

W H I T E P A P E R

DeFinity Markets

A New Era of Electronic Trading
Bridging the gap between
TradFi and Digital Assets

definitymarkets.com

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Table of Contents

- 0 Abstract
- 01 Introduction
- 02 The Need for Institutional-Grade Digital Assets Trading Infrastructure
- 03 Pioneering Digital Assets Trading
- 04 Building a Robust Infrastructure for Institutional Digital Assets Trading
- 05 Tokenomics and Economics
- 06 Use Cases and Applications
- 07 Market Analysis



- 08 Core Team
- 09 Road Map
- 10 Legal and Regulatory Considerations
- 11 Security
- 12 Partnerships and Alliances
- 13 Community
- 14 Appendices
- 15 References and Citations
- 16 Risk Disclosure
- 17 Conclusion



DeFinity Markets

Mission Statement

At the heart of our mission lies the commitment to establish a robust infrastructure that forms the foundation for the next generation of digital asset trading. Our technology creates a more open, transparent and accessible digital asset marketplace for banks, funds and corporations, by connecting our TradFi system DMALINK with the new DeFi system DeFinity Markets

Vision Statement

In our vision, we see a future where our unwavering commitment to building a robust infrastructure stands as the bedrock for a new era in digital asset trading. This infrastructure, underpinned by cutting-edge technology, will not only form the foundation but also shape the very essence of the next generation digital asset marketplace.

Our vision extends beyond the present, as we strive to create a digital asset ecosystem that is more than just robust; it is open, transparent, and readily accessible. We envision a marketplace that transcends boundaries, where banks, funds, and corporations navigate with ease, engaging in digital asset trading with confidence and efficiency.

In this future, our technology will have broken down barriers and fostered an environment where all participants find a level playing field, and trust and transparency reign supreme. This vision is one where the power of innovation and technological advancement paves the way for a new era in digital asset trading, redefining the landscape and elevating the possibilities for all stakeholders.

Using Traditional Finance as a Blueprint for Institution Digital Asset Trading

The institutional digital asset trading landscape is evolving, drawing inspiration from traditional financial markets, particularly foreign exchange, to enhance safety and transparency. The recent FTX debacle exposed vulnerabilities in the industry, prompting a shift towards separating custody from trading and adopting an FX-style market structure. The goal is to create a more secure, transparent, and accessible digital asset trading environment for all institutional participants. We aim to utilise existing TradFi legal framework used for traditional asset trading and apply this legal structure to crypto trading and other digital assets. To that end, we are involving banks in the process of client onboarding, credit intermediation and eventually, clearing and settlement. This will drive institutional adoption 'en masse'.

MANU CHOUDHARY
CEO

M. Choudhary





Abstract

DeFinity Markets: A New Era of Electronic Trading, Bridging the gap between TradFi and Digital Assets

DeFinity Markets is a groundbreaking institutional-only digital asset business that ushers in a new era of electronic trading in the digital asset landscape. This whitepaper provides a comprehensive overview of our mission, vision, and the innovative solutions we offer. We aim to address the pressing challenges in the crypto trading industry by drawing inspiration from traditional finance practices.

Our unique features include an ECN-style execution for spot crypto, seamless fiat on and off-ramps, and deliverable fiat-to-fiat trading for crypto makers and takers. Moreover, we have established an exclusive partnership with a European investment bank, enabling us to introduce traditional finance Prime Brokerage credit lines to trade crypto on the DeFinity platform.

Introduction

The digital asset trading landscape is evolving rapidly, and institutional participants demand a secure, transparent, and efficient marketplace. DeFinity Markets emerges as the solution to bridge the gap between traditional finance and the crypto world. We strive to revolutionize digital asset trading, empowering banks, funds, and corporations with access to an institutional-grade platform, bolstered by cutting-edge technology and a commitment to innovation.

Problem Statement

The current digital asset trading ecosystem faces several critical challenges. The lack of segregation between exchange-trading and custody-of-assets functions leaves investors vulnerable to misuse of their funds, as evidenced by past debacles like the FTX incident. Additionally, operational challenges, regulatory uncertainties, and a lack of traditional finance support hinder the growth and maturity of the crypto trading space.

Solution

DeFinity Markets presents a comprehensive solution to the challenges in the digital asset trading industry. We introduce an ECN-style execution system for spot crypto trading, which enhances transparency and ensures fair pricing. Moreover, we offer seamless fiat on and off-ramps, simplifying the process of entering and exiting the crypto market. Our innovative deliverable fiat-to-fiat trading feature opens up new opportunities for institutional participants.

Technology

Our platform encompasses purpose-built technology, incorporating robust algorithms and protocols to deliver a secure and efficient trading experience. We leverage blockchain technology for transparency and security while implementing high-frequency trading capabilities to meet institutional demands.



Tokenomics and Economics

DeFinity Markets introduces a native token (DEFX) that serves as the lifeblood of our ecosystem. It incentivizes market participants, facilitates fee payments, and supports the platform's growth. Token distribution is designed to ensure a fair and sustainable economic model for all stakeholders.

Use Cases and Applications

Our platform has a broad range of use cases, catering to institutional participants across the financial industry. These include banks, funds, and corporations looking for secure and efficient exposure to the digital asset market. DeFinity Markets offers them the tools they need to navigate this emerging asset class confidently.

Market Analysis

We analyze the current digital asset trading landscape and position DeFinity Markets as a unique solution, offering features not found in traditional crypto exchanges. Our ECN-style execution, fiat on and off-ramps, and partnership with a European investment bank set us apart in the market.

Team and Advisors

Our core team comprises experts with extensive experience in both the traditional finance and crypto sectors. We have advisors who bring valuable insights and guidance from various aspects of the financial industry, ensuring the success of DeFinity Markets.

Roadmap

We provide a detailed roadmap that outlines our development milestones and future goals, including platform enhancements, partnerships, and expansion into new markets.

Legal and Regulatory Considerations

DeFinity Markets is committed to full compliance with legal and regulatory requirements. We work closely with authorities to ensure that our platform operates within the bounds of the law and adheres to industry regulations.

Security

Security is a paramount concern for us. We employ robust security measures to safeguard our platform from vulnerabilities and attacks, ensuring the safety of our users' assets.

Partnerships and Alliances

We (as DMALINK) have been serving foreign exchange participants since 2016 in close partnership with a European investment bank acting as our central clearer. Our long-standing relationship with over 16 bank prime brokers has enabled us to introduce traditional finance Prime Brokerage credit lines for crypto trading. We highlight this partnership and other alliances that support our project.



Community

We engage our community and provide transparency and inclusivity within our organisational structure.

Appendices

Technical specifications, code samples, charts, graphs, and supplementary information are included in the appendices to provide further support and insights.

References and Citations

We cite relevant sources, research, and related projects to establish credibility and context for our whitepaper.

Risk Disclosure

We clearly outline potential risks and challenges associated with DeFinity Markets, ensuring that all stakeholders are well-informed about the project's potential pitfalls and mitigation strategies.

Conclusion

We encapsulate the core essence of the whitepaper and reiterate the significance of DeFinity Markets in transforming the digital asset trading landscape.



Introduction

Background

The landscape of digital asset trading has rapidly evolved over the past decade, reshaping the way we approach financial transactions and investments. The rise of cryptocurrencies, blockchain technology, and decentralized finance (DeFi) has introduced novel paradigms to the world of finance. However, with these innovations comes the need for a more robust and secure infrastructure that can accommodate the growing institutional interest in the digital asset space.

DeFinity Markets has been conceived in response to this crucial need. We recognize the transformative potential of digital assets and understand that their widespread adoption hinges on the development of a new generation of trading platforms that address the limitations of the existing landscape. By harnessing the power of blockchain and integrating it with traditional financial practices, DeFinity Markets seeks to redefine how institutional entities engage with digital assets.

The cryptocurrency market, despite its rapid growth and innovation, has been marred by various challenges, including issues of transparency, security, and efficiency. DeFinity Markets endeavors to bridge these gaps by establishing an institutional-grade platform that leverages cutting-edge technology and a comprehensive understanding of the complexities surrounding digital asset trading. Our mission is to build a solid foundation that paves the way for a new era in digital asset trading.

Mission Statement

At the heart of our mission lies the commitment to establish a robust infrastructure that forms the foundation for the next generation of digital asset trading. We recognize the pivotal role of technology in shaping the future of finance and are dedicated to creating a platform that ensures security, transparency, and accessibility for institutional traders.

Our unwavering dedication to this mission is driven by the recognition of the pivotal role technology plays in reshaping the world and redefining the digital asset landscape. We aim to provide a solution that not only addresses the current shortcomings of the digital asset trading industry but also sets new standards for professionalism and security.



Introduction continued

Vision Statement

In our vision, we see a future where our unwavering commitment to building a robust infrastructure stands as the bedrock for a new era in digital asset trading. This infrastructure, underpinned by cutting-edge technology, will not only form the foundation but also shape the very essence of the next generation digital asset marketplace.

Our vision extends beyond the present, as we strive to create a digital asset ecosystem that is more than just robust; it is open, transparent, and readily accessible. We envision a marketplace that transcends boundaries, where banks, funds, and corporations navigate with ease, engaging in digital asset trading with confidence and efficiency.

In this future, our technology will have broken down barriers and fostered an environment where all participants find a level playing field, and trust and transparency reign supreme. This vision is one where the power of innovation and technological advancement paves the way for a new era in digital asset trading, redefining the landscape and elevating the possibilities for all stakeholders. We aim to be at the forefront of this evolution, driving institutional digital asset trading into a new era of electronic trading.

DeFinity Markets is not just a platform; it is a vision realized through cutting-edge technology, innovative practices, and a commitment to shaping the future of digital asset trading.



The Need for Institutional-Grade Digital Asset Trading

The Digital Asset Market Landscape

The landscape of digital assets has undergone a dramatic transformation in recent years, expanding well beyond its initial incarnation as a novel and speculative investment. While cryptocurrencies like Bitcoin and Ethereum marked the birth of this industry, it has since grown to encompass an extensive range of digital assets. This expansion includes security tokens, utility tokens, stablecoins, and non-fungible tokens (NFTs), among others.

What was once a fringe interest has emerged as a powerful force in the world of finance and technology. Digital assets are not only changing the way we perceive and exchange value but also reshaping traditional finance, governance, and ownership structures. The underlying technology, blockchain, has proven itself as a versatile and disruptive force, enabling decentralized finance (DeFi), smart contracts, and a multitude of innovative applications.

With the maturation and diversification of the digital asset market, the demand for institutional-grade trading infrastructure has become increasingly pronounced. Institutional-grade trading infrastructure refers to a framework and ecosystem designed to cater to the specific needs and expectations of institutional investors, such as banks, hedge funds, asset managers, and corporations. These entities bring with them a set of requirements that extend beyond the capabilities of many existing digital asset platforms, including security, compliance, scalability, and transparency.



Using Traditional Finance as a Blueprint for Institution Digital Asset Trading

In the aftermath of the FTX debacle, the digital asset industry has been compelled to reflect on its shortcomings. One of the glaring gaps in the crypto market structure is the absence of segregation between exchange-trading and custody-of-assets functions. This structural vulnerability was a key enabler of FTX's misuse of client funds. Investors holding cryptocurrencies were at the mercy of exchanges for safekeeping, with little transparency on the utilization of their assets.

An interim solution would be the establishment of a dedicated interdealer market for digital assets, operated by a reputable entity. This would provide a reliable alternative to the current all-to-all venues, such as Binance or Deribit, which dominate the digital asset trading landscape.

The best solution to quickly arrive at robust market structures would be to copy from traditional markets that share striking similarities with digital assets. The path of least resistance lies in borrowing a page from the traditional Over-The-Counter (OTC) foreign exchange spot market. Both entail a base currency, with FX typically trading against the US dollar or euros, and digital assets traded against fiat currencies, stablecoins, or major cryptocurrencies like Bitcoin. Both exhibit round-the-clock trading, high fragmentation across various platforms, and have distinct cash and derivatives markets. Crucially, neither has a centralized regulatory authority.

However, becoming an asset class within the global OTC markets will require the alignment of stakeholders within the traditional finance and native crypto space. The advent of regulatory clarity as well as certainty in respect of bank capital requirements would certainly empower banks to price digital asset, fostering liquidity, and encouraging direct secondary market access through prime relationships, and in due course pave the way for cryptocurrencies to integrate primary markets.



Albeit, the current digital asset market structure has its roots in the retail sector and was not designed with institutional investors and major dealers in mind. To bolster the digital asset infrastructure, it is necessary to include the separation of custody services from trade execution. To reach or go beyond the 6.6 trillion USD traded daily on the foreign exchange market, the cryptocurrency market will have to offer strong prime brokerage services. New entrants such as Hidden Road Partners and Galaxy are endeavoring to fill that void. However, unlike their FX counterparts, digital asset prime brokers often lack robust balance sheets that provide confidence to clients. Finally, the introduction of a centralized settlement utility akin to CLS in the FX market will become necessary. The demise of digital asset-friendly banks Silvergate and Signature has underscored the necessity of such a utility. Fortunately, the move towards an FX-style market structure will address these imbalances.

The absence of efficient payment rails for fiat currency movement in the digital asset market has compelled participants to trade crypto-to-crypto or crypto-to-stablecoin, leaving room for significant improvement. Payment-versus-payment settlement and efficient fiat-to-crypto conversion are operational challenges that require solutions. Regulatory concerns around FX settlement risk have drawn attention to blockchain-based settlement systems as potential remedies. However, existing blockchains lack support for crypto-versus-fiat conversions, rendering the onboarding process challenging. In fact, traditional banks have been cautious in this regard due to concerns about reputation risk and compliance with anti-money laundering and 'know your customer' regulations.

In terms of trading, the shift towards an FX-style interdealer and dealer-to-client structure has been most evident in non-deliverable forwards (NDFs). NDFs offer a way for traditional finance users to gain synthetic exposure to digital assets without the complexities of physically holding and settling digital assets. As the digital asset sector embraces more traditional financial market practices, it is poised to enter a new era of professionalism and security. The transition may entail challenges, but it holds the promise of safer, more transparent, and efficient trading in the years ahead.

Challenges and Vulnerabilities

The digital asset market's growth and potential have garnered significant attention, but it has not been devoid of challenges and vulnerabilities. These issues have emphasized the necessity of establishing institutional-grade trading solutions to address these shortcomings:

Lack of Regulation

The digital asset market has evolved rapidly, outpacing regulatory development in many regions. As a result, it has become an environment where regulatory gaps and ambiguities are exploited by bad actors. The absence of a cohesive and globally recognized regulatory framework for digital assets has made it challenging for institutions to navigate this market confidently. Institutional investors often require a regulatory framework that provides legal clarity and protections.

