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WisdomTree Europe

Navigating Blockchain and Cryptocurrency Miners: Why 2025 Could Be the Breakout Year

Blake Heimann
Sr. Associate,
Quantitative Research
WisdomTree Europe

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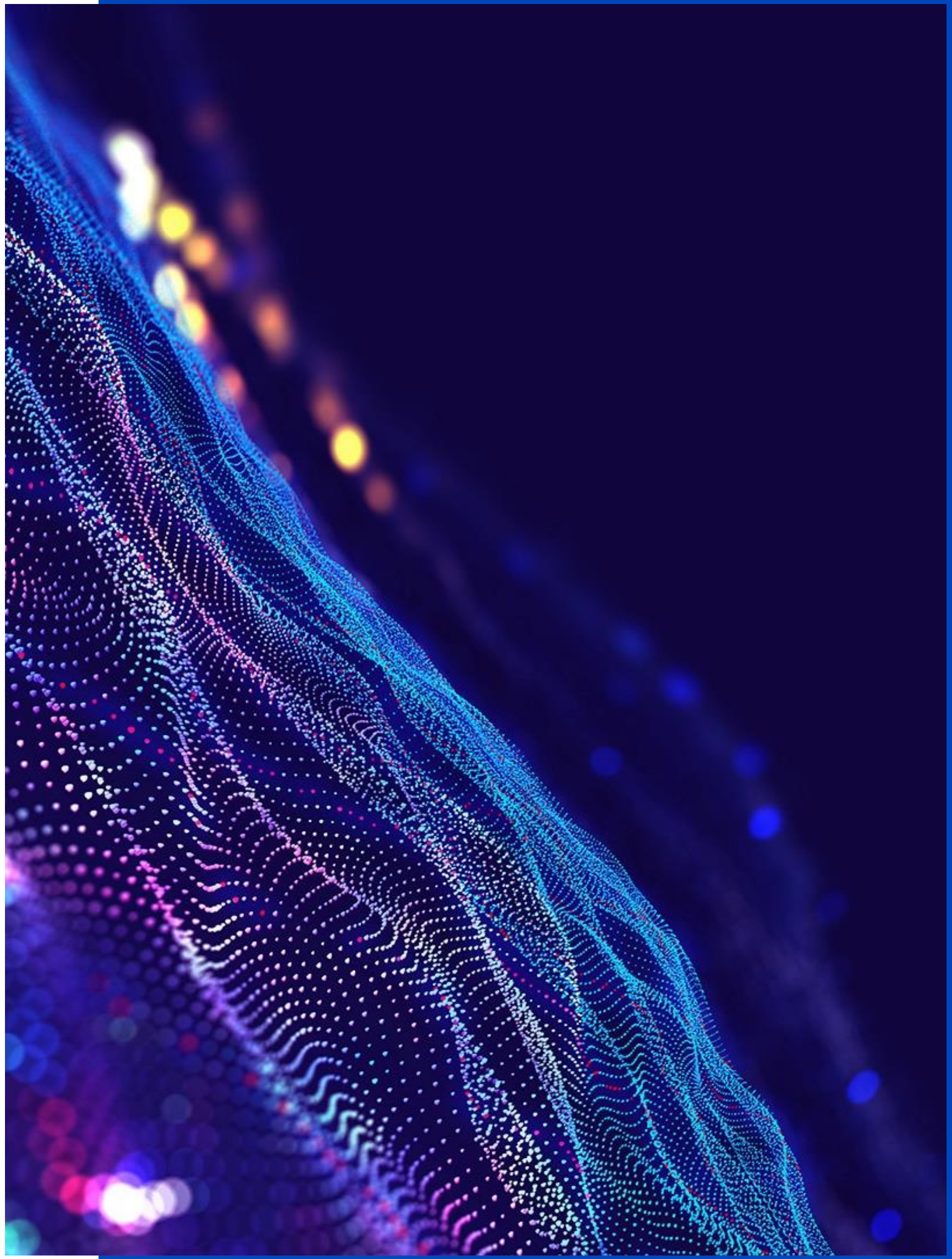
Navigating Blockchain and Cryptocurrency Miners



WisdomTree Webinar

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Blockchain in the Year Ahead

Why 2025 Could Be the Breakout Year

Market Overview: 2024 was a landmark year for cryptocurrencies

$3.4Tr
Total Market Capitalisation

+106%
2024 Market Performance

$148bn
Crypto ETP AUM Globally

Top 5 Cryptocurrencies by Market Capitalisation

Cryptocurrency	Level 1 classification	Market dominance	2024 performance
Bitcoin	Layer-1 payments	55%	+122%
Ethereum	Layer-1 smart contracts	12%	+46%
Tether	Stablecoin	4%	0%
XRP	Layer-1 payments	4%	+239%
Solana	Layer-1 smart contracts	3%	+87%

Source: WisdomTree, Artemis Terminal, Bloomberg. 31 December 2024. 2024 market performance calculated as change in total crypto market cap. Crypto ETP AUM globally covers both physical and synthetic crypto ETPs.
Historical performance is not an indication of future performance and any investment may go down in value.

The Trigger: US Bitcoin ETFs and how they fared so far

+ The Security and Exchange Commission (SEC) approvals of spot bitcoin exchange-traded funds (ETFs) in January 2024 dominated headlines.
+ These approvals opened the gates for a much broader US investor base.
+ Support for digital assets and cryptocurrencies by institutions have enabled important ecosystem players like custodians and exchanges to prosper

12 Bitcoin ETFs approved

$35bn in net flows

$105bn in total assets

Source: Bloomberg. 02 January 2025.

Trump's election marks the end of the SEC's 'war on crypto'

Why SOL, MATIC and others could still be under SEC threat

SOL, ADA listed in Crypto.com Wells notice

SEC sues Cumberland DRW for acting as an unregistered securities broker, Solana ETFs at risk

OpenSea Gets 'Wells Notice' From SEC, Which Calls NFTs Sold on Platform 'Securities'

"We're shocked the SEC would make such a sweeping move against creators and artists," says CEO of OpenSea.

DeFi Exchange Uniswap Receives Enforcement Notice From the SEC

Uniswap's CEO Hayden Adams took to X on Wednesday to say that the exchange is "ready to fight" after receiving notice that the regulator is planning an enforcement action.

SEC Scrutinizes NFT Market Over Illegal Crypto Token Offerings

- Regulator is probing whether some of the assets are securities
- Agency's enforcement lawyers have sent out queries, subpoenas

SEC Sues Crypto Firm Consensys for Not Registering as Broker

- Regulator says software company broke securities rules
- SEC says firm made millions on securities transactions

SEC Pushes Back Against Ripple Ruling, Prolonging XRP's Legal Limbo

SEC Goes After Another Crypto Firm, Slaps Immutable With Wells Notice

The firm's IMX token is down over 13% at $1.16 following the announcement.

