XRP

Powering Global Liquidity
in Real Time

cf benchmarks
a kraken company

Understanding Ripple & XRP

XRP: POWERING GLOBAL LIQUIDITY IN REAL TIME

What is Ripple?

Ripple is a blockchain company enabling fast, cost-efficient cross-border payments

Ripple Labs is a blockchain technology company that developed and maintains the XRP Ledger (XRPL), a decentralized, open-source blockchain optimized for fast, low-cost payments. Unlike Bitcoin or Ethereum, which focus on store-of-value and smart contract functionality respectively, Ripple aims to position XRP as a neutral bridge asset for global value transfer—eliminating the need for pre-funded accounts and enabling real-time settlement across borders.

- The XRP Ledger (XRPL): Purpose-built for payments, XRPL is a decentralized, carbon-efficient blockchain that settles transactions in 3-5 seconds and routinely processes thousands of transfers per second at network fees measured in fractions of a cent. Its XRP Ledger Consensus Protocol replaces Proof-of-Work and Proof-of-Stake with a lightweight voting process in which a vetted set of validators reach finality every few seconds, producing immutable "ledgers" that all nodes replicate. This design delivers low operating costs, resilience against single-party control, and a deterministic final-settlement layer suitable for enterprise applications.

- XRP: All 100 billion XRP were minted at genesis; 80 billion were placed under Ripple control, and 55 billion of that is locked in monthly-releasing escrow, supplying predictable liquidity while limiting discretionary sales. Network fees are denominated—and partially burned—in XRP, aligning token velocity with ledger activity.

- Consensus Mechanism: The XRP Ledger replaces mining and staking with the XRP Ledger Consensus Protocol—a federated Byzantine agreement model in which a vetted set of validators exchange proposals every few seconds, reaching super-majority agreement on the order and validity of transactions. This lightweight vote-based process finalizes payments in 3–5 seconds, consumes negligible energy, and prevents double-spending without relying on a single central authority.

- On-Demand Liquidity (ODL): ODL uses XRP as a real-time bridge between fiat currencies, allowing banks and payment service providers to avoid pre-funded nostro accounts. Ripple's Q4 2024 Markets Report showed average daily XRP spot volume of $3.4 billion, with ODL responsible for a growing share of settlement flow. Management now cites more than 200 financial institutions—including Bank of America and Standard Chartered—testing or using ODL corridors.

Source: Kraken

What is XRP?

XRP Powers Real-Time Settlement at Scale

XRP (XRP) is the native digital asset of the XRP Ledger (XRPL), designed to move value quickly and inexpensively across borders. It enables payment providers, banks and financial technology companies to convert one fiat currency into another without maintaining pre-funded nostro accounts. Transactions settle in 3-5 seconds, network fees are a fraction of a cent, and the ledger's energy requirements are negligible thanks to its lightweight XRP Ledger Consensus Protocol.

Within the XRPL ecosystem, XRP serves two principal roles. First, it functions as the medium of exchange and liquidity rail for On-Demand Liquidity (ODL) corridors, allowing institutions to source and off-ramp funds in real time. Second, every ledger action—from simple transfers to tokenized asset issuance—requires a tiny amount of XRP as a fee, deterring spam and aligning token velocity with network usage. Unlike Ether, XRP's entire 100 billion supply was minted at genesis; approximately 55 billion remain in time-released escrow, creating a predictable emission schedule.

Key components of the XRP Ledger

- XRP Ledger Consensus Protocol: A federated Byzantine agreement model where independent validators reach super-majority agreement on transaction order and validity every few seconds—finalizing payments quickly without Proof-of-Work or staking.

- Validators & Nodes: Anyone can run a node; a smaller set of trusted validators participate in consensus, keeping the network decentralized yet performant.

- On-Demand Liquidity (ODL): Ripple's enterprise product that leverages XRP as a bridge asset, eliminating the need for pre-funded accounts and enabling near-instant foreign exchange settlement.

- Escrow & Token Burn: A cryptographic escrow releases up to 1 billion XRP per month to Ripple; unused amounts return to escrow, while each transaction permanently destroys a minuscule amount of XRP, making the supply mildly deflationary over time.