Security Concerns

The unique digital nature of assets introduces distinctive security challenges. High-profile security breaches and hacks targeting exchanges and custodial services have exposed vulnerabilities within the infrastructure. Institutional investors, managing substantial assets, demand a significantly higher level of security to safeguard their holdings and the assets of their clients.



Lack of Transparency

Transparency is a fundamental pillar of trust in financial markets. In the digital asset realm, transparency has been lacking, especially concerning how trading platforms handle customer assets and execute orders. The lack of transparency has eroded trust among market participants, particularly institutions that require a comprehensive view of order execution and asset management.

Scalability Issues

Furthermore, the limited depth of existing crypto exchanges exacerbates the scalability issues faced by the digital asset market. As institutional investors increasingly show interest in this space, the current exchange infrastructure struggles to accommodate the surge in trading volumes. This shortfall not only hampers the efficiency of trading and settlement processes but also contributes to volatility and price discrepancies across platforms. A lack of sufficient liquidity and depth restricts the market's ability to absorb large trades without significant price impact, presenting a critical obstacle to the seamless entry and participation of institutional players. Addressing scalability concerns becomes paramount to fostering a more robust and resilient ecosystem capable of supporting the growing demands of institutional investors.

The Role of Institutional Investors

Institutional investors are central to shaping the trajectory of the digital asset landscape. Their participation in the market injects liquidity and stability, making it less susceptible to extreme volatility. Beyond liquidity provision, institutions bring a level of professionalism and regulatory scrutiny that enhances the market's reputation and trustworthiness.

Institutional investors are known for their long-term investment perspective, risk management practices, and portfolio diversification strategies. Their involvement in digital assets broadens the appeal and acceptance of this emerging asset class, making it more accessible to a wide range of investors, from retail to high-net-worth individuals. The presence of institutional investors also contributes to mainstream recognition and legitimizes digital assets as a credible and viable addition to traditional investment portfolios.

As institutional investors continue to explore the digital asset market, their specific requirements and expectations must be met. This includes the provision of secure custodial services, transparent and compliant trading platforms, and the establishment of a regulatory framework that offers legal protections and clarity. Institutional-grade digital asset trading is not merely a luxury; it is an imperative to accommodate the demands of this growing and influential segment of the market, ensuring its sustainability and long-term success.



DeFinity Markets: Pioneering Institutional Digital Asset Trading

Our Unique Value Proposition

DeFinity Markets emerges as a trailblazing force in the digital asset trading realm, offering institutional participants a unique value proposition rooted in trust, transparency, and innovation. Our commitment to shaping the future of institutional crypto trading is underscored by a suite of groundbreaking features and services that empower institutions with unprecedented advantages.

DeFinity Markets brings a comprehensive and innovative solution to institutional crypto trading. With a unique value proposition, an ECN-style execution system, seamless fiat on and off-ramps, fiat-to-fiat deliverable trading, a strategic partnership with a European investment bank, integration of traditional finance Prime Brokerage services, and the utility of the DeFinity Token (DEFX), we are dedicated to pioneering institutional-grade crypto trading in a secure and compliant manner. Our roadmap, community engagement, partnerships, and commitment to risk disclosure underline our mission to provide institutions with a competitive edge in the digital asset trading landscape.

ECN-Style Execution for Spot Crypto

DeFinity Markets stands out by introducing an Electronic Communication Network (ECN)-style execution system for spot crypto trading. This approach aims to create a transparent and equitable trading environment by minimizing intermediaries and fostering direct market access. The ECN model eliminates information asymmetry, ensuring that institutional traders encounter competitive, impartial pricing. This revolutionary step represents a departure from conventional crypto trading and heralds a new era of professionalism and efficiency.

Direct Market Access

By facilitating direct connectivity to a network of market makers, liquidity providers, and other market participants, DeFinity Markets empowers institutions to execute trades swiftly and efficiently, directly interacting with the market and enhancing transparency.



Order Matching

The DeFinity ECN system employs advanced order matching algorithms to ensure fair and efficient trade execution. Orders are matched based on predefined criteria, fostering a level playing field for all market participants and preventing any form of discrimination or unfair trade execution.

Off-Ramps

Exiting the crypto market and converting digital assets back into fiat currencies is equally convenient with DeFinity Markets' off-ramp solution. Institutions can seamlessly liquidate their digital assets, facilitating efficient fund repatriation. This feature offers a level of flexibility and liquidity that is essential for institutional participants.

Multi-Currency Support

DeFinity Markets is committed to providing multi-currency support for both on and off-ramps. We understand that institutions operate with various fiat currencies, and our platform accommodates this diversity. Whether institutions prefer to engage with USD, EUR, JPY, CHF, MUR, AED or other fiat currencies, our on and off-ramps ensure seamless transitions.

Fiat-to-Fiat Deliverable Trading

One of DeFinity Markets' groundbreaking features is the introduction of fiat-to-fiat deliverable trading within the digital asset market. While cryptocurrencies have garnered significant attention, the ability to trade fiat currencies directly is equally essential for institutional participants.

Depth of Market

Our ECN platform offers a Depth of Market feature, enabling institutions to access real-time order book data. This functionality provides insights into market depth, allowing traders to make informed decisions based on current market dynamics. The DOM empowers institutions with a comprehensive view of the market, facilitating precise order placement.

Fiat On and Off-Ramps

Recognizing that accessibility to the digital asset market is essential for institutions, DeFinity Markets offers seamless fiat on and off-ramps. These on-ramps simplify the process of entering the crypto market, allowing institutions to convert fiat currencies into digital assets with ease. Simultaneously, our off-ramps enable a straightforward exit from the crypto market, providing a quick and efficient way to convert digital assets back into fiat currencies.

The Significance of Fiat-to-Fiat Trading

Fiat-to-fiat trading offers institutional participants several distinct advantages. It enables institutions to engage in direct trading between traditional fiat currencies, streamlining financial operations and mitigating exposure to crypto market volatility. This feature serves as a bridge between the traditional financial realm and the digital asset space, empowering institutions to leverage their expertise in fiat currency trading.



Diverse Fiat Pairs

DeFinity Markets provides a diverse range of fiat-to-fiat trading pairs, allowing institutions to execute transactions with their preferred currencies. This diversity ensures that institutions have flexibility in their trading strategies and can effectively manage their exposure to various fiat currencies.

Settlement and Clearing

Our platform ensures efficient settlement and clearing processes for fiat-to-fiat trades. Institutional participants can rely on DeFinity Markets to facilitate secure, transparent, and swift settlements, minimizing operational risks and enhancing overall trading efficiency.

Partnership with a European Investment Bank

DeFinity Markets proudly announces its strategic partnership with a renowned European investment bank. This groundbreaking collaboration represents a significant milestone in the digital asset industry, as it enables institutions to utilize traditional finance Prime Brokerage credit lines for trading on the DeFinity platform.

Bridging Traditional Finance and Digital Assets

The partnership with a European investment bank serves as a bridge between traditional finance and digital assets. It facilitates the use of existing Prime Brokerage credit lines, a standard feature in traditional finance, for trading digital assets on the DeFinity platform. This revolutionary approach makes it possible for institutions to access the digital asset market using their established lines of credit, reducing the barriers to entry and capital requirements.

Seamless Credit Integration

DeFinity Markets seamlessly integrates Prime Brokerage credit services, offering institutions access to a broader range of financial instruments. This feature not only empowers institutions with an extended trading toolkit but also simplifies credit management and access to liquidity.

Regulatory Compliance through bank partnership

The partnership between DeFinity Markets and the European investment bank ensures that all operations comply with relevant regulatory requirements. The transparent and compliant nature of the collaboration underpins the platform's commitment to institutional-grade trading.

Traditional Finance Prime Brokerage Integration

To further enhance institutional participation, DeFinity Markets integrates traditional finance Prime Brokerage services into the digital asset sector. This integration is aimed at providing institutions with the same level of support, credit management, and access to liquidity that they have traditionally enjoyed in financial markets.

Credit Lines and Collateral Management

DeFinity Markets offers institutions the capability to manage credit lines effectively and optimize collateral usage. This integration ensures that institutions can trade with confidence, knowing that their credit lines are efficiently managed and collateralized, reducing risks associated with trading.



Liquidity & Direct Market Access

Institutions leveraging traditional finance Prime Brokerage services on the DeFinity platform gain direct access to digital asset markets. This direct market access enables real-time trading, helping institutions take advantage of market opportunities promptly and efficiently. DeFinity Markets provides institutions with unparalleled liquidity access, sourced from various liquidity providers and market makers. This deep liquidity pool ensures that institutions can execute large trades without impacting market prices, a crucial advantage for institutional participants.

DeFinity Token (DEFX) Utility

The DeFinity Token (DEFX) serves as the cornerstone of our ecosystem, playing a pivotal role in our commitment to align the interests of all participants. DEFX is the native cryptocurrency of the DeFinity platform, and it offers a range of utilities to institutional users.

Trading Fee Discounts

Institutional participants can utilize DEFX to access trading fee discounts, reducing transaction costs and optimizing their trading strategies. This cost-saving feature enhances the competitiveness of institutional trading on the DeFinity platform.

Premium Features Access

DEFX grants institutions access to premium features and services on the DeFinity platform. These premium features offer enhanced functionalities and tools that cater to the specific needs of institutional participants, providing a competitive edge.

Staking for Rewards

Institutions and token holders can participate in DEFX staking, earning rewards for staking their tokens. Staking rewards offer an additional source of income, providing incentives for institutions to engage actively with the DeFinity ecosystem. The rewards are paid in DEFX.

Secure and Compliant Trading

DeFinity Markets places the highest priority on security and compliance. Our platform employs advanced security measures to safeguard institutional assets and data. Additionally, we adhere to all relevant regulatory requirements, ensuring that institutions can confidently engage in trading while maintaining compliance with legal standards.

Security Measures

DeFinity Markets utilizes cutting-edge security technologies, including multi-factor authentication, encryption, and cold storage of digital assets, to protect institutional assets from potential threats. Our robust security infrastructure is continuously updated to address emerging risks.



Regulatory Compliance KYC/AML

The platform complies with Know Your Customer (KYC) and Anti-Money Laundering (AML) regulations, providing a safe and compliant environment for institutions. Regulatory adherence underscores the platform's commitment to transparent and legitimate trading.

Community and Governance

DeFinity Markets actively involves the community and operates with a transparent governance structure. Institutional participants have a voice in the decision-making processes, ensuring that the platform evolves to meet their specific needs.

Community Engagement

The DeFinity community is a vital part of our ecosystem. We actively seek input, feedback, and suggestions from institutional users, ensuring that their voices are heard and integrated into platform improvements.

DeFinity Markets Roadmap

DeFinity Markets has a comprehensive roadmap that outlines the platform's development milestones and future goals. This roadmap reflects our commitment to continuous improvement and innovation. For more detail, see section 9.

Development Milestones

Our roadmap includes specific development milestones, such as platform enhancements, feature launches, and integrations. These milestones are strategically designed to provide institutions with a competitive advantage in the digital asset trading landscape.

Future Goals

DeFinity Markets' roadmap extends into the future, outlining ambitious goals that reflect our commitment to setting new industry standards. These goals encompass expanding the range of supported assets, integrating additional financial services, and further enhancing the trading experience for institutional participants.

Legal and Regulatory Considerations

DeFinity Markets pays meticulous attention to legal and regulatory considerations. We operate with full transparency and adherence to all relevant laws and regulations. Our commitment to regulatory compliance ensures that institutional users can engage in trading with confidence and peace of mind.

Legal Framework

Our legal framework is designed to be fully compliant with international regulations and standards. We work closely with legal experts to ensure that all platform operations are in accordance with legal requirements.

Partnerships and Alliances

DeFinity Markets actively seeks partnerships and alliances that support the project's goals and enhance the services offered to institutional participants.



Liquidity Providers

We collaborate with some of the largest and most reputable liquidity providers and market makers to ensure that institutions have access to deep liquidity pools. These partnerships facilitate smooth order execution and optimize trading efficiency.

Technology Providers

DeFinity Markets partners with cutting-edge technology providers to continuously enhance the platform's capabilities. These alliances enable us to remain at the forefront of digital asset trading technology.

Industry Collaborations

We engage in collaborations with industry organizations and associations to stay informed about regulatory changes and best practices. These collaborations ensure that our platform remains aligned with industry standards.

Risk Disclosure

DeFinity Markets provides a comprehensive risk disclosure to institutional participants. It is essential for institutions to understand the potential risks associated with digital asset trading.

Market Risks

Institutional participants should be aware of market risks, including price volatility, liquidity fluctuations, and market sentiment. These factors can impact the value of digital assets and the success of trading strategies.

Security Risks

Digital asset trading carries security risks, including the potential for cyberattacks, fraud, and unauthorized access to accounts. Institutions should take necessary precautions to protect their assets and data.

Regulatory Risks

DeFinity Markets operates in a regulated environment. Institutional participants should be mindful of regulatory risks and ensure that their trading activities comply with applicable laws and regulations.



Anomaly Detector

DeFinity Markets has created the world's first Deep learning AI powered Crypto Anomaly detector. The Anomaly Detector is the most powerful risk management tool in digital asset trading.

Anomaly detection is generally used to automatically detect out-of-distribution behaviours in asset prices, which may be the result of undisclosed new information, ripple effects from correlated assets, or structural breaks in an asset's behaviour versus the broader market. Although these anomalies do not represent a directional indication regarding future price moves, they are predictive of impending volatility events and as such are powerful risk management tools.

As part of our embedded collaboration with Axyon AI, a leading European FinTech with expertise in Deep Learning AI for asset management and trading firms, DeFinity has been providing its customers and token holders access to premium crypto market anomaly detection scores since September 2021.

The technology has proven extremely valid to monitor crypto market data and generate early warnings regarding:

- (i) unexpected price behaviours,
- ii) anomalous liquidity changes, and
- (iii) inconsistent transactions that could be a sign of broader volatility events on price.

On an hourly basis, approx. 5 minutes past each hour (UTC), a new anomaly score (0-100%) is generated by deep learning AI models for each of the 12 supported crypto assets, (AAVE, ADA, BNB, BTC, DOT, ETH, LTC, MATIC, SOL, UNI, XMR, XRP). The deep learning AI models look at a combination of market data, context data and on-chain data to detect irregular patterns.