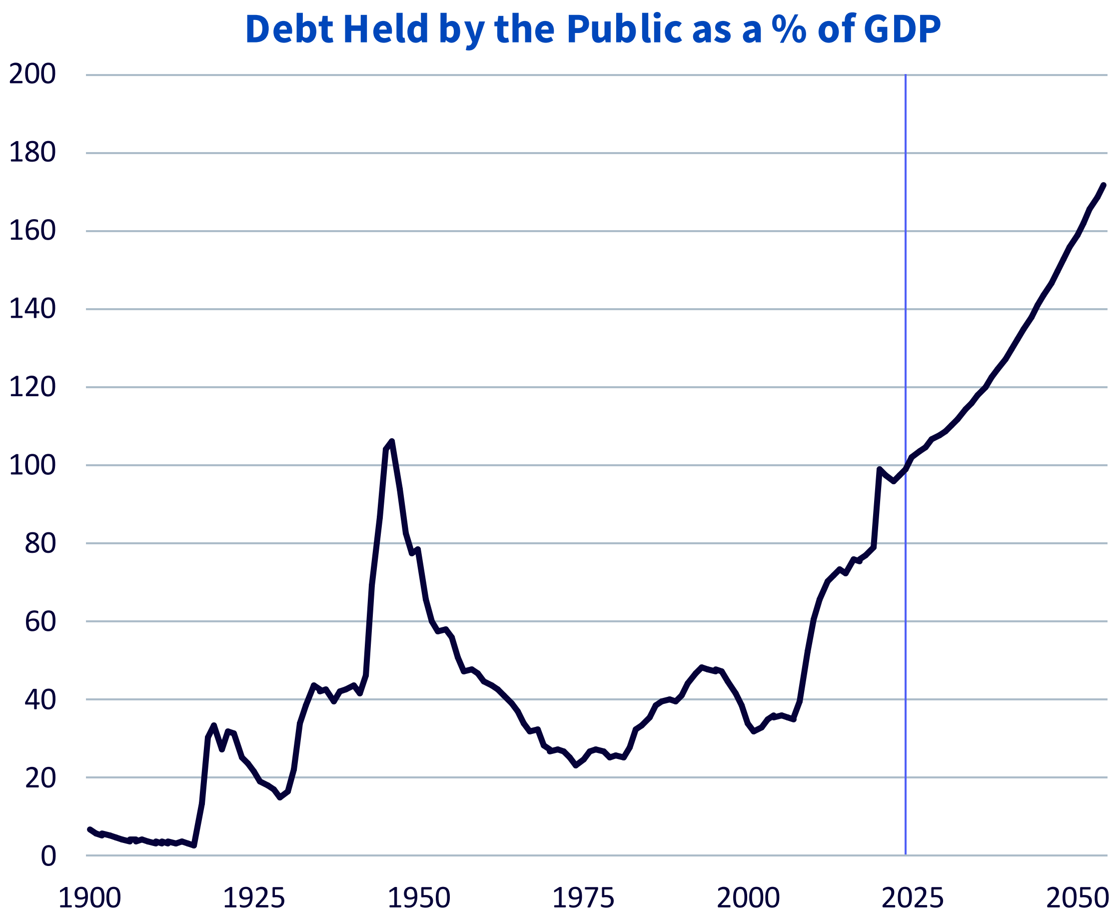
SEC's Case Against Kraken Will Proceed to Trial, California Judge Rules

Sources: Bloomberg, Forbes, Coindesk, Blockworks, various sources, as of November 2024.

> On day one, I will fire Gary Gensler and appoint a new SEC Chair.

Donald Trump
US President

Trump policy plans sustain deficit spending, supporting the thesis for bitcoin and bitcoin miners



+ **Trump's plans add $7.5T to federal debt** according to the Committee for a Responsible Federal Budget
+ By the year 2050, the Congressional Budget Office **estimates US debt hits 160% of GDP**
+ **Trump's policy focus**: tax cuts for individuals and businesses, applying tariffs to stimulate domestic industry growth, restricting immigration, and avoiding cuts to healthcare and pensions
+ **Sustained deficit spending and subsequent rising structural inflation and long-term borrowing costs, support the case for bitcoin as a long-term store of value**

Source: WisdomTree, Congressional Budget Office, as of October 2024.
Historical Performance is not an indication of future performance and any investments are subject to risk and uncertainties.
Forecasts are not an indicator of future performance and any investments are subject to risk and uncertainties.

A resurgence in venture capital investment on the back of a supportive regulatory environment could bolster support for publicly listed blockchain firms

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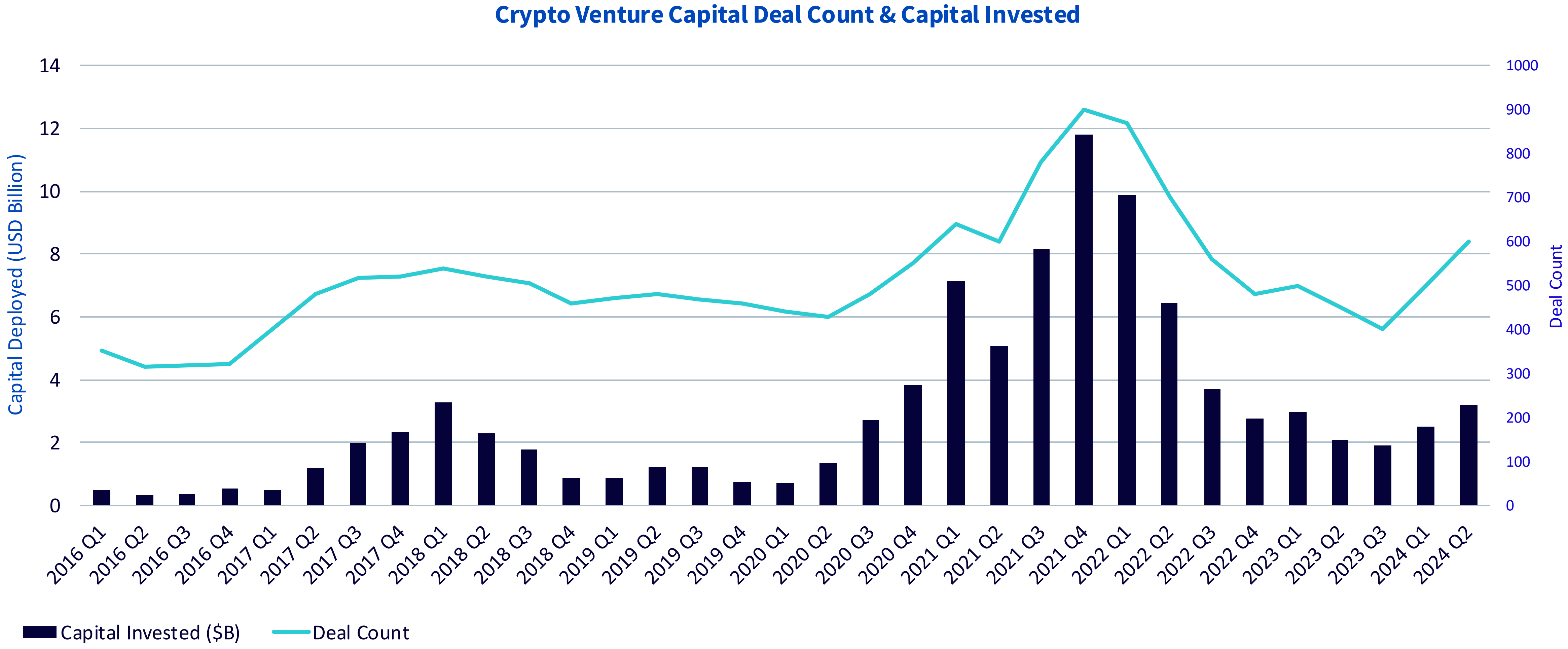

Source: Galaxy Research, as of August 2024.