Source: Kraken

XRP's Role in Portfolios
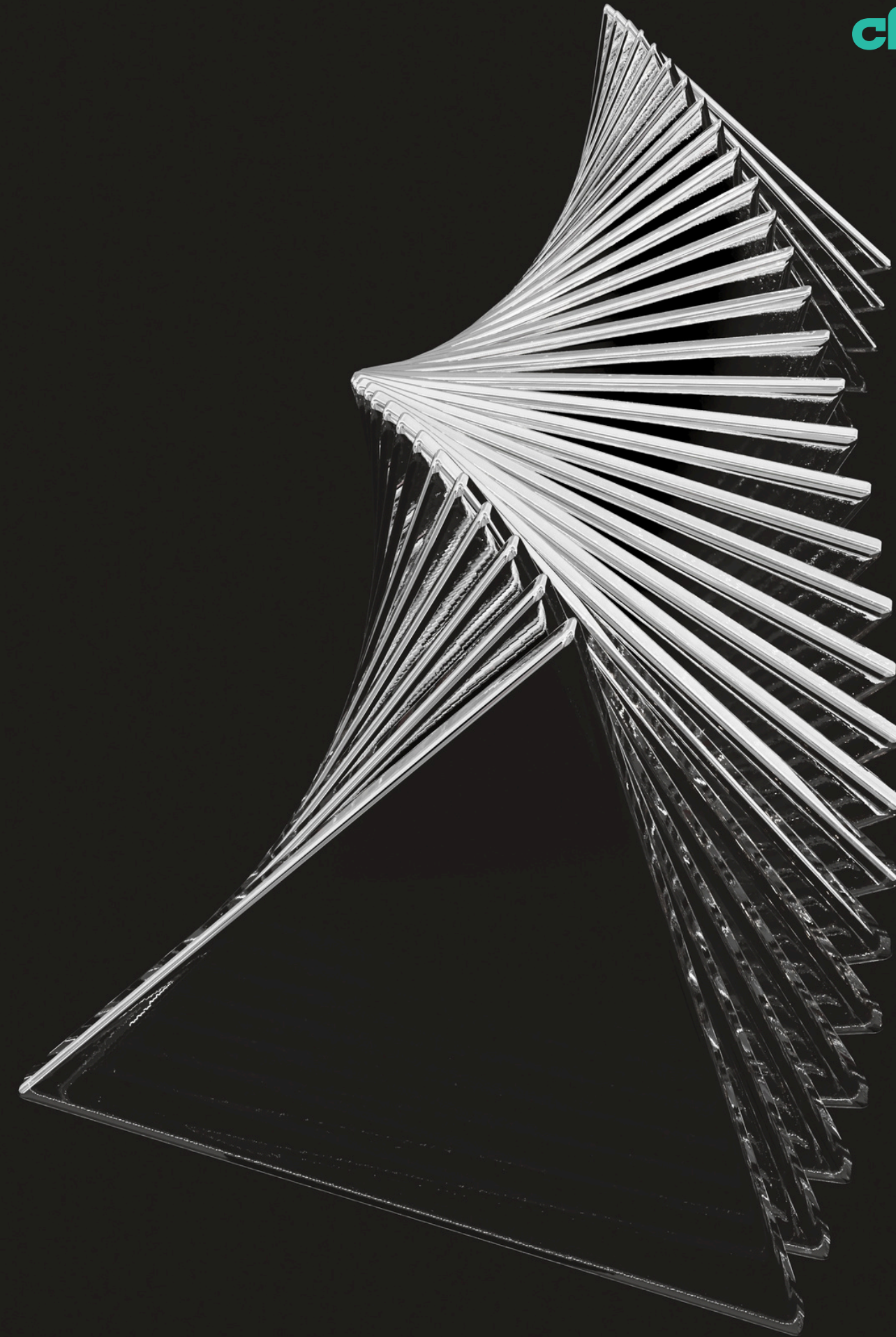
XRP's Mega-Cap Status in the Digital Asset Hierarchy

A Payment Solution with a Growing Market Position

XRP commands a market capitalization of nearly $150 billion, making up about 4.3% of the entire crypto market—a footprint comparable to the weight of a large-cap constituent in a blue-chip equity index. Just as investors hold mega-caps to anchor portfolios to broad market movements, treating XRP as a core digital-asset position can help a crypto allocation mirror overall market beta and minimize tracking error.

