glassnode

swissblock

Systematic Trading

Swissblock Capital is a proprietary trading company that manages shareholder funds through a blend of discretionary and systematic mandates across digital assets and traditional capital markets. Swissblock pioneered the use of on-chain data in systematic trading strategies from its inception in 2017. It created sophisticated tooling to better navigate the blockchain space, eventually leading to the inception of Glassnode as a separate entity.

The Challenge

Digital asset markets suffer from a lack of traditional fundamentals, idiosyncratic risks, and complex infrastructure. Navigating this landscape while optimizing risk-adjusted returns is a challenge. Key difficulties for Swissblock when expanding in the market included:

1. **Valuing the digital assets system**

   As the industry's bellwether, Bitcoin's valuation is key to understanding the broader market. However, lacking clear fundamentals, its price is predominantly driven by supply and demand, speculation, regulation, and macro trends. While the network's transparency enables innovative valuation methods, their application requires specialized technology and expertise.

2. **Assessing risk**

   Valuation challenges extend to assessing risk, as digital assets' extreme volatility, liquidity constraints, and regulatory uncertainty weaken traditional risk models.

A broad range of factors must be considered when evaluating exposure. Like valuation, risk assessment presents opportunities for novel approaches, but this remains difficult in a rapidly evolving space.

3. **Accessing quality datasets and infrastructure**

   Blockchain data is vast, complex, and ever-evolving. Its decentralized and pseudonymous nature adds further challenges, requiring specialized datasets and infrastructure to process and extract insights. Scaling this process demands substantial resources.

Like many entrants into the market, Swissblock had to carefully consider and navigate the above factors while managing risk-adjusted returns.

Solution

Glassnode provides a vast range of on-chain metrics that Swissblock was able to use to develop a set of proprietary indices that help reveal underlying market dynamics and trends. For instance, indices focused on Bitcoin fundamentals and risk are used to assess the market as a whole. These indices are part of a broader systematic framework, helping to manage risk-adjusted returns. Swissblock leveraged Glassnode's robust API to seamlessly integrate such data into its algorithms.

Key features that made the difference:

1. **Network and liquidity indicators**

   Glassnode provides Swissblock with a variety of on-chain metrics that feed into their proprietary 'Bitcoin Fundamental Index' (BFI). It covers network health and liquidity, serving as a proxy for the state of the digital asset system:

- 'Network health' measures the strength and growth of the Bitcoin network, using Glassnode's on-chain metrics combined in a proprietary fashion to assess whether user activity and adoption are expanding or contracting.

- Liquidity metrics assess transaction and trading activity, serving as a proxy for supply and demand dynamics. It utilizes metrics like Entity-Adjusted Transaction Volume and Transaction Count, while also assessing exchange transaction flows.
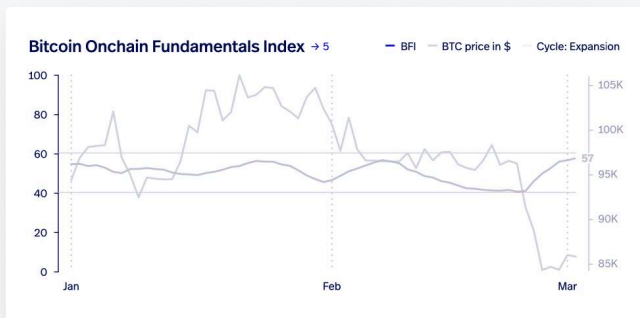
2. Sentiment indicators

Glassnode's on-chain data also feeds Swissblock's 'Bitcoin Risk Signal,' which is a proprietary indicator that gauges the potential risk of a major drawdown in Bitcoin price. This signal heavily utilizes on-chain valuation and cost-basis metrics to ascertain potential market sentiment:

- On-chain indicators include valuation and cost-basis metrics like Entity-Adjusted MVRV and SOPR, which help assess investor sentiment.

- Such metrics are further broken down by short- and long-term holders variants, offering deeper insights into different cohort behaviors.

3. Robust API

Glassnode's API provides Swissblock seamless access to its institutional infrastructure.

- A baseline latency of 220ms is suitable for Swissblock's trading algorithms
- High call volumes of up to 1200 per minute facilitate large-scale models
- A single entry point provides access to all metrics for models and in-house tooling.
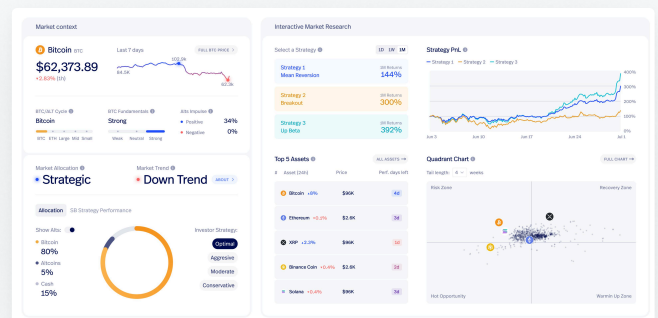
Results

Swissblock has become one of the largest players in the systematic digital asset trading space. On-chain data helps them:

Key outcomes

- **Find alpha:** Alternative datasets provide an edge to trading algorithms
- **Improve risk management:** Network, liquidity, and sentiment indicators signal impending volatility, guiding strategic positioning
- **Build robust infrastructure:** Institutional-grade APIs strengthen systematic processes

Conclusions

Glassnode is a critical piece of Swissblock's architecture, enabling it to find edge and manage risk-adjusted returns at the institutional level.

"Glassnode is a cornerstone of our systematic trading strategy. Its on-chain datasets provide orthogonal insights to price action, enabling a deeper understanding of capital flows within the system and market sentiment."

— **Yann Alleman**, Co-founder, Swissblock