Algos

DeFinity Markets offers highly customizable TWAP and VWAP algorithms. Our intelligent LP execution algorithms provide huge benefits to end users. Depending on the configuration, they are able to:

100% track an agreed benchmark

Efficiently execute using time or volume-based parameters
Cost Saving Inventory management
Cash Digital Assets Inventory Management for Institutional Participants
Mitigating information leakage
Approved users can participate in our dark pool ecosystem.





Algos

As an execution venue, we can trade on several liquidity sources with full transaction reporting available.

Our Cost Saving is categorised as:

- (i) Passive order utilisation logic: Our LP algos post liquidity on passive side at opportune moments, benefiting from large variations in passive / active fees across venues.
- (ii) Non-linear credit adjustment: Adjustment in real time: our algorithms adjust credit required per trade in real time depending on market conditions.
- (iii) Child order slicing: Our proprietary algorithms intelligently adjust order size in real time to reduce information leakage.

Our Benchmark Flexibility and Tracking can:

- (i) Create bespoke benchmarks for execution to fit client needs.
- (ii) Guaranteed execution vs a pre-determined benchmark
- (iii) Slippage vs. benchmark for exchange executions is limited by configurable "aggression factor".

Inventory Management

Submitted interest in the form of a good till cancelled (GTC) or DAY order is transmitted via our standard FIX API. The order has a time to live (TTL) window in which the limit order rests in our book.

Passive Interest – Matching logic

Market impact, a function of information leakage, reduces significantly when working orders alongside platform peers. The Definity platform is underpinned by curated liquidity and driven by transparent execution, thus ensuring a sustainable liquidity ecosystem.

Lit and Unlit Pools

Approved users can participate in our dark pool ecosystem.

- Our unlit pools enable market-makers and clients to manage their cash crypto inventory by not publishing orders to the market when engaging in risk-reducing activity.
- Submitted interest, in the form of a GTC or DAY order, is transmitted via our standard FIX API

Mitigating Market Impact

Using our dark pool matching logic, users can achieve confidentiality of their inventory management patterns by eliminating information leakage and therefore minimising market impact.

Offsetting interest does not match against auto-hedging systems or algos to further reduce market impact. The system protects the interests of the order originator and other participants within the dark pool. The service is available on dedicated sessions. Each participant gains access to suitable bids and offers.



Building a Robust Infrastructure for Institutional Digital Asset Trading

Separating Custody and Trading Functions

DeFinity Markets recognizes the critical importance of separating custody and trading functions within the digital asset industry. This separation serves as a fundamental pillar in building a robust infrastructure for institutional digital asset trading. By separating custody and trading functions, implementing an FX-style market structure, introducing a centralized settlement utility, and emphasizing the importance of regulatory clarity, we lay the foundation for a secure and transparent digital asset trading environment that empowers institutions and aligns with established best practices in traditional finance.





The FTX Debacle and Lessons Learned

The FTX debacle serves as a stark reminder of the vulnerabilities associated with the coalescence of custody and trading functions. FTX's misuse of client funds was enabled by a lack of segregation, leaving investors at the mercy of the exchange for asset safekeeping and transparency in asset utilization. The repercussions of this event reverberated throughout the digital asset industry, compelling stakeholders to reevaluate and reform their operational models.

The Role of Segregation

Separating custody and trading functions introduces a critical layer of security and transparency to the institutional digital asset trading landscape. By dissociating these functions, institutions can ensure that their assets are safeguarded by specialized custodians, independently audited and insured. This segregation minimizes the risk of asset misappropriation and provides greater transparency into asset utilization, instilling trust and confidence among institutional participants.

Independent Custodians

DeFinity Markets collaborates with reputable independent custodians, ensuring that assets held on the platform are entrusted to dedicated and experienced asset custodians. These custodians implement best-in-class security practices and insurance measures to protect institutional assets, contributing to the overall safety of the digital asset trading environment.

FX-Style Market Structure

The introduction of an FX-style market structure represents a transformative shift in the institutional digital asset trading landscape. By drawing inspiration from traditional over-the-counter (OTC) foreign exchange (FX) markets, DeFinity Markets leverages established practices to enhance safety, transparency, and efficiency.

Striking Parallels Between Digital Assets and FX

Digital asset markets and traditional FX markets share remarkable similarities. Both involve a base currency, with FX typically trading against the US dollar or euros, and digital assets traded against various fiat currencies, stablecoins, or major cryptocurrencies like Bitcoin. Both exhibit continuous, round-the-clock trading, high fragmentation across multiple platforms, and encompass distinct cash and derivatives markets. Crucially, neither domain operates under the jurisdiction of a centralized regulatory authority.

Implementing an FX-Style Market Structure

DeFinity Markets aims to bolster the digital asset infrastructure by implementing core features of the FX-style market structure. This transition involves the separation of custody services from trade execution and the introduction of a centralized settlement utility similar to Continuous Linked Settlement (CLS) in the FX market.

The Role of Custody and Credit Management

Separating custody services from trade execution introduces a robust infrastructure where institutions can have confidence that their assets are safely held and independently verified. Moreover, the implementation of credit management akin to FX prime brokerage practices offers institutions greater control over credit lines and risk management. These features enhance the overall reliability and efficiency of digital asset trading, contributing to an institutional-grade environment.



Centralized Settlement Utility

DeFinity Markets recognizes the paramount importance of a centralized settlement utility within the digital asset trading landscape. This utility serves as a linchpin in fostering secure and efficient transaction settlement.

Learning from the Demise of Crypto-Friendly Banks

The demise of crypto-friendly banks like Silvergate and Signature underscored the necessity of a centralized settlement utility in the digital asset industry. Institutions require a secure and efficient platform that can facilitate the settlement of digital asset transactions in a manner that aligns with traditional financial settlement standards.

Benefits of Centralized Settlement

A centralized settlement utility offers institutions a reliable and efficient platform for settling digital asset transactions. By centralizing this process, DeFinity Markets ensures that transactions are settled promptly and securely, minimizing counterparty risk and transactional uncertainty. This feature significantly enhances the operational efficiency of digital asset trading for institutional participants.

The Importance of Regulatory Clarity

Regulatory clarity is a pivotal factor in the development of a robust infrastructure for institutional digital asset trading. DeFinity Markets recognizes the significance of regulatory guidance and compliance with legal standards.

Reflecting on Traditional Finance

The digital asset industry can learn from traditional finance, where regulatory clarity and compliance with legal and bank capital requirements are paramount. This clarity empowers institutions to confidently participate in trading, enabling them to price digital assets and foster liquidity while ensuring direct market access through prime relationships.

Paving the Way for Regulatory Alignment

DeFinity Markets believes that the advent of regulatory clarity on digital assets and legal and bank capital requirements will pave the way for the sector to resemble the FX OTC market. Such regulatory alignment enables institutions to engage in digital asset trading with clarity on legal obligations, fostering trust and legitimacy in the marketplace.

Addressing Compliance Challenges

Although regulatory clarity is a necessity, DeFinity Markets acknowledges the challenges surrounding compliance. These include concerns about anti-money laundering (AML) and Know Your Customer (KYC) regulations, as well as the integration of blockchain-based settlement systems. The platform remains committed to addressing these challenges while adhering to the highest standards of legal compliance.



Tokenomics and Economics

DeFinity Markets introduces a native token, the DeFinity Token (DEFX), which plays a pivotal role in shaping the economic dynamics within our ecosystem. This section offers a comprehensive overview of our tokenomics and economic model, emphasizing the various functions of DEFX, the principles governing its distribution, and its significance in the broader digital asset trading landscape.

DeFinity Markets has thoughtfully designed its tokenomics and economic model with DEFX at its core. This native token embodies the spirit of a vibrant, participatory ecosystem while offering utility. With DEFX, DeFinity Markets aspires to establish a new standard in the digital asset trading industry, one that is equitable, inclusive, and poised for sustained growth and innovation.





The DeFinity Token (DEFX)

The DeFinity Token (DEFX) lies at the heart of our ecosystem, serving as a versatile instrument that fulfills multiple critical functions. Built on a blockchain, DEFX operates as a unifying element, aligning the incentives of market participants, enabling seamless fee payments, and forming the cornerstone of our platform's growth.

Incentivizing Market Participants

DEFX stands as a potent incentive mechanism for participants within the DeFinity Markets ecosystem. Users, traders, and liquidity providers can earn DEFX as rewards for actively engaging with the platform. These incentives create a dynamic environment in which participants are motivated to contribute to the ecosystem's growth, thereby ensuring its health and vibrancy.

Fee Payments

A fundamental role of DEFX is to facilitate fee payments within the DeFinity Markets platform. Users can pay transactional fees, such as trading fees, fiat on and off-ramp fees, or fees related to fiat-to-fiat deliverable trading, using DEFX. This approach streamlines the transaction process, providing users with a convenient and consistent means of interacting with various platform features.

Community Involvement

At DeFinity Markets, we deeply value community involvement, considering it an indispensable aspect of our overarching mission. We actively cultivate an inclusive environment that encourages engagement from our diverse stakeholders. Our community extends beyond token holders, encompassing users, developers, partners, and various contributors, all pivotal in co-creating the trajectory of our platform's evolution. We strive to foster a collaborative atmosphere where every member has a meaningful role in shaping and guiding the future of our ecosystem.

Token Distribution

DeFinity Markets has meticulously designed its token distribution strategy to ensure equitable and balanced access to DEFX, thereby promoting a fair and sustainable economic model for all participants. The total supply of DEFX is capped at 171,516,755 tokens.



Initial Distribution

The initial distribution of DEFX tokens has been carefully planned to establish a strong foundation for the platform. This allocation includes provisions for the founding team, advisors, early investors, and liquidity pools. By incentivizing long-term commitment and support, this allocation fosters stability and growth within the DeFinity Markets ecosystem.

User Rewards and Incentives

A substantial portion of DEFX tokens is dedicated to user rewards and incentives. These tokens are reserved to encourage active participation, trading, and liquidity provision on the platform. Such incentives are vital in nurturing a vibrant and engaged user base, enhancing the ecosystem's overall health and ensuring a dynamic marketplace.

Token Buybacks & Burn

A variable % of profits at random intervals will be used for DEFX buybacks and burns – whilst the amount is undisclosed, it will be visible on the respective blockchain.

Future Growth and Development

A portion of DEFX tokens is earmarked for future growth and development within the DeFinity Markets ecosystem. These tokens will be instrumental in funding ongoing research and development efforts, as well as initiatives aimed at expanding the platform's capabilities and user base. This allocation ensures the platform remains at the forefront of innovation, responsiveness, and adaptability.

The Role of DEFX in the Digital Asset Landscape

The introduction of DEFX reflects our commitment to reshaping the digital asset trading landscape. As digital assets continue to gain traction and traditional financial markets converge with the digital asset sphere, DEFX is poised to become an integral element of the broader digital asset landscape.



Use Cases and Applications

DeFinity Markets stands as a versatile platform, offering a diverse array of use cases and applications, particularly tailored to meet the needs of institutional participants within the financial industry. Our platform caters to a wide spectrum of stakeholders, including banks, funds, and corporations, each of whom seeks secure and efficient exposure to the digital asset market. Here, we delve into the breadth of use cases and applications our platform enables, underscoring its pivotal role in transforming the landscape for institutional digital asset trading.

DeFinity Markets is at the forefront of addressing the operational challenges faced by institutional participants in the digital asset market. By presenting innovative solutions, we empower banks, funds, and corporations to navigate this emerging asset class with confidence, efficiency, and security. Our platform serves as a bridge between the traditional financial industry and the digital asset market, promoting the convergence of these two worlds while maintaining the highest standards of security and transparency.

Banking Institutions

Traditional banks, often considered the bedrock of the financial sector, are not immune to the seismic shift towards digital assets. DeFinity Markets offers banking institutions a robust platform to gain exposure to digital assets, ensuring they can operate securely and efficiently in this new asset class.

- **Custody Services:** Banking institutions can avail themselves of secure custody services that safeguard their digital assets while adhering to regulatory standards. DeFinity Markets eliminates the need for in-house custody solutions, reducing operational complexity.
- **Trading Services:** Banks can seamlessly execute digital asset trades on the platform. DeFinity's ECN-style execution system ensures fair pricing, transparency, and efficient trading, aligning with the stringent requirements of institutional participants.



Investment Funds

Investment funds play a pivotal role in the financial industry, managing a wide spectrum of assets on behalf of clients. DeFinity Markets empowers these funds to diversify their portfolios and leverage the potential of digital assets.

- **Diversification:** Investment funds can allocate a portion of their portfolios to digital assets, providing diversification and risk mitigation, especially in a world where traditional asset classes exhibit increased correlations.
- **Efficient Management:** DeFinity Markets simplifies the process of entering and exiting digital asset positions, allowing investment funds to respond promptly to market trends and capitalize on opportunities.
- **Research and Analytics:** The platform offers comprehensive data and analytics tools, enabling funds to conduct thorough research and make informed investment decisions.

Corporations

Corporations, ranging from tech giants to traditional businesses, are exploring digital assets as both investments and tools for corporate treasury management. DeFinity Markets offers them a secure and efficient means to engage in digital asset transactions.

- **Treasury Management:** Corporations can utilize digital assets for treasury management, diversifying their holdings and leveraging the advantages of blockchain technology for transparent and efficient cross-border transactions.
- **Risk Mitigation:** By offering a platform with robust security measures, DeFinity Markets assists corporations in mitigating the operational and cybersecurity risks associated with digital asset transactions.

Operational Challenges and Solutions

In the pursuit of its mission to provide a holistic solution to institutional digital asset trading, DeFinity Markets addresses several operational challenges that have historically hindered institutional participation in this emerging market. By presenting innovative solutions, we equip institutional participants with the tools they need to navigate the digital asset landscape confidently.

Payment-versus-Payment Settlement

The digital asset market, marked by its fragmentation and lack of standardized settlement protocols, often presents challenges in ensuring payment-versus-payment (PvP) settlement, which is critical for mitigating counterparty risks and ensuring secure transactions.

DeFinity Markets is pioneering a blockchain-based settlement system that enables secure and efficient PvP settlement for digital asset transactions. Our platform offers a standardized PvP settlement process, enhancing trust and transparency for institutional participants. This innovative approach eliminates counterparty risk, a paramount concern for institutions, and streamlines the settlement process, reducing operational complexities.



Efficient Fiat-to-Crypto Conversion

Efficient fiat-to-crypto conversion is essential for enabling institutional participants to seamlessly enter the digital asset market. Traditional banking systems often present hurdles, such as inefficient conversion processes and associated regulatory concerns.