From an indexing standpoint, the logic is straightforward: cap-weighted indices assign importance in proportion to economic significance, and XRP's share of aggregate crypto value is too large to ignore. Allocating to XRP therefore captures a material slice of the market's payment-rail thesis, paralleling the way equity index funds include sector leaders to reflect the investable universe.

Beyond size, XRP benefits from deep liquidity, millisecond-level settlement times, and expanding enterprise adoption via Ripple's On-Demand Liquidity corridors, reinforcing its standing as a foundational asset. Incorporating XRP not only secures exposure to blockchain's utility for cross-border payments but also enhances portfolio representativeness in a manner analogous to owning a key large-cap stock within a diversified equity benchmark.

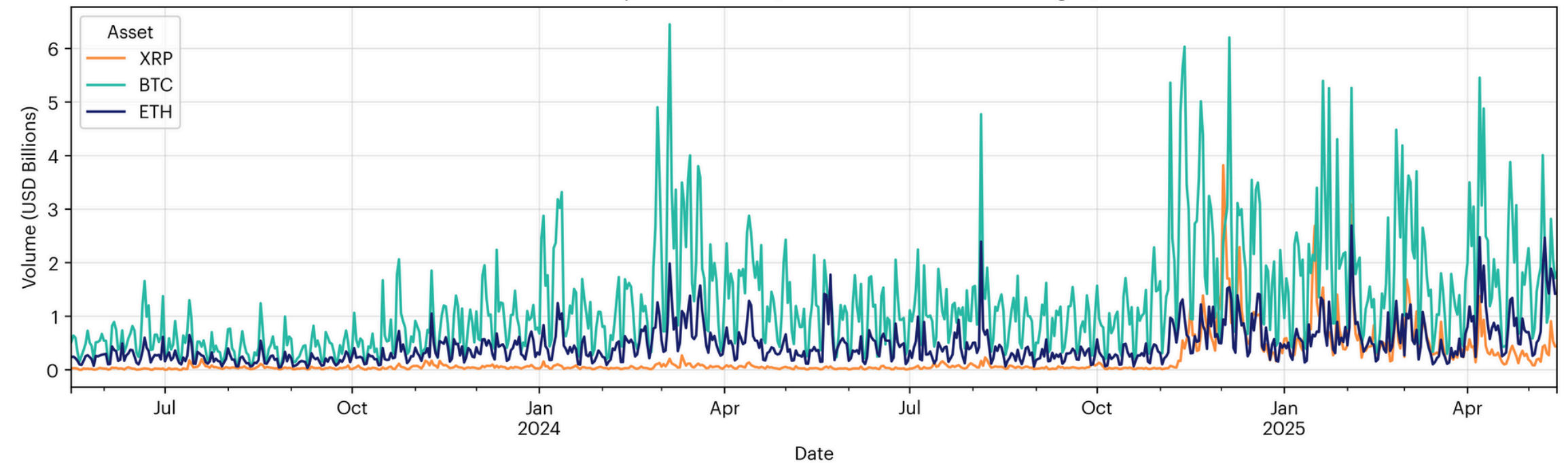| Name (Asset)	Market Cap ($M)	Weight (CF Broad Cap)
BTC	$2,050,593	72.2%
ETH	$ 290,938	10.3%
XRP	$ 143,452	5.8%
SOL	$ 88,487	4.3%
DOGE	$ 32,969	1.3%
ADA	$ 27,052	1.3%
SUI	$ 12,864	0.5%
LINK	$ 10,602	0.4%
SHIB	$ 8,710	0.3%
LTC	$ 7,422	0.3%

Source: CF Benchmarks, table represents the top-10 digital assets in the CF Broad Cap Index by free-float market capitalization, as of May 14, 2025

XRP's Market Depth Rivals the Largest Digital Assets

Total Daily USD Volume (Across Constituent Exchanges)