Historical performance is not an indication of future performance and any investment may go down in value.

Potential Impacts of Trump Presidency on the Blockchain Environment

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Macroeconomic Policies

+ **Tariffs & Inflation**
  + Tax cuts and tariffs could drive long-term inflation, boosting bitcoin as a long-term store of value

+ **Cheaper Domestic Energy For Bitcoin Mining**
  + Looser constraints on domestic energy production can reduce cost for US based bitcoin miners

Regulatory Impacts

+ **Digital Assets Regulatory Framework**
  + Establish a comprehensive framework defining digital assets like commodities, securities, and tokens and how to issue them
  + Provide clarity for blockchain companies, enabling innovation to flourish

+ **Capital Gains Tax Reform**
  + Speculation on removing capital gains tax on cryptocurrencies could drive investment and trading activity

Adoption Impacts

+ **Support for Crypto Investment Products & Financial Infrastructure**
  + Enhance US ETF structure, allow financial institutions to use bitcoin as collateral, and offer blockchain integration with traditional financial products and services

+ **Strategic Bitcoin Reserve**
  + Proposal to establish a US bitcoin reserve to maintain economic leadership and counter the growing budget deficit

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The Disruptive Opportunity

Blockchain Technology

What are the characteristics of a blockchain?

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Decentralised

+ **No single entity controls the network**; authority is distributed among participants.

Immutable

+ Once data is added**, it cannot be altered or deleted**, ensuring permanent records.

Transparent

+ **All transactions are visible to participants**, promoting trust and accountability.

Secure

+ Advanced **cryptographic techniques protect data** from unauthorized access and tampering.

Accurate

+ Consensus is achieved through protocols that **ensure all network participants agree on the validity of transactions**, maintaining the integrity of the blockchain's data

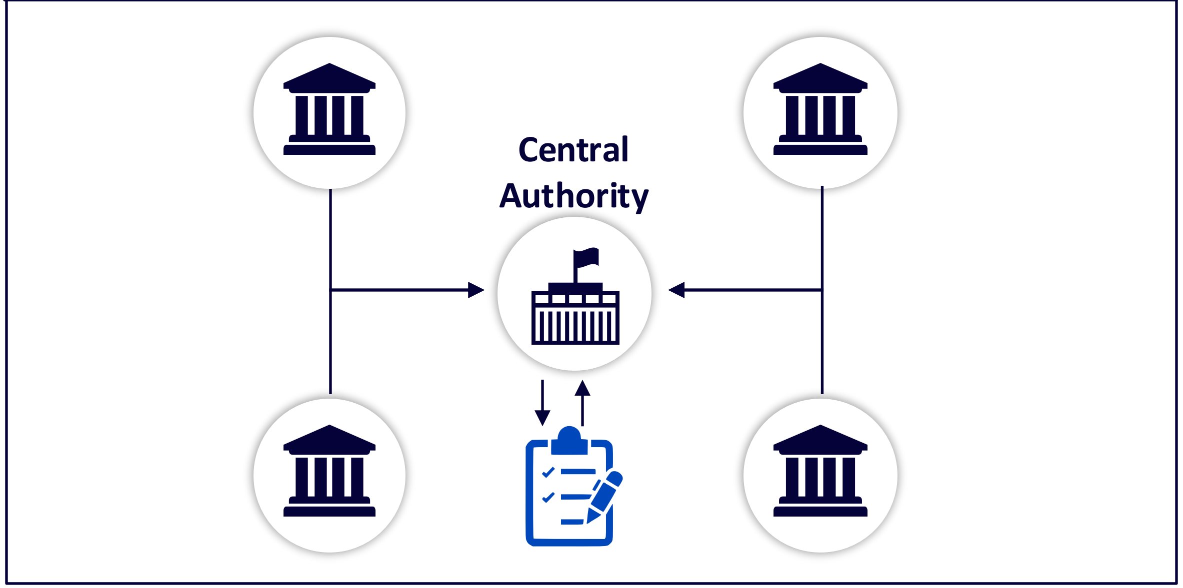
Efficient

+ By eliminating intermediaries and automating processes through smart contracts, blockchains **reduce costs and enhance speed, driving operational efficiency** across various industries

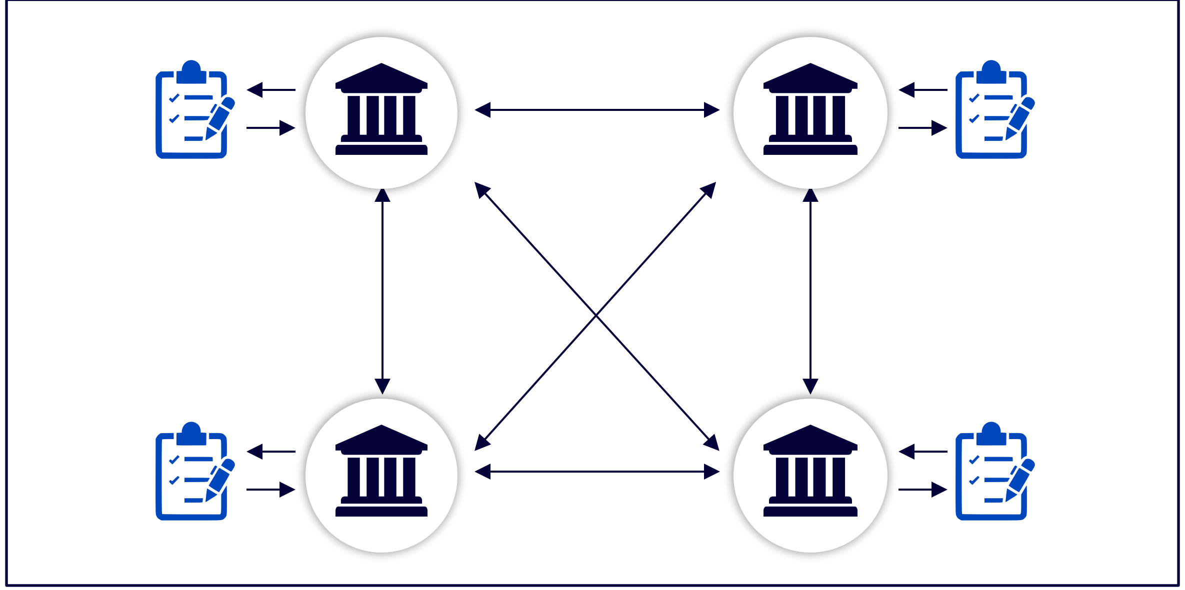
A blockchain is a digital ledger that stores and records transactions in a secure, transparent, and immutable way. It's a type of distributed database, which means that the power to update the blockchain is spread across a network of nodes, or participants.

Blockchain's distributed ledger enables transparent and accurate record-keeping, peer-to-peer value transfer, and trust without centralised counterparties

Centralised Ledger (database)



Distributed Ledger (database)



- Distributed ledgers eliminate the need for a **central authority** or intermediary to process, validate or authenticate transactions.
- Records are typically stored in the ledger/database **after consensus has been reached** by the parties involved.

Source: WisdomTree, Illustrative example

What do leaders say about blockchain? A big opportunity leading to big change

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Bob Greifeld
Former chairman, Nasdaq

"[Blockchain] is the biggest opportunity set we can think of over the next decade or so."

