitcoin's volatility has declined as its value has increased, but remains elevated[1]



Bitcoin has generally exhibited a low historical correlation with stocks, similar to gold

Trailing 6-month S&P 500 correlation[2,4]



Past performance does not guarantee future results. Index performance is for illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. 1. Start date reflects inception of CME bitcoin futures in the U.S. 2. Source: Bloomberg Bitcoin Spot Price, as of Dec. 31, 2023. 3. BlackRock calculations of one-year trailing volatility. This represents the dispersion of spot bitcoin prices from Bloomberg around the mean over a one-year period. 4. 6-month trailing correlation of bitcoin and gold returns with S&P 500 returns. Source: Bloomberg Gold Spot Price, S&P Global, and BlackRock calculations. 5. Average correlation with the S&P 500 over the period displayed (April 30, 2015 to Dec. 31, 2023). Correlation is a statistical measures that assesses the degree to which two variables are interconnected and quantifies the strength and direction of the relationship.

Conclusion

Bitcoin's journey may be just beginning. Uniquely amongst cryptoassets, the infrastructure and investor recognition around bitcoin is now in place to support bitcoin on a broader scale following significant shifts in recent years, coinciding with the opening of mainstream access to this asset. Major forces are boosting adoption, from increasing geopolitical tension to the rise of digital natives. Now this new era is widening mainstream access to bitcoin via ETFs. Although the exact path bitcoin takes is unknown, we believe this enhanced access, catalyzed by the convenience of ETFs, may further boost bitcoin's adoption as a potential store of value by a wider investing audience.

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Glossary

Bitcoin: Can refer to both the asset and the network protocol.

- **The protocol, Bitcoin,** processes transactions and maintains the ledger via a distributed system of computers and nodes.
- **The asset, bitcoin,** is the native token on the Bitcoin network and the world's leading and most widely adopted cryptoasset. It is mined, stored, and transferred on a peer-to-peer network via a public ledger, the blockchain.

Blockchain: A distributed digital database that is shared amongst the nodes of a network of computers that enables consensus. As a database, a blockchain stores information, maintaining a secure and decentralized record of transactions. The core innovation of blockchain technology is focused on the fidelity and security of a record of data while minimizing trust amongst participants.

Cryptoassets, or cryptocurrencies, or crypto: These are considered digitally native assets because they are issued on a blockchain. What makes them unique is that they utilize cryptography, peer-to-peer networking, and a public ledger that is amended via consensus to regulate the generation of new units, verify the transactions, and secure the records of ownership without reliance on an intermediary.

Digital assets: An umbrella term that refers primarily to cryptoassets, stablecoins, and financial assets issued as tokens on a blockchain.

Stablecoin: A stablecoin is a cryptoasset pegged to a stable source of value, typically a currency or commodity.

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All dollar amounts shown are in US dollars.

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Investing in digital assets, such as bitcoin, involves significant risks due to their extreme price volatility and the potential for loss, theft, or compromise of private keys. The value of the shares is closely tied to acceptance, industry developments, and governance changes, making them susceptible to market sentiment. Digital assets represent a new and rapidly evolving industry, and the value of the Shares depends on the acceptance of bitcoin. Changes in the governance of a digital asset network may not receive sufficient support from users and miners, which may negatively affect that digital asset network's ability to grow and respond to challenges. A disruption of the internet or a digital asset network, such as the Bitcoin network, would affect the ability to transfer digital assets, including bitcoin, and, consequently, would impact their value.

Companies that are involved in the development, innovation, and utilization of blockchain and crypto technologies are subject to a number of risks: the technology is new and many of its uses may be untested; intense competition; slow adoption rates and the potential for product obsolescence; volatility and limited liquidity; loss or destruction of keys to access accounts or the blockchain; reliance on the internet; cybersecurity risks; and the lack of regulation and the potential for new laws and regulation that may be difficult to predict. In addition, blockchain companies involved in cryptocurrencies may be adversely affected by fluctuations in, and manipulation of, the price of cryptocurrencies. Moreover, the extent to which companies utilize blockchain technology may vary, and it is possible that even widespread adoption of blockchain technology may not result in a material increase in the value of such companies.

International investing involves risks, including risks related to foreign currency, limited liquidity, less government regulation and the possibility of substantial volatility due to adverse political, economic or other developments. These risks often are heightened for investments in emerging/developing markets and in concentrations of single countries.

Funds that concentrate investments in specific industries, sectors, markets or asset classes may underperform or be more volatile than other industries, sectors, markets or asset classes and the general securities market.

Commodities' prices may be highly volatile. Prices may be affected by various economic, financial, social and political factors, which may be unpredictable and may have a significant impact on the prices of precious metals.

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