Average Daily Trading Volume by Constituent Exchange

Exchange	BTC Volume ($M)	ETH Volume ($M)	XRP Volume ($M)
Bitstamp	$ 118.5	$ 18.9	$ 17.6
Bullish	$ 160.7	-	-
Coinbase	$ 735.5	$ 286.8	$ 152.0
Crypto.com	$ 663.2	$ 521.6	-
Gemini	$ 44.3	$ 15.2	-
ItBit	$ 9.9	$ 4.6	-
Kraken	$ 147.2	$ 57.1	$ 30.8
LMAX	$ 118.9	$ 48.3	$ 26.4
Total	$ 1,997.7	$ 952.5	$ 226.8

Source: CF Benchmarks, as of May 14, 2025

Following the U.S. SEC's withdrawal of its enforcement action, market demand for XRP has risen markedly. Daily spot turnover across the constituent exchanges that make up the CME CF XRPUSD Reference Rate now totals $226.8 million. While this represents approximately 24% of Ethereum's daily volume and 11% of Bitcoin's trading activity, XRP maintains significant presence across five major exchanges in the CF Benchmarks constituent universe.

This substantial liquidity signals a market that has matured beyond speculative bursts. A broader base of institutional and retail participants, supported by renewed U.S. exchange listings—particularly Coinbase's robust $152 million daily volume—now sustains a consistent flow profile. The distribution across multiple tier-one venues (Coinbase, Kraken, LMAX, and Bitstamp) demonstrates market-wide infrastructure support rather than concentration on a single platform.

For investors, the practical implication is that entry and exit in meaningful size can be executed with manageable price impact, particularly on exchanges where liquidity is deepest. Its improved tradability, combined with distinct return drivers and eight years of price discovery across multiple market cycles, enhances XRP's role as a viable component in diversified digital-asset portfolios that meet institutional standards for liquidity and execution quality.

XRP has Low Correlation to Other Digital Assets

	XRP	Bitcoin	Ether	Solana	CF Broad Cap (Free-Float)
XRP	1.00	0.47	0.48	0.47	0.77
Bitcoin	0.47	1.00	0.79	0.64	0.97
Ether	0.48	0.79	1.00	0.64	0.89
Solana	0.47	0.64	0.64	1.00	0.74
CF Broad Cap (Free-Float)	0.77	0.97	0.89	0.74	1.00

The correlation matrix underscores XRP's dual role in a pure-crypto portfolio. Against Bitcoin ($\rho \approx 0.47$), Ether ($\rho \approx 0.48$), and Solana ($\rho \approx 0.47$), XRP exhibits only moderate pairwise correlation, highlighting its historically distinct price behavior. In fact, XRP's intra-asset correlations are lower than those observed for Bitcoin or Solana, indicating that its returns are driven by partially independent market factors. In contrast, its correlation with the CF Broad Cap free-float index is higher ($\rho \approx 0.77$), positioning XRP as a reliable proxy for broader market performance.

This profile makes XRP both a diversifier across protocol-specific risks and a core building block within a crypto allocation. Investors applying modern portfolio theory to digital assets will recognize the value of XRP's correlation characteristics. Its relatively low correlation with other major tokens enables more efficient diversification and a reduction in unsystematic risk. At the same time, its high correlation with the broader index ensures participation in aggregate crypto market movements. This dynamic supports improved risk-adjusted returns and reduced tracking error, two key objectives in portfolio construction.

Source: CF Benchmarks, Bloomberg, weekly correlations are calculated on price return indices over the past 5 years, as of April 30, 2025