DeFinity Markets offers an integrated fiat on and off-ramp solution, streamlining the process of converting traditional fiat currencies into digital assets and vice versa. By partnering with trusted banking institutions, we ensure efficient conversion while adhering to regulatory requirements. Our platform significantly reduces friction, enabling institutional participants to transition into the digital asset market with ease.

The Role of Trusted Banking Partners

Institutional participants require a bridge between the digital asset market and traditional financial systems. Trusted banking partners play a pivotal role in facilitating the seamless integration of these two worlds.

DeFinity Markets has established strategic partnerships with reputable banking institutions, setting the stage for a harmonious convergence of digital assets and traditional finance. These banking partners provide the necessary infrastructure for institutions to access digital asset markets through traditional finance channels, such as Prime Brokerage credit lines. This partnership further enhances the credibility and trustworthiness of our platform, attracting institutional participants and fostering confidence in the digital asset market.



Market Analysis

In the ever-evolving landscape of digital asset trading, it is crucial to understand the market dynamics and the unique position DeFinity Markets holds. This section delves into a detailed market analysis, outlining the current challenges, and underscoring the distinctive features that set DeFinity Markets apart in the digital asset trading industry.

The future of digital asset trading will be defined by professionalism, security, and enhanced market infrastructure. DeFinity Markets is at the forefront of this evolution, offering a platform that adheres to these principles and sets new industry standards. We envision a future where banks, funds, and corporations navigate the digital asset market with confidence and efficiency. Our commitment to innovation, accessibility, and security will continue to drive the transformation of the digital asset trading landscape.

The Current Digital Asset Trading Landscape

The digital asset trading landscape has witnessed rapid expansion and innovation, but it remains rife with challenges and disparities that impact both retail and institutional participants. To appreciate the significance of DeFinity Markets, it is essential to understand the existing market conditions:

Fragmented Ecosystem: The digital asset trading ecosystem is characterized by a plethora of exchanges, each with its unique rules, regulations, and order-matching mechanisms. This fragmentation often leads to significant price disparities and liquidity fragmentation. Institutional participants, in particular, require a more cohesive and standardized environment.

Lack of Transparency: Many crypto exchanges fall short in terms of providing transparency regarding their trading practices and the handling of client funds. This lack of transparency not only hinders trust but also raises concerns about market integrity. Institutional participants demand a higher degree of transparency to engage confidently in the market.





Custody and Security Concerns: Security is a paramount concern in the digital asset space. The history of exchange hacks and mismanagement of client assets has led to apprehension regarding the custody and protection of digital assets. This concern is amplified for institutional investors who deal with larger asset volumes.

Lack of Institutional-Grade Infrastructure: Most cryptocurrency exchanges have their roots in serving retail traders. Consequently, they lack the institutional-grade features and infrastructure required by banks, funds, and corporations. This deficiency presents a significant barrier to institutional participation.

Positioning DeFinity Markets

DeFinity Markets is uniquely positioned to address these challenges and provide institutional participants with a seamless and secure trading environment. Our platform introduces several features that distinguish us from traditional cryptocurrency exchanges:

ECN-Style Execution: DeFinity Markets adopts an Electronic Communication Network (ECN)-style execution system for spot crypto trading. This system, renowned for its fairness, transparency, and efficiency, ensures that market participants receive the best possible prices for their orders. It addresses the issues of price disparities and fragmented liquidity. Whether it's retail traders or institutional investors, our platform is dedicated to ensuring equitable and professional execution.

Fiat On and Off-Ramps: DeFinity Markets understands that the process of entering and exiting the digital asset market can be cumbersome, especially for institutional participants. To simplify this process, we offer seamless fiat on and off-ramps. These integrated on-ramps and off-ramps significantly reduce friction and enhance accessibility for institutions looking to convert traditional fiat currencies into digital assets or vice versa.

European Investment Bank Partnership: DeFinity Markets takes an unprecedented step in bridging traditional finance and the digital asset market through our partnership with a European investment bank. This partnership opens the door to the utilization of traditional finance Prime Brokerage credit lines for trading digital assets on our platform. We pave the way for a harmonious integration of the two financial worlds, ensuring that institutional participants can leverage their existing banking relationships.

Our commitment to professionalism, fairness, transparency, and accessibility positions DeFinity Markets as a groundbreaking solution that caters to the needs of institutional participants, setting new industry standards.

The Future of Digital Asset Trading

The future of digital asset trading is poised for transformation, driven by the increasing participation of institutional investors. In this section, we discuss the core tenets that will define this future and emphasize how DeFinity Markets contributes to this promising evolution.



Professionalism and Security

Professionalism and security will be the pillars of the future digital asset market. The burgeoning involvement of institutional investors will necessitate higher standards of integrity, ethical practices, and risk mitigation.

Institutionalization: As more banks, funds, and corporations enter the digital asset market, the industry will undergo a process of institutionalization. This transformation will demand greater levels of professionalism, market integrity, and regulatory compliance. DeFinity Markets embraces this transition and is dedicated to adhering to the highest standards of professionalism and ethics.

Best Practices: The influx of institutional participants will require the implementation of best practices across the digital asset market. This includes robust asset custody solutions, risk management, and an unwavering commitment to transparency. DeFinity Markets is at the forefront of these efforts, setting industry standards to ensure the safety and integrity of the digital asset market.

Enhanced Market Infrastructure

Market infrastructure will undergo significant enhancements, particularly in areas that have historically posed challenges, such as settlement, custody, and liquidity.

Blockchain-Based Settlement: Blockchain technology has matured to a point where it can revolutionize settlement processes in the digital asset market. Blockchain-based settlement systems offer several advantages, including real-time settlement, reduced counterparty risk, and enhanced transparency. DeFinity Markets is committed to leading the way in blockchain-based settlement, offering institutional participants a secure and efficient settlement solution.

Custody Solutions: The future will witness the emergence of more reliable and sophisticated custody solutions. These solutions will cater to the needs of institutional participants and meet stringent regulatory requirements. DeFinity Markets is committed to providing state-of-the-art custody solutions, ensuring the secure storage and protection of digital assets.



Team and Advisors

Core Team

At the helm of DeFinity Markets stands a core team of professionals who blend extensive experience from the traditional finance and crypto sectors. Their collective expertise and insights are the driving force behind the success of DeFinity Markets.

definitymarkets.com/leadership

MANU CHOUDHARY

Co-Founder & CEO



Manu Choudhary, as the Co-Founder and CEO of DeFinity Markets, embodies the ideal fusion of traditional finance acumen and crypto expertise. With almost two decades of experience in the traditional financial sector, Manu has held leadership roles in major financial institutions including Lloyds and Barclays Investment bank. Manu is committed to bridging the divide between traditional finance and the burgeoning digital asset space.

CHRIS PARK

Co-Founder & CFO



Chris Park, as the Co-Founder and CFO of DeFinity Markets, has a strong background in capital markets and financial markets, coupled with an intimate understanding of regulations and compliance, positions him as the visionary leader of DeFinity Markets. Chris ensures that DeFinity Markets adheres to the highest standards of legal compliance and safeguards the interests of both the platform and its users.

MICHAEL SIWEK

Co-Founder & CRO



Michael Siwek as the Co-Founder, holds the vital position of Chief Revenue Officer (CRO) at DeFinity Markets. His role as a sales and communications specialist is pivotal in shaping the image of the platform and cultivating an active and engaged clients. Michael's strategic insights are instrumental in the creation of the platform's branding and in fostering a supportive and vibrant DeFinity Markets userbase.

ASHWIND SOONARANE

Co-Founder & COO



Ashwind Soonarane, the Co-Founder and COO of DeFinity Markets, adds a dynamic dimension to the core team. With a substantial background in electronic trading and ultra-low latency technology, Ashwind has led high-impact technology infrastructure projects. His operational acumen is the driving force behind the seamless operation of DeFinity Markets. Ashwind's experience in the electronic trading sphere ensures that DeFinity Markets not only envisions change but effectively implements it.



Advisors

DeFinity Markets has also engaged the expertise of distinguished advisors who offer a wealth of knowledge from various facets of the financial industry. These advisors are instrumental in providing insights and guidance, ensuring that DeFinity Markets remains aligned with industry best practices and evolving regulatory requirements. The core team and advisors of DeFinity Markets represent a harmonious fusion of expertise from both traditional finance and the digital asset space. Their collective experience, insights, and guidance are paramount in driving the success of DeFinity Markets. This dedicated team remains committed to upholding the highest standards of professionalism, security, and innovation, ensuring that DeFinity Markets stands as a trailblazer in the evolving landscape of digital asset trading.

GREG MYERS

Greg Myers brings a wealth of experience as a former executive of a leading European investment bank. His insights into traditional finance, especially regarding prime brokerage and credit line integration, have played a pivotal role in forging the groundbreaking partnership between DeFinity Markets and the European investment bank. His guidance ensures that DeFinity Markets stands at the forefront of bridging the traditional and digital asset financial sectors.

ANDREW EVANS

Andrew Evans is a pioneering figure in the financial technology sector, renowned as the Co-founder of Smart, a groundbreaking FinTech unicorn specializing in pensions. With an illustrious career spanning global leadership roles, Andrew has served as the International Managing Director at esteemed financial institutions including Lloyds, Barclays, and Credit Agricole. His expertise lies at the intersection of innovation and finance, driving transformative initiatives and shaping the landscape of modern financial services.

PAUL RODRIGUEZ

Paul Rodriguez is a widely recognized figure in the financial realm, celebrated for his extensive expertise as a seasoned proprietary trader and financial analyst. His illustrious career encompasses significant achievements, including a tenure as a lecturer at City University in London, where he imparted knowledge on Technical Analysis. Concurrently, during the 1990s, Rodriguez garnered acclaim as an award-winning analyst at NatWest Global Financial Markets, a division now under RBS. His pioneering efforts in advocating and propagating the education and application of technical analysis within City professionals and private investors marked a pivotal moment in financial education.

Driven by his passion for educating and consulting, Rodriguez established Think Trading, an endeavor aimed at furthering education and consultancy in the financial sphere. His insights and perspectives have been sought after by various financial news channels, underscoring his authority and expertise in the field. Three years ago, he co-founded the State of The Markets Podcast alongside fund manager Tim Price. This podcast has consistently secured a top position among the UK's top 50 business podcasts, boasting a substantial global audience.

Beyond his podcasting success, Rodriguez dedicates himself to providing tailored research and consultancy services to industry-leading firms. His bespoke approach, coupled with his wealth of experience and insights, cements his position as a trusted authority within the financial landscape.



THOMAS SOEDE

Thomas Soede is a seasoned business leader with a wealth of experience in spearheading extensive, multi-region digital programs. His career has been marked by influential roles at prestigious financial institutions such as JPMorgan, Lehman Brothers, BNPP Paribas, HSBC, and Santander. With a proven track record in overseeing large-scale end-to-end digital initiatives across diverse regions, Thomas brings a strategic vision and a depth of expertise in driving transformative changes within the financial landscape.

MALKEET SOKHI

Malkeet Sokhi is a seasoned executive management consultant with two decades of invaluable expertise in the financial industry. With a strong focus on regulatory remediation, Malkeet has been instrumental in implementing resilient controls and fostering the growth of sales and trading functions within various organizations. His extensive experience spans across strategic roles, offering profound insights into navigating regulatory landscapes and fortifying operational frameworks to drive sustainable growth and compliance within the financial sector.

DANIELE GRASSI

Daniele Grassi is the Chief Executive Officer of Axyon AI, spearheading the company as a prominent figure in the realm of deep learning for asset managers and hedge funds. With an innovative approach and strategic leadership, Daniele has positioned Axyon AI as a frontrunner in leveraging cutting-edge technology to empower financial entities in making informed investment decisions. His role underscores a commitment to driving advancements in AI-driven solutions, enabling asset managers and hedge funds to harness the power of deep learning for enhanced operational performance and optimized investment strategies.

BRIAN FUDGE

Brian Fudge is a prominent figure within the financial landscape, serving as a key contributor at thearmchairtrader.com. With a wealth of expertise in the financial sector, Brian brings an insightful perspective to the platform, offering astute market analysis, investment insights, and valuable commentary on trading strategies. His commitment to delivering comprehensive and accessible financial content has made him a trusted source among investors and traders seeking informed guidance in navigating the markets. Through his contributions, Brian continues to empower individuals with the knowledge and tools needed to make informed decisions in the dynamic world of finance.

STUART FIELDHOUSE

Stuart Fieldhouse stands as the co-founder of thearmchairtrader.com, a pivotal platform catering to more than 800,000 investors seeking a hands-on approach to trading and market dynamics. The Armchair Trader, under Stuart's guidance, serves as a comprehensive source of information and news, offering market intelligence and educational resources tailored for active traders. Covering a wide spectrum, including futures, CFDs, forex, main market shares, funds, ETFs, and various listed financial products, Stuart's platform equips traders with vital insights, empowering them to make informed decisions in today's ever-evolving financial landscape. His dedication to providing valuable guidance and market intelligence has established thearmchairtrader.com as a go-to resource for traders navigating the complexities of the financial markets.



JAGJIT MANHAS

Jagjit Manhas is the visionary founder behind the AEGIR Strategy, a pioneering initiative dedicated to fully systematic methodologies. AEGIR Strategy is renowned for its focus on identifying and capitalizing on relative value and arbitrage opportunities within exchange-traded energy markets. Jagjit's innovative approach and strategic leadership have solidified AEGIR Strategy as a distinguished platform, employing cutting-edge techniques to navigate and leverage opportunities in the dynamic energy market landscape. His commitment to systematic strategies and a keen eye for relative value has established AEGIR Strategy as a leader in the realm of exchange-traded energy markets.

TIM DAVIES

Tim Davies is the accomplished founder behind MKT Solutions, leveraging extensive expertise amassed over nearly two decades in the financial sector. Prior to establishing MKT Solutions, Tim made significant contributions within prominent banking institutions including Westpac, RBS, Lloyds, ANZ, and CBA. His versatile experience spans across the UK and Australia, focusing on the structuring, sales, and trading of FX derivatives. Tim's profound insights and strategic prowess acquired from his tenure in esteemed financial entities have fortified MKT Solutions, positioning it as a dynamic and forward-thinking entity in the financial landscape.

HELMUT FRIEDRICH

Helmut Friedrich is the visionary founder and CEO behind Systrade AG, boasting a remarkable legacy in the brokerage industry dating back to 1979. With a career spanning decades, Helmut has been a pioneering force, actively engaged in the evolution of futures markets into the sophisticated and highly liquid trading platforms of today. His proactive approach and profound experience have established him as a seasoned authority within the trading sphere, guiding Systrade AG to the forefront of innovation and success in the financial markets.

JOEL KOVSHOFF

Joel Kovshoff, widely known as Coach K, is the co-founder of Academy For Capital Growth LLC, specializing in Trading Education and Capital Management. With a focus on empowering traders, he pioneers the creation of essential tools like indicators, trade journals, and management strategies that enhance trading proficiency. Joel extends his expertise as an advisor to distinguished platforms such as Paid Network, FinXFlo, Veracity, Ferrum Network, and PlotX. Renowned for his exceptional networking capabilities, he is relied upon to forge strategic partnerships, facilitate exchange listings, and orchestrate innovative marketing initiatives. Joel Kovshoff, alias Coach K, stands as a reputable figure in the trading and investment realms, fostering growth and opportunities within the industry.

JAY RAIN

Jay Rain, widely known as CryptoRain is a dedicated crypto investor and a prominent figure within the digital asset community. Renowned for his influence in the crypto sphere, Jay is recognized as a prominent voice, offering insights and expertise that resonate across the investor landscape. With a passion for cryptocurrencies and a knack for navigating the intricacies of the digital asset market, Jay Rain stands as an influential figure, shaping perspectives and guiding investors through the dynamic world of crypto investments.



Road map

DeFinity Markets is committed to a path of continuous development and growth. Our roadmap is a clear and structured guide that details our strategic vision, development milestones, and future goals. It encompasses key elements such as platform enhancements, strategic partnerships, and expansion into new markets. Here's a comprehensive breakdown of our roadmap:

Q4 2023

Platform Launch and Ecosystem Establishment

In the last quarter of 2023, our primary focus is the successful launch of the DeFinity Markets platform. This milestone marks the beginning of our journey to redefine institutional digital asset trading. We are dedicated to establishing a robust ecosystem that seamlessly integrates various features, ensuring a holistic experience for our users.

Liquidity Partner Integration

In this phase, we begin integrating our liquidity partners, laying the foundation for an efficient and highly liquid trading experience. These strategic partnerships enhance market depth and ensure competitive pricing.

Q1 2024

ECN-Style Execution for Spot Crypto Trading

Building upon the platform's initial launch, the last quarter of 2023 sees the introduction of an ECN-style execution system for spot crypto trading. This milestone represents a significant step in our mission to enhance transparency, fair pricing, and trust in the digital asset market.

Fiat On and Off-Ramps

We expand our ecosystem by providing seamless fiat on and off-ramps with our banking partners. This development simplifies the process of entering and exiting the digital asset market, offering our users more versatility and ease in their trading activities.

Alpha Testing and User Feedback

As we believe in co-creation with our users, we initiate alpha testing of our platform. Valuable user feedback collected during this phase serves as an essential resource for continuous improvement.

Q2 2024

Fiat-to-Fiat Deliverable Trading

This quarter marks the launch of an innovative feature—fiat-to-fiat deliverable trading. DeFinity Markets becomes the pioneer in the digital asset industry, offering institutional participants a unique opportunity to engage in this form of trading.

Advanced Security Enhancements

With security being a top priority, we implement advanced security enhancements. These measures fortify our platform, safeguarding it against potential vulnerabilities and threats. Our commitment to ensuring user assets' safety remains unwavering.



Q3 2024

Strategic Partnership with a European Investment Bank

DeFinity Markets enters into a historic partnership with a leading European investment bank. This groundbreaking collaboration marks a significant step in bridging traditional finance with the digital asset space. Together, we pave the way for the use of traditional finance Prime Brokerage credit lines in the DeFinity Markets platform.

Beta Testing and User Onboarding

We launch our beta testing phase, allowing a broader user base to experience the DeFinity Markets platform. User onboarding is streamlined, offering a seamless introduction to our innovative ecosystem.

Q4 2024

Traditional Finance Prime Brokerage Integration

We continue to evolve as we integrate traditional finance Prime Brokerage services. This transformative step opens the doors to a more extensive range of institutional participants and enhances the efficiency of trading processes.

User Feedback Implementation

User feedback, collected from both alpha and beta testing phases, is meticulously reviewed and implemented. We aim to fine-tune our platform based on the valuable insights provided by our user community.

Q1 2025

Market Expansion

The last quarter of 2024 marks the expansion of the DeFinity Markets platform into Crypto Repo trading. With the platform's maturity, we broaden our reach and expand into new markets, making our services accessible to a more extensive range of institutional participants worldwide.

Beyond 2025

As we venture into the future, our commitment to innovation and excellence remains steadfast. Beyond the outlined roadmap, we continue to explore opportunities for strategic partnerships, technological advancements, and expansion into emerging markets. DeFinity Markets strives to remain at the forefront of institutional digital asset trading, setting new industry standards and empowering institutional participants with a secure and professional trading environment.

DeFinity Markets' roadmap is a testament to our dedication to shaping the future of institutional digital asset trading. We are resolute in our commitment to transparency, security, and innovation, and we look forward to the exciting journey that lies ahead as we realize our vision.



Legal and Regulatory Considerations

At DeFinity Markets, we place a paramount emphasis on legal and regulatory compliance. We understand the critical importance of operating within the bounds of the law and adhering to industry regulations to foster trust, ensure the safety of our users, and contribute to the overall integrity of the digital asset trading ecosystem. Below, we delve into the legal and regulatory considerations that guide our operations.

Commitment to Regulatory Compliance

DeFinity Markets is fully committed to regulatory compliance in all aspects of our operations. We recognize that the dynamic nature of the digital asset industry calls for a proactive approach to staying aligned with evolving regulations worldwide. To achieve this commitment, we engage in close collaboration with regulatory authorities, ensuring that our platform remains at the forefront of compliance.

Collaboration with Regulatory Authorities

Our approach to regulatory compliance involves proactive engagement with regulatory authorities across the globe. By fostering open lines of communication and collaboration, we aim to contribute to the development of a regulatory framework that benefits the entire digital asset trading industry. This approach also ensures that we remain updated on new regulatory developments and promptly adapt to changes when required.

Adherence to AMLD5

Anti-Money Laundering Directive 5 (AMLD5) is a cornerstone of our regulatory compliance strategy. AMLD5 establishes rigorous anti-money laundering (AML) and counter-terrorism financing (CTF) regulations for digital asset service providers (VASPs). DeFinity Markets upholds these regulations in their entirety, implementing robust AML and CTF measures to mitigate potential risks and safeguard our platform against illicit activities.



Regulatory Status in Mauritius

We are proud to announce that DeFinity Markets is currently regulated in Mauritius as an Appointed Representative (AR) to a Virtual Asset Service Provider (VASP). This regulatory status reflects our commitment to operating within the framework of established regulations. Under the purview of the Mauritius Financial Services Commission (FSC), we ensure our compliance with the regulatory requirements set forth for VASPs.

Ongoing Compliance Enhancement

Our commitment to regulatory compliance extends beyond initial certifications. We view compliance as an ongoing process, and we continually enhance our compliance efforts to adapt to evolving regulatory landscapes. This involves regular assessments, reviews, and updates to our practices and policies to align with the latest regulatory standards.

DeFinity Markets is resolute in its dedication to legal and regulatory compliance. Our commitment to regulatory alignment is evident through our proactive engagement with authorities, adherence to AMLD5, and our regulated status in Mauritius. We firmly believe that adherence to industry regulations is pivotal to providing a safe, transparent, and reliable digital asset trading environment for our users. We will continue to champion regulatory compliance and work diligently to uphold the highest standards in the industry, supporting the growth of institutional digital asset trading.



Security

Security is an uncompromising priority for DeFinity Markets. We have adopted a multi-faceted approach to safeguard our platform and protect the assets and interests of our users. Our security strategy combines industry-leading best practices with advanced technology solutions to create a robust, dependable, and secure digital asset trading environment. Let's delve into our security measures and partnerships with trusted industry players.

Robust Security Measures

DeFinity Markets is committed to ensuring the highest level of security to protect our users' assets and sensitive information. We employ a multi-pronged security strategy that encompasses various layers of protection, ensuring comprehensive security coverage.

Fireblocks Security Integration

As part of our dedication to security, we have strategically partnered with Fireblocks, a renowned digital asset custody, trading, and settlement platform. Fireblocks is renowned for its advanced security features, making it a crucial component of our security infrastructure.

Multi-Party Computation (MPC) and Distributed Control Plane (CMP)

Fireblocks employs Multi-Party Computation (MPC) and Distributed Control Plane (CMP) technology to secure its customers' private keys. This approach ensures that no single entity or person has access to the complete private key. It significantly raises the bar for potential hackers, making it considerably more challenging to steal funds.

Multi-Layered Security Approach

Fireblocks implements a multi-layered security strategy, combining several security measures. These include MPC, Intel Software Guard Extensions (SGX), the Fireblocks Policy Engine, and a deposit address authentication network. This multi-layer approach provides comprehensive protection against a wide range of threats, from external attacks to internal vulnerabilities.

Multi-Cloud Deployment

Fireblocks' multi-cloud deployment offers our users flexibility and enhanced security. By being deployed across multiple cloud providers, we mitigate the risk of service outages and security breaches from a single provider. Users can choose the cloud provider that best aligns with their needs while benefiting from the additional security inherent in this approach.

Self-Serve Policy Engine

The Fireblocks Policy Engine empowers our users to create custom transaction authorization policies. This control ensures that users have the final say in how their funds are utilized and provides an additional layer of security to prevent fraud and unauthorized transactions.



Hardware Protected Transfers and Policies

Fireblocks integrates hardware security modules (HSMs) to safeguard customers' private keys and transaction policies. HSMs are tamper-proof devices that provide the highest level of security for digital assets.

Automated Deposit Address Authentication & Rotation

To counter the threat of hackers targeting deposit addresses, Fireblocks automatically authenticates and rotates these addresses. By doing so, it significantly reduces the risk of fund theft, as this is a common focus for malicious actors.

Cold Storage

DeFinity Markets offers cold storage options for digital assets. Cold storage keeps digital assets offline, making them considerably more resilient to hacking attempts.

Hot, Warm, and Cold Configurations

Our platform allows users to configure their wallets as hot, warm, or cold storage, providing flexibility that matches their security and performance needs.

Segregated Wallets & Workspace Support

We enable the creation of segregated wallets and workspaces, which enhances security and compliance by isolating different asset types and user access.

Instant Access Air-Gapped Cold Storage

Users can enjoy instant access to air-gapped cold storage. This feature allows for rapid and secure withdrawals from cold storage when needed.

Industry Certifications

Fireblocks holds the highest level of security certification for digital asset custodians, the CCSS Level 3 certification. This certification validates the robust security standards and practices upheld by Fireblocks.

Additional Certifications

In addition to CCSS Level 3, Fireblocks is also certified to ISO 27001 (Security), ISO 27017 (Cloud), ISO 27018 (Privacy), and SOC II Type II. These certifications underscore Fireblocks' unwavering commitment to security and compliance across various domains.

Insurance

DeFinity Markets users benefit from insurance coverage provided by Fireblocks, ensuring up to \$30 billion in digital asset protection. This insurance offers peace of mind, guaranteeing users that their funds remain safeguarded even in the event of a loss.

Zero Custodial Counterparty Risk

Our non-custodial model ensures that users maintain control over their private keys at all times, eliminating the risks associated with custodial counterparty involvement.



Emergency Workspace Freeze

In the event of an emergency, our platform allows users to freeze their workspaces. This feature helps prevent unauthorized access to funds and assets, adding an additional layer of security.

Mobile Approvals with 2FA

We support mobile approvals with two-factor authentication (2FA) for all transactions, adding a layer of security when authorizing transactions and securing user accounts.

Talos Security Integration

In addition to our partnership with Fireblocks, we have integrated Talos into our security infrastructure. Talos is another leading platform in the digital asset security space, providing a range of robust security features to protect customer assets.

Multi-Cloud Deployment

Talos is deployed across multiple cloud providers, bolstering security by mitigating the risk of outages and breaches at a single provider.

Hardware Security Modules (HSMs)

Talos uses hardware security modules (HSMs) to protect private keys and sensitive data. HSMs are tamper-proof devices that provide an additional layer of security for digital assets.

Multi-Signature Wallets

Talos leverages multi-signature wallets to store customers' crypto assets. This method requires multiple keys to sign and execute transactions, thus preventing fraud and unauthorized access.

Role-Based Access Control (RBAC)

RBAC ensures that access to systems and data is controlled based on roles. It helps limit user access to the resources and functionalities they require, reducing the risk of human error and malicious activity.

Two-Factor Authentication (2FA)

Talos mandates 2FA for all logins and transactions, adding an extra layer of security to protect customer accounts and assets.

Security Monitoring and Auditing

Talos continually monitors its systems and networks for security threats and conducts regular security audits to identify and address vulnerabilities.

A Comprehensive Security Ecosystem

Incorporating both Fireblocks and Talos into our security infrastructure results in a comprehensive security ecosystem designed to protect our users' assets and create a safe and dependable digital asset trading environment. Our multi-layered security approach, non-custodial model, and industry certifications collectively position us as a leading choice for digital asset trading.

We understand that security is an ongoing concern, and we remain committed to continually enhancing our security efforts, adapting to new threats, and staying aligned with the latest security standards and practices. DeFinity Markets is steadfast in our commitment to safeguarding our users' assets and providing a platform where they can trade digital assets with confidence and peace of mind.



Partnerships and Alliances

www.definitymarkets.com/press



AxyonAI

Axyon AI stands as a pioneering force in the European FinTech landscape, specializing in cutting-edge Deep Learning and Artificial Intelligence technologies tailored specifically for asset management and trading firms. Renowned for their expertise, Axyon AI has solidified its position as a leader in this domain by offering innovative solutions that redefine the boundaries of financial technology.

Through their unparalleled mastery of Deep Learning and AI, Axyon AI has developed a suite of highly successful products that cater to diverse financial use-cases. Their repertoire extends across various critical areas within the financial sector, demonstrating proficiency in tasks ranging from intricate security selection and nuanced asset allocation strategies to the meticulous identification of anomalies in option pricing mechanisms.

A key strength lies in their ability to address multifaceted challenges encountered by asset management and trading firms. Axyon AI's solutions not only streamline security selection processes and optimize asset allocation but also provide robust tools for anomaly detection within option pricing frameworks. This unique skill set empowers financial entities with sharper decision-making tools, enhanced risk management capabilities, and the agility needed to thrive in dynamic market environments.

Their track record speaks volumes, reflecting successful implementations and a demonstrated ability to revolutionize how financial data is leveraged and interpreted. Axyon AI's commitment to innovation and excellence positions them as a trusted partner for financial institutions seeking advanced AI-driven solutions that drive performance, mitigate risks, and uncover valuable insights in an ever-evolving financial landscape.

READ THE PRESS RELEASE

<https://medium.com/definity-network/definity-is-pleased-to-announce-our-partnership-with-axyon-ai-54c94e87486>



Cobalt



Cobalt stands at the forefront of market infrastructure innovation, dedicating its efforts to revolutionizing institutional FX and digital asset markets. The company's core mission centers on the comprehensive re-engineering of these markets, aiming to streamline essential processes such as real-time clearing, settlement procedures, and the implementation of dynamic risk and credit management systems.

At its essence, Cobalt functions as a pivotal provider within the market infrastructure sphere, seeking to transcend traditional models by introducing cutting-edge technologies and methodologies. By focusing on the institutional FX and digital asset sectors, Cobalt addresses critical pain points and inefficiencies prevalent in these markets.

The core functionalities Cobalt offers entail real-time clearing and settlement mechanisms, introducing a paradigm shift in how transactions are processed and reconciled. These advancements foster a seamless and efficient transaction environment, reducing complexities and enhancing operational speed and accuracy for market participants.

Moreover, Cobalt's dedication to implementing dynamic risk and credit management strategies marks a significant step forward in risk mitigation within these markets. By introducing adaptable risk management frameworks, Cobalt empowers market participants to respond swiftly to evolving market conditions, thereby enhancing their ability to manage and mitigate potential risks effectively.

Through its innovative approach and commitment to redefining market infrastructure, Cobalt emerges as a catalyst for change within institutional FX and digital asset markets. Its focus on real-time processing, settlement optimization, and the implementation of dynamic risk management positions the company as a key player in reshaping the future landscape of financial markets, fostering greater efficiency, security, and resilience for market participants.

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<https://www.cobaltdl.com/2021/12/22/definity-partners-with-leading-market-infrastructure-provider-cobalt-to-enable-real-time-fx-clearing-and-dynamic-credit-management-of-digital-asset-trades/>



Supra Oracles



Supra Oracles stands as a robust and influential cross-chain oracle network, purpose-built to serve as the backbone for decentralized applications (dApps) operating across diverse blockchain ecosystems. Its primary objective is to provide rapid, secure, decentralized, and scalable data solutions, catering to a wide spectrum of applications within the Web3 landscape.

The network's versatility extends across various sectors, including but not limited to decentralized finance (DeFi) and GameFi, highlighting its ability to facilitate critical data feeds and seamless connections required for these domains to flourish. Supra Oracles plays a pivotal role in harnessing the potential of Web3 by addressing the fundamental need for reliable and real-time data accessibility across blockchain networks.

Through its robust infrastructure and sophisticated architecture, Supra Oracles ensures the swift and secure delivery of data, essential for the operational efficiency of dApps. The network's decentralized nature guarantees the integrity and reliability of data feeds, promoting transparency and trust within the decentralized ecosystem.

One of Supra Oracles' key strengths lies in its scalability, enabling it to accommodate the evolving needs of an expanding Web3 environment. By providing a scalable framework for data solutions, the network remains agile and adaptable, supporting the growth and evolution of decentralized applications across various blockchain networks.

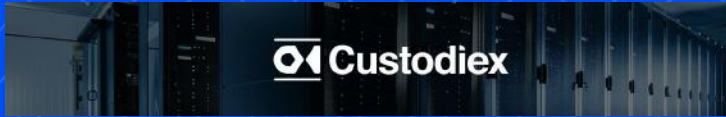
Supra Oracles emerges as a critical enabler of innovation within the blockchain space, facilitating the seamless integration of decentralized applications by providing essential data feeds and connections. Its commitment to fast, secure, decentralized, and scalable data solutions solidifies its position as a cornerstone of the Web3 ecosystem, fostering an environment where dApps can thrive and reach their full potential.

READ THE PRESS RELEASE:

<https://supraoracles.com/news/supraoracles-partners-with-definity-to-bring-decentralized-technology-to-fx-markets/>



Custodiex



Custodiex stands out as a premier provider of top-tier security solutions tailored specifically for safeguarding digital assets. Specializing in high-security cold storage, the company offers a fortified infrastructure designed to ensure the utmost protection for a diverse range of digital assets belonging to Financial Institutions (FIs).

The cornerstone of Custodiex's offerings is its high-security cold storage, which represents a robust solution for the secure storage of digital assets. Employing cutting-edge technology and stringent security measures, Custodiex's cold storage solutions guarantee a fortified environment that shields digital assets against cyber threats, unauthorized access, and potential breaches.

What sets Custodiex apart is its unwavering commitment to security and scalability. The company's infrastructure boasts unlimited scalability, ensuring that Financial Institutions can securely store and manage digital assets regardless of the scale or volume. This feature is particularly crucial in an era marked by rapid technological advancements and the ever-growing volume of digital assets within the financial landscape.

The security measures implemented by Custodiex are unparalleled. Hardware facilities are strategically located across multiple bunkers in undisclosed locations, enhancing the security and redundancy of the storage infrastructure. Furthermore, the company meticulously orchestrates key ceremonies and processes that are fortified against the most aggressive physical and cyber-attacks. These stringent protocols are designed to fortify the defense mechanisms, ensuring the integrity and security of the stored digital assets.

Additionally, Custodiex is at the forefront of real-time digital asset management technologies tailored for Financial Institutions. By integrating cutting-edge technologies into its solutions, the company empowers FIs with comprehensive tools and functionalities for efficient asset management, monitoring, and seamless operations.

Custodiex's unwavering dedication to providing high-security cold storage solutions coupled with real-time asset management technologies makes it a trusted partner for Financial Institutions seeking robust and reliable solutions. With a steadfast commitment to security, scalability, and cutting-edge technology, Custodiex continues to redefine the standards for secure digital asset storage and management in the financial industry.

READ THE PRESS RELEASE:

<https://www.prnewswire.com/news-releases/definity-markets-partners-with-digital-asset-cold-storage-provider-custodiex-and-infrastructure-provider-crucius-to-create-an-expansive-institutional-digital-asset-execution-ecosystem-301631480.html>



COMO Digital Life



COMO Digital Life, headquartered in Luxembourg, stands as a pioneering entity that specializes in providing innovative financial solutions, particularly in the realm of cross-border multi-currency IBAN accounts. With a diverse array of services encompassing over 24 currencies, the company caters to a broad spectrum of clientele, including platforms, marketplaces, corporations, payment service providers (PSPs), and FinTech firms.

At the core of COMO Digital Life's offerings lies its cutting-edge cross-border multi-currency IBAN accounts. These accounts represent a pivotal solution in the modern financial landscape, offering unparalleled convenience and flexibility for businesses and individuals conducting transactions across borders.

The company's service portfolio extends beyond the conventional offerings, catering to the distinct needs of various entities involved in the financial ecosystem. Its services are designed to accommodate platforms and marketplaces seeking efficient financial structures, corporates looking for streamlined cross-border transactions, PSPs aiming to enhance their payment solutions, and innovative FinTech firms striving to revolutionize financial services.

By providing access to a wide array of currencies, COMO Digital Life empowers its clients with the ability to transact seamlessly in multiple currencies, mitigating the complexities and challenges associated with international transactions. This capability is especially valuable in an increasingly globalized business landscape, where fluid and efficient cross-border transactions are imperative for success.

Furthermore, the company's solutions are tailored to meet the unique demands of its diverse clientele, offering a user-friendly interface, robust security measures, and comprehensive support. This holistic approach ensures that businesses and financial entities can leverage COMO Digital Life's services to optimize their financial operations, enhance efficiency, and expand their reach across international markets.

COMO Digital Life's commitment to providing cross-border multi-currency IBAN accounts and a comprehensive suite of financial services positions it as a leading force in facilitating global financial transactions. Through its innovative solutions and client-centric approach, the company continues to empower businesses and financial entities, enabling them to navigate the complexities of cross-border transactions with ease and confidence.

READ THE PRESS RELEASE:

<https://www.prnewswire.com/news-releases/dmalink--secures-key-strategic-partnership-with-como-digital-life-to-address-the-unique-needs-of-fast-growth-innovative-technology-companies-301887189.html>



One Trading (part-owned by BitPanda Pro)



One Trading, previously recognized as BitPanda Pro, stands out as a premier European digital asset trading platform boasting a VASP registration in Italy and a pending MiFID trading venue license. This platform caters to a diverse spectrum of trader profiles, accommodating beginners, seasoned traders, and institutional players alike. Its multifaceted offerings span across three key areas: Exchange, Instant Trade, and an OTC desk.

At the core of One Trading lies its Exchange, which grants registered users access to one of the swiftest trading venues globally. The platform prides itself on transparency, showcasing a clear order book infused with extensive liquidity. Additionally, it provides an array of advanced charting tools and order types to facilitate varied trading strategies. Functioning within a secure and EU-regulated framework, One Trading assures its customers of a safe environment. Deep liquidity, minimal trading fees, support for major cryptocurrencies, and robust fiat rails in EUR, GBP, and CHF are some of its key features.

The team behind One Trading boasts substantial expertise derived from the traditional finance (TradFi) sector. Their collective focus revolves around delivering an unparalleled product experience. This commitment to excellence is evident in their pursuit of establishing a platform that amalgamates top-notch security, regulatory adherence, and a seamless trading environment for their diverse user base.

READ THE PRESS RELEASE

<https://coinmarketcap.com/community/articles/657ffd26ee34b973323c3f69/>



Community

Community Engagement

At DeFinity Markets, community involvement is integral to our mission. We foster an inclusive environment where our stakeholders, including token holders, users, developers, and partners, play a pivotal role in shaping the future of our platform. Our commitment to community engagement is reflected in several key areas:

Open Communication Channels

We maintain open and transparent communication channels to ensure that our community stays informed about developments, updates, and decisions related to the DeFinity Markets ecosystem. Our communication channels include social media platforms, forums, newsletters, and regular blog posts.

Feedback Mechanisms

To empower our community, we prioritize feedback mechanisms that allow stakeholders to voice their opinions, suggestions, and concerns. Whether through surveys, forums, or dedicated community portals, we actively seek and value input from our users.

Education and Resources

We are committed to educating our community about blockchain technology, DeFinity Markets, and the functionalities of the DeFinity Token (DEFX). We provide comprehensive resources, such as tutorials, documentation, and educational content, to empower users and foster a deeper understanding of our platform.

Community Initiatives

To encourage active participation, we organize community-driven initiatives, such as hackathons, bounty programs, and developer grants. These initiatives not only incentivize engagement but also foster a collaborative spirit among our community members.

Events and Meetups

We regularly host both virtual and physical events, including webinars, conferences, and local meetups, to facilitate direct interaction between the DeFinity Markets team and our community. These events serve as platforms for sharing insights, discussing future plans, and networking.



Appendices

Hourly Crypto Anomaly Detector

Deep learning AI-powered market anomaly detection is a cutting-edge technology that generates automated alerts on irregular patterns in asset prices, which may be the result of undisclosed new information, ripple effects from correlated assets, or structural breaks in an asset's behaviour versus the broader market. Our deep learning AI technology can promptly discover these hidden market data aberrations, which would otherwise be virtually impossible to identify and provide an early warning on potential volatility events or directional changes in trend. One of the most powerful aspects of the crypto anomaly detector is its ability to identify 'graduated anomalies,' that is to be able to identify the presence and scale of an anomaly in advance.

The Crypto Anomaly detector uses a state-of-the-art unsupervised anomaly detection model called isolation forest in conjunction with a proprietary post-processing technique, which generates hourly anomaly scores for 12 target cryptocurrencies. Developed by DMALINK in collaboration with DeFinity Markets, the detector uses a potent combination of raw market data, contextual indicators from traditional financial markets, and blockchain metrics to identify and report graduated anomalies.

In anomaly detection, an anomaly is chiefly defined by it being significantly different to a normal data point, and by being significantly rarer than a normal data point. Other anomaly detection methods use a profile system to classify normal data and compare potentially anomalous data to the normal profile. This can lead to normal data being misclassified as anomalous due to the algorithm focusing too heavily on patterns in normal data, leading to an erroneously low number of anomalies detected. Instead, isolation forest uses decision trees to isolate anomalies – when processed by these decision trees, anomalies will have a shorter tree path than normal data. This makes anomalies much easier to detect and will increase the detection accuracy. These trees are called isolation trees, hence the name isolation forest.

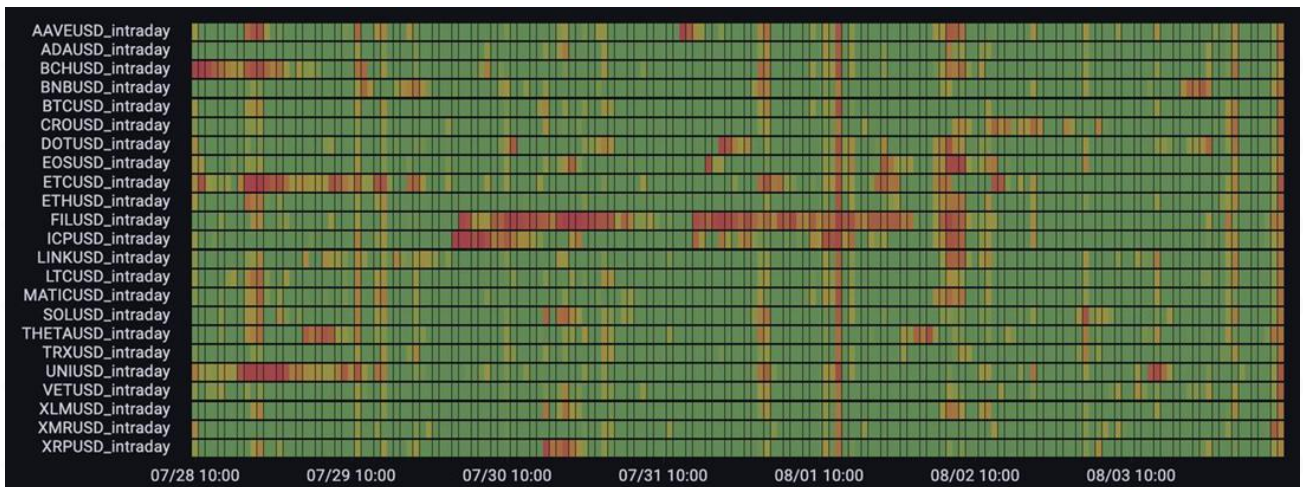
Isolation forest is used instead of a similar type of algorithm called random forest. In a random forest algorithm, the decision trees generated will be easier to use and interpret, though usually these algorithms are heavily trained on the data used to create the trees so their detection accuracy for other, external data sets will be worse than that of an isolation forest algorithm. The isolation forest algorithm is also to create sub-samples out of the data set it is given to create multiple trees, decreasing the negative effects of effects such as swamping (classifying normal data as anomalies – “false positives”) and masking (failing to detect real anomalies – “false negatives”). This process also means that some isolation trees will become “experts” at detecting anomalies, leading to higher accuracy and prediction power.



Analysis of the anomaly scores uncovered some significant insights. It was found that, over time, the stability of the models depended on the contextual data added. The more contextual data added (both financial and crypto), the higher the correlation of scores, however when no context is known, the correlation of anomaly scores is significantly lower than the correlation of asset daily returns. This means that the isolation forest model can do significantly more than just learn the distribution of returns – it actually can capture complex behaviors in asset prices. Our analysis shows a statistically significant link between the Anomaly Detector and future volatility events, even when controlling for past volatility, which is particularly true at high volatility regimes.

The Crypto Anomaly detector essentially detects changes in volatility before they occur. Since the anomaly detector is more accurate at predicting spot realised volatility it allows you to arbitrage market implied volatility versus spot realised volatility using vanilla options. As the signals are non-directional when it comes to monetisation, the most efficient way to monetise the signals is to trade using straddles. Option prices tend to climb when volatility rises and fall when volatility decreases, all other things being equal, such as crypto asset price, time to expiry and skew stay constant. As a result, as volatility rises, the price of long straddles rises and profits are made. When volatility falls, the price of long straddles falls and they lose value. Vice versa, short straddles profit from an underlying lack of volatility.

Assessing the Accuracy of the Daily Crypto Anomaly Detector



Our Crypto Anomaly detector uses the state-of-the-art isolation forest algorithm to generate daily anomaly scores for cryptocurrency assets. In order to make use of the anomaly detector, the accuracy, precision and misclassification rates of the detector must first be calculated. By investigating the anomaly scores from the out-of-sample datasets, the detector's performance when working with new data, such as daily updates, can be assessed. The iForest algorithm is a type of unsupervised anomaly detector, which means that the algorithm was not trained with data with clearly labelled anomalies and normal data points. To assess the anomaly detector, a method of classifying anomalies must first be created, in order to understand the total number of anomalies in the dataset and the proportion of anomalies that are detected by the algorithm. Once the performance of the anomaly detector has been assessed via a series of useful metrics, conclusions can be made about how to utilise the detector when trading cryptocurrency assets.



The Isolation Forest Algorithm

Anomalies possess two distinctive characteristics: they are discernibly different from normal data points and they are rarer than normal data points. Because of these two distinctive characteristics, there are a variety of ways to detect anomalies in a dataset. Most conventional anomaly detection methods build a “profile” for normal data points and compare potential anomalies to this profile. Profile-based methods of anomaly detection often end up focusing on patterns seen in normal data, resulting in normal data points being misclassified as anomalies and overall few anomalies being detected.

The two distinctive qualities of anomalies allow them to be easily isolated from normal data points. When viewed on a graph, data points that are similar to each other are more likely to cluster together, making it easy to see anomalies, which are often further away from clusters of normal data points. If data points are put through a decision tree rather than projected on a graph, anomalies will be isolated with a shorter tree path, closer to the base of the tree, compared to regular data points. Decision trees used to isolate anomalies from normal data points are called isolation trees (iTrees). The iForest algorithm functions similarly to the Random Forest algorithm, it builds many iTrees using sub-sampling and partitioning until there is a “forest” of iTrees and calculates average path lengths across all of the trees in the iForest.

The path length of a data point in an iTree is determined by the number of partitions that are required to isolate the data point. Partitions are selected randomly between each iTree in the forest by selecting a random attribute and a threshold for that variable. By taking small samples of the data set to construct multiple trees, the iForest algorithm provides some resistance to the effects of swamping and masking in the dataset. Swamping occurs when normal data points are misclassified as anomalies because they are close to true anomalies and require more partitions to isolate the data points. Masking occurs when many anomalies cluster together, requiring more partitions to isolate the anomalies and causing some anomalies to appear as regular data points. An additional benefit of sub-sampling and small sample sizes is that the iForest can produce trees that are “experts” at isolating specific types of anomalies.

As previously mentioned, anomalies will have a shorter average path length compared to regular data points. Because the iForest algorithm is concerned with path lengths that are below average, the iForest acts as a partial model, as the larger part of the isolation tree, which isolates normal data points, is not required. The use of subsampling and partial modelling allows the iForest algorithm to better handle large datasets with lots of variables and attributes that might be irrelevant to distinguishing between anomalies.



Decision and Anomaly Scores

The iForest algorithm assesses anomalies based on the path length used to isolate the data point, but the results of the algorithm are conveyed through a decision/anomaly score. To convert a path length into an anomaly score, the path length is normalised by the average path length for the size of the dataset.

$$\begin{aligned}h(x) &= \text{path length of data point } x \\c(n) &= \text{average of } h(x) \text{ for a given data set of size } n \\c(n) &= 2H(n-1) - 2((n-1)/n) \\H &= \text{harmonic number} = \ln(x) + \text{Euler's constant} \\s(x) &= \text{anomaly score} \\&= \frac{h(x) - E(h(x))}{c(n)} \\s(x, n) &= \frac{h(x) - E(h(x))}{c(n)} \\E(h(x)) &= \text{average } h(x) \text{ for a collection of isolation trees}\end{aligned}$$

The decision/anomaly scores produced by different algorithms are often on different scales and usually are not interpretable. To produce an interpretable metric, we have converted the raw decision scores into a continuous anomaly score using the following formula:

$$y_i = \min(1.0, 2 \text{ ECDFs}(s_i) - 1)$$

In which y_i represents the continuous anomaly score, s_i represents the raw decision score produced by the iForest and ECDFs is the empirical cumulative distribution function of raw scores. It should be noted that the continuous scores are not a form of probability, but a measure of how of an outlier the given data point is.

Datasets

In the process of developing the isolation forest algorithm for crypto anomaly detection, we created four data sets with different combinations of features. The four WE datasets can be summarised as:

- i. V0 – Crypto asset data.
- ii. V1 – Crypto asset data and financial context data.
- iii. V2 – Crypto asset data and block-chain context data.
- iv. V3 – Crypto asset data, financial context data and block-chain context data.

During the analysis of the robustness of the isolation forest with each dataset, we found that the block-chain context data improved the long-term stability of the algorithm at a slight cost to the reactivity of the model. In contrast, the financial context data improved the reactivity of the model, but with a cost to the stability over time. As a result, the V2 dataset was selected as the most appropriate dataset for isolation forest.



The out-of-sample anomaly scores should be analysed to understand how the isolation forest trained on the V2 dataset responds to data that was not used to train the data set. The anomaly scores generated with the V2 dataset was provided in our phase one report. Cryptocurrency price data for Cardano (ADA), Binance Coin (BNB), Bitcoin (BTC), Ethereum (ETH), Polkadot (DOT) and Monero (XMR) was sourced from CoinApi for the dates between 02.12.2019 to 10.08.2021. Volatility for the six cryptocurrency assets described above was sourced from PortfolioLabs for the period between 2019–2022. The anomaly score data, crypto price data and volatility data was read into Rstudio, the left join function in the dplyr package was used to join the datasets and match the dates of the price and volatility data with the dates of the anomaly scores.

Designing Anomalies and Measuring Performance

There are a variety of metrics that can be used to access the performance of unsupervised anomaly detectors. Precision– Recall is one such metric that is useful with data in which anomalies and normal data points have already been labelled. Unfortunately, pre-labelled data is rather rare, so a method of labelling anomalies must be devised. Once data has been labelled, we have a clear understanding of how many anomalies are present in the data and can investigate how well the anomaly scores reflect the anomalies defined by the created labels. The anomaly scores produced by the detector are continuous anomaly scores between 0 and 1, measuring how much of an outlier a given data point is. During this analysis a minimum threshold of 0.10 was used to distinguish whether the anomaly detector correctly identified the anomaly.

The precision and recall of the anomaly detector can be defined as:

Recall : The proportion of true anomalies identified =

$$\frac{\text{True Positive}}{\text{True Positive} + \text{False Negative}}$$

Recall : The proportion of identified anomalies that are true anomalies

$$= \frac{\text{True Positive}}{\text{True Positive} + \text{False Positive}}$$

Another useful metric is the F1 score, which is the harmonic mean of the precision and the recall, and provides a measure of the overall performance of the anomaly detector. The F1 statistic can be represented as:

$$F1 = \frac{2(\text{Precision} \cdot \text{Recall})}{\text{Precision} + \text{Recall}}$$



Initial assessments of the cryptocurrency anomaly detector focused in above average or above median movements in the close price of crypto assets. The average or median positive and negative percentage change between daily close prices was calculated in R, for yearly, monthly, weekly and 3-day periods. Anomalies were defined as any data point with a percentage change in the close price that was greater than the average/median positive change or less than the average/median negative change. The overall performance of the anomaly detector, as measured by the F1 statistic, was between 20–30%, showing both poor precision and poor accuracy. Given the inherent volatility of cryptocurrencies, it was determined that rather than simply utilising above average movements, anomalies should be defined as being a minimum threshold above the average, e.g., 5% or 10% above average. In addition to applying minimum thresholds, the price high and price low should be considered in the anomaly labelling, to better capture price fluctuations within the same day, rather than just between the close price between days.

In their investigation of anomalies in cryptocurrency “pump and dump” schemes, Kamps and Kleinberg (2018), define anomalies in asset price and volume as being greater than a given percentage increase (ϵ) above the moving average (μ_γ) in which γ represents a specific lag or time period. The anomaly labelling by Kamps and Kleinberg (2018) was adapted to include a given percentage decrease relative to the moving average ($-\epsilon$). To determine whether a given data point (x) was an anomaly, the following test was used:

$$\text{Price Anomaly}(x) = \begin{cases} \text{True}, & x_{\text{high}} > \epsilon \cdot \mu_\gamma \mid x_{\text{low}} < -\epsilon \cdot \mu_\gamma \\ \text{False}, & x_{\text{high}} \leq \epsilon \cdot \mu_\gamma \mid x_{\text{low}} \geq -\epsilon \cdot \mu_\gamma \end{cases}$$

For example, if $\epsilon = 10$ and $\gamma = 3$, a data point will be classified as a anomaly if the price high is greater than 10% above the 3- day moving average or the price low is greater than 10% below the 3-day moving average. Additional analysis uncovered links between the continuous anomaly score and the log of past volatility with the log of future volatility. To further explore this relationship between anomaly score and volatility, a second anomaly test incorporating past volatility was designed:

$$\text{Volatility Anomaly}(x) = \begin{cases} \text{True}, & x_{\text{volatility}} > \epsilon \cdot \mu_\gamma \\ \text{False}, & x_{\text{volatility}} \leq \epsilon \cdot \mu_\gamma \end{cases}$$

Using the same values of $\epsilon = 10$ and $\gamma = 3$, a data point would be classified as a volatility anomaly if the volatility of the data point was greater than 10% above the 3-day rolling average of volatility.

Anomalies in price and anomalies in volatility can potentially occur independently of each other and occur during the same day. For the purpose of this analysis, the number of true anomalies in the data set is determined as the number of days that contain at least one form of anomaly.



Results

General Performance:

- After deciding to use the anomaly definitions above, the values of ε for price and volatility anomalies was investigated using intervals of 5,10,15 and 20. The F1 score for ADA can be seen for all combinations of ε can be seen in the table below (Table 1). For this analysis γ was 7, so the threshold was created using the weekly moving average.

Table 1, The F1 score of the crypto anomaly detector for the Cardano using the anomaly definitions above with ε varying between 5–20 for price and volatility and $\gamma = 7$.

ε	Volatility 5	Volatility 10	Volatility 15	Volatility 20
Price 5	0.740	0.722	0.709	0.709
Price 10	0.645	0.600	0.534	0.517
Price 15	0.550	0.450	0.345	0.299
Price 20	0.520	0.385	0.260	0.203

- The table above shows that the highest F1 score, and thus overall best performance for the anomaly detector is seen when $\varepsilon = 5$, when $\gamma = 7$. Though the F1 scores for ADA are shown in Table 1, the trend of ε

$= 5$ and $\gamma = 7$ producing the best F1 score was seen in all assets

- The next step is to assess how the F1 score varies when $\varepsilon = 5$, but γ is varied. Values of γ between 3 to 28 were assessed, representing the 3-day moving average to (roughly) the monthly moving average. The F1 scores for BTC can be seen in the table below using different moving averages (Table 2).

Table 2, The F1 score for the crypto anomaly detector for Bitcoin using the anomaly definitions above, with $\varepsilon = 5$ for price and volatility and varying γ between 3 and 28.

γ	BTC F1 score
3	0.558
4	0.615
5	0.618
6	0.645
7	0.668
10	0.656
14	0.679
28	0.667

- The table above shows that $\gamma = 14$ (two-week moving average) produces the best F1 score when $\varepsilon = 5$, with $\gamma = 7$ (weekly moving average) producing the second-best result. Calculating the F1 scores for all assets using $\varepsilon = 5$ and γ

$= 7$ or 14 gives an average F1 score of 0.733 and 0.736 respectively. Despite the two-week moving average producing slightly higher F1 scores, it may be more intuitive to use the weekly moving average as this information is already provided in the daily Telegram reports. The recall, precision and F1 scores for all crypto assets can be seen in the table below (Table 3).



table 3, Recall, precision and F1 scores for all crypto assets in the crypto anomaly detector, using the above anomaly definitions, with $\varepsilon = 5$ and $\gamma = 7$.

Asset	Recall	Precision	F1 Score
ADA	0.809	0.680	0.740
BNB	0.764	0.650	0.705
BTC	0.738	0.609	0.668
ETH	0.810	0.623	0.705
DOT	0.876	0.756	0.881
XMR	0.741	0.667	0.702
Average	0.790	0.667	0.733

- The recall of the anomaly detector is quite high, nearly 80% on average, meaning that a lot of anomalies are picked up by the detector. The precision is lower than the recall, meaning that on average, only 67% of the anomalies predicted by the detector will actually be anomalies. The overall performance, as measured by the F1 score, is around 73%.
- Initially the minimum anomaly score threshold of 0.1 was used to determine whether an anomaly was predicted or not. In addition to this threshold an additional prediction threshold was introduced to account for anomaly scores on the previous day. The threshold can be represented as:

Anomaly score – Change in anomaly score from previous day > 0

- In essence an anomaly was considered detected if the anomaly score on the day or the day before was above 0.1.
- Taken all together, if the anomaly score is above 0.1 or was above 0.1 the previous day, then it is likely that there will be a price change greater than 5% above or below the weekly moving average and/or a 5% increase in volatility.
- At present, we do not yet know whether a price anomaly will be due to a sharp increase in price or a sharp decrease in price. In order to effectively use the anomaly detector to inform trading strategies we need to understand how well anomaly score correlates with changes in price direction.
- Additionally, under current definitions a price anomaly is defined as greater than 5% above or below the moving average. We will also need to understand how well the size of the anomaly score correlates with the actual size/magnitude of anomalies relative to the threshold.



Assessing Magnitude

- To assess the relationship between anomaly score and the magnitude/size of the anomalies, the anomaly scores were grouped into 10 bins, representing anomaly scores between 0–0.1, 0.1–0.2, 0.2–0.3 and so forth between 0 and 1. The percentage difference between the price high or price low and the relevant high or low threshold was then calculated in R. Box plots were then constructed to show the average distance between the price high/price low for anomalies and the threshold for each anomaly score bin.

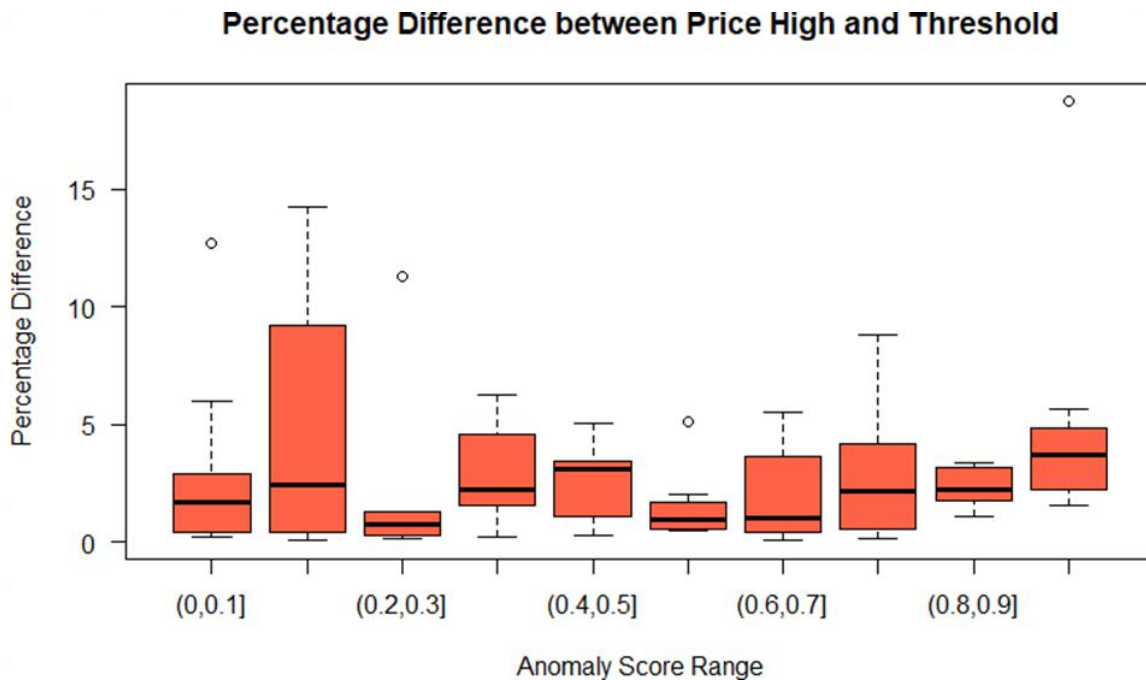


Fig.1 Box plot showing the average percentage difference between price high of anomalies and the high price threshold for BTC.

- Overall there is a lot of overlap between each anomaly score bin and the average for every bin is centred around 2.5 to 3%.



Fig.2 Box plot showing the average price difference between the price low of anomalies and the low price threshold for BTC.

Once again there is a log of overlap between the average distance from the threshold, centered around 2.5 – 5%. There is a much clearer trend in the range of percentage difference after the anomaly score value of 0.6. Could interpret negative anomalies with a score above 0.60 as having the potential, but not guarantee, to be larger than anomalies with lower anomaly scores.

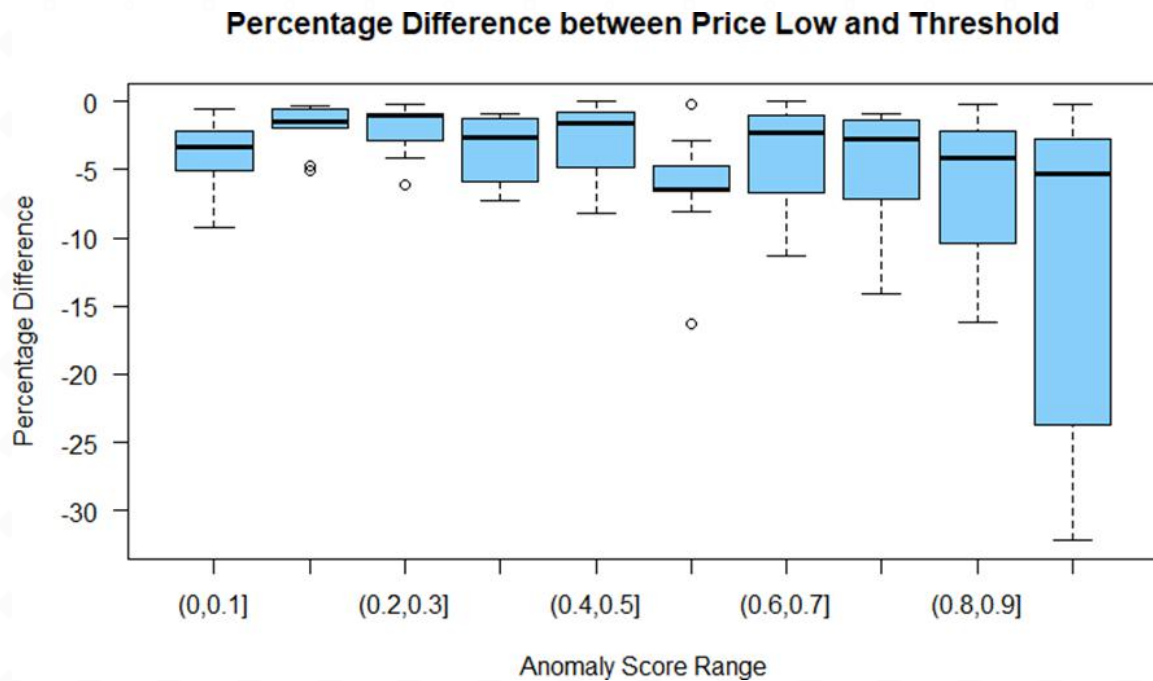
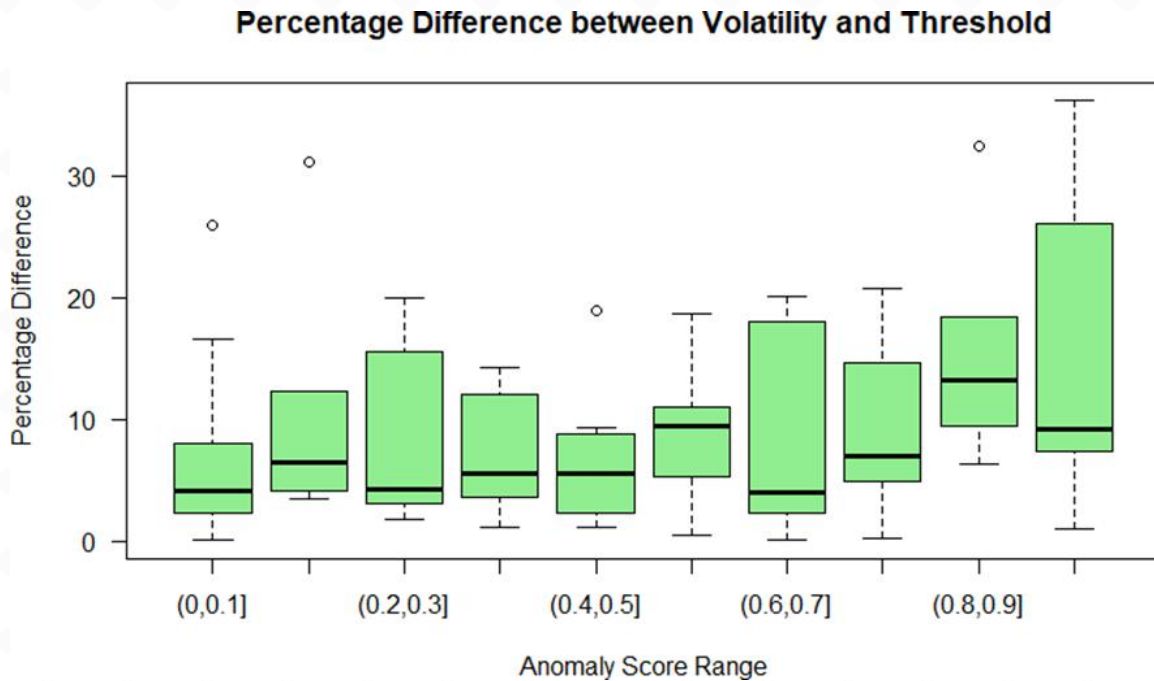




Fig.3 Box plot showing the average price difference between the volatility of anomalies and the volatility threshold for BTC.

- Though the average volatility of anomalies seems centred between 5-10%, which is higher than the distance between price anomalies and their respective thresholds. There is still a lot of overlap between the averages and the range of percentage differences, though the largest range increase does occur in the 0.9-1.0 bin.
- The plots above are all for BTC, but there is some variation between assets.
- ADA shows much weaker trends in both positive and negative price and volatility.



• ETH and BNC show similar trends with positive price, weaker trends with negative price and stronger trends in volatility.

• DOT shows much stronger positive price trends than BTC and a clear-cut increase in the potential range for negative price distances after anomaly scores of 0.5. Trends in volatility distances are much weaker in DOT than in BTC.

• XMR shows overall weaker trends in volatility and positive price distances when compared to DOT, but overall, the range of potential distances is much larger for all anomaly score bins.

• All assets show a great deal of overlap between anomaly score bins for positive/negative price distances and volatility distances. The best interpretation thus far is that for certain assets a larger anomaly score indicates that size or magnitude of the anomaly has the potential, but not guarantee, to be larger with respect to price and/or volatility.



Discussion

- The current definition of anomalies, $\varepsilon = 5$ and $\gamma = 7$, is intended to be useful in making trading decisions. The values for ε and γ can be tailored to trading needs, but this may come with a cost in the overall performance of the anomaly detector.
 - There are some trends in the size of anomalies in relation to the size of the anomaly score. Though there is a lot of overlap, anomalies with larger anomaly scores have the potential to be larger than their equivalents with low anomaly scores, with respect to positive/negative price movement and volatility.
 - Investigation into predicting changes and reversals in direction are ongoing but will likely look at velocity and volatility of asset on days with anomaly scores greater than 0.1.
 - Prediction of anomalies is effectively dependent on the anomaly score on the day or the day before being above
- 0.1. Trading strategies should be considered over two-day periods in order to compare anomaly scores and the changes between them.
- An alternative method of assessing the anomaly detector would be to work with pre-labelled data. The best example might be to look at the 10 largest price drops and 10 largest price increase in each asset over the time period for each dataset and see if these events may have been predicted by the detector.



References and Citations

1Background

- Law, S. Sabett, S. & Solinas, J. (1997). HOW TO MAKE A MINT: THE CRYPTOGRAPHY OF ANONYMOUS ELECTRONIC CASH. NSA.
<https://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article=1389&context=aulr>
- Nakamoto, S. (2008). Bitcoin: A Peer-to-Peer Electronic Cash System. Retrieved from <https://bitcoin.org/bitcoin.pdf>
- Buterin, V. (2013). Ethereum: A Next-Generation Smart Contract and Decentralized Application Platform. Retrieved from <https://ethereum.org/en/whitepaper/>
- Tapscott, D., & Tapscott, A. (2016). Blockchain Revolution: How the Technology Behind Bitcoin Is Changing Money, Business, and the World. New York, NY: Portfolio.

Mission Statement

- DeFinity Markets Whitepaper. (2023). DeFinity Markets: A New Era in Digital Asset Trading.

Vision Statement

- Bogle, J. C. (1991). Common Sense on Mutual Funds: New Imperatives for the Intelligent Investor. New York, NY: John Wiley & Sons.
- Smith, A. (1776). An Inquiry into the Nature and Causes of the Wealth of Nations. London: W. Strahan and T. Cadell.

The Need for Institutional-Grade Digital Asset Trading

The Digital Asset Market Landscape

- Cuthbertson, A., & Nitzsche, D. (2021). The Economics of Cryptocurrencies and Blockchain. New York, NY: Springer.
- Menkveld, A. J. (2013). High Frequency Trading and the New-Market Makers. *Journal of Financial Markets*, 16(4), 712–740.
- SEC Report: Examination of U.S. Equity Market Structure. (2010). U.S. Securities and Exchange Commission. Retrieved from <https://www.sec.gov/news/studies/2010/marketstructureconceptrelease.pdf>

Using Traditional Finance as a Blueprint for Institution Digital Asset Trading

- Song, Y. (2018). *Cryptocurrency Trading Guide: A Comprehensive Introduction to Cryptocurrency Markets*. New York, NY: Independently published.
- European Central Bank. (2012). The Foreign Exchange Market Structure in the Context of a Generalised Two-Currency Goods-Market Framework. Retrieved from <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1424.pdf>



Challenges and Vulnerabilities

- Swanson, T. (2015). Consensus-as-a-service: A Brief Report on the Emergence of Permissioned, Distributed Ledger Systems. Retrieved from <https://www.ofnumbers.com/wp-content/uploads/2015/04/Permissioned-distributed-ledgers.pdf>
- Raval, S. (2016). Decