# White Paper – B3X: The Ultimate AI-Powered Protocol for Decentralized Derivatives and Options Trading

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**Abstract**

B3X is an innovative decentralized protocol revolutionizing derivatives and options trading in the DeFi space. By integrating cutting-edge AI with blockchain technology, B3X offers a comprehensive ecosystem for creating, managing, and trading advanced financial instruments. The protocol's core components include a dynamic fund marketplace enabling user-created vaults, an AI-driven fund builder powered by LLMs, an intelligent fund oracle, and a high-performance trading layer supporting up to 1000x leverage. The platform features permissionless market creation, synthetic tokens of real-world assets (RWA), and seamless Web2 user onboarding through account abstraction, significantly expanding trading possibilities and improving accessibility.

Initially integrated with the Shared Order Book of the Injective blockchain to demonstrate the implementation of the protocol, B3X is developing a custom, multichain Perpetual DEX with proprietary market-making and cross-chain liquidity features. This DEX will expand across Injective, Movement, Monad, Arbitrum and Base blockchains. The B3X token drives governance, incentives, and value accrual through innovative profit-sharing mechanisms. Leveraging patent-pending AI technology, B3X delivers a scalable, user-centric trading experience with features like one-click trading and automated Telegram updates, providing unparalleled opportunities for traders, investors, and fund managers in the evolving landscape of decentralized finance.

*"Get smart people together, give them a lot of freedom, create an atmosphere where everyone talks to everyone else, provide the best infrastructure, and make everyone partners."*

Jim Simons, founder of Renaissance Technologies
April 25, 1938 – May 10, 2024

In honor of a visionary leader whose principles continue to inspire our journey.

# Contents

# 1 Introduction

In the rapidly evolving landscape of decentralized finance (DeFi), B3X emerges as a game-changing platform, set to revolutionize derivatives and options trading. By harnessing the power of cutting-edge artificial intelligence and blockchain technology, B3X democratizes access to sophisticated financial instruments, empowering a diverse range of users from individual traders to professional fund managers.

At the heart of the B3X protocol lies a comprehensive ecosystem built on four pillars:

1. **Dynamic Fund Marketplace:** We connect investors with top-performing fund managers, fostering a vibrant ecosystem that optimizes capital allocation and drives innovation in trading strategies. Our platform enables user-created vaults and funds, allowing successful traders to share their strategies with the community.

2. **AI-Powered Fund Builder:** Our state-of-the-art tool, driven by large language models (LLMs), empowers fund managers to create, optimize, and automate sophisticated trading strategies with unprecedented ease and flexibility. AI-integrated fund managers analyze market trends and make real-time decisions, offering data-driven performance.

3. **Intelligent Fund Oracle:** Harnessing advanced AI algorithms, this smart contract-based system automates fund selection and allocation, tailoring investment strategies to individual risk profiles and market conditions.

4. **Advanced DEX for Derivatives & Options:** Our decentralized exchange delivers a fully on-chain trading experience that rivals centralized platforms in performance and user experience, featuring high leverage options up to 1000x and permissionless market creation.

B3X pushes the boundaries of DeFi with groundbreaking features:

- **Real-World Asset Integration:** Through synthetic tokens of RWA, users can gain exposure to a wide array of assets, from traditional commodities to stocks, without leaving the crypto ecosystem. Our permissionless market creation allows any token to serve as collateral, expanding trading possibilities.

- **Enhanced User Experience:** We bridge the Web2-Web3 gap with seamless account abstraction, enabling email-based registration and one-click trading. Our platform integrates with Telegram bots for real-time updates and offers fiat on/off-ramps through industry-leading banking partners.

- **Advanced Liquidity Solutions:** Our proprietary market-making strategies with profit sharing and cross-chain liquidity access through chain abstraction ensure deep, efficient markets across networks.

Built initially on Injective's shared order book for rapid market entry, B3X is already developing a proprietary, multichain Perpetual DEX. Scheduled for release in Q2 2025, this custom DEX will expand our reach across Injective, Movement, Monad, Arbitrum and Base blockchains, significantly enhancing liquidity and accessibility.

The B3X token stands at the core of our ecosystem, driving governance, incentives, and value accrual. By aligning the interests of all stakeholders, we're fostering a dynamic, engaged community that shapes the future of decentralized finance.

Drawing on our team's extensive experience and leveraging patent-pending AI technology from b-cube.ai, B3X is not just a platform—it's a movement towards a more accessible, efficient, and intelligent DeFi ecosystem. We invite traders, investors, and innovators to join us in this transformative journey, as we unlock new possibilities in financial empowerment and reshape the landscape of decentralized trading.

## 2 Terminology

**Perpetual Decentralized Exchange (Perpetual DEX):** A Perpetual DEX is a decentralized platform for trading perpetual derivative contracts without expiry dates. It operates peer-to-peer via smart contracts, eliminating intermediaries and enhancing security. These platforms allow users to speculate on cryptocurrency prices with leverage, typically using a funding rate mechanism to align contract prices with spot markets.

**Derivatives:** Derivatives are financial instruments whose value is based on the price of an underlying asset, such as a cryptocurrency, stock, or commodity. Common types of derivatives include futures, options, and swaps. These instruments are used for various purposes, including hedging risk, speculating on price movements, and gaining access to otherwise hard-to-trade assets. In the context of cryptocurrency, derivatives enable traders to bet on the future price movements of digital currencies without actually owning the underlying asset.

**Options Trading:** Options trading involves buying and selling options contracts, which give the holder the right, but not the obligation, to buy or sell an underlying asset at a predetermined price before a specified expiration date. There are two types of options: calls (which give the right to buy) and puts (which give the right to sell). Options can be used for hedging, income generation, or speculation. In the cryptocurrency market, options allow traders to manage risk and leverage positions more effectively.

**B3X Token:** The B3X token is the native cryptocurrency of the B3X platform which plays an important role in the ecosystem, providing holders with governance rights, incentives, and rewards opportunities. It can be used to pay for transaction fees on the DEX, participate in platform governance by voting on proposals, and earn rewards from trading fees and AI-managed funds.

**B3X SDK:** The B3X SDK is a comprehensive software development kit provided by the B3X platform. It includes a suite of tools, libraries, and documentation that enable developers and fund managers to create, customize, and deploy advanced trading strategies. The SDK leverages the power of artificial intelligence and machine learning to facilitate the development of sophisticated AI trading agents. The B3X SDK empowers users to harness the full potential of the platform's capabilities, driving innovation and enhancing the trading experience.

**AI Agent:** An AI agent is a software entity that perceives its environment, processes information, and takes actions to achieve specific goals. It uses techniques such as machine learning, neural networks, and large language models (LLMs) to analyze data, make informed decisions, and improve its performance over time. AI agents can operate in various domains, including natural language processing, robotics, and finance, where they continuously learn and adapt to changing conditions to optimize their behavior and outcomes.

**AI Trading Agent:** An AI trading agent is a specialized type of AI agent designed to operate within financial markets. It leverages large language models (LLMs) and machine learning algorithms to analyze vast amounts of historical and real-time market data, predict price movements, and execute trades autonomously. These agents are capable of adapting to market changes, optimizing trading strategies, and minimizing risks.

**Fund Manager:** A fund manager is an individual or entity responsible for making investment decisions and managing a fund's portfolio to achieve its investment objectives. In the context of B3X, fund managers can be experienced crypto traders or professional hedge funds who create and manage funds within the platform. They earn performance fees based on the profits generated from their trading strategies, which are executed via smart contracts.

**Fund Marketplace:** The fund marketplace is a feature of the B3X platform that allows investors to browse and invest in various funds managed by different fund managers. Investors can choose funds based on their performance, strategy, and risk profile. The marketplace provides a transparent and accessible way for investors to allocate their capital to professionally managed funds, benefiting from the expertise of seasoned traders.

**Fund Builder:** The fund builder is a tool within the B3X platform that enables fund managers to create and manage their funds. It provides an interface for developing AI trading agents using advanced AI and large language model (LLM) technology. Fund managers can design automated trading strategies, manually trade, or integrate external tools to post trading signals. This flexibility allows fund managers to tailor their funds to their specific trading style and expertise.

**Fund Oracle:** The fund oracle is a smart contract system that uses AI algorithms to automatically select and allocate funds based on investor preferences and market conditions. It helps investors optimize their portfolios by dynamically adjusting fund allocations according to predefined criteria, such as risk tolerance and investment goals. The fund oracle ensures that investments are managed efficiently and adaptively, maximizing returns and minimizing risks.

**Synthetic Tokens:** Digital assets that track the price of real-world assets (such as precious metals, stocks, or commodities) without requiring ownership of the underlying asset. These tokens allow users to gain exposure to various asset classes within the cryptocurrency ecosystem.

**RWA (Real World Assets):** Traditional, off-chain assets such as commodities, real estate, stocks, or financial instruments that are represented on the blockchain through tokenization. In the B3X platform, these assets are represented as synthetic tokens, allowing traders to gain exposure to traditional markets without directly owning the underlying assets. This integration enables 24/7 trading of traditionally illiquid assets and bridges the gap between conventional finance and DeFi markets.

**Account Abstraction:** A blockchain technology that allows users to interact with smart contract wallets instead of traditional externally owned accounts (EOAs). It enables customizable account behavior, improved security features, and enhanced user experience by abstracting away complex blockchain interactions. Account abstraction simplifies tasks like transaction fee management, account recovery, and multi-signature functionality, potentially facilitating broader adoption of blockchain technology.

**Injective Blockchain:** The Injective blockchain is a high-performance blockchain optimized for decentralized finance (DeFi) applications. It offers fast transaction speeds, low costs, and interoperability with other blockchains through IBC. The Injective blockchain supports a shared order book, allowing multiple exchanges to pool their liquidity.

**Shared Order Book:** A shared order book is a system where multiple exchanges share a common order book, combining their liquidity to improve trading efficiency. This approach allows traders to access deeper liquidity and better pricing, as orders from different platforms are aggregated into a single, cohesive order book. The shared order book enhances market efficiency and reduces trading costs.

**LLM (Large Language Model):** A large language model (LLM) is a type of artificial intelligence model trained to process and generate human-like text based on statistical patterns learned from large datasets. LLMs are trained on vast amounts of data and can perform various natural language processing tasks, such as text generation, translation, and summarization. In the B3X platform, LLMs are used to create sophisticated AI trading agents that can analyze market data and execute trades based on natural language instructions.

# 3 Problems & Solutions

### Problem 1: Complexity in Fund Creation and Management

Developing and managing investment funds in DeFi is resource-intensive and technically challenging, deterring potential fund managers.

**Solution:** AI-Powered Fund Builder and Community-Driven Innovation

- Intuitive interface for developing AI trading agents using LLMs
- Real-time strategy backtesting and optimization
- Integration with Large Language Models for natural language strategy development
- User-created vaults enabling community members to share successful strategies
- AI-integrated fund managers for automated strategy optimization

### Problem 2: Inefficient Investment Allocation

Investors struggle to optimize their portfolios due to the absence of automated, AI-driven tools for dynamic fund allocation.

**Solution:** Intelligent Fund Oracle

- AI-driven automated investment allocation
- Dynamic portfolio rebalancing based on market conditions
- Personalized investment recommendations using advanced algorithms

### Problem 3: High Technical Barriers to Entry

Complex wallet management and blockchain interactions deter new users from participating in DeFi ecosystems.

**Solution:** Seamless User Experience

- Email-based registration through Account Abstraction
- One-click trading for instant execution
- Automated Telegram bot integration for real-time updates
- Fiat on/off-ramps with industry-leading banking partners

### Problem 4: Limited Exposure to Traditional Financial Instruments

DeFi users often lack access to synthetic versions of traditional assets, restricting their investment options.

**Solution:** Comprehensive Real-World Asset Integration

- Synthetic tokens of RWA including commodities and traditional assets

- Permissionless market creation for any token as collateral
- Support for diverse asset types including index tokens
- User-requested markets for various asset classes

### Problem 5: Limited Access to Sophisticated Trading Instruments

Many DeFi platforms lack advanced derivatives and options trading capabilities, restricting portfolio management and risk hedging strategies.

**Solution:** Advanced DEX for Derivatives & Options

- High leverage options up to 1000x for advanced trading strategies
- High-performance on-chain trading with up to 50,000 TPS
- Cross-chain compatibility across multiple networks
- Advanced order types and real-time risk management

### Problem 6: Insufficient Market Liquidity and Cross-Chain Complexity

DeFi platforms often struggle with fragmented liquidity and complex cross-chain operations.