Blythe Masters
Motive Partners

"The blockchain is the financial challenge of our time. It is going to change the way that our financial world operates"

Abigail Johnson
CEO, Fidelity

"Blockchain technology isn't just a more efficient way to settle securities. It will fundamentally change market structures(...)."

Ginni Rometty
Ex CEO, IBM

"Anything that can conceive of as a supply chain, blockchain can vastly improve its efficiency- it doesn't matter if its people, numbers, data, money."

Kenneth C. Griffin
CEO, Citadel

"Blockchain's a very interesting technology that will have some very profound applications for society over the years to come."

Two types of blockchains: public or private

PERMISSIONLESS = PUBLIC BLOCKCHAINS

+ Anyone can freely access and use a blockchain network and participate in consensus without having to ask for permission, authorisation or approval.
+ Anyone can send/receive transactions.
+ Anyone can operate a node (PC) and review, copy and contribute to code.
+ Anyone can "fork" the code, ie. copy and change it.

Source: WisdomTree

PERMISSIONED = PRIVATE BLOCKCHAINS

+ Private blockchains have gatekeepers who decide who can/cannot access the network, use and govern the blockchain (i.e. are <u>not</u> decentralised).
+ Typical use cases:
  + Digital ID systems, passports
  + Land registries
  + Voting systems
  + Supply-chain management
  + Marketplaces without an intermediary
  + Cloud data storage
  + Payments with banks
  + Cybersecurity

Private blockchains are used by many private companies in several industries

Walmart developed a blockchain system to trace the provenance of their products

De Beers uses a ‘secure and immutable trail’ using a private blockchain to verify the authenticity and provenance of diamonds and ensure they are not “blood diamonds”

DHL is at the forefront of blockchain-backed logistics, using it to keep a digital ledger of shipments and maintain integrity of transactions

Comcast uses a blockchain-based system which allows advertisers to target viewers with specific adverts while maintaining viewers’ privacy

JP Morgan and **MetLife**, are using their own private blockchains to simplify, streamline and verify transactions and contracts

Source: WisdomTree

What is unique about public blockchains?

Public blockchains have gained mass user adoption over the last few years.

Their unique characteristics have built trust among users, drawing in builders that are creating apps and services that will support the economy of tomorrow.

Decentralised / Distributed; Censorship resistant
Transactions are conducted peer-to-peer. No need for a centralised counterparty. There is no single point of failure. All participants have a full copy of the ledger.

Secure
Transaction records are cryptographically secured.

Programmable
Blockchains can be programmed with a set of "smart contracts" (pieces of code) without a centralised counterparty.

Neutral
There is no good/bad, illegal/legal transaction. There is only valid or invalid one.

Immutable
All transactions are verified and recorded on the blockchain's ledger and cannot be changed / they are tamper-proof.

Instantaneous / Low-cost
Transactions take place 24/7 and can be processed in minutes or instantaneously. Very low-cost transaction fees.

Permissionless / open for everyone
Everyone around the world has access to the blockchain data at any time / data is easily auditable. Source code is freely available.

Stablecoins have quietly become a tour de force in the global cryptocurrency market, representing more than two-thirds of the trillions of dollars worth of cryptocurrency transactions recorded in recent months.

Chainalysis
Crypto Data Analytics Firm

Source: Stablecoins 101: Behind crypto's most popular asset, Chainalysis, December 2024

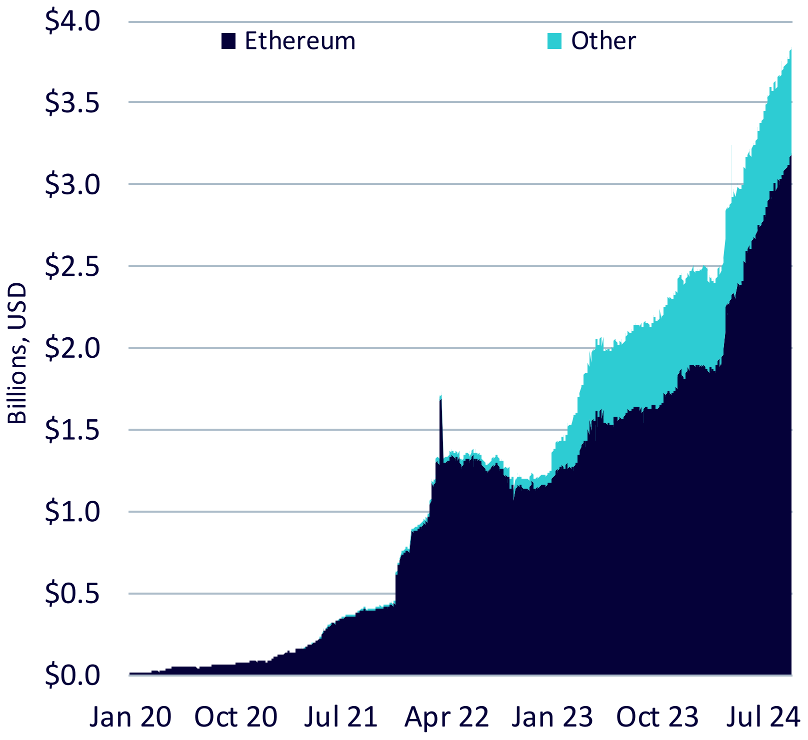
Financial services are moving on chain

Leading firms are racing to dominate blockchain-based financial solutions

Tokenized assets and stablecoins are disrupting traditional finance

- **Stablecoins** enable seamless, instant global payments, eliminating inefficiencies of traditional payment systems.
- Tokenized Assets revolutionize investment products, making them more accessible, transparent, and liquid.
- The leading financial technologies and payments companies are competing to lead this transformation, leveraging blockchains like Ethereum and Solana.

Tokenised Assets by Blockchain



Source: WisdomTree, DefiLlama as of September 2024.
Historical Performance is not an indication of future performance and any investments are subject to risk and uncertainties.

Driving Innovation at the Crossroads of Global Technology Megatrends

The blockchain ecosystem has rapidly evolved, converging with major megatrends to fuel economic growth, technological adoption, and transformative innovation.

Source: WisdomTree

Blockchain: Unlocking Trillion-Dollar Opportunities

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$1.76T

+ Blockchain technologies could boost the global economy by $1.76 trillion by 2030 according to PWC

300M

+ Usership is growing, with more than 300 million people worldwide using blockchain, representing approximately 3.9% of the global population

$200B

+ Tokenization is transforming asset ownership, with $200B in tokenized traditional assets including real estate, securities, and stablecoins

$3T

+ The cryptocurrency market is valued over $3 trillion, indicating substantial adoption in blockchain-based assets

81%

+ 81 of the world's top 100 public companies have adopted blockchain technology in some capacity

Blockchain is the Infrastructure of the Future

Adoption across industries, from finance to healthcare, will reshape global economic systems by 2030.

Sources: PWC, DemandSage, Coingecko, DefiLlama, BlockData, WisdomTree, as of January 2025.

Historical Performance is not an indication of future performance and any investments are subject to risk and uncertainties.