XRP's Distinctive Risk–Reward Profile

Median Monthly Returns by Asset

Box Plot (Min, Q1, Median, Q3, Max)
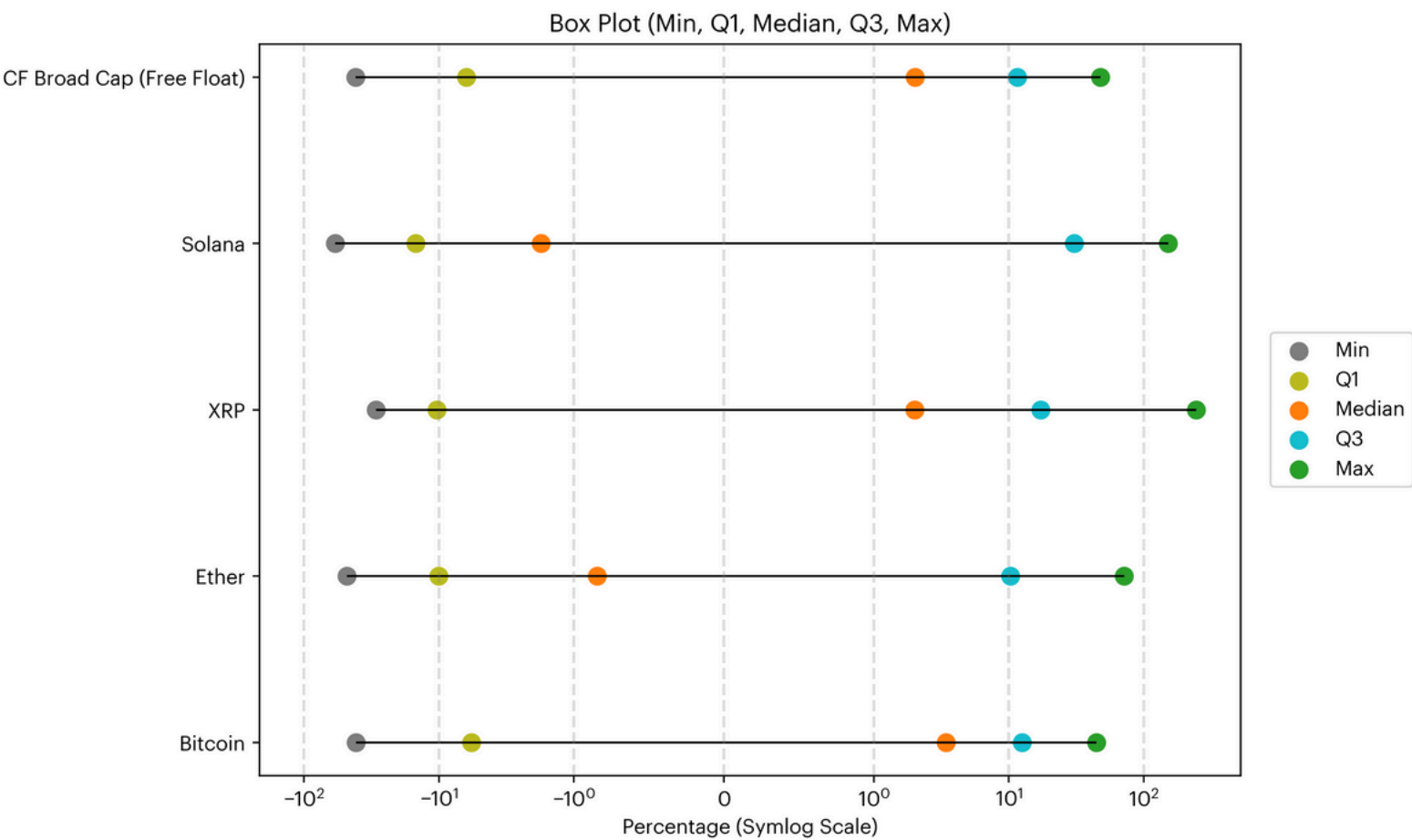
XRP exhibits the same asymmetric, positively skewed return profile that is typical of digital assets, yet its risk-reward mix sits between Bitcoin and the blue-chip smart contract platforms. Over the past three years, XRP's interquartile range spans from -10.33% to 17.27%, wider than Bitcoin's (-5.76% to 12.52%) but noticeably narrower on the downside than Solana's (-14.89% to 30.61%). Importantly, XRP shares an identical median monthly return of 2.01% with the CF Broad Cap index—demonstrating that investors can capture broad-market crypto beta without accepting proportionally larger drawdowns.

Where XRP distinguishes itself is in its right-tail potential: the token delivered a maximum single-month gain of 244.59%, eclipsing every peer in the comparison set (Solana's 151.98% is the next closest). At the same time, its worst monthly loss (-29.21%) is meaningfully shallower than the extreme troughs recorded by Ether (-48.22%) or Solana (-58.70%). For allocators seeking asymmetric upside with moderated downside relative to other layer-1s, XRP provides a compelling middle ground—matching the median performance of the broad market, cushioning extreme losses better than many large-caps, and still offering the highest observed upside in the cohort.