**Solution:** Advanced Liquidity Management

- In-house market making with profit sharing for LPs
- Cross-chain liquidity access through chain abstraction
- Seamless multi-chain capital flow management
- Incentivized liquidity provision through profit-sharing mechanisms

### Problem 7: Inadequate Market Sentiment Analysis

Existing platforms often fail to leverage advanced AI and Large Language Models (LLMs) for comprehensive market sentiment analysis.

**Solution:** LLM-Enhanced Financial Sentiment Analysis

- Integration of specialized models fine-tuned on cryptocurrency market data
- Real-time processing of vast amounts of financial data for actionable insights

### Problem 8: Inefficient Time Series Analysis

Many platforms rely on traditional statistical methods, missing out on the potential of AI, including LLMs, for more accurate market predictions.

**Solution:** Advanced Time Series Analysis with LLMs

- Incorporation of models like TimeGPT for superior market trend forecasting

- Outperforming traditional statistical and machine learning methods in accuracy

**Conclusion of this chapter**

The integration of Large Language Models (LLMs) into the B3X platform represents a significant advancement in applying artificial intelligence to decentralized finance and cryptocurrency trading.

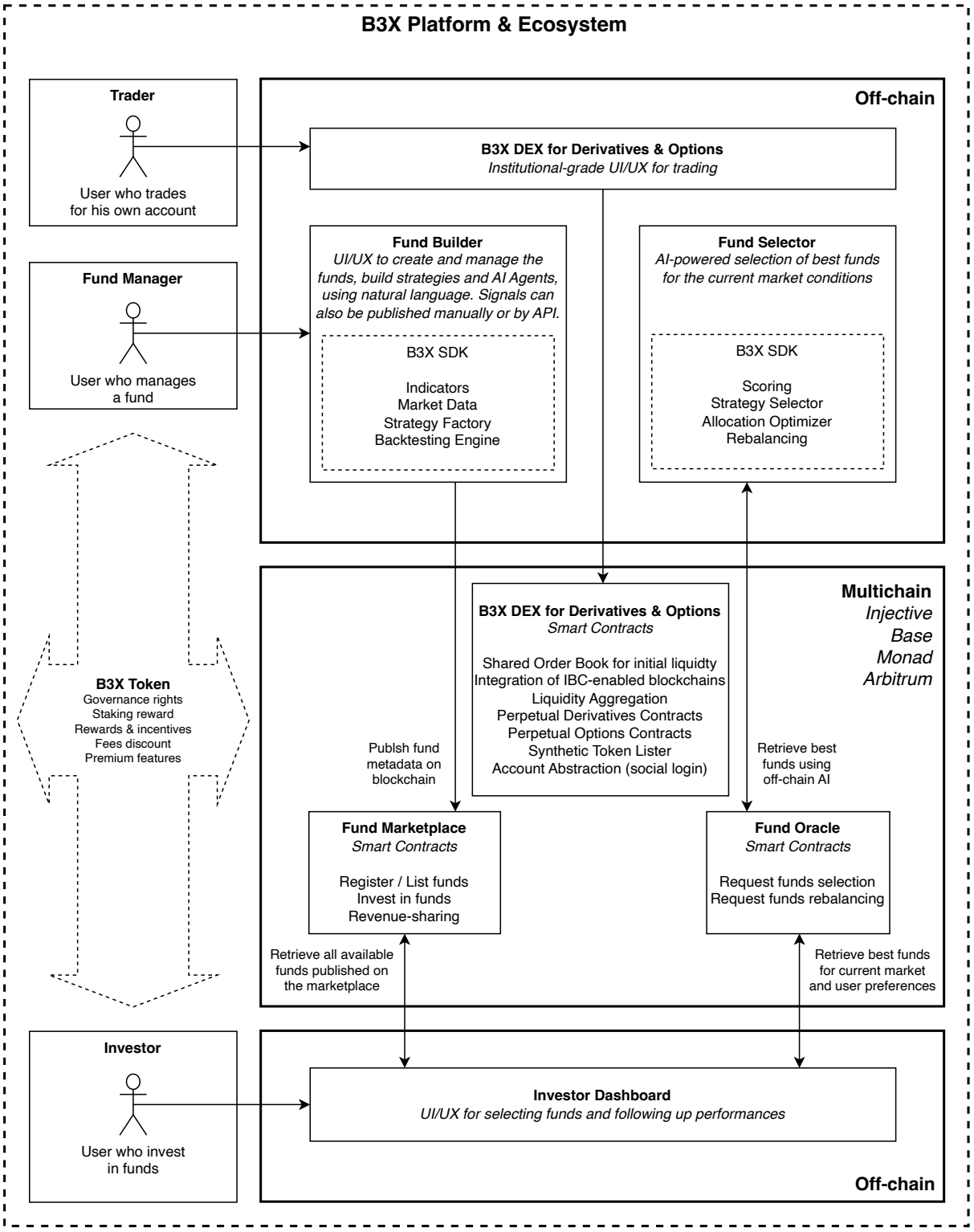
By leveraging LLMs across multiple domains, B3X offers unprecedented capabilities:

- Enhanced financial sentiment analysis for more accurate market insights
- Advanced time series analysis for superior market trend forecasting
- Sophisticated AI trading agents for automated, adaptive trading strategies
- Innovative code generation for streamlined strategy development
- Comprehensive RWA integration and permissionless market creation
- Advanced liquidity solutions with cross-chain capabilities

These advancements not only enhance B3X's existing quantitative tools but also open up new possibilities for strategy development, risk management, and market analysis. By integrating LLMs into its core architecture and providing innovative trading features, B3X is setting a new standard for intelligent, adaptive, and user-friendly decentralized trading platforms, positioning itself at the forefront of the rapidly evolving DeFi landscape.

# 4 Protocol Architecture

B3X's architecture is built on a modular, scalable framework that integrates advanced blockchain technology with AI-driven components. This design ensures flexibility, performance, and security across all platform features, positioning B3X at the forefront of decentralized derivatives and options trading.



## 4.1 Core Components

### Fund Marketplace

The Fund Marketplace connects investors with experienced fund managers, featuring:

- Seamless integration with the DEX for efficient strategy execution
- Real-time performance tracking and analytics
- Automated fee distribution and reporting
- Diverse range of investment strategies and fund types
- User-created vaults and funds with community-driven innovation
- AI-integrated fund managers powered by latest LLMs

### Fund Builder

Our AI-powered Fund Builder leverages a distributed computing framework, allowing for:

- Real-time strategy backtesting across multiple assets and timeframes
- Dynamic strategy optimization using reinforcement learning algorithms
- Automated risk management through predictive modeling
- Integration with Large Language Models (LLMs) for natural language strategy development
- Customizable performance metrics and risk parameters
- Community strategy sharing and investment opportunities

### Fund Oracle

The Fund Oracle utilizes advanced AI algorithms for automated investment allocation:

- Real-time market data processing and analysis
- Dynamic portfolio rebalancing based on predefined criteria and market conditions
- Integration with the Fund Marketplace for seamless execution of allocation strategies
- Personalized investment recommendations based on user profiles and risk appetites

### Decentralized Exchange (DEX)

The B3X DEX is the primary component of our platform, providing a fully on-chain trading experience for derivatives and options, built on a high-performance infrastructure.

Initial MVP on Injective:

- Leverages Injective blockchain's capabilities
- Processes up to 10,000 transactions per second

- Achieves sub-second finality

**Custom Perpetual DEX (Launching Q2 2025):** Our proprietary multichain solution aims to compete with top-tier platforms:

- **Throughput:** Designed to handle up to 50,000 transactions per second, comparable to leading DEXs
- **Latency:** Targets sub-100ms trade execution times, aligning with high-frequency trading standards
- **Scalability:** Implements a modular architecture for efficient scaling as demand grows
- **Cross-chain Compatibility:** Deployed on Injective, Movement, Monad, Arbitrum and Base, enhancing liquidity and accessibility across multiple ecosystems
- **Order Matching Engine:** Utilizes a high-speed, fair-sequencing algorithm to prevent front-running
- **Advanced Order Types:** Supports conditional orders, stop-losses, and take-profits, with plans to introduce more complex strategies
- **Risk Management:** Implements real-time position and margin calculations with sub-second updates
- **Liquidity:** Employs a hybrid liquidity model combining order book and AMM approaches for optimal depth

## 4.2 Unique Features of Our Perpetual DEX

**Market Creation and Trading Features**

1. **Permissionless Market Creation:** Empower market creators to list any token as collateral, opening up diverse trading possibilities and expanding market options for users. For instance, a gaming protocol with its native token could allow players to long or short BTC by using their gaming tokens as collateral. This approach adds value to the gaming token, creating utility beyond gaming and encouraging broader adoption.
2. **High Leverage Options:** Allows traders to take leverage up to 1000x, catering to high-risk, high-reward strategies and attracting advanced traders who seek maximized exposure in crypto and other markets.
3. **User-Requested Markets:** Enable users to request and create markets for various asset classes, including crypto, stocks, and commodities, as well as to trade on Fund Manager tokens. This flexibility gives traders access to an extensive trading ecosystem tailored to their interests.
4. **Synthetic Tokens of RWA:** Diversify offerings by allowing synthetic assets of commodities (e.g., cattle, coffee, or tomatoes) to be listed as index tokens, alongside other options such as liquidity staking tokens. This unique feature allows exposure to non-traditional assets, appealing to a wider range of traders.

**AI and Fund Management**

5. **User-Created Vaults and Funds:** Enable users to create and manage vaults (funds) to run their own trading strategies. After backtesting, the protocol lists successful strategies on the platform, allowing other users to invest in them. This feature fosters community-driven strategy innovation and offers users a way to benefit from skilled traders' expertise.

6. **AI-Integrated Fund Managers:** Our platform features fund managers powered by AI agents, trained on the latest Large Language Models (LLMs) and rigorously backtested. These AI fund managers analyze market trends, make real-time decisions, and optimize strategies, offering users an option to trade on high-performing, data-driven funds.

**User Experience and Accessibility**

7. **Seamless Web2 User Onboarding:** Simplify onboarding for Web2 users by utilizing Account Abstraction, allowing them to register with just an email address. This feature bridges the gap for non-crypto users, making it easy for them to explore DeFi without needing a crypto wallet.

8. **Automated Telegram Bot Integration:** Integrate Telegram bots to deliver trade data and updates to users in real-time. This feature enhances accessibility and user engagement by keeping traders informed of their positions and market movements conveniently within their preferred messaging platform.

9. **One-Click Trading:** Simplify the trading experience with one-click trading, allowing users to execute trades instantly. This feature appeals to both new and experienced users by making trading quick and easy.

10. **Fiat Infrastructure:** Access cheapest on- and off-ramps with industry-leading banking partners. Secure instant fiat transaction settlements through card payments.

**Liquidity and Cross-Chain Features**

11. **In-House Market Making with Profit Sharing:** Implement proprietary market-making strategies to improve liquidity and stability on the platform. Profits from market-making are shared with liquidity providers (LPs), creating a win-win ecosystem and encouraging more users to contribute liquidity.

12. **Cross-Chain Liquidity Access with Chain Abstraction:** Unlock seamless multi-chain liquidity access by leveraging chain abstraction, allowing efficient capital flow across networks without requiring users to manage cross-chain complexities. This approach enhances the depth and resilience of our DEX, creating a smoother, more integrated trading experience.