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Investing in the Blockchain Ecosystem

Understanding Types of Exposure

Ways to gain exposure into the technological shift

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Single Cryptocurrencies & Baskets

- **Direct ownership** of cryptocurrencies such as Bitcoin and Ethereum
- **Pure exposure to price appreciation** of individual assets or a diversified basket of cryptocurrencies.
- **Value Accrual Factors:**
  - Supply and demand dynamics (e.g., Bitcoin's fixed supply, Ethereum Tokenomics).
  - Adoption rates and network activity.
  - Technological advancements and ecosystem growth.
- **Considerations**:
  - Regulatory and custody complexities.

Blockchain Companies

- **Public equity ownership of firms that are building and leveraging blockchain technology** for payments, trading, enterprise applications, and beyond.
- **Direct revenue generation** and diversification across real economy cases reduces dependence on cryptocurrency market cycles.
- **Value Accrual Factors:**
  - Revenue from transaction fees, enterprise solutions, and blockchain-powered services.
  - Growth in blockchain technology adoption and leadership in emerging use cases.
- **Considerations**:
  - Purity of technology theme exposure

Bitcoin Miners

- **Public equity ownership of firms that secure the Bitcoin network** by verifying transactions and adding blocks to the blockchain for payment.
- **Direct revenue generation** from bitcoin mining business, while **offering leverage to bitcoin price given firm's capital structure**.
- **Value Accrual Factors:**
  - Bitcoin price and network activity.
  - Mining efficiency (e.g., cost per BTC mined, renewable energy use)
- **Considerations**:
  - High price correlation to bitcoin.

Source: WisdomTree.

Key considerations across investment exposures

Characteristic	Single Cryptocurrency	Crypto Basket	Bitcoin Miners	Blockchain Companies
Volatility	High	High	Very high	Moderate
Correlation to Broad Crypto Market	High	Very High	High; Levered to bitcoin price	Moderate; influenced by crypto and traditional business factors
Diversification	None beyond a single token	Moderate if basket is well diversified across sectors	Low/Moderate; primarily depends on BTC's performance and mining efficiency	Moderate; driven by the mix of crypto vs. other business segments
Growth Potential	High, driven by network adoption and scarcity/tokenomics	High; captures broad crypto market growth	High; leveraged to BTC price plus operational scaling	High; especially if firm innovates in blockchain or captures new markets
Risk	Token selection risk, regulatory risk, market volatility, smart contract risk	Regulatory risk, market volatility, smart contract risk	Operational (mining efficiency and energy costs), regulatory, bitcoin price volatility	Market and regulatory risk, technology disruption, competition
Ownership	ETPs (exchange-traded products) or direct custody (wallets)	ETPs or direct custody wallets across multiple tokens	Equity in publicly traded companies	Equity in publicly traded companies
Complexity	Medium/High; requires due diligence, wallet security, private keys, etc.	Medium/High; requires due diligence, wallet security, private keys, etc.	Low	Low
Cash Flows	Unlikely, but depends on token	Unlikely, but depends on tokens	Mining rewards, transaction fees, and hosting services revenue	Service, transaction fees, and subscription revenue
Value Drivers	Adoption, scarcity, network usage, token fundamentals	Overall crypto market growth, token-specific fundamentals	Mining efficiency, energy costs, bitcoin price	Adoption and usage of applications and services
Tax & Regulatory	Highly variable based on tax jurisdiction and method of access	Highly variable based on tax jurisdiction and method of access	Standard equity capital gains	Standard equity capital gains
Valuation Methods	Difficult to apply traditional metrics; rely on on-chain data, tokenomics, and macro	Difficult to apply traditional metrics; rely on on-chain data, tokenomics, and macro	Traditional equity analysis (EV/S, P/E, etc.), cost per BTC mined, hashrate capacity, growth prospects	Traditional equity analysis (EV/S, P/E, etc.), plus crypto sentiment and growth prospects
Liquidity & Trading Hours	Underlying trades 24/7 trading on crypto exchanges; ETPs trade on stock exchanges; can be highly liquid for top coins	Each underlying trades 24/7 trading on crypto exchanges; ETPs trade on stock exchanges; liquidity varies by token	Trades on stock exchanges (market hours)	Trades on stock exchanges (market hours)

Source: WisdomTree

Why investors might choose each approach

Single Cryptocurrencies

+ Best for investors seeking pure, high-beta exposure to individual assets.
+ Participate in both bull and bear crypto markets but requires tolerance for volatility and idiosyncratic price impacts.

Diversified Crypto Basket

+ Ideal for those looking to capture the overall growth of the crypto ecosystem while reducing single-asset risk.
+ Offers a passive way to invest in multiple high-potential projects.

Bitcoin Miners

+ Suitable for those bullish on Bitcoin and willing to accept operational opportunity and risks, and often amplified volatility.
+ Provides leveraged exposure to bitcoin price and mining profitability dynamics, offering a more traditional cash flowing business tied to bitcoin price.

Blockchain Companies

+ Best for investors seeking more stable, diversified revenue exposure to blockchain adoption.
+ Captures blockchain's broader potential beyond cryptocurrencies.

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Capturing Value Across the Ecosystem

Investing in Blockchain and Cryptocurrency Mining Companies

Where will value be captured in the blockchain ecosystem?

Blockchain Enablers: Building the Foundation

+ **Infrastructure providers** that support the ongoing usage and development of blockchain technology.

+ Includes companies that run **cryptocurrency mining operations, node management services**, or develop essential hardware such as **ASIC miners**.

Blockchain Engagers: Driving Adoption

+ **Application and Service providers** that leverage blockchain technologies to deliver innovative solutions or enhance traditional business models.

+ Includes companies that offer crypto and **blockchain-based products and services**, such as payment processing, financial services, and support for decentralized applications.

As the traditional economy and blockchain economy converge, companies providing infrastructure and services will have the greatest opportunity for value capture.

Blockchain Enablers

The Backbone of Blockchain

Enablers are the backbone of blockchain networks that power decentralised systems. This includes miners, validators, and hosting providers, who ensure network security and transaction validation. In Bitcoin's proof-of-work (PoW) model, miners validate transactions and secure the network while deriving revenue from mining rewards and transaction fees.

Investment Appeal

+ Support and maintain the sanctity of the network, **supporting increased activity and adoption**.
+ Familiar business model with **recurring revenues**.
+ **High correlation and beta to bitcoin price**, given direct operational leverage to the asset.

Risks

+ **Revenue and balance sheet health heavily tied to bitcoin price** cycles and macroeconomic environment.
+ Cost structures are heavily **tied to electricity costs.**
+ **High volatility and limited diversification** within the peer group.

Blockchain Engagers

Drivers of Blockchain Adoption

Engagers leverage blockchain technology to drive innovation across payments, DeFi, NFTs, supply chain, and more. By bridging the gap between crypto-native solutions and traditional economic use cases, they enable broader adoption and unlock value across diverse industries.

Investment Appeal

+ **Broader revenue base** from products and services (e.g., custody, trading, staking, payments) that may offer more **sustainable growth**.
+ **Benefit directly from blockchain activity** associated with growing adoption and integration with the traditional economy.
+ **Less exposed to crypto price** fluctuations and benefit from diversified use cases across industries.

Risk

+ **Highly competitive environment** with both traditional players and crypto-native startups.
+ **Regulatory hurdles**, including compliance with anti-money laundering (AML) and know-your-customer (KYC) requirements that may be challenging in a decentralised world.

Risk and Return Profile are Key

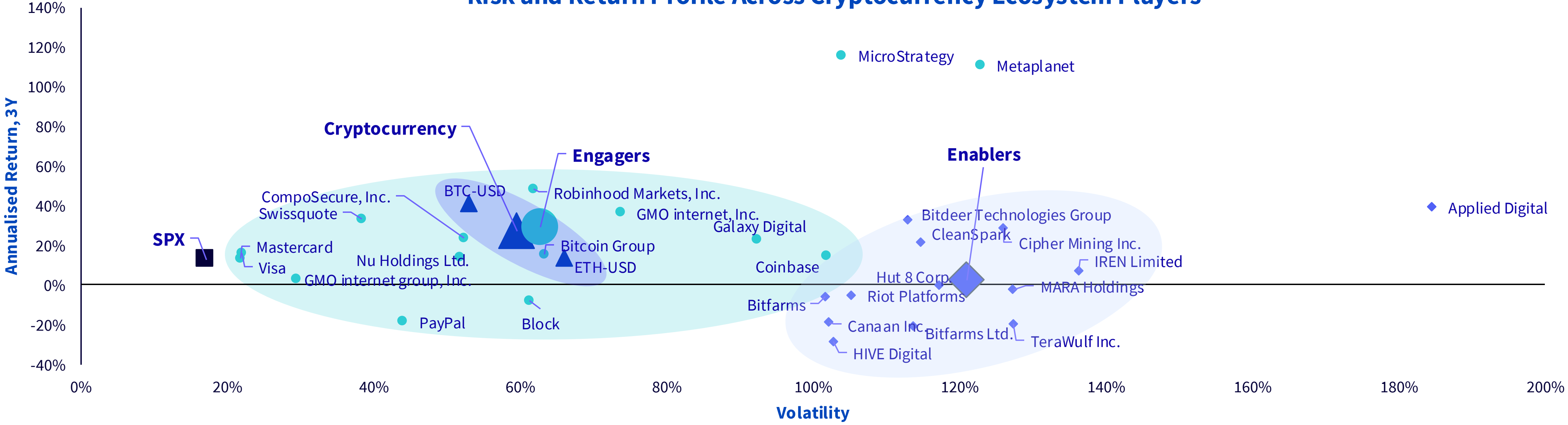
Balancing Exposure Across the Ecosystem

+ **Engagers provide diversified exposure,** that can align closely to direct cryptocurrencies, but with dispersion in returns and volatility amongst the peer group.

+ **Enablers** exhibit extreme volatility and are highly sensitive to crypto market dynamics.

+ Investors may want to tailor exposure based on risk tolerance, from more **stable engagers** to **high-risk, high-reward enablers**.

Risk and Return Profile Across Cryptocurrency Ecosystem Players



Source: WisdomTree, YahooFinance. Trailing 5 years annualised volatility and total returns as of January 6, 2025.

You cannot invest directly in an index. Historical performance is not an indication of future performance and any investments may go down in value.

Miners Outperform Bitcoin in Positive Markets

Miners Outperform Bitcoin in Positive Markets but Face Long-Term Pressure from Operational Costs

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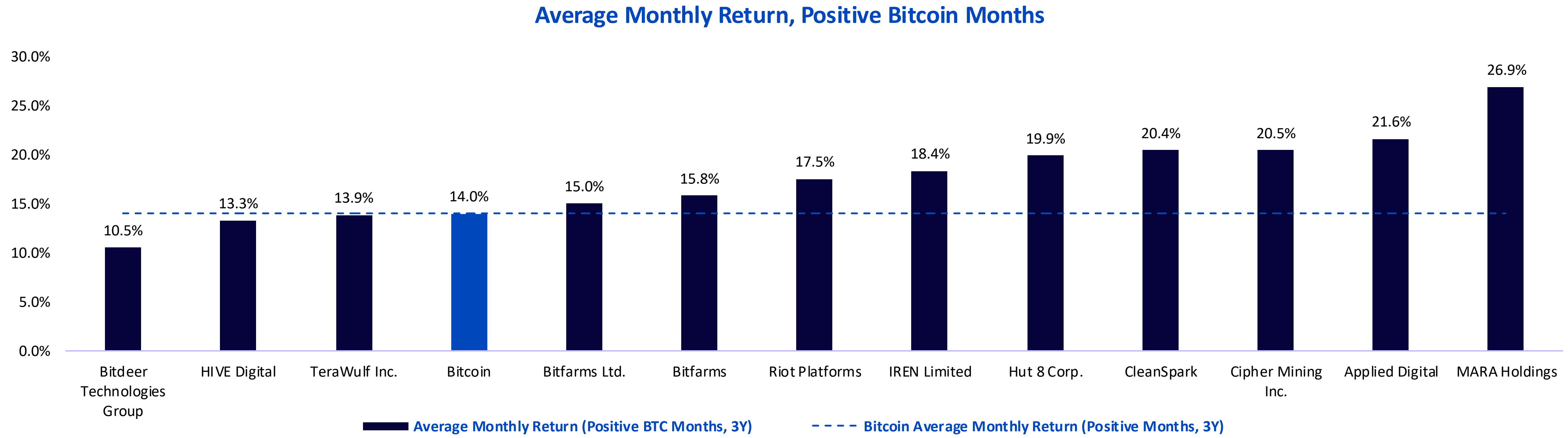
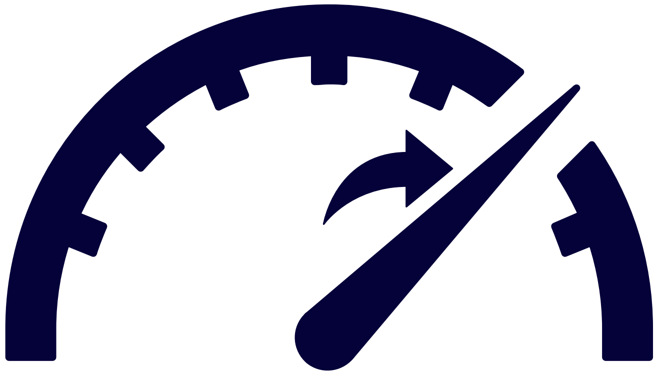
+ Heavy balance sheet exposure, debt financing, and direct revenues tied to bitcoin price result in high beta to bitcoin.
+ In times of rapid bitcoin price appreciation, this can serve as a positive catalyst for miners.
+ Over long-term miners may underperform the asset given operational complexity and capital needs.



Source: WisdomTree, YahooFinance. Trailing 3 years as of January 6, 2025.
Historical performance is not an indication of future performance and any investments may go down in value.

Understanding allocating based on market regime



Market Regime	Engagers Allocation	Enablers Allocation	Rationale
Blockchain Activity Boom	Overweight	Underweight	Engagers lead as blockchain application activity grows. Enablers remain relevant as critical infrastructure.
Crypto Bull Market	Underweight	Overweight	Enablers outperform as crypto prices rise. Engagers benefit from adoption but at a slower pace.
Sideways Crypto Market	Neutral	Neutral	Balanced exposure diversifies while capturing potential upside in adoption and crypto price trends.
Crypto Bear Market	Overweight	Underweight	Engagers benefit from more stable cash flows. Enablers face margin compression.

