

Calgo Whitepaper



Table of CONTENTS

1. Introduction	3	11. Focus on Crypto Asset Managemt Firms	15
2. Definition of Calgo	4	12. Arbitrage Opportunities	16
3. History of Calgo	5	13. MDD and Risk Management Firms	17
4. Macro Market	6	14. Roadmap	18
5. CeFi Market Problems	9	15. DeFi Expansion Plans	19
6. Calgo's Solutions	10	16. Team	20
7. Calgo's Advanced Tools	12	17. Token Economics	21
8. Calgo's Architecture	13	18. Token Metric	24
9. Security & Compliance	14	19. Conclusion	
10. Market Potential	14		

01

Introduction

This whitepaper provides a comprehensive overview of a centralized finance (CeFi) mobile application designed to capitalize on price discrepancies across multiple exchanges to generate profits for users. In conjunction with this platform, we're excited to introduce the Calgo Token (CLGO). The platform ensures robust security and ease of use, while also planning to expand into decentralized finance (DeFi) services. Members who deposit coins in their Calgo Wallets (be it BTC, ETH or CLGO) will earn income through arbitrage opportunities and staking. This document also details an overview of the trading strategies employed by our 'Robo-Advisor', risk management strategies, including Maximum Drawdown (MDD) stability, and examines the critical role of crypto asset management firms in the ecosystem..

Democratization of elite financial services

Algorithmic hedge fund services, once reserved for elite institutions and high-net-worth individuals, are now within reach of everyday cryptocurrency users!

This democratization of financial technology provides regular investors with the same sophisticated strategies. Through our robo-advisors' users can effortlessly manage and invest their assets. The Calgo mobile app harnesses these robo-advisor trading algorithms to offer an innovative solution for managing CeFi assets in the crypto market.

What is a Robo-Advisor?

A robo-advisor is a blend of 'robot' and 'advisor' where sophisticated algorithms analyse financial market and manage or advise on an investor's assets in place of a human advisor. This technology employs big data and artificial intelligence (AI) to automatically execute investment strategies, delivering personalized services to investors.

Advantages

- **Cost Efficiency:** Provides high-quality asset management services at lower fees compared to traditional asset management services.
- **24/7 Operation:** Algorithms operate continuously, reflecting real-time market volatility.
- **Personalized Service:** Offers customized investment strategies tailored to the user's investment preferences and goals.

Utilizing robo-advisors, The CeFi asset management mobile app is revolutionizing the investment landscape through technological advancements.. This user-friendly app streamlines asset management and removes the need for expert advice. Smart algorithms are now at users' fingertips, providing enhanced protection and maximizing your returns

02

Definition of Calgo

What is Calgo?

Calgo is a centralized finance (CeFi) mobile application designed to profit from price discrepancies across multiple cryptocurrency exchanges through automated trading strategies. Users can deposit various cryptocurrencies, such as Bitcoin (BTC), Ethereum (ETH), or Calgo's native token (CLGO), into their Calgo wallets and earn income through arbitrage opportunities and staking. The platform leverages advanced trading algorithms managed by robo-advisors to provide high-quality asset management services previously only accessible to elite institutions. These algorithms continuously monitor the market, offering personalized and efficient trading strategies, reducing fees, and operating 24/7.

Key advantage

The key advantage of Calgo lies in its ability to automate complex investment strategies and ensure robust security, making it accessible to both experienced and novice investors. In addition to its CeFi services, the platform plans to expand into decentralized finance (DeFi), offering additional opportunities for income generation. Calgo addresses several challenges in the crypto asset management industry, such as the lack of regulation, unclear accounting standards, and technical vulnerabilities, by providing transparent operations, standardized accounting, and enhanced security features.

With a focus on security and compliance, Calgo implements Know Your Customer (KYC) and Anti-Money Laundering (AML) protocols, data encryption, and regular system audits to protect user funds and data. By offering a comprehensive ecosystem that integrates CeFi and DeFi services, Calgo aims to democratize financial services and provide users with the tools to maximize their returns while managing risks effectively.

03

History of Calgo

Proven Leadership in Crypto Market

Calgo has consistently maintained its position as a leader in the cryptocurrency market. Drawing on a strong history of innovation and strategic decision-making, Calgo is well-positioned to continue driving growth and setting trends in the cryptomarket. Our proven track record of competitive advantage underscores our commitment to staying at the forefront of the industry.

History of Calgo	Calgo Gen1	Calgo Gen2	Calgo Gen3	Calgo Gen4
Deployment	2019.03 ~ 2019.12	2020.01 ~ 2020.05	2020.06 ~ 2021.05	2021.06 ~
Engine Age	10 months	5 months	12 months	Currently in use
Maximum Available Bitcoin	400 BTC	800 BTC	6,400 BTC	12,800 BTC
Operating Machine	i5 Server 2.0	i7 Server 2.0	i7 Server 4.0	t3.2 xlarge 8 cpu
Core Strategy Algorithm	BLSH (5.0)	BLSH (7.0) + Arbitrage	WhaleSlayer 1.0	Swap HFTA 1.0
Algorithmic encryption	MD5	SHA 128	SHA 256	SHA 512
Supported Technologies	HTCS	HMCS	SHMS	Machine Learning + Signals
Exchange	OK Coin	Bybit	Bybit & Upbit	Binance & Upbit
Strategic Engine Cost	25,000 USD	60,000 USD	100,000 USD	300,000 USD



04

Macro Market

Vision of the Crypto Market

The vision of the crypto market is to enhance decentralization within the financial system. Based on a transparent blockchain technology, the aim is to provide a secure platform to provide access to financial services to all. This vision aims to increase global financial inclusion and overcome the limitations of the existing financial system. The key vision elements are as follows

1. **Decentralization:** Enables direct transactions between individuals without the intervention of central institutions, reducing transaction costs and increasing transparency
2. **Transparency:** Utilizes blockchain technology to make all transaction records public and verifiable by anyone.
3. **Security:** Ensures data safety through a distributed network, minimizing risks such as hacking.
4. **Financial Inclusion:** Expands access to financial services, even in regions without traditional banking, thereby increasing global financial inclusion.

04

Macro Market

Growth of the Crypto Market

The crypto market has experienced rapid growth in recent years. The adoption of major cryptocurrencies like Bitcoin and Ethereum has significantly expanded the market size. Key growth indicators and the compound annual growth rate (CAGR) of the crypto market are as follows:

1. Market Size:

- As of June 2024, the total market size of the crypto market is approximately \$2trillion.
- The DeFi (Decentralized Finance) market size is around \$6 billion and is growing rapidly.

2. CAGR:

- The overall CAGR of the crypto market is estimated to be around 30%.
- The DeFi market, in particular, has a CAGR of approximately 60%, indicating very rapid growth.

3. User Growth:

- The number of cryptocurrency wallet users worldwide is in the hundreds of millions and is steadily increasing each year.
- The number of Defi platform users exceeded 5 million in 2023, more than doubling from the previous year.

The crypto market is growing rapidly, driven by technological innovation and increased financial inclusion. Over the next few years, significant growth is expected, particularly with new financial services like DeFi overcoming the limitations of traditional financial systems and providing broader access to financial services.

Growth of the CeFi (Centralized Finance) Market

The CeFi market, which combines traditional financial systems with cryptocurrencies to provide centralized financial services, has shown remarkable growth. CeFi is particularly characterized by its stability and reliability, attracting institutional investors and large capital.

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04

Macro Market

Growth Rate (CAGR)

The CAGR of the CeFi market varies by source, but generally falls within the following range:

- **CAGR:** Estimated to be around 15% – 25%. This can fluctuate based on the integration of traditional financial services with the cryptocurrency market and improvements in regulatory environments.

User Growth

The number of users on CeFi platforms is continuously increasing, driven by:

- **Stability:** Provides reliability to investors due to centralized institutions being responsible for security and operations.
- **Accessibility:** Offers a wide range of financial services globally, increasing user accessibility.
- **Institutional Participation:** The participation of large institutional investors increases the market size and user base.

Key Indicators

1. Market Size:

- As of 2023, the total market size of the CeFi market is estimated to be around \$1 trillion.
- This size reflects the integration of traditional financial services with cryptocurrency services, forming a very large market.

2. Number of Users:

- The number of users on CeFi platforms likely exceeds 250 million users worldwide by mid-2024.
- This represents an approximate 20% increase from the previous year, reflecting the continuous growth of the CeFi market.

The CeFi market is rapidly growing, backed by the stability and reliability of centralized financial services. With a CAGR of approximately 15% – 25% and an annual user growth rate of around 20%, this growth is driven by institutional investor participation, improved regulatory environments, and increased global accessibility to financial services. This growth trend is expected to continue, positioning CeFi as a crucial player in the global financial market.

05

CeFi Market Problems

Crypto asset management firms play a significant role in the rapidly growing digital asset market. However, several critical issues persist:

1. **Lack of Regulation:** Many crypto asset management firms operate without the oversight of traditional financial regulations, potentially compromising investor protection and market reliability. The absence of regulation can lead to inadequate asset management by some firms, causing market instability.
2. **Unclear Accounting Standards:** Numerous crypto asset management firms lack clear standards for accounting. This opacity makes it challenging for investors to understand how their assets are managed and to determine the actual value of their investments.
3. **Technical Vulnerabilities:** Due to the digital nature of assets, there is a high risk of asset loss from hacking or system failures. Many exchanges and asset management firms have yet to fully address these technical issues, posing a threat to investor asset security.
4. **Unstable Investment Strategies:** The crypto market's high volatility means that poorly executed investment strategies can result in substantial losses. Some asset management firms employ high-risk strategies without sufficient experience or data, leading to significant investor losses.
5. **Lack of Transparency:** Many crypto asset management firms do not provide enough transparency regarding their operations and investment strategies. This lack of information makes it difficult for investors to make informed decisions.

These issues undermine the reliability and stability of crypto asset management firms. Addressing these challenges through regulatory enhancement, technical improvements, and increased transparency is crucial.

06

Calgo's Solutions

Calgo's service offers solutions to the problems faced by crypto asset management firms through a combination of robo-advisory and centralized finance (CeFi) models:

1. Addressing Lack of Regulation:

- **Enhanced Regulatory Compliance:** The Calgo CeFi platform collaborates with regulatory bodies to meet legal requirements and respond promptly to regulatory changes, thereby enhancing investor protection and market trust.
- **Transparent Operations:** All operational processes and transaction histories are openly disclosed to reassure investors about the safety of their assets.

2. Clarifying Accounting Standards:

- **Standardized Accounting Practices:** Calgo adheres to global standard accounting practices for asset management and valuation, helping investors accurately understand the actual value of their assets.
- **Regular Audits:** External audits and transparent reporting secure the reliability of asset management.

3. Mitigating Technical Vulnerabilities:

- **Enhanced Security Systems:** The platform uses the latest encryption technologies and multi-factor authentication to ensure secure asset storage.
- **Ongoing System Upgrades and testing:** Regular security system checks and updates strengthen the defense against hacking and system errors.

4. Stabilizing Investment Strategies:

- **Advanced Algorithms:** Calgo employs advanced AI-based algorithms to seek stable returns even in volatile markets.
- **Diversified Portfolios:** Investment is spread across various assets to mitigate risk, with portfolios adjusted according to market conditions.

5. Improving Transparency:

- **Real-Time Information:** Investors have access to real-time updates on their portfolio status and investment strategies.
- **Enhanced Communication:** Regular communication with investors collects feedback to improve services.

These measures enable the 'Calgo' to address the issues facing crypto asset management firms, creating a better investment environment and experience.

06

Calgo's Solutions

Key Features

1. **Automated Trading:** Utilizes advanced algorithms to identify and execute arbitrage opportunities across multiple exchanges, ensuring timely trade execution without manual intervention.
2. **Real-Time Market Data:** Continuously updates price feeds from various exchanges, providing users with the most current information for informed trading decisions.
3. **Security:** Implements robust security measures, including two-factor authentication, encrypted transactions, and secure API integrations, to protect user funds and data.
4. **User-Friendly Interface:** Designed for ease of use, with intuitive navigation and comprehensive support, making it accessible to traders of all experience levels.
5. **Low Transaction Fees:** Minimizes costs by aggregating and negotiating lower transaction fees with partner exchanges, maximizing user profits.





07

Calgo's Advanced Tools

In the evolving cryptocurrency market, maximizing returns while managing risks is crucial. Calgo offers a range of advanced tools designed to help users achieve this by leveraging various arbitrage and trading strategies.

Lending Tools: Lending bots automatically lend USDT/USD to leveraged traders on platforms like Bitfinex, providing users with steady income from interest with minimal active management.

Spot-Futures Arbitrage Tools: Protects users' assets by hedging with spot positions, allowing them to earn funding rates from their futures positions, minimizing risk while ensuring steady returns.

FIAT-Crypto Arbitrage Tools: Exploits significant spreads on fiat pairs with stablecoins like USDT and USDC, earning profits from price differences by buying from one exchange and selling on another.

Grid Trading Tools: Places buy and sell orders at regular intervals around a set price, helping users capitalize on market volatility.

TradingView Tools: Integrates with TradingView, allowing expert traders to develop strategies and feed signals directly into Calgo, optimizing profits from well-developed trading strategies.

08

Calgo's Architecture

Backend

Calgo's backend is built on a scalable cloud infrastructure to handle high-frequency trading and large volumes of data. It includes

- **Trading Engine:** Executes trades based on predefined algorithms.
- **Data Aggregator:** Collects and processes real-time market data from multiple exchanges.
- **Risk Management Module:** Monitors and manages trading risks, ensuring safe trade execution.

Frontend

The frontend is a mobile application available on both iOS and Android platforms. It features:

- **Dashboard:** Provides an overview of the user's portfolio, including current holdings, recent trades, and performance metrics.
- **Trading Interface:** Allows users to customize trading settings and view detailed trade history.
- **Notifications:** Alerts users to significant market events and trading opportunities.

APIs

Calgo connects securely to major cryptocurrency exchanges through APIs for real-time data and transaction execution. Key components include:

- **Market Data API:** Retrieves current price information from exchanges.
- **Trading API:** Executes buy and sell orders on behalf of the user.
- **Account API:** Manages user accounts, including deposit and withdrawal functions.

09

Security and Compliance

Calgo prioritizes security and compliance to ensure the safety and legality of our operations.

- **KYC/AML:** Implements Know Your Customer (KYC) and Anti-Money Laundering (AML) procedures to comply with regulatory standards and prevent fraudulent activities.
- **Data Encryption:** Ensures privacy and security by encrypting all user data and transactions.
- **Audit Trails:** Maintains comprehensive logs of all transactions and user activities to support transparency and accountability.

10

Market Potential

The global cryptocurrency market is expanding, with growing interest in arbitrage trading due to its profit potential. Key market trends include:

- **Rising Cryptocurrency Adoption:** Increasing participation by individuals and institutions drives demand for sophisticated trading tools.
- **Volatility in Cryptocurrency Prices:** Frequent price fluctuations create numerous arbitrage opportunities, making automated trading solutions highly valuable.
- **Technological Advancements:** Improvements in blockchain technology and trading algorithms enhance the efficiency and effectiveness of arbitrage strategies.

11

Focus on Crypto Asset Management Firms

Crypto asset management firms are essential in the digital asset ecosystem, providing professional investment services and managing large portfolios. Leading firms like Blackrock and Goldman Sachs are integrating digital assets into their offerings, indicating broader acceptance and integration of cryptocurrencies into traditional finance.

Role of Crypto Asset Management Firms

- **Portfolio Management:** Manage diversified portfolios of digital assets, balancing risk and reward for optimal returns.
- **Institutional Access:** Enable institutional investors to enter the crypto market safely and efficiently.
- **Market Research and Analysis:** Conduct extensive research and analysis to inform investment strategies and identify emerging opportunities.
- **Regulatory Compliance:** Ensure compliance with global financial regulations to maintain credibility and trust.

Current Trends and Future Outlook

- **Increased Adoption of Altcoins:** Asset management firms are expanding their portfolios to include altcoins, reflecting the growing diversity of the cryptocurrency market.
- **Crypto ETFs:** The approval of cryptocurrency ETFs marks a significant step toward mainstream acceptance and easier access for retail investors.
- **DeFi Integration:** Firms are exploring ways to integrate DeFi services into their offerings, enhancing liquidity and providing innovative financial products.

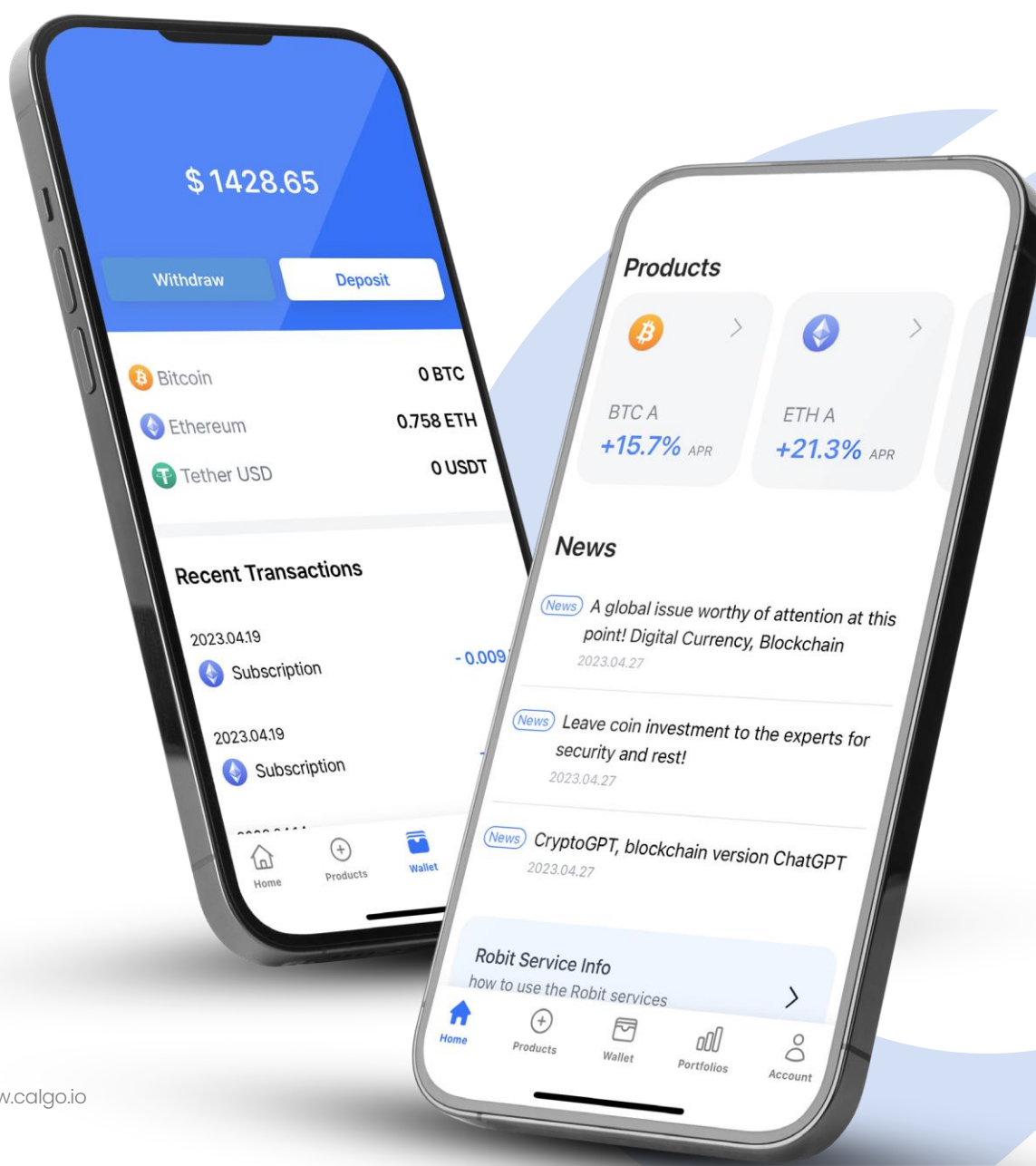
12

Arbitrage Opportunities

Arbitrage in the cryptocurrency market involves capitalizing on price differences of the same asset on different exchanges. This can be lucrative due to the high volatility and fragmented nature of the crypto market.

Types of Arbitrage

- **Spatial Arbitrage:** Buying an asset on one exchange at a lower price and simultaneously selling it on another exchange at a higher price.
- **Triangular Arbitrage:** Exploiting price differences between three different cryptocurrencies across multiple exchanges.



13

Maximum Drawdown (MDD) and Risk Management

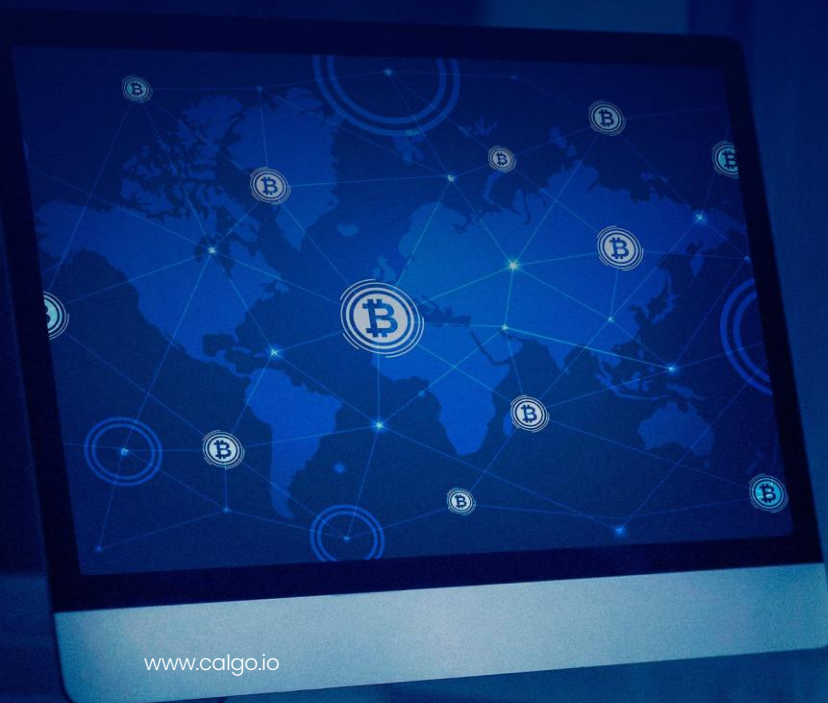
Maximum Drawdown (MDD) measures the largest single drop from peak to trough in the value of a portfolio. It is a critical metric for assessing the risk and stability of an investment strategy.

Importance of MDD

- **Risk Assessment:** Helps investors understand the potential risk associated with a particular trading strategy.
- **Performance Evaluation:** A lower MDD indicates a more stable and reliable trading strategy, essential for long-term investment success.

Risk Management Strategies

- **Diversification:** Spread investments across different assets to reduce exposure to any single asset's risk.
- **Stop-Loss Orders:** Automatically sell an asset when its price falls to a predetermined level to limit potential losses.
- **Regular Monitoring:** Continuously track market conditions and adjust strategies to mitigate risks.
- **Hedging:** Use financial instruments such as options and futures to offset potential losses in the primary investment.



14

Roadmap

01

Q2 2024

Homepage Lunch

02

Q3 2024

White Paper Open / Calgo App
Lunch / CEX Listing

03

Q4 2024

Expand investment strategy

04

Q1 2025

Yield Farming and Staking
service Open

05

Q3 2025

Asset Management
Coin Expansion

15

Defi Expansion Plans

Overview

Integrate DeFi functionalities to offer decentralized financial services, enhancing the platform's capabilities and user experience.

Key Areas:

- **Decentralized Exchanges (DEXs):** Facilitate direct cryptocurrency trading between users without intermediaries.
- **Lending and Borrowing Platforms:** Enable users to lend and borrow digital assets, earning interest or accessing liquidity.
- **Yield Farming and Staking:** Allow users to earn passive income by providing liquidity or participating in network validation.
- **Stablecoins and Synthetic Assets:** Provide stable investment options and exposure to traditional financial instruments through tokenized assets.

Benefits:

- **Increased Financial Inclusion:** Offer financial services to the world.
- **Enhanced Security and Transparency:** Utilize blockchain technology for secure and transparent transactions.
- **Innovation and Flexibility:** Foster the creation of innovative financial products and services.

16

Team

**CEO****Mitch Horn – BBus (Accounting/Finance)**

Mitch is the driving force behind Calgo. Prior to creating the platform, he spent time within the banking and investment management space where he developed exceptional analytical skills and an aptitude for cultivating enduring relationships.

**CFO/COO****Tom Cencic – BBus (Accounting/Management), CPA**

Tom is another driving force behind Calgo. Prior to developing the platform, he spent time within the finance sector holding down lead financial controlling roles.

Tom has also owned multiple successful businesses across Australia within the automotive and hospitality industries.