## 4.3 Liquidity Management

### Unified Liquidity Model (ULM)

Our proprietary ULM integrates concentrated liquidity pools with a dynamic market-making algorithm, optimizing capital efficiency by:

- Automatically adjusting liquidity depth based on trading volume and volatility
- Implementing a multi-tier fee structure that incentivizes liquidity provision in less liquid markets

- Utilizing a virtual automated market maker (vAMM) for synthetic assets, ensuring deep liquidity without traditional order books
- Facilitating cross-margin trading to maximize capital efficiency

**Proprietary Market Making**

Our in-house market-making strategy enhances platform liquidity through:

- Implementation of sophisticated market-making algorithms optimized for various market conditions
- Profit-sharing mechanism with liquidity providers (LPs) to create a sustainable ecosystem
- Dynamic liquidity provision across all supported assets, including synthetic RWA tokens
- Advanced risk management systems to maintain market stability

**Cross-Chain Liquidity**

B3X's custom multichain Perpetual DEX enhances liquidity and accessibility through chain abstraction:

- Seamless deployment across Injective, Base, Monad, and Arbitrum blockchains
- Advanced cross-chain bridges enabling efficient asset transfer and trading
- Implementation of a unified liquidity pool system across supported chains
- Atomic cross-chain settlements for enhanced security and efficiency
- Automated liquidity routing to optimize capital efficiency across chains
- Simplified user experience abstracting away cross-chain complexities

**Liquidity Incentives**

Our comprehensive incentive structure encourages sustainable liquidity provision:

- Revenue sharing from platform trading fees with active liquidity providers
- Additional rewards for providing liquidity to less liquid markets
- Special incentives for long-term liquidity commitment
- Performance-based rewards tied to market-making effectiveness

## 4.4 Security and Scalability

**Security Measures**

B3X implements robust security protocols:

- Regular third-party audits and bug bounty programs
- Formal verification of critical smart contracts

- Multi-signature wallets and time-locked transactions for platform upgrades
- Real-time monitoring and automated threat detection systems
- Comprehensive disaster recovery and business continuity plans

**Scalability Solutions**

To ensure efficient execution and minimize transaction costs:

- Implementation of layer-2 scaling solutions for improved throughput
- Use of off-chain computation for resource-intensive tasks, with on-chain verification
- Optimized data structures and algorithms for efficient on-chain operations
- Dynamic fee adjustment mechanism to balance network usage and cost

## 4.5 Integration of AI and Blockchain

**Advanced Market Analysis**

B3X leverages state-of-the-art AI models for comprehensive market understanding:

- Real-time sentiment analysis using specialized models fine-tuned on cryptocurrency market data
- Advanced time series forecasting with TimeGPT and Temporal Fusion Transformers
- Pattern recognition and anomaly detection for market manipulation prevention
- Integration with financial news feeds and social media for holistic market insights

**AI-Powered Trading Agents**

Our platform features sophisticated AI trading agents:

- LLM-powered fund managers capable of strategy development and optimization
- Reinforcement Learning algorithms for automated strategy execution and adaptation
- Natural language interface for strategy creation and modification
- Real-time performance monitoring and strategy adjustment

**LLM Applications in Trading**

Large Language Models are integrated throughout the platform:

- Strategy development through natural language processing
- Automated code generation for trading strategies
- Market analysis and interpretation of financial data
- Risk assessment and portfolio optimization recommendations

This advanced integration of AI and blockchain technologies provides B3X with a robust, scalable, and innovative foundation. The combination of high-performance blockchain infrastructure with sophisticated AI capabilities, particularly in the realm of LLMs and automated trading, positions B3X at the forefront of DeFi technology. This unique synthesis enables us to offer an unparalleled trading experience that adapts to market conditions and user needs, setting new standards for derivatives and options trading in the decentralized finance space.

## 4.6 User Flows

The B3X platform offers a comprehensive suite of functionalities tailored to the needs of traders, fund managers, and investors. Each user type interacts with the platform through distinct processes designed to optimize their experience and achieve their specific objectives. The following sequence diagrams illustrate the detailed user flows for each user type, highlighting how they engage with the platform's features and smart contracts.

### Traders

Traders on the B3X platform can engage in derivatives and options trading through a decentralized exchange (DEX). They can create, monitor, and manage their trades directly, benefiting from the platform's high-speed transactions. The sequence diagram for traders outlines the flow from order creation to execution, including checking order status and managing funds.

### Fund Managers

Fund managers are responsible for creating and managing investment funds on the B3X platform. They utilize the Fund Builder to develop sophisticated trading strategies, including AI-driven ones, and list their funds on the Fund Marketplace. The sequence diagram for fund managers demonstrates the process of fund creation, strategy deployment, and fund listing, showcasing the integration with smart contracts for automation and transparency.

### Investors

Investors use the B3X platform to browse, select, and invest in various funds managed by experienced fund managers. They can set their investment preferences and rely on the Fund Oracle to automate fund allocation based on their criteria. The sequence diagram for investors details the steps involved in browsing funds, making investments, setting preferences, and the automatic allocation of funds.

These user flows ensure that the B3X platform provides a seamless and efficient experience for all participants, leveraging the power of blockchain technology, smart contracts, and artificial intelligence to deliver a robust decentralized finance ecosystem.