Source: WisdomTree

Managing Volatility in Blockchain Investments

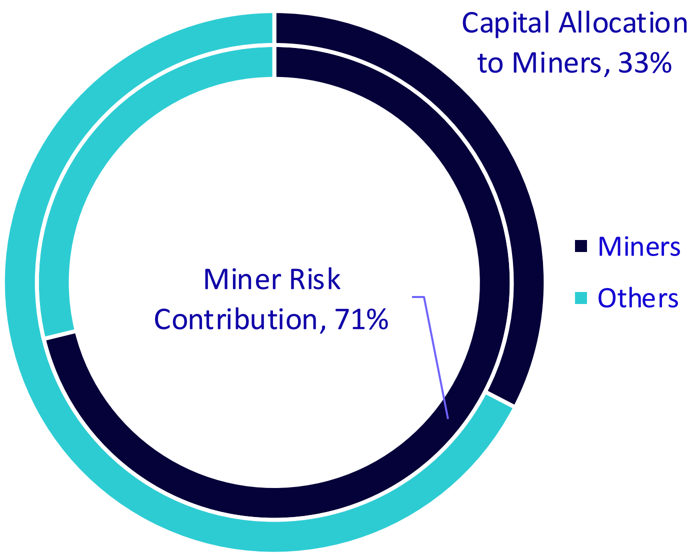
Bitcoin Miners Dominate Portfolio Risk

+ Driven by high intercorrelation and significant operational leverage tied to Bitcoin.

Diversifying with Non-Miner Blockchain Companies

+ Balancing miners with diversified blockchain holdings reduces volatility and stabilizes portfolio performance.

Capital Allocation (Outer) vs. Risk Contribution (Inner)



Impact of High Correlation and Volatility

+ Too many miners can amplify portfolio risk due to high intercorrelation, offering limited diversification benefits.
+ Miners often add higher leverage to bitcoin, increasing portfolio beta and bitcoin-driven volatility. This can lead to outperformance in bull markets but often results in underperformance during downturns.
+ Blockchain companies (e.g. Engagers) provide diverse revenue streams across sectors, offsetting some of the volatility and sharp drawdowns associated with miners.

Source: Bloomberg, as of July 2024. Illustrative basket portfolio consisting of Bitcoin miners and blockchain companies derived from assorted blockchain UCITs ETFs.

Summary of investment characteristics

Enablers

+ **Often have direct Leverage to bitcoin Price**: Profitability and stock performance are directly tied to bitcoin prices, often offering amplified returns during bull markets as well as amplified volatility and drawdowns in bear markets. Their role as critical infrastructure ensures relevance, but their cyclical nature necessitates strategic allocation.

+ **Operational Efficiency Upside**: Companies with access to low-cost energy or advanced mining hardware can outperform peers.

+ **Support the Ecosystem**: Enablers play a critical role in maintaining the security and functionality of the blockchain, aligning with long-term adoption.

Engagers

+ **Broader Revenue Streams**: Diversified businesses that generate income from blockchain-based payments, decentralized finance (DeFi), NFTs, and more.

+ **Stable Growth:** Less sensitive to crypto price volatility, with growth driven by mainstream blockchain adoption and fintech innovation.

+ **Blockchain Use Case Expansion**: Benefit from increasing use cases for blockchain technology beyond cryptocurrency, such as supply chain solutions and Web3 applications.

+ **Long-Term Adoption**: Positioned to thrive as blockchain technology integrates more deeply into the global economy.

Evaluating Companies Using a Five Factor Method

40%

Thematic Relevance

Measures the proportion of revenue tied to blockchain activities and the company's importance in the value chain.

20%

Market Positioning

Assesses competitive strength, market share, and ability to capture value in the blockchain ecosystem.

20%

Growth and Scalability

Evaluates revenue growth, opportunity for market expansion, and the scalability of blockchain-related operations.

10%

Innovation

Highlights R&D, patents, and contributions to advancing blockchain technology.

10%

Risk and Stability

Examines financial stability, regulatory exposure, and business resiliency.

Source: WisdomTree

Scoring: Enablers

Criterion	Rationale	MARA	CLSK	RIOT	WULF
Thematic Relevance	+ All are highly aligned with the theme and derive revenue from bitcoin mining, but WULF and RIOT diversify with other AI and high-performance computing (HPC) initiatives.	5	5	4	4
Market Positioning	+ MARA is the major incumbent and dominates market, but is suffering strong competition; Others are growing by leaning into renewable energy and AI and HPC	5	4	4	3
Growth & Scalability	+ RIOT is best positioned for scalability with vertical integration and low-cost energy sources, while MARA heavily dependent on third party hosting for growth	2	3	5	4
Innovation	+ CLSK leads in energy-efficient mining and microgrid innovation; RIOT excels with vertical integration; WULF prioritizes carbon-free mining while MARA focuses on scaling capacity over technology	2	4	4	4
Risk	+ WULF faces the highest risk due to its small scale and niche focus, while RIOT carries the lowest with vertical integration & market dominance	4	4	5	3
Score	+ Aggregate score according to 40% thematic relevance, 20% market positioning, 20% growth & scalability, 10% innovation, 10% risk	**4.0**	**4.2**	**4.3**	**3.7**

Source: WisdomTree

Scoring: Engagers

		coinbase COIN	PayPal PYPL	MicroStrategy MSTR	galaxy GLXY
Thematic Relevance	+ COIN, PYPL, and GLXY have strong blockchain-related revenue streams; MSTR's relevance is tied to its Bitcoin holdings.	5	5	5	5
Market Positioning	+ COIN dominates crypto exchanges and institutional finance onramps, PYPL in online payments, and GLXY excels in blockchain-focused investment banking.	4	4	1	5
Growth & Scalability	+ COIN and GLXY show strong growth potential through product expansion and scaling through institutional finance. + PYPL expands into blockchain payments and stablecoins.	5	5	3	5
Innovation	+ COIN and PYPL innovate by building blockchain solutions, while GLXY focuses on M&A and Venture Capital.	5	5	2	5
Risk	+ MSTR poses risk as a leveraged bitcoin holder, issuing convertible debt; others have working business models but face more regulatory risk.	4	4	3	4
Score	+ Aggregate score according to 40% thematic relevance, 20% market positioning, 20% growth & scalability, 10% innovation, 10% risk	**4.7**	**4.7**	**3.3**	**4.9**

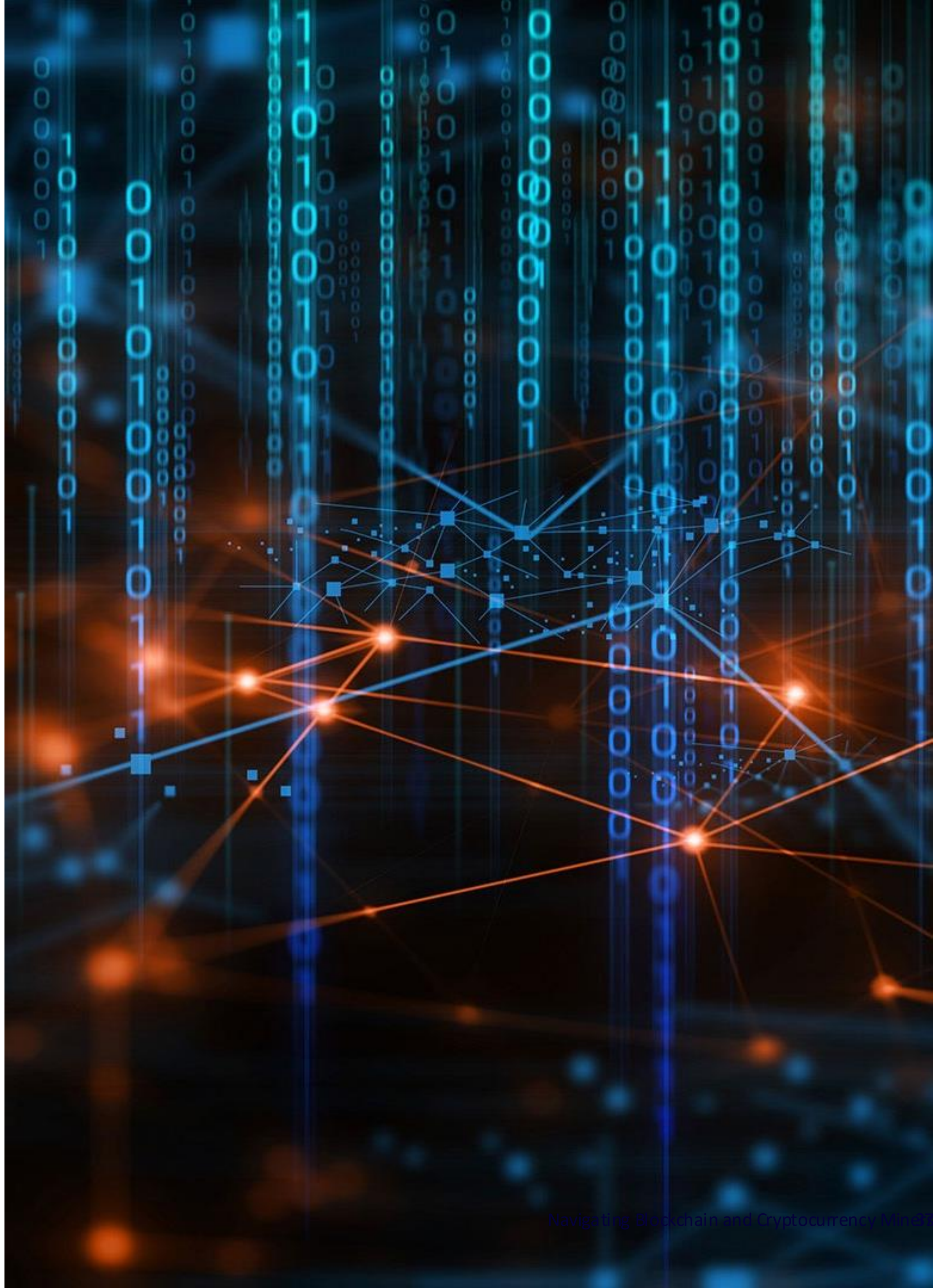
Source: WisdomTree

Thank you.

Blake Heimann

Senior Associate, Quantitative Research

WisdomTree Europe



Questions

+ For more information and insights please visit:

wisdomtree.eu

wisdomtree.eu/global-quality-dividend-growth

wisdomtree.eu/broad-commodities

wisdomtree.eu/megatrend-etfs

ETPedia

The educational guide to Exchange Traded Products (ETPs)

wisdomtree.eu/etpedia

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Appendix

Blockchain Investing

Considerations when investing in Enablers

Criteria	What to Evaluate	Why It's Important	Key Questions to Ask
Operational Efficiency	Cost of production per Bitcoin. Access to low-cost energy.	Efficiency determines profitability.	How much does it cost to mine 1 Bitcoin? Does the company have long-term energy agreements?
Bitcoin Reserves	Quantity of bitcoin held on the balance sheet.	Firms that 'Hodl' bitcoin take on more direct crypto price risk.	How much bitcoin reserves compared to total assets?
Scale and Growth	Hash rate capacity. Planned expansions or facility upgrades.	Larger-scale miners achieve economies of scale and higher market share.	What is the miner's current hash rate? Are there plans to expand?
Balance Sheet Health	Debt-to-equity. Cash reserves. Financing strategies.	A strong balance sheet offers resilience during market downturns.	Does the company rely heavily on debt? Are they positioned to acquire distressed assets during bear markets?
Energy Source	Renewable vs. non-renewable energy use. Energy cost per kWh.	Energy efficiency drives profitability.	Does the miner have access to renewable energy? Are they at risk from rising energy costs?
Regulatory Environment	Geographic location. Local regulatory risks or advantages.	Miners in favorable regions (e.g., Texas, Canada) benefit from lower risk and operational stability.	What is the regulatory landscape for crypto mining across operating regions?
ESG and Sustainability	Use of renewable energy. ESG compliance and carbon neutrality goals.	Growing focus on ESG compliance can attract institutional investors and reduce regulatory risks.	Does the miner have a clear ESG policy? How sustainable is their energy mix?
Revenue Diversification	Hosting services for third-party miners. Energy resale or other ventures.	Diversified revenue streams reduce dependency on bitcoin price.	Are they solely mining bitcoin, or do they offer additional services such as AI compute?

Source: WisdomTree

Considerations when investing in Engagers

Criteria	What to Evaluate	Why It's Important	Key Questions to Ask
Revenue Streams	Percentage and type of direct revenue from blockchain/crypto offerings.	Assess purity and ensure income sources provide stability and reduce dependence on volatile crypto prices.	How much of their revenue comes from blockchain products and services? Is this tightly coupled to market prices?
User Growth and Adoption	Growth in active users and transaction volumes. Adoption of new blockchain products/services.	User and transaction growth indicate increasing relevance and revenue/fee generation.	Are they gaining market traction? Is their user base growing consistently?
Innovation and R&D	Corporate investment and/or venture capital. Patents or proprietary solutions.	Innovation drives competitive advantages	How much is the company investing in R&D? Are they leaders or followers in blockchain innovation?
Regulatory Compliance	Adherence to KYC/AML regulations. Jurisdictional risks.	Compliance ensures operational stability and builds trust with consumers and regulators.	How prepared are they for evolving regulations? Are they exposed to significant regulatory risks?
Partnerships and Ecosystem	Key partnerships with crypto firms, fintechs, or enterprises. Ecosystem integration.	Strong partnerships expand reach and validate the company's position in the market.	Are they collaborating with other major players? Do they have a robust partner network?
Profitability and Margins	Operating margins. Revenue growth.	Healthy margins and scalability indicate a strong business model and operational efficiency.	Are they profitable or on a clear path to profitability? How scalable is their cost structure, and how does it relate to the total addressable market?
Market Share	Positioning within their peer group. Competitive landscape.	Companies with strong market positions can benefit from network effects.	Are they leaders in their niche? How defensible is their competitive position?
Valuation Metrics	P/E, P/S, and EV/EBITDA multiples. Comparison to fintech/tech peers.	Assess whether the company is overvalued or undervalued relative to peers and growth potential.	Is the valuation reasonable compared to peers? Does the valuation reflect future growth potential?
Geographic Reach	Presence in key markets for crypto adoption. Expansion into emerging blockchain markets.	Access to global markets ensures relevance and growth as adoption spreads internationally.	Are they expanding in high-adoption regions? Do they have plans for international growth?

Source: WisdomTree