**CTO****Matthew Smart – BA Economics**

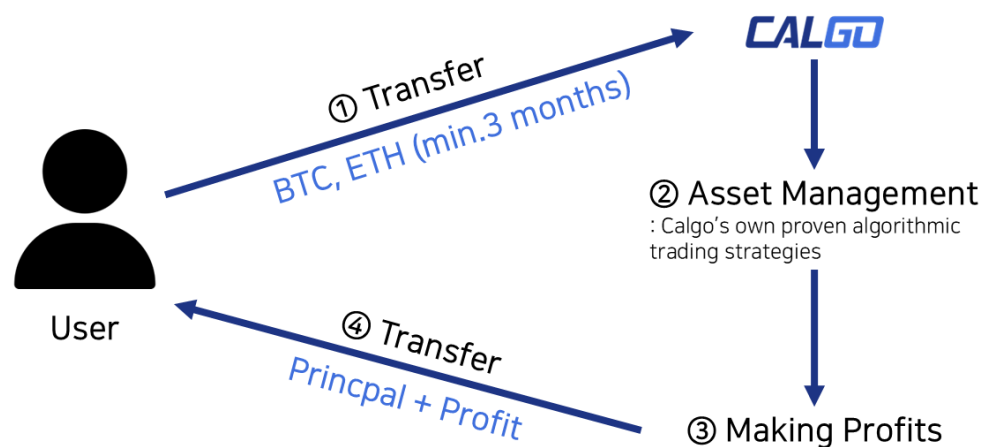
With nearly 20 years in global financial markets, Matt leads our technology team. An experienced proprietary, high-frequency, algorithmic market-maker, and derivatives trader, he has traded traditional equity, debt, and derivatives worldwide. Matt is passionate about merging technology with finance.

**Risk Management Consultant****Tom Krause – BBus (Accounting/Management), CA, MBA**

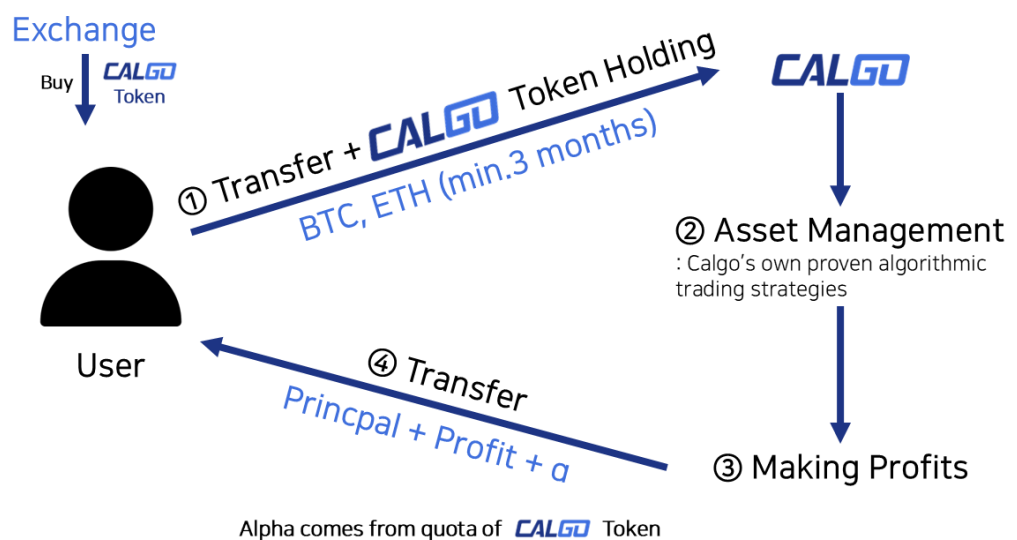
Tom is a seasoned business professional with a passion for growth and development with a risk minded focus. Tom ensures compliance and regulatory procedures are adhered to across our platforms and geographic locations.

Token Economics

Basic Calgo Revenue model framework



Calgo Token Revenue model framework



Token Economics

The investment fees will be directly proportionate to the Calgo user holdings.

The more Calgo tokens held, the higher their investment returns will be and the lower the investment delegation fees they will have to pay.

Benefits of Holding Tokens Issued by the Asset Management Company.

1. Increased Returns

The asset management company can enhance holders' returns by distributing dividends or allocating a portion of the profits. Token holders can also participate in voting on specific transactions, allowing them to influence strategies that maximize operational returns.