Source: CF Benchmarks, Bloomberg, observation period begins on April 31, 2022, as of April 30, 2025

16

In a Portfolio of Digital Assets, XRP is Constructive

Efficient Frontier – Monte Carlo Simulation
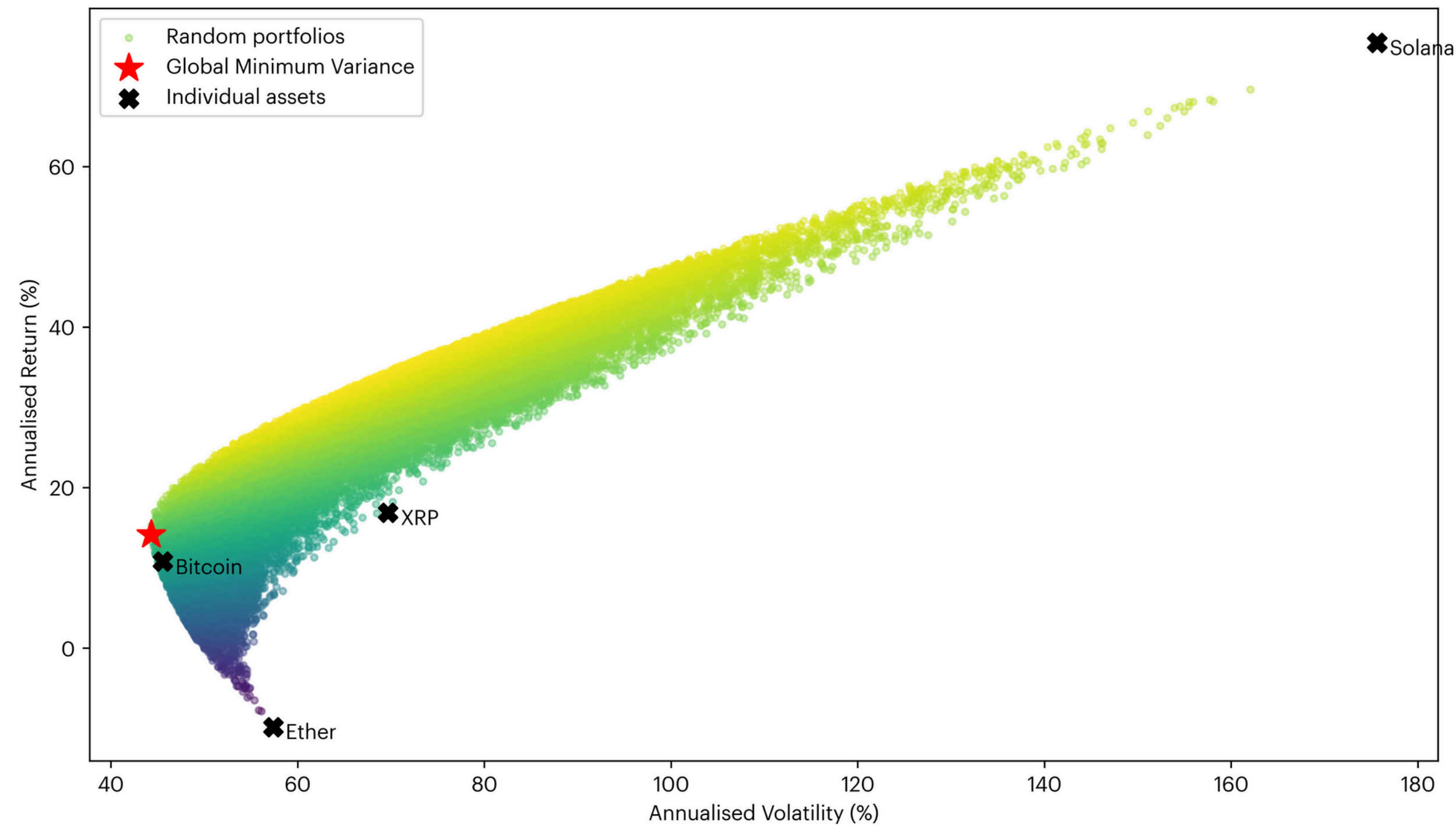
Our efficient frontier analysis reveals compelling evidence for XRP in digital asset portfolios. A modest 3.9% position—identified in our minimum-variance framework—improves efficiency while maintaining returns near 14% and reducing volatility.