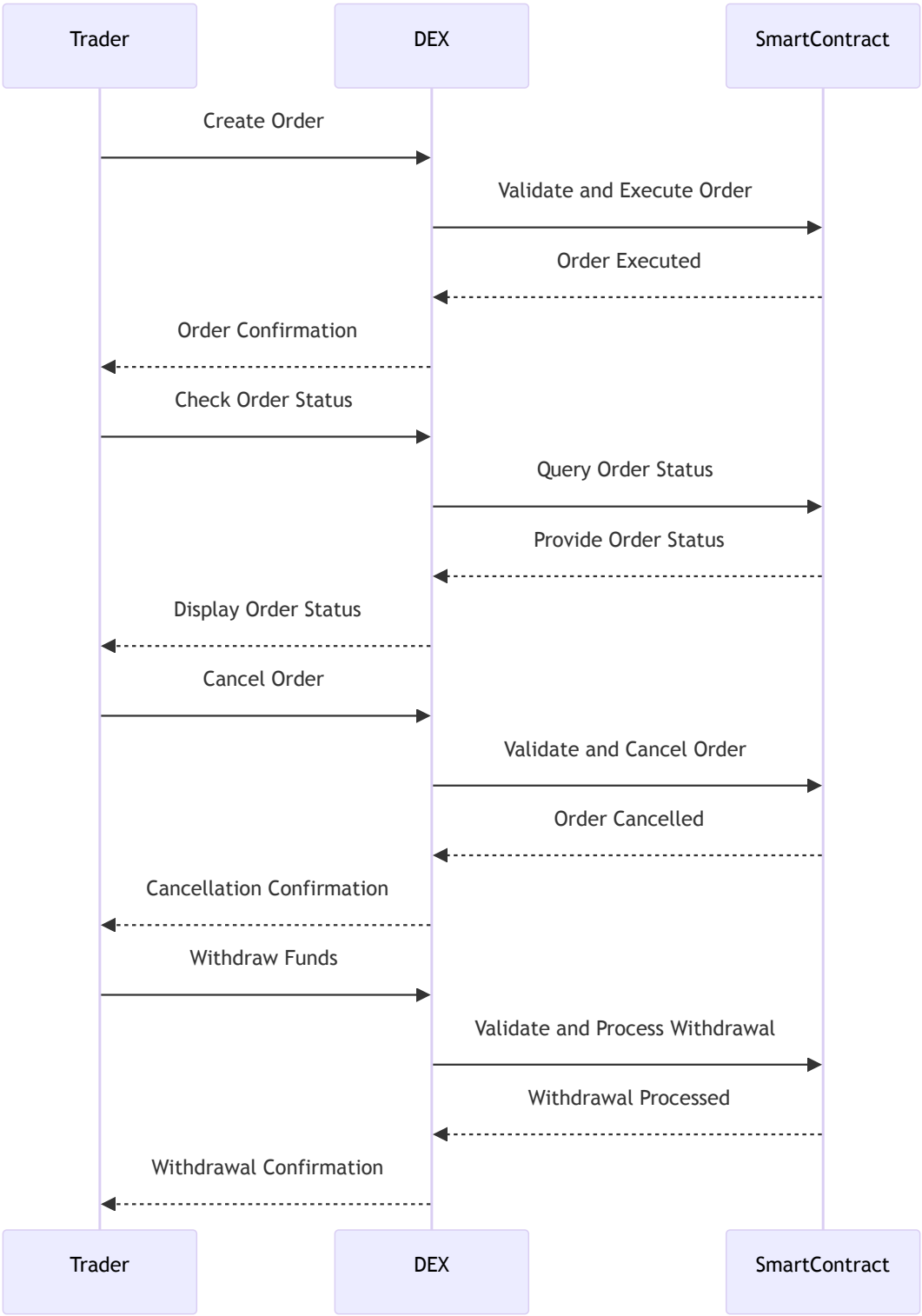



Figure 1: User flow for a Trader

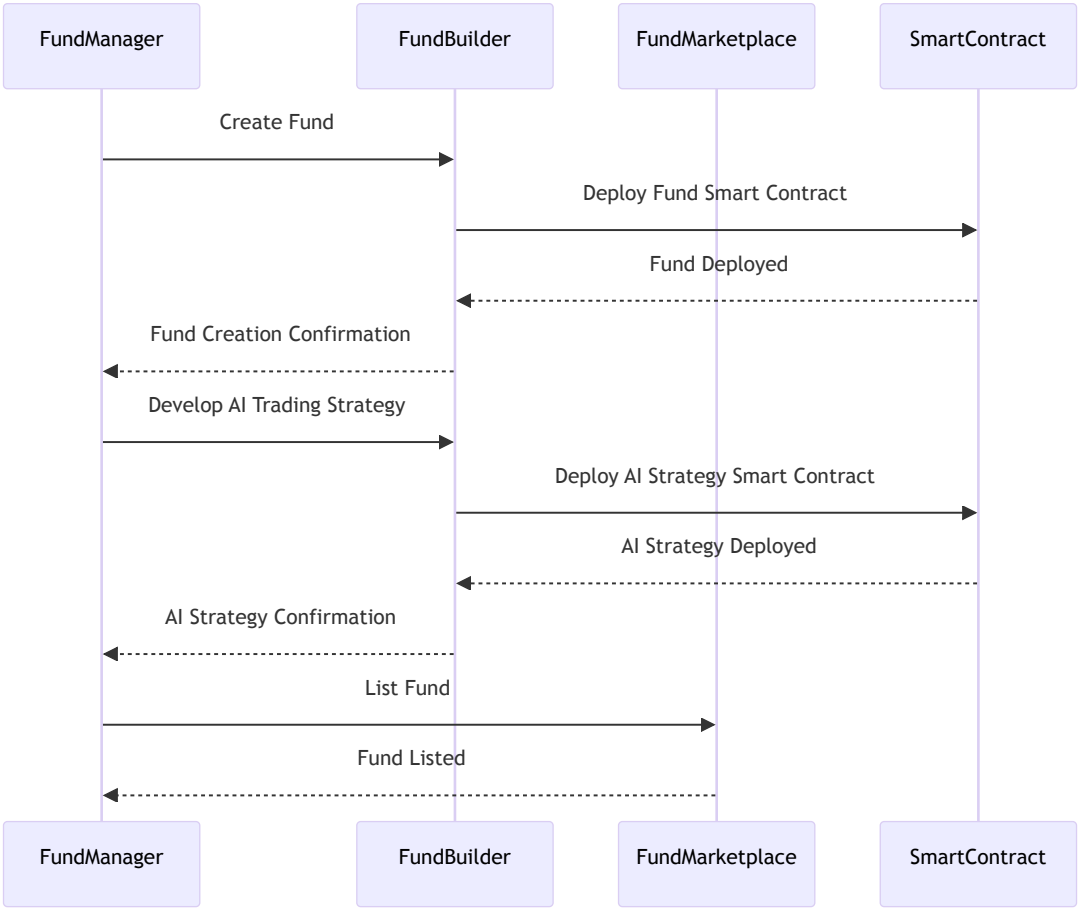



Figure 2: User flow for a Fund Manager

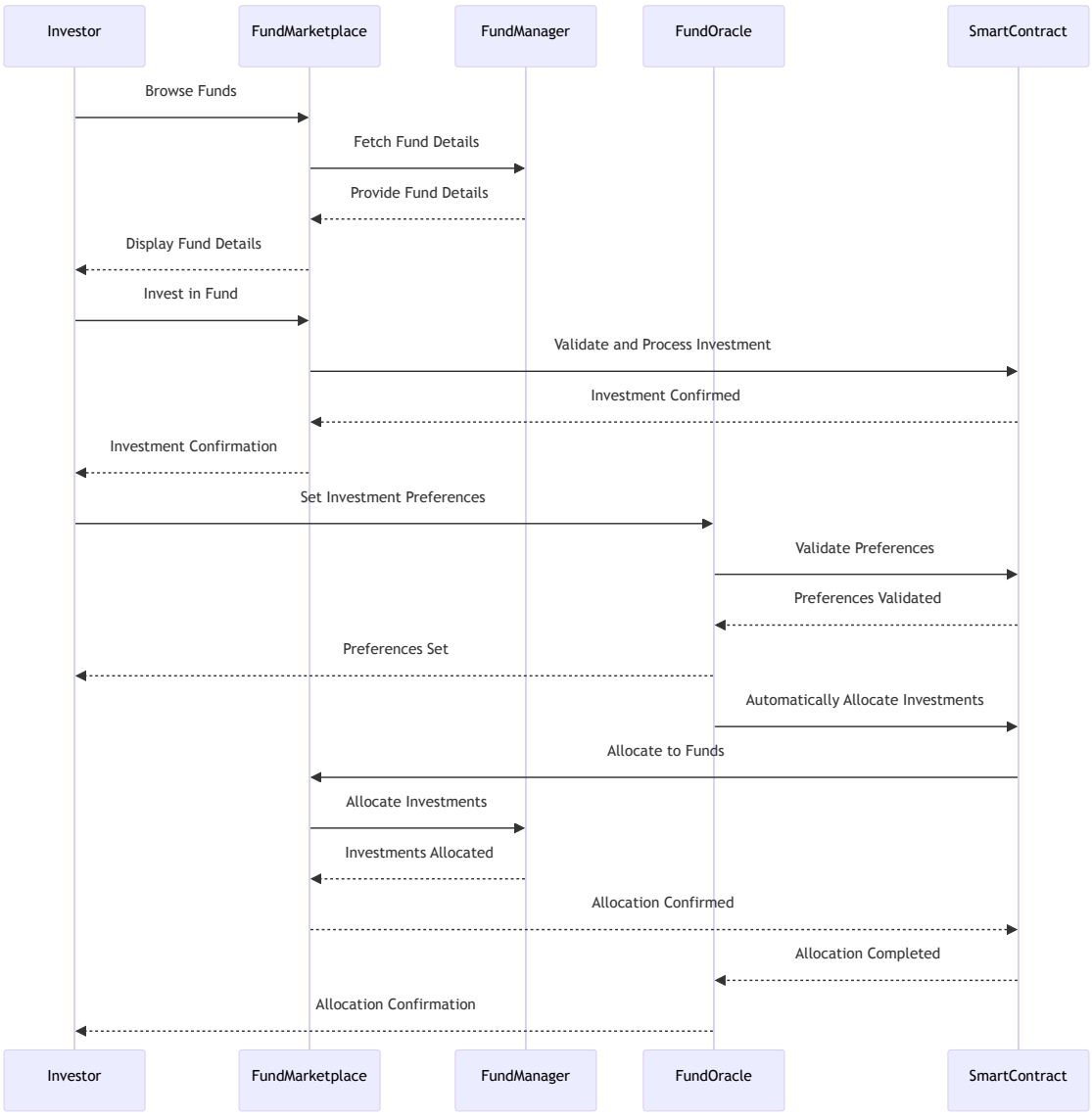



Figure 3: User flow for an Investor

Conclusion of this chapter

The B3X platform architecture represents a paradigm shift in decentralized finance, seamlessly integrating cutting-edge blockchain technology with advanced artificial intelligence capabilities. By leveraging the high-performance Injective blockchain initially and developing a custom multichain Perpetual DEX, B3X ensures unparalleled speed, scalability, and cross-chain accessibility.

Key architectural highlights include:

- A high-throughput DEX capable of processing up to 50,000 transactions per second
- Advanced AI-driven components like the Fund Builder and Fund Oracle
- Innovative liquidity management through the Unified Liquidity Model (ULM)
- Robust security measures and scalability solutions
- Seamless user experiences tailored for traders, fund managers, and investors

This comprehensive architecture not only addresses current DeFi challenges but also lays a solid foundation for future innovations. By combining high-performance blockchain infrastructure with sophisticated AI capabilities, B3X is poised to redefine derivatives and options trading in the decentralized finance space.

The platform's modular design ensures adaptability to emerging technologies and market demands, positioning B3X as a forward-thinking solution capable of evolving with the rapidly changing DeFi landscape. As the crypto market matures, B3X's architecture stands ready to meet the growing needs of both retail and institutional participants, driving the next wave of DeFi adoption and innovation.

# 5 Quantitative Tools

This section aims to describe our different tools based on quantitative methods which we have already developed and used in production for the past two years on our exisitng platform b-cube.ai. This is based on those tools that we are building the B3X SDK and the Strategy Validator.

The backtesting engine allows users to backtest their own strategies, the strategy factory makes it possible to generate lots of strategies from a family of strategies to help them choose parameter values and the strategy selector builds a trading strategy from a set of strategies. This strategy is in fact a strategy basket, whose composition and weights are determined by quantitative methods based on Artificial Intelligence.

Artificial intelligence (AI) is increasingly being used in the field of trading, and it has the potential to significantly improve the efficiency and effectiveness of trading strategies.

One way that AI can be used in trading is through the use of machine learning algorithms. These algorithms can be trained on historical data to recognize patterns and make predictions about future market movements. For example, a machine learning algorithm could be trained to identify trends in a particular stock or index, and then make predictions about whether the stock or index is likely to go up or down in the future. In fact, there are already classic statistical techniques, based on trading indicators (moving average, volatility, etc.) that already make it possible to correctly predict future returns. It turns out that machine learning techniques do not significantly improve predictions compared to traditional statistical methods. Even using machine learning methods, it is complicated to build strategies suitable for all market regimes.

The big challenge lies in being able to stop a strategy when it no longer performs and to change strategy at the right time. It is to solve this problem that AI is very useful. Our machine learning methods are able to detect the right strategies to use based on past performance. AI algorithms can analyze a large amount of data quickly and accurately, enabling the selection of the most appropriate trading strategies for a given situation.

Of course, there are also some challenges associated with using machine learning algorithms for strategy allocation. One of the biggest challenges is ensuring that the strategies are sufficiently different from each other. If the strategies do not differ enough, their tracks will be almost identical and therefore an allocation of these strategies will not change much compared to a single strategy. Additionally, there is always the risk that the algorithms will be subject to bias, which could affect the allocation of strategies. Our future work will then focus on improving the methods in order to provide an even more optimal allocation.

Despite these challenges, the potential benefits of using AI methods for strategy allocation are clear. These algorithms have the potential to improve the efficiency of strategy allocation. By way of illustration, we describe in the following part an example of an application in which the strategy selector is able to build an allocation of strategies with a better return than the best of the strategies in the starting set.

## 5.1 Backtesting Engine

Backtesting is a technique used by traders and investors to evaluate the performance of a trading strategy or investment portfolio. The idea behind backtesting is to simulate the performance of a strategy or portfolio using historical data, and then compare the simulated results to actual market conditions. This allows traders and investors to assess the accuracy and robustness of their strategy or portfolio, and to make any necessary adjustments before implementing it in

live markets.

One of the main advantages of backtesting is that it allows traders and investors to test their strategies and portfolios under a variety of market conditions. By using historical data, backtesting can simulate different market environments, including bull markets, bear markets, and market volatility. This allows traders and investors to see how their strategy or portfolio would have performed under different market conditions, and to determine if it is capable of generating consistent returns in different market environments.

Our tool allows users to build a trading strategy and backtest it. The user can choose an exchange from the list of major exchanges and a cryptocurrency among the main ones. The user can then select the statistical indicators that he wants to use for the backtest. The tool offers a wide range of indicators, including Moving Averages, Relative Strength Index, ALMA, and TRIX, among others. User can choose a different timeframe and decide if he wants to put Stop/Loss orders or not. The user specifies entry and exit conditions. The tool allows backtesting long-short strategies. It also makes it possible to take into account trading costs as well as slippage to reproduce as faithfully as possible what the strategy would have given if it had been applied in live trading.

Once the user has defined his trading strategy, the tool will run the backtest and generate a report showing the performance of the trading strategy. The report will include key metrics such as returns, profit and loss, win rate, maximum drawdown, volatility, and Sharpe ratio, among others. In addition to the backtest report, the tool also provides a graphical representation of the performance of the trading strategy. This can help traders quickly identify trends and patterns in their strategy and make informed decisions about their approach.

Although we offer a large list of the main indicators used in trading, the user may want to use indicators not present in the list. The "build your own bot" option will allow the user to provide the tool with a script that, based on historical data, calculates the entry and exit conditions. This will allow the user to backtest custom strategies.

Overall, our backtesting engine is a valuable tool for traders who want to evaluate the effectiveness of their trading strategy before implementing it in the real world. It offers a range of features and customization options that make it easy to test and optimize a trading strategy, helping traders make more informed decisions about their approach.

## 5.2 Strategy Factory

Backtesting a single strategy is not optimal and it could be very difficult especially for beginners to choose the right values of their parameters. To address this issue, we allow users to quickly and easily backtest multiple strategies with a wide range of parameter values. This can help traders identify the most effective combinations of parameters and improve the overall performance of their strategies.

Contrary to the previous part, the user no longer chooses fixed values for the parameters of the indicators but ranges of values (a minimum value, a maximum value, and a step). The user can then see the graphs of the different backtests and deduce the optimal values of the parameters of his indicators.

$$\boxed{\begin{array}{l}\text{Indicator 1 (min value = 1, max value = 5, step = 1)}\\ \text{Indicator 2 (min value = 10, max value = 20, step = 5)}\end{array}}$$

$$\xrightarrow{\text{STRATEGY FACTORY}} \begin{cases} \text{Strategy 1} & \text{Indicator 1 value 1, Indicator 2 value 10} \\ \text{Strategy 2} & \text{Indicator 1 value 2, Indicator 2 value 10} \\ \dots & \\ \text{Strategy n} & \text{Indicator 1 value 5, Indicator 2 value 20} \end{cases}$$

### 5.3 Strategy Selector

Choosing the right trading or investment strategy can be a complex and time-consuming task, especially for traders and investors who are new to the market or who have limited experience. A strategy selector can simplify this process. This can save traders and investors a significant amount of time and effort, and help them focus on implementing and managing their chosen strategy.

We have developed quantitative methods which, based on the historical performance of different strategies, give an allocation allowing investment in the strategies with the best chance of performing in the future. In the cryptocurrency market, we notice different market regimes. For example, during certain periods the prices evolve according to clear and sustained trends (upward or downward trends). In these regimes, it will be the trend-following type strategies that will largely outperform the market. In contrast, during other periods, there are no sustained trends and prices fluctuate around an average value. In these regimes, it is then the mean-reversing type strategies that perform well. The advantage of our strategy selector is to be able to change strategy when it is no longer suited to the regime in question.

Formally speaking, if we note $ST_i$ the track value of the strategy $i$ at time $T$, the strategy selector takes into input the last values of each strategy and gives an allocation of $(S_1, \dots, S_n)$ for the period $[T, T+1]$. This process is updated at each time $T$.

The idea is to have uncorrelated strategies $(S_1, \dots, S_n)$ capable of performing in each type of situation. Our quantitative methods based on AI and machine learning will then be able to detect them and assign a significant weight $w_j$ when we are in the period when strategy $j$ is performing.

$$(s^1_{t\leq T}, s^2_{t\leq T}, s^3_{t\leq T}, \dots, s^n_{t\leq T}) \xrightarrow{\text{STRATEGY SELECTOR}} \sum_{j=1}^{n} w_j s^j$$

$$\text{where } 0 \leq w_j \leq 1 \text{ and } \textstyle\sum_{j=1}^{n} w_j \leq 1$$

### 5.4 Performance & Scalability

One of the key features of our backtesting engine is its use of vectorization, which allows it to perform calculations much faster than traditional loop-based approaches. This makes it possible to compute quickly the results of the backtests, even on complex strategies. In addition to its high performance, our strategy selector is also designed to be highly scalable. We can easily add some strategies to improve the quality of the selection. Moreover, our tools are based on a serverless architecture, which ensures scalability, flexibility, and reliability.

**Conclusion of this chapter**

The tools and methods described in this chapter are the foundation upon which B3X is building its advanced trading and strategy validation capabilities. By leveraging the experience and technology developed for b-cube.ai, B3X aims to provide users with powerful, efficient, and intelligent tools for strategy development, backtesting, and execution. The integration of AI and machine learning ensures that users can adapt to changing market conditions and continuously optimize their strategies, making B3X a leader in the DeFi space.