2. Reduced Fees

Token holders benefit from reduced transaction fees, which can help lower trading costs.

Management Fee Rate (f) for Virtual Asset Management

Tiered Management Fee Rate

- Tier 1: When profit is over 0% and up to 5% of the principal: 15%
- Tier 2 : When profit is over 5% and up to 8% of the principal: 25%

Tier 3: When profit is over 8% of the principal: 40%

Calculation Formulas

Customer fee (y), profit (x), customer investment (v), profit at 5% of principal (α), profit at 8% of principal (β):

- ✓ $\alpha = 0.05 * v$
- ✓ $\beta = 0.08 * v$
- ✓ $C1 = 0.15 * \alpha$
- ✓ $C2 = 0.25 * (\beta - \alpha) + C1$

Tier Calculations:

- ✓ Tier 1: $y = 0.15 * x$ ($0 < x \leq \alpha$)
- ✓ Tier 2: $y = 0.25 * (x - \alpha) + C1$ ($\alpha < x \leq \beta$)
- ✓ Tier 3: $y = 0.4 * (x - \beta) + C2$ ($\beta < x$)
- ✓ f (fee rate): y (fee) / v (customer investment)

17

Token Economics

Discount Rate (d) for Customer Fees based on Virtual Asset Holdings

The discount rate will be adjusted based on the timing of product subscription, customer acquisition strategy, and market conditions.

Formula

d (discount rate) = $f \times (\text{customer holdings} \div 10\% \text{ of total issuance}) \times (\text{holding days} \div 365)$

(provided that d cannot exceed f)

Customer Profit (R) for Virtual Asset Robo-Advisor

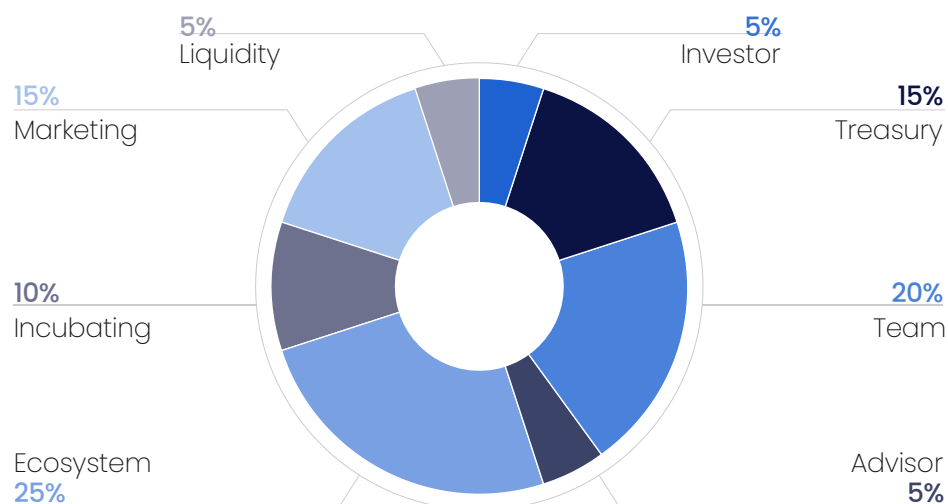
(Excluding dividend income from holding virtual assets issued by our company)

- Customer investment (V): Customer investment amount
- Annual rate of return (r): Annual rate of return ($r_{btc}, r_{eth}, r_a, \dots, r_z$)
- Portfolio (w): Investment ratio ($w_{btc}, w_{eth}, w_a, \dots, w_z$), ($\sum_{k=btc}^z w_k = 1$)
- Management fee rate (f): Annual management fee rate
- Management discount rate (d): Annual management fee discount rate
- Investment period (t): Investment period in years

$$R(\text{Customer Profit}) = V \times \sum_{k=btc}^z \prod_{t=1}^n w_{k,t} (1 + r_{k,t} - f_t + d_t)$$

18

Token Metric



19

Conclusion

Calgo seeks to streamline and automate the BTC and ETH arbitrage trading process, delivering a secure, efficient, and profitable solution for users. By incorporating DeFi services, Calgo creates a comprehensive financial ecosystem that fosters innovation, allowing users to optimize their returns while effectively managing risks.