Monte Carlo simulations consistently validate XRP's diversification benefits across thousands of market scenarios. Its value stems from moderate correlations with major layer-1 protocols, shallower drawdowns during market stress, and substantial upside potential—evidenced by historical triple-digit monthly gains.

These characteristics allow investors to capture diversification benefits without large portfolio commitments. Even a low-single-digit allocation provides enhanced return optionality while reducing protocol-specific exposure. For sophisticated investors optimizing performance metrics, XRP represents an efficiently-sized position that improves overall Sharpe and Sortino ratios while maintaining appropriate market participation.

Source: CF Benchmarks, Bloomberg, from April 30, 2022 to April 30, 2025

Appendix

Further Resources

CFB Podcast

Vimeo

Apple Podcasts

Spotify

RSS.com

YouTube

CFB Talks Digital Assets is the home of informed conversation about crypto from CF Benchmarks. We are the first and leading digital asset index provider, authorized and regulated by the UK FCA. Respected and innovative financial institutions use our indices and reference rates to power regulated financial instruments, like listed derivatives, investment funds and structured products. Join CF Benchmarks' Head of Content, Ken Odeluga and Head of Research, Gabe Selby, CFA, as they talk with some of the most accomplished and influential figures in finance, about everything affecting digital assets — crypto protocols, markets, fund flows, on-chain metrics, macroeconomics and more.

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CF Benchmarks Research & Insights

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Further Resources

CFB Social Channels

LinkedIn

Twitter

Vimeo

YouTube

Instagram

CF DACS Token Explorer

CFB Indices & Methodologies

For more information about our CF Benchmarks indices and our methodologies, please visit the respective web links:

- CF Diversified Large Cap Index
- CF DeFi Composite Index
- CF Web 3.0 Smart Contract Platforms Index
- CF Digital Culture Composite Index

- CF Cryptocurrency Ultra Cap 5 Index
- CF Broad Cap Index Market Cap Weight
- CF Broad Cap Index Diversified Weight

Contact us

Have a question or would like to chat? If so, please drop us a line to: info@cfbenchmarks.com

Glossary of Terms

Gas: A unit that measures the cost to execute transactions and smart contracts on the Ethereum network, paid for in Ether.

Consensus: The process by which transactions are verified and new blocks are created in a blockchain. Ethereum uses a proof-of-stake (PoS) mechanism where validators stake Ether to validate transactions.

Proof-of-Stake (PoS): A consensus mechanism where users stake their cryptocurrency to validate transactions and secure the network, considered more energy-efficient than proof-of-work (PoW).

Ethereum Virtual Machine (EVM): A decentralized virtual machine that executes smart contracts on the Ethereum network, similar to cloud hosting services.

Decentralized Applications (dApps): Applications that run on a decentralized network rather than a single computer, making them resistant to censorship and control.

Smart Contracts: Self-executing contracts with the terms of the agreement directly written into lines of code, which automatically execute when predefined conditions are met.

Sharpe Ratio: A measure used to assess the performance of an investment by calculating the average return earned in excess of the risk-free rate per unit of volatility or total risk.

TAM: Total Addressable Market (TAM) quantifies the maximum revenue opportunity available for a product or service, assuming complete market saturation under ideal conditions.

Market Cap: The total value of a company's shares of stock or a cryptocurrency's circulating supply, calculated by multiplying the current price per share or per token by the total number of shares or tokens outstanding.

CF Digital Asset Classification Structure

CF Digital Asset Classification Structure

The CF Digital Asset Classification Structure (CF DACS) classifies coins and tokens based on the services that the associated software protocol delivers to end users, grouping assets by the role they play in delivering services to end users. The CF DACS powers CF Benchmarks' sector composite and category portfolio indices and allows users to perform attribution analysis to better understand the fundamental drivers of returns within their digital asset portfolios.

Appendix

Disclaimer and Disclosures

Appendix

Disclaimer and Disclosures (cont.)

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