# 6 Leveraging LLMs

Recent work has demonstrated significant advances in applying LLMs to financial domains [4, 6, 10]. This section explores the application of LLMs in cryptocurrency trading, focusing on their potential to enhance trading strategies, improve market sentiment analysis, and drive the innovative capabilities of the B3X platform.

We are integrating the power of LLMs in our existing Quantitative Tools to bring our B3X SDK to the next level.

## 6.1 LLMs in Financial Sentiment Analysis

Financial sentiment analysis involves interpreting the sentiment behind financial news, social media, and other sources to predict market movements. Traditional models often struggle with numerical values and contextual comprehension. However, LLMs have demonstrated significant improvements in these areas through instruction tuning, as shown in the development of models like Instruct-FinGPT [13].

Recent works like FinGPT [6] and BloombergGPT [4] have demonstrated that financial-domain LLMs can significantly outperform general-purpose models on sentiment classification tasks while maintaining strong performance on general NLP benchmarks. Further research from Pixiu [10] provides benchmarks and evaluation frameworks specifically designed for assessing LLMs' performance on financial sentiment analysis tasks.

Instruct-FinGPT uses a combination of transformer architecture and financial-specific training data to achieve higher accuracy in sentiment classification. The model is fine-tuned on large financial corpora, allowing it to understand context and nuances in financial language, although the model has not been trained specifically for the cryptocurrencies market. The sentiment analysis process can be mathematically expressed as follows:

$$\hat{y} = \text{softmax}(W \cdot \text{ReLU}(U \cdot h + b_1) + b_2)$$

where $h$ represents the hidden state of the LLM, $U$ and $W$ are weight matrices, $b_1$ and $b_2$ are bias terms, and $\hat{y}$ is the predicted sentiment score.

The integration of LLMs with financial sentiment analysis in B3X allows for more accurate market predictions by analyzing vast amounts of data quickly and comprehensively. This capability is particularly vital in the volatile and fast-paced world of cryptocurrency trading, where market sentiment can drastically influence price movements. For example, the use of financial sentiment analysis with LLMs can identify trends in market sentiment that precede price movements, providing traders with actionable insights.

## 6.2 Time Series Analysis with LLMs

Time series analysis is crucial for understanding and forecasting market trends based on historical data. Recent advancements in LLMs for time series analysis [5, 9] have shown these models can excel in forecasting tasks, outperforming traditional statistical and machine learning methods.

The general form of a time series forecasting model using LLMs can be expressed as:

$$\hat{y}_{t+h} = f(y_t, y_{t-1}, \ldots, y_{t-n}; \theta)$$

where $\hat{y}_{t+h}$ is the forecasted value at time $t + h$, $y_t$ represents the observed values at time $t$, and $\theta$ denotes the parameters of the model. The LLM processes these inputs through multiple layers of transformers to capture temporal dependencies and patterns.

Incorporating these LLM-based time series analysis models into B3X provides traders with powerful tools to predict market trends, optimize trading strategies, and minimize risks. These models can analyze and predict market behaviors more effectively, offering a significant edge in trading decisions.

### 6.3 AI Trading Agents

An AI trading agent utilizes artificial intelligence, including LLMs, to automate trading strategies. These agents can analyze historical data, understand market sentiments, and execute trades based on sophisticated algorithms. Recent developments in automated trading systems like Alpha-GPT [11] and FinRL [12] have demonstrated how LLMs can be effectively adapted for trading strategy optimization [6].

Previous work has shown that LLMs trained on financial data can effectively process and analyze trading-relevant information [4]. We extend this capability by developing specialized AI trading agents that not only analyze market information but also execute trades based on sophisticated algorithms.

#### Decision Process

The decision-making process of an AI trading agent can be formulated as a Markov Decision Process (MDP), where the agent learns a policy $\pi$ that maximizes the expected return $R$. Time series forecasting with language models has shown promising results in financial applications, particularly in extracting temporal patterns and market dynamics [5]. The expected return can be expressed as:

$$R = \mathbb{E}\left[\sum_{t=0}^{T} \gamma^t r_t\right] \tag{1}$$

where:

- $r_t$ represents the reward at time t
- $\gamma$ is the discount factor
- T is the time horizon

#### Advanced Capabilities

The LLM-based trading agent updates its policy $\pi$ using reinforcement learning techniques to maximize $R$. Recent research has demonstrated the effectiveness of reflective LLM-based agents in cryptocurrency trading, particularly in zero-shot scenarios [7]. These AI trading agents can process and interpret large volumes of data from multiple sources, including:

- News articles

- Social media
- Historical price data

This capability allows them to make informed trading decisions, reducing the impact of human emotions and biases. The FinCon system has shown how a synthesized LLM multi-agent system with conceptual verbal reinforcement can enhance financial decision-making through distributed analysis [8], enabling trades to be executed with higher precision and speed, which is essential in high-frequency trading environments.

## 6.4 Code Generation

LLMs have shown great potential in the field of code generation, enabling users to create code based on natural language descriptions and specific requirements. This capability can be leveraged in various domains, including finance, software development, and data science, to automate and streamline the coding process.

Mathematically, the code generation process involves transforming the natural language input $x$ into a code sequence $y$ through the following probabilistic model:

$$P(y|x) = \prod_{t=1}^{T} P(y_t|y_{<t}, x)$$

where $y_t$ represents the $t$-th token in the generated code, and $y_{<t}$ represents the sequence of previously generated tokens. The LLM leverages its pre-trained knowledge and fine-tuning on code-specific datasets to accurately generate the desired code.

## 6.5 Application in B3X

Building on proven applications of LLMs in finance [4, 6] and recent advances in financial time series analysis [5], the integration of LLMs into B3X encompasses several components:

- **Sentiment Analysis**: LLMs analyze financial news and social media to gauge market sentiment, influencing trading strategies.
- **Time Series Forecasting**: Advanced models like TimeGPT forecast market trends, helping traders anticipate price movements.
- **AI Trading Agents**: These agents use LLMs to automate and optimize trading strategies, adapting to real-time market changes.
- **Code Generation**: The generation of code using our B3X SDK can be done through natural language and templates.

### Sentiment Analysis

In B3X, the sentiment analysis component leverages LLMs to process real-time data from various sources, including news articles, social media posts, and financial reports. By applying techniques such as attention mechanisms, the model can focus on the most relevant parts of the input data, improving the accuracy of sentiment predictions. The attention mechanism can be mathematically represented as:

$$\text{Attention}(Q, K, V) = \text{softmax}\left(\frac{QK^T}{\sqrt{d_k}}\right)V$$

where $Q$ is the query matrix, $K$ is the key matrix, $V$ is the value matrix, and $d_k$ is the dimension of the key vectors. This mechanism allows the model to weigh the importance of different pieces of information dynamically.

### Time Series Forecasting

The time series forecasting component in B3X uses LLMs to analyze historical price data and predict future market movements. By utilizing the transformer architecture, the model can capture long-term dependencies in the data, leading to more accurate forecasts. The transformer model consists of an encoder-decoder structure, where the encoder processes the input sequence and the decoder generates the output sequence. The model is trained to minimize the mean squared error (MSE) between the predicted and actual values:

$$\text{MSE} = \frac{1}{n}\sum_{i=1}^{n}(\hat{y}_i - y_i)^2$$

where $\hat{y}_i$ are the predicted values and $y_i$ are the actual values.

### AI Trading Agents

B3X's AI trading agents utilize reinforcement learning algorithms to optimize trading strategies. These agents are trained using historical trading data and simulated environments to learn policies that maximize returns. The agents employ techniques such as Q-learning and policy gradient methods to update their strategies based on observed rewards. The Q-value update rule in Q-learning is given by:

$$Q(s, a) \leftarrow Q(s, a) + \alpha\left(r + \gamma \max_{a'} Q(s', a') - Q(s, a)\right)$$

where $Q(s, a)$ is the Q-value for state $s$ and action $a$, $\alpha$ is the learning rate, $r$ is the reward, $\gamma$ is the discount factor, and $s'$ and $a'$ are the next state and action.

### Code Generation

In addition to sentiment analysis and time series forecasting, LLMs can significantly enhance the B3X platform through automated code generation. By leveraging LLMs for code generation, fund managers and traders can create customized trading strategies based on the B3X SDK without requiring extensive programming knowledge. This capability allows users to input their requirements in natural language and generate executable code that can be further customized to optimize their strategies.

The code generation process can be illustrated as follows:

1. **Template Selection**: Users select a template for their desired strategy, such as momentum trading, mean reversion, or arbitrage.

2. **Natural Language Input**: Users describe their specific requirements and constraints in natural language, such as risk tolerance, asset preferences, and trading frequency.

3. **Code Generation**: The LLM processes the input and generates the corresponding code in Python or another supported language, integrating the B3X SDK and Quantitative Tools.

4. **Customization**: Users can review and customize the generated code to fine-tune their strategies and add any additional logic or conditions.

This functionality enhances the B3X platform by democratizing access to advanced trading strategy development, enabling a broader range of users to leverage sophisticated quantitative tools and techniques.

**Conclusion of this chapter**

The adoption of LLMs in B3X represents a significant leap forward in cryptocurrency trading technology. By harnessing the power of financial sentiment analysis, time series forecasting, and AI trading agents, B3X offers traders a robust platform equipped with advanced tools to navigate the complex crypto markets. This integration not only enhances trading efficiency but also provides a competitive edge, positioning B3X as a leader in AI-driven crypto trading solutions.

# 7 Synthetic Tokens

## 7.1 Introduction

B3X introduces a groundbreaking approach to synthetic tokens of Real World Assets (RWA), offering users unparalleled access to a diverse range of global assets within our decentralized ecosystem. Through our permissionless market creation system, users can create and trade synthetic versions of any real-world asset, from traditional commodities to unique market indices. Our innovative platform combines advanced market-making algorithms, robust price oracles, and sophisticated risk management tools to create a seamless and efficient synthetic asset trading experience.

## 7.2 Key Features

### Diverse Asset Exposure

B3X synthetic tokens will provide access to an extensive range of Real World Assets, expanding far beyond traditional cryptocurrencies. Users will gain exposure to physical commodities (e.g., cattle, coffee, tomatoes), major stock indices, foreign exchange pairs, and custom indices. Our permissionless listing system allows market creators to introduce new synthetic assets, fostering innovation and expanding trading possibilities. This diversity will allow traders to create truly global portfolios within the crypto ecosystem, bridging the gap between traditional and decentralized finance.

### Unified Liquidity Model (ULM)

At the heart of B3X's synthetic token ecosystem is our proprietary Unified Liquidity Model. This innovative approach will seamlessly integrate concentrated liquidity pools with limit orders, creating a hybrid system that combines the best aspects of automated market makers and order book-based exchanges. The ULM will enable single-token liquidity provision for synthetic assets, dramatically improving capital efficiency and liquidity depth. Furthermore, it will support the permissionless listing of new synthetic assets, fostering a dynamic and ever-expanding marketplace.

### Dynamic Collateralization System

B3X will employ an advanced collateralization mechanism designed to maintain the stability and integrity of our synthetic tokens. This system will support multiple collateral types, allowing users to diversify their risk across various assets. Collateralization ratios will be dynamically adjusted based on market conditions, ensuring the system remains robust during periods of high volatility. Smart contracts will manage automated liquidations, while real-time collateral health monitoring provides users with up-to-the-minute information about their positions.

### Decentralized Price Discovery Network

Accurate and manipulation-resistant pricing is crucial for the integrity of synthetic assets. Our robust price discovery system will aggregate the data from multiple decentralized sources, implementing a time-weighted average price (TWAP) mechanism for enhanced stability. We will incorporate failsafe mechanisms to handle extreme market conditions, and utilize both on-chain and off-chain oracles to ensure comprehensive coverage and reliability.

**Streamlined Minting and Redemption**

User experience is at the forefront of our design philosophy. We will create an intuitive minting process where users can easily deposit collateral to receive synthetic tokens. Redemption is equally straightforward, allowing users to return synthetic tokens for their underlying collateral. Our dynamic fee structure will optimize for market conditions, balancing accessibility with platform sustainability.

**Enhanced Liquidity Incentives**

To ensure deep liquidity for our synthetic tokens, B3X will offer innovative liquidity provision programs. These include dedicated liquidity pools for synthetic tokens and attractive yield farming opportunities. We will gamify the liquidity mining experience to make it more engaging, and implement a tiered reward system based on liquidity commitment and duration. These incentives aim to create a vibrant and liquid market for all listed synthetic assets.

## 7.3 Advanced Trading Features

B3X will incorporate several advanced features to enhance the trading experience and protect users. Our adaptive market stability mechanisms include exponential moving average (EMA) based mark prices and progressive penalty fees to deter market manipulation. For perpetual synthetics, we will implement continuous funding rate adjustments to maintain price alignment with the underlying assets.

Our comprehensive risk management suite will offer advanced order types such as trailing stop-loss and bracketed orders. We will implement cross-margining capabilities for efficient capital use, allowing users to maximize their positions while minimizing risk. Real-time portfolio analytics and risk assessment tools will provide traders with the information they need to make informed decisions.

Community involvement is crucial to the growth of our synthetic token ecosystem. We will implement a decentralized governance process for new asset listings, ensuring that the community has a say in the expansion of our offerings. This process is backed by a rigorous evaluation framework that ensures the quality and demand for each new synthetic asset.

**Benefits of B3X Synthetic Tokens**

The B3X synthetic token system will offer numerous advantages to users. It will provide global market access, allowing traders to engage with traditionally inaccessible assets in a decentralized environment. Our 24/7 trading capability transcends the limitations of traditional exchange hours, offering uninterrupted market access.

By leveraging smart contract technology, we minimize counterparty risk, eliminating the need for intermediaries in the trading process. Our system will allow for capital optimization, enabling users to gain leveraged exposure without full asset ownership. This will open up new possibilities for portfolio construction and risk management.

The B3X platform will acilitate seamless diversification, allowing users to easily build globally diversified portfolios within the crypto ecosystem. Additionally, our various liquidity provision and trading programs will offer multiple avenues for yield generation, providing users with opportunities to earn rewards on their assets.

**Security and Risk Mitigation**

At B3X, we prioritize platform security and user protection. We conduct regular third-party audits of all smart contracts to ensure their integrity and safety. A comprehensive insurance fund will be established to safeguard against black swan events, providing an additional layer of protection for our users.

Our approach to introducing new synthetic assets follows a phased rollout strategy, allowing us to carefully monitor and adjust as needed. We will also conduct ongoing stress testing and risk modeling to identify and mitigate potential vulnerabilities before they can impact our users.

## 7.4 Future Innovations

B3X is committed to pushing the boundaries of synthetic asset trading. Our roadmap includes the development of advanced derivative products based on synthetic tokens, further expanding the range of trading strategies available to our users. We're also working on enhancing interoperability with other DeFi protocols and blockchains, aiming to create a more connected and efficient ecosystem.

To address scalability concerns, we're exploring the implementation of layer-2 scaling solutions to improve performance and reduce transaction costs. Looking further ahead, we're investigating the potential of AI-driven trading and risk management tools, which could revolutionize how users interact with synthetic assets.

By leveraging our Unified Liquidity Model and advanced market mechanisms, B3X sets a new standard for synthetic asset trading in the decentralized finance space. Our platform offers unparalleled access to global markets, combining the benefits of decentralization with the sophistication of traditional financial instruments. As we continue to innovate and expand our offerings, we invite users to join us in shaping the future of decentralized finance.

Conclusion of this chapter

B3X's synthetic tokens ecosystem represents a significant advancement in decentralized finance, bridging traditional markets with the crypto world. Our proprietary Unified Liquidity Model, advanced price discovery mechanisms, and robust risk management tools create a platform offering unparalleled access to diverse global assets.

By enabling exposure to commodities, stock indices, and forex markets within the crypto ecosystem, B3X democratizes access to global markets. Our dynamic collateralization system, streamlined processes, and advanced trading features empower users to execute sophisticated strategies in a decentralized environment.

The B3X synthetic token platform stands at the forefront of DeFi innovation, offering 24/7 trading, minimized counterparty risk, and new opportunities for diversification and yield generation. As we continue to evolve and adapt to user needs, B3X invites traders, investors, and innovators to join us in reshaping the future of decentralized finance.

# 8 Tokenomics and Governance

The B3X token is a fundamental component of the B3X platform, driving its economic model and governance structure. This chapter outlines the tokenomics and governance mechanisms that ensure a robust, fair, and incentivized ecosystem for all participants.

| | |
|---|---|
| **Token name** | B3X |
| **Total Raise** | $4,999,998 |
| **Total Supply** | 1,000,000,000 |
| **Public Valuation** | $35,000,000 |

Table 1: B3X Token Overview

| | |
|---|---|
| **Initial circulating supply (excl. liq.)** | 29,427,069 |
| **Initial circulating supply (excl. liq.)** | 2.943% |
| **Initial circulating supply market cap excl. liq.** | $1,029,947 |
| **Fully diluted valuation at launch** | $35,000,000 |

Table 2: B3X Token Generation Event (TGE) Summary

## 8.1 Token Sale Rounds and Allocation

| Investment round | Price Per Token | Discount to TGE price | Amount of tokens | Allocation of total supply | Allocation of Raise | Raise Amount | Valuation | IDO x |
|---|---|---|---|---|---|---|---|---|
| Pre-Seed | $0.0175 | 50% | 57,142,850 | 5.71% | 20% | $1,000,000 | $17,500,000 | 2.00 |
| Seed | $0.0240 | 31% | 77,083,483 | 7.71% | 37% | $1,850,004 | $24,000,000 | 1.46 |
| KOL | $0.0300 | 14% | 11,666,667 | 1.17% | 7% | $350,000 | $30,000,000 | 1.17 |
| Community | $0.0320 | 9% | 31,250,000 | 3.13% | 20% | $1,000,000 | $32,000,000 | 1.09 |
| Public | $0.0350 | - | 22,857,000 | 2.29% | 16% | $799,995 | $35,000,000 | 1.00 |
| **Total** | - | | 200,000,000 | 20.00% | 100% | $4,999,998 | - | |

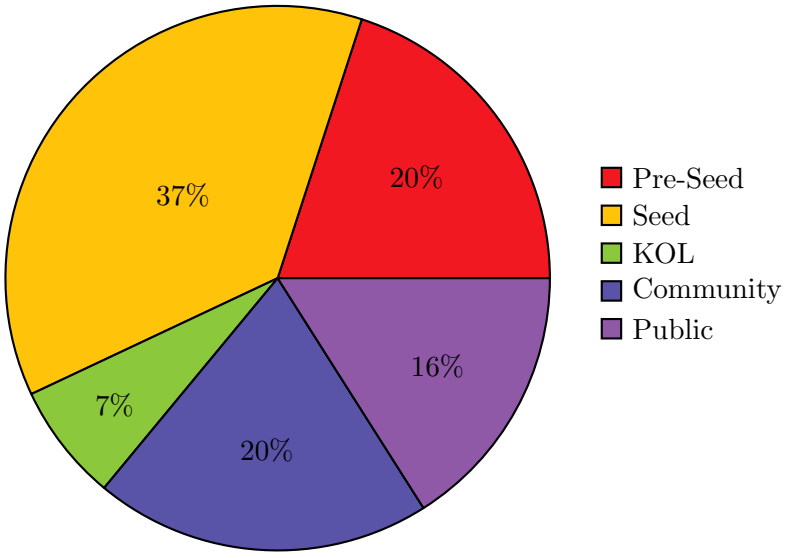



Figure 4: B3X Token Allocation

## 8.2 Token Allocation and Vesting Schedule

| Allocation | % of Total Supply | Amount of tokens | TGE % of allocation | % of supply unlocked at TGE | Cliff (in months) | Vesting (in months) | Total vesting (in months) |
|---|---|---|---|---|---|---|---|
| Pre-Seed | 5.71% | 57,142,850 | 6.0% | 0.34% | 6 | 24 | 30 |
| Seed | 7.71% | 77,100,000 | 10.0% | 0.77% | 4 | 16 | 20 |
| KOL | 1.17% | 11,666,667 | 15.0% | 0.18% | 0 | 12 | 12 |
| Community | 3.13% | 31,250,000 | 17.5% | 0.55% | 0 | 8 | 8 |
| Public | 2.29% | 22,858,000 | 20.0% | 0.46% | 0 | 6 | 6 |
| Team | 15.00% | 150,000,000 | 0% | 0.00% | 12 | 36 | 48 |
| Reserves | 15.00% | 150,000,000 | 0% | 0.00% | 12 | 48 | 60 |
| Ecosystem Dev Fund | 20.00% | 200,000,000 | 0% | 0.00% | 0 | 36 | 36 |
| Advisors | 5.00% | 50,000,000 | 0% | 0.00% | 6 | 24 | 30 |
| Airdrops | 3.00% | 30,000,000 | 10% | 0.30% | 0 | 9 | 9 |
| Bug Bounty | 7.00% | 70,000,000 | 5% | 0.35% | 6 | 24 | 30 |
| Market Liquidity | 15.00% | 150,000,000 | 100% | 15.0% | 0 | 0 | 0 |
| **Total** | 100% | 1,000,000,000 | - | - | - | - | - |

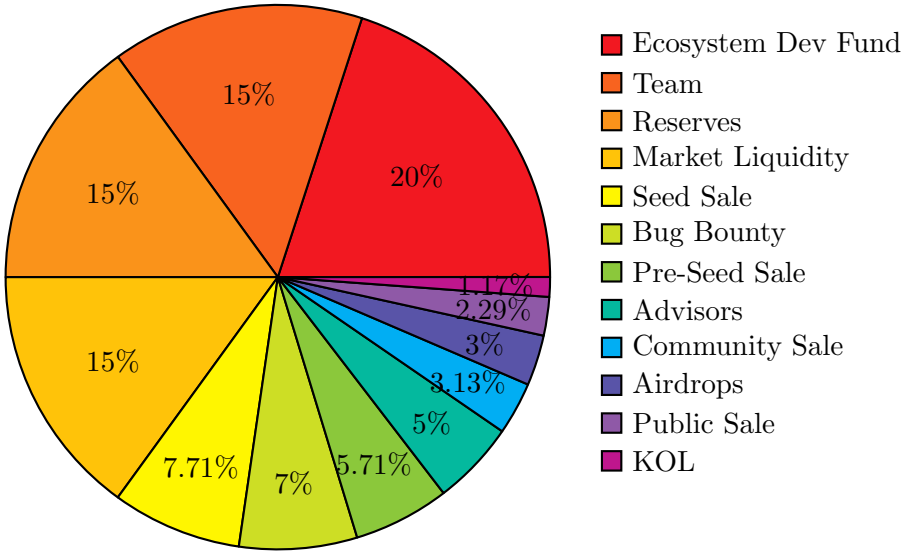



Figure 5: B3X Token Allocation

## 8.3 Token Utility

The B3X token serves multiple purposes within the B3X ecosystem:

- **Governance:** B3X token holders can participate in the governance of the B3X platform. They can vote on proposals that affect the platform's development and operation, such as protocol upgrades, parameter changes, and listing of new synthetic RWA tokens.
- **Staking and Revenue Sharing:** Users can stake B3X tokens to earn attractive rewards in USDC and participate in the governance process. They earn:
  - 15% of the DEX's trading fees
  - Proposal fees on the DAO
  - Protocol fee charged to the Fund managers
  - Share of market-making profits when providing liquidity

  Staking provides incentives for long-term holding and active participation. Rewards are distributed based on the amount of tokens staked and the duration of the staking period.

- **Liquidity Mining and Market Making:**
  - B3X tokens incentivize liquidity providers through traditional liquidity mining
  - Additional rewards for participating in the platform's proprietary market-making strategies
  - Enhanced rewards for providing liquidity to synthetic RWA tokens
  - Special incentives for cross-chain liquidity provision
- **Transaction and Platform Fees:**
  - Fund managers use B3X tokens to pay Protocol and DAO proposal fees
  - Fees for creating new synthetic RWA markets
  - Discounted trading fees for token holders
  - Fee reductions for high-volume traders and active market makers
- **Community and Ecosystem Incentives:**
  - Rewards for contributing to platform development
  - Incentives for creating successful trading strategies
  - Bonuses for bringing significant volume or new users
  - Special allocations for institutional liquidity providers

## 8.4 Governance

### Decentralized Governance Model

The B3X platform employs a decentralized governance model, empowering token holders to influence the platform's development and decision-making processes. Key features of this governance model include:

- **Proposal Submission:** Any token holder can submit proposals for changes or improvements to the platform. Proposals can cover a wide range of topics, including protocol upgrades, fee structures, and new feature implementations. One should pay $1000 worth of B3X tokens to make a proposal which maintains a standard for the seriousness of the proposals.
- **Voting Mechanism:** Token holders can vote on proposals using their staked B3X tokens. The weight of each vote is proportional to the number of tokens staked, ensuring that those with a greater stake in the platform have a correspondingly greater influence on decisions.
- **Quorum and Approval:** For a proposal to be accepted, it must meet a minimum quorum of participating votes and achieve a majority approval. This ensures that only proposals with broad community support are implemented.
- **Implementation:** Once a proposal is approved, it is implemented by the development team and integrated into the platform. The progress and status of implementations are

transparently communicated to the community.

**Governance Incentives**

To encourage active participation in the governance process, B3X offers incentives to token holders who engage in voting and proposal discussions. These incentives include:

- **Voting Rewards:** Token holders who participate in voting on proposals receive rewards proportional to their staked tokens and the level of their engagement.
- **Proposal Rewards:** Contributors who submit proposals that are accepted and implemented receive rewards for their contributions to the platform's development.
- **Discussion Participation:** Active participants in governance discussions, forums, and other community engagements may receive additional rewards for their valuable input and collaboration.

## 8.5 Economic Sustainability

The tokenomics and governance mechanisms are designed to ensure the long-term economic sustainability of the B3X platform. By aligning the interests of all stakeholders and providing robust incentives for participation and engagement, B3X aims to create a thriving, resilient, and decentralized ecosystem.

**Conclusion of this chapter**

The B3X tokenomics and governance model are designed to create a sustainable and decentralized ecosystem that aligns the interests of all stakeholders. The B3X token serves multiple purposes, including governance, transaction fees, incentives, and rewards, ensuring active participation and engagement from the community.

The decentralized governance framework empowers token holders to influence the platform's development and decision-making processes, promoting transparency and inclusivity. Incentives for participation in governance, staking, and other activities further encourage long-term commitment and active involvement.

The well-structured token distribution model ensures fair allocation among founders, advisors, partners, and the community, supporting the platform's growth and stability. Through continuous development and community-driven governance, B3X aims to build a robust, transparent, and user-centric DeFi ecosystem, setting a new standard for decentralized finance platforms.

# 9 Business and Technical Roadmap

The B3X platform's development and expansion will be guided by a comprehensive roadmap, divided into quarterly milestones. This roadmap outlines the key business and technical objectives to be achieved over the next two years, ensuring a structured and strategic approach to the platform's growth.

### Q4 2024

**Business Objectives:**

- Initiate strategic partnerships with key industry players.
- Expand marketing efforts to attract early adopters and traders.
- Host webinars and AMAs to educate the community about the platform.
- Launch a bug bounty program to ensure platform security.
- Secure additional funding through a public or private token sale.

**Technical Objectives:**

- Enhance the UI/UX based on beta user feedback.
- Complete the development of core protocol components: Fund Marketplace, Fund Builder, and initial DEX functionality.
- Conduct security audits for the initial set of smart contracts.
- Finalize the B3X SDK based on the existing Quantitative Tools.
- Launch the B3X token sale.
- Launch the MVP for the DEX, Fund Marketplace and Fund Builder.

### Q1 2025

**Business Objectives:**

- Expand community engagement and user acquisition initiatives.
- Begin outreach to potential fund managers and institutional investors.
- Enhance marketing strategies based on user feedback and market conditions.
- Listing of B3X token

**Technical Objectives:**

- Implement advanced AI-driven trading strategies and publish them on the Fund Marketplace.
- Develop the Fund Oracle.
- Continue rigorous security testing and audits.

- Launch the mobile app for iOS / Android.

### Q2 2025

**Business Objectives:**

- Expand global marketing efforts to attract a wider user base.
- Onboard more fund managers to the platform.
- Establish customer support and community management teams.

**Technical Objectives:**

- Finalize and deploy the Fund Oracle.
- Optimize the performance and scalability of the platform.
- Launch staking and rewards programs for B3X token holders.
- Ensure full platform audit and address any identified vulnerabilities.
- Develop additional trading pairs and liquidity pools.
- Launch of account abstraction feature, enabling login with various SSO options (Google, Apple, X, etc.) and improving user accessibility.
- Launch of the Custom Perpetual DEX with proprietary order book and liquidity pools.
- Deploy the Custom Perpetual DEX on Injective, Movement, Monad, Arbitrum and Base blockchains.

### Q3 2025

**Business Objectives:**

- Expand partnerships with additional blockchain networks and DeFi projects.
- Launch educational content and training programs for users.
- Continue to scale user acquisition and community engagement efforts.
- Monitor market trends and adjust strategies accordingly.

**Technical Objectives:**

- Develop Options trading features.
- Enhance the AI capabilities of the Fund Builder.
- Integrate new features based on user feedback and market demands.
- Conduct ongoing security and performance optimizations.
- Launch of synthetic token listing and trading, enabling users to access a wider range of asset classes

### Q4 2025

**Business Objectives:**

- Host conferences and hackathons to foster innovation and community engagement.
- Strengthen brand presence through strategic marketing and partnerships.
- Explore new revenue streams and business models.

**Technical Objectives:**

- Implement advanced governance features for B3X token holders.
- Develop APIs for third-party integrations and developer tools.
- Enhance the scalability and reliability of the platform infrastructure.
- Introduce new AI-driven trading tools and features.

### Q1 2026

**Business Objectives:**

- Partner with traditional financial institutions to bridge DeFi and traditional finance.
- Continue to grow the user base and increase platform adoption.
- Regularly evaluate and refine business strategies based on performance metrics.

**Technical Objectives:**

- Launch new DeFi products and services based on market demand.
- Enhance the Fund Builder and Fund Oracle with more sophisticated AI algorithms.
- Expand the range of supported assets and financial instruments.
- Optimize the platform for higher transaction throughput and lower latency.
- Continue to prioritize security and compliance measures.

### Q2 2026

**Business Objectives:**

- Review and assess the year's achievements and challenges.
- Plan and set objectives for the next phase of platform growth.
- Strengthen the governance model and ensure community involvement.
- Celebrate milestones and recognize contributions from the community and team.

**Technical Objectives:**

- Integrate with emerging blockchain technologies and standards.

- Continue to innovate and add new features to the platform.
- Conduct comprehensive security reviews and updates.
- Enhance user experience across all platforms and devices.
- Prepare for future scalability and technological advancements.

**Conclusion of this chapter**

This roadmap outlines a clear and strategic path for the development and expansion of the B3X platform. By focusing on both business and technical milestones, B3X aims to build a robust, scalable, and user-friendly platform that addresses the needs of traders, investors, and fund managers in the decentralized finance space. Through continuous innovation and community engagement, B3X is poised to become a leading player in the DeFi ecosystem.

# 10 Team and Advisors

Our team of professionals has a strong background in the Asset Management industry, Trading, IT, Mathematics, Blockchain and Artificial Intelligence, backed by a world class advisory board.

## Core Team

**Guruprasad Venkatesha, Co-Founder / Business Expert – in**
Guruprasad Venkatesha started his first FinTech Company Sharegiants Wealth Advisors Private Limited in Bangalore, India, when he was 16, managing an AUM of $2 million and had a successful exit from the company. Later he worked for Morgan Stanley as an investment analyst and a trader, where he was in a team managing $50 million. He defined many successful strategies during his term at Morgan Stanley, and some of them are used in the current trading models of b-cube. He has 15 years of experience in fund management & defining trading strategies in equities, commodities, and cryptocurrencies. He holds a Bachelor's Degree in Industrial Engineering and Management from reputed MSRIT (now called RIT, among the top 25 best engineering schools in India). He is a guest writer on cryptocurrencies & technical analysis on bitcoinbazis.hu, Hungary's Leading Cryptocurrencies & Digital Payment platform. He is the CEO of b-cube.ai since 2018.

**Erwan Rouzel, Co-Founder / Tech Expert – in**
Erwan Rouzel is a computer enthusiast since an early age, he developed his first programs at 8 years old and since then has been designing and implementing numerous IT architectures. He has 20+ years of experience in IT as a Software Engineer, Consultant and Architect. His has been Architect for Crédit Agricole French bank, and then for Groupe Mutuel Switzerland health insurance, where he has setup the companies infrastructure for running Data Science & AI projects. He graduated as an engineer (MSc) from IMT Atlantique in 2005 with a major in Computer Science & AI (top 3 French telecom schools) and then completed an Advanced Master in Scalable Systems & Big Data at CentraleSupélec (top 3 French engineering schools). Erwan has also been a Guest Teacher at EPITA French computer science engineering school on the subject of Big Data Infrastructure & Cloud Computing, as part of the MSc in Artificial Intelligence Systems. He has been the CTO of b-cube.ai from 2018 to 2021 and then President.

**Jean-Baptiste Devreton, Co-Founder / Quant Expert – in**
Jean-Baptiste started his career in equity trading at LFIS (hedge fund of La Française) before joining a crypto-focused asset manager in 2020. He worked as a quantitative researcher and developed expertise in quantitative investment strategies, algorithmic trading and the crypto market. He joined the quant team of b-cube.ai in 2022. Jean-Baptiste graduated from Ecole Nationale de la Statistique et de l'Administration Economique (Ensae ParisTech) a leading engineering school in statistics and quantitative finance. He also holds a Master's degree in Random modelling, Finance & Data science from Paris VII University. He has been Quantitative Researcher at b-cube.ai since 2022.

**Abhijit Kumar, Blockchain Lead – in**
Abhijit brings over 6 years of blockchain expertise and a proven track record in DeFi innovation. He led the development of DEXes that achieved $400M+ trading volume within six months. With experience spanning product architecture, team leadership, business development, and community scaling, Abhijit has successfully built and deployed cutting-edge DeFi solutions. He specializes in perpetual DEX design, modular market systems, advanced risk-management implementations, and seamless on-chain/off-chain integrations. Abhijit is committed to driving innovation and delivering scalable DeFi products.

## Advisors

**Dr. Damien Challet, Scientific Advisor & Mentor – in**
Damien is a professor & researcher at CentraleSupélec, Université Paris-Saclay (France) and external lecturer at EPFL (Switzerland), co-director of the Quantitative Finance Group at CentraleSupélec. He is associate editor for Quantitative Finance, Journal of Economic Interaction and Coordination, Journal of Statistical Mechanics: theory and experiments, and co-chief editor of Market Microstructure and Liquidity. Previously associate editor for Applied Mathematical Finance (2006-2018). He published in 2004 a book on Minority Games and the dynamics of predictability in financial markets, and is finishing a new book about Quantitative Finance. He ran his own advisory hedge fund company in Switzerland, Encelade Capital SA, for 10 years from 2008 to 2018. He graduated with a MSc in Physics from EPFL and a PhD in Theoretical Physics from University of Fribourg (Switzerland).

**Ajit Tripathi, CFA, DeFI Advisor & Mentor – in**
Ajit is Master Cheiftain at Hadron Founders Club, a community + fund for early stage crypto founders. He was the head of institutional business at AAVE and was also an advisor to the Polygon. He is well known in the crypto community for building bridges between financial institutions and the crypto/internet of value ecosystem. He built banking and payments rails for Binance and Paxful, led the buildout of the fintech practice for ConsenSys and the UK Blockchain Business for PwC. He is also the crypto co host of Breaking Banks Fintech podcast and a columnist for Coindesk in addition to being an active angel investor in high quality crypto startups.

**Dr. Diana Mile, Legal Advisor – in**
Diana is the founder and an attorney at Mile & Partners, Mile Law Office. As an experienced senior attorney with more than 15 years of demonstrated history working in the law practice industry, her professional background comes with expertise in business law, IT law, and in the developing field of FinTech, blockchain, and digital assets. She graduated from the renowned University of Pécs (HU) and had extensive competitive law training at PPKE-JÁK. She is a member of the Budapest Bar Association since 2010 and is studying 'CS50 and blockchain for lawyers' at Harvard-X. She is one of the first blockchain and cryptocurrency lawyers in Hungary and a highly involved member of the Blockchain Hungary Association. She participated in the governmental blockchain working party's work through the Association regarding digital and crypto-assets legislation. She is a contributing party and co-editor of the' Blockchain Regulatory Concept for Hungary' document, prepared by the Association. Diana has consulted with local and global technology companies, cryptocurrency exchanges, and wallet providers and helped set-up successful businesses. She has a broad knowledge of the different regulatory environments in the EU and the other relevant countries. She appears as a lecturer in the crossing field of legal tech themes in several blockchain-focused courses and training.

Conclusion of this Chapter

The B3X team comprises a diverse group of highly experienced professionals, each bringing a wealth of knowledge and expertise in their respective fields. From fund management and technical development to quantitative research and legal advisory, the team's collective experience forms a robust foundation for the B3X platform.

Guruprasad Venkatesha's extensive experience in fund management and trading strategies, combined with Erwan Rouzel's deep technical expertise and Jean-Baptiste Devreton's proficiency in quantitative research, positions B3X at the forefront of innovation in the DeFi space. The advisors, including Dr. Damien Challet, Ajit Tripathi, Antoine Detante, and Dr. Diana Mile, add significant value with their specialized knowledge in quantitative finance, blockchain, and legal aspects.

Together, this formidable team is well-equipped to navigate the complexities of the decentralized finance landscape, driving the development of cutting-edge solutions and ensuring the platform's success. The B3X team's dedication and expertise are key to realizing the vision of a revolutionary AI-powered decentralized exchange for derivatives and options trading.

# 11 Conclusion

B3X stands at the forefront of a new era in decentralized finance, redefining the landscape of derivatives and options trading. Our platform's innovative fusion of artificial intelligence, blockchain technology, and financial expertise addresses critical challenges in the DeFi space while opening up unprecedented opportunities for traders, investors, and fund managers alike.

Key achievements and offerings of B3X include:

- A comprehensive protocol for derivatives and options trading, featuring high leverage options up to 1000x and a high-performance DEX processing up to 50,000 TPS
- A dynamic fund marketplace with user-created vaults, connecting investors with both human and AI-integrated fund managers powered by the latest LLMs
- A permissionless market creation system enabling the listing of synthetic RWA tokens, from traditional commodities to unique market indices
- Advanced liquidity solutions combining proprietary market-making strategies with profit sharing for LPs and seamless cross-chain liquidity access
- Enhanced user experience through email-based registration, one-click trading, real-time Telegram updates, and fiat on/off ramps
- A robust tokenomics model centered around the B3X token, driving governance, incentives, and value accrual through innovative profit-sharing mechanisms

As we look to the future, our commitment to innovation remains unwavering. The development of our proprietary, multichain Perpetual DEX, set to launch in Q2 2025, will further enhance liquidity and market reach across Injective, Base, Monad, and Arbitrum blockchains. This, coupled with our ongoing advancements in AI-powered trading tools and risk management systems, positions B3X at the cutting edge of DeFi innovation.

Our success is built on a foundation of security, transparency, and community engagement. Through rigorous testing, continuous development, and active collaboration with our user base, we ensure that B3X not only meets the current needs of the market but also anticipates and shapes its future direction.

The journey of B3X is more than just the evolution of a platform; it represents a paradigm shift in how we approach decentralized finance. By democratizing access to sophisticated financial instruments and strategies, we're empowering a global community of users to take control of their financial futures.

We invite you to join us in this transformative journey. Whether you're a seasoned trader seeking advanced leverage options, an investor looking to explore synthetic RWA opportunities, or a fund manager aiming to leverage cutting-edge AI technology, B3X offers a gateway to the future of finance.

Together, we can create a more accessible, efficient, and intelligent DeFi ecosystem. The future of decentralized finance is here, and it's powered by B3X. Join us as we reshape the financial landscape and unlock new realms of opportunity in the digital asset space.

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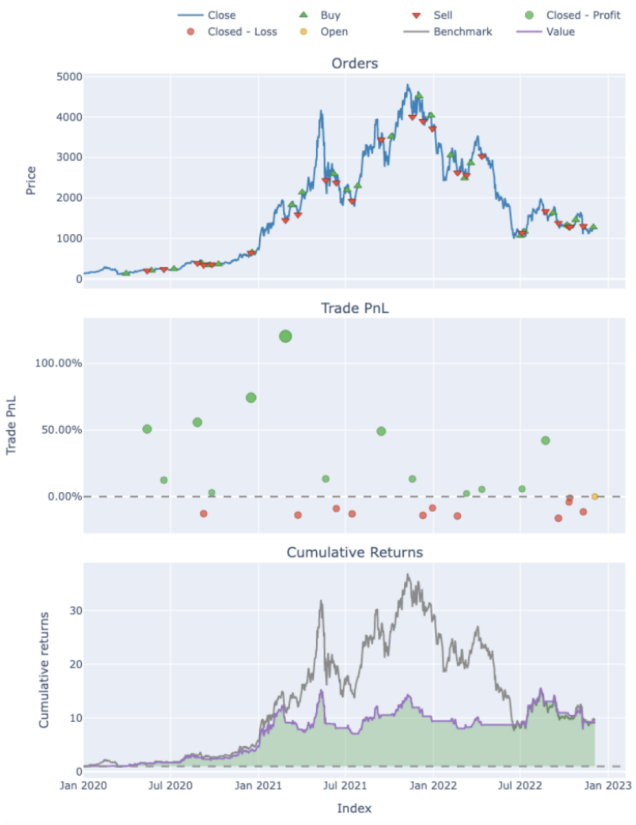
# A Quantitative Tools – Example with a Trend Following Strategy

We describe here the use of the different quantitative tools presented for a user who would like to implement a trading strategy. This explains the scientific process behind the processus of strategy building and selection.

## A.1 Backtesting Engine

As described in part 1, we can use our tool to backtest our trading strategy. For example, we may seek to build a trend following trading strategy on the ETH-USDT cryptocurrency. For this, we decide to buy when the average price of the last 10 days (fast moving average) becomes higher than that of the last 20 days (slow moving average), and we sell when it becomes lower. The tool allows us to quickly backtest this strategy, and thus see what it would have done if it had been applied since 1st January 2020.




| | |
|---|---|
| **Start** | 2020-01-01 00:00:00 |
| **End** | 2022-12-04 00:00:00 |
| **Period** | 1069 days 00:00:00 |
| **Start Value** | 100.0 |
| **Min Value** | 99.850225 |
| **Max Value** | 1559.681877 |
| **End Value** | 925.313155 |
| **Total Return [%]** | 825.313155 |
| **Benchmark Return [%]** | 879.038432 |
| **Total Time Exposure [%]** | 53.320861 |
| **Max Gross Exposure [%]** | 100.0 |
| **Max Drawdown [%]** | 53.886077 |
| **Max Drawdown Duration** | 457 days 00:00:00 |
| **Total Orders** | 49 |
| **Total Fees Paid** | 56.046659 |
| **Total Trades** | 25 |
| **Win Rate [%]** | 54.166667 |
| **Best Trade [%]** | 120.3374 |
| **Worst Trade [%]** | -16.135153 |
| **Avg Winning Trade [%]** | 34.492324 |
| **Avg Losing Trade [%]** | -10.68568 |
| **Avg Winning Trade Duration** | 36 days 16:36:55.384615384 |
| **Avg Losing Trade Duration** | 8 days 02:10:54.545454545 |
| **Profit Factor** | 1.740128 |
| **Expectancy** | 34.351675 |
| **Sharpe Ratio** | 1.413527 |
| **Calmar Ratio** | 2.111155 |
| **Omega Ratio** | 1.325895 |
| **Sortino Ratio** | 2.188579 |

Figure 6: Backtest of a ETH-USDT long only Trend Following Strategy on a daily basis

In Figure 6 We can see the backtest results for this strategy. We used trading fee rates of 0.15% and only market orders (no take profit or stop loss orders). This strategy gives a total return of 825% since 2020. The backtesting engine provides graphics with performance strategy and a table with statistical indicators.

## A.2 Strategy Factory

This trading strategy is parametric, in fact, it depends on the number of days taken into account in the calculation of slow and fast-moving averages. In the previous part, we chose 10 and 20 but these values are arbitrary and therefore not necessarily optimal. In addition, a novice does not necessarily know which values to use. Thanks to the strategy factory, we will be able to backtest similar strategies for several parameter values. We then have access to hundreds of backtests corresponding to strategies belonging to the same family of strategies.

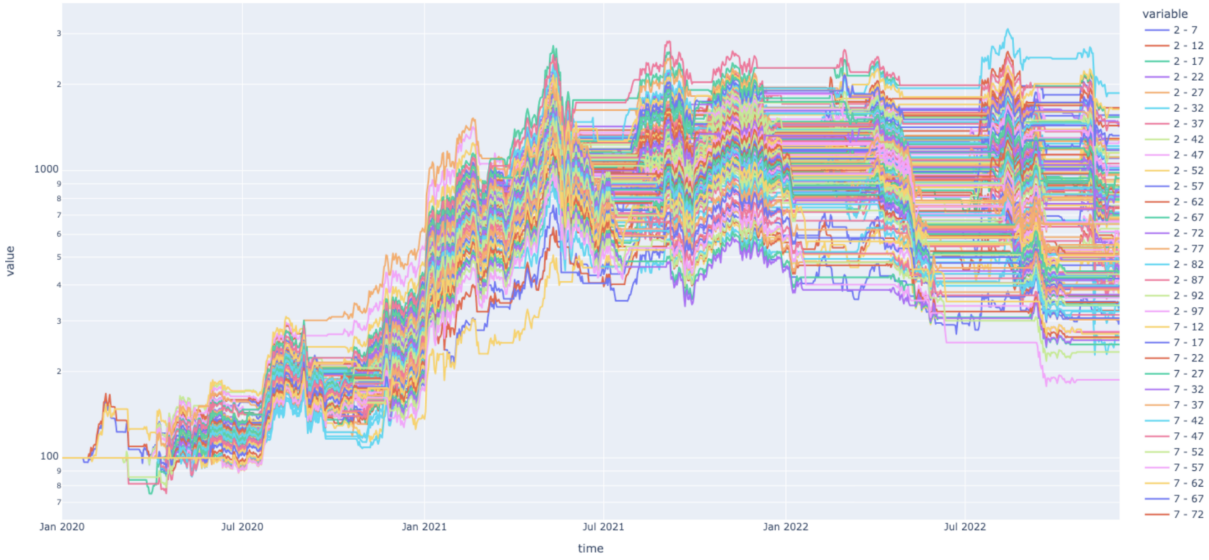



Figure 7: Backtest of a ETH-USDT long only Trend Following Strategy on a daily basis for lots of parameter values

In Figure 7, we can see the tracks of lots of trend-following trading strategies by comparing a fast-moving average on the last j days with a slow-moving average on the last k days (j¡k) for several values of j and k. In this example, we chose j and k between 2 and 100, with a step of 5. The optimal parameters seem to be 27 (for the fast-moving average) and 32 (for the slow-moving average) with a total return of 1763

## A.3 Strategy Selector

Although the strategy factory allows seeing the values of the parameters allowing to have optimal strategies, this raises the risk of overfitting. Indeed, we are not sure that the parameters being optimal over the period 2020-2022 will always be so in the future. To solve this problem, the strategy selector makes it possible to build a strategy that is based on the past performance of the strategies built with the strategy factory to lead to a dynamic allocation of these strategies.

In Figure 8 We can see the results of the strategy selector. This strategy had a total return of 1765% since 2020. This outperforms the underlying ETH-USDT (879% since 2020). It outperforms also the trend-following strategy with the random parameters chosen in subpart 4.1 (10 for fast moving average, 20 for slow moving average). The performance of the strategy built by the strategy selector is better than a simple average of all strategies provided by the strategy factory (equally weighted, $w_j = 1/n$ for all $j$). And remarkably, this outperforms the best strategy offered by the strategy factory. Thus, the allocation chosen by the strategy selector is very effective because it allows them to follow the winning strategies according to the different market regimes and to change strategy when necessary.


Figure 8: Backtest of the Strategy Selector

# B Legal Considerations

The B3X platform is committed to complying with all relevant legal and regulatory requirements. As the regulatory landscape for decentralized finance evolves, we will continuously monitor and adapt to ensure compliance and safeguard the interests of our users and stakeholders.

**Disclaimer**

This white paper is for informational purposes only and does not constitute legal or financial advice. Potential investors and users should conduct their own research and consult with professional advisors before engaging with the B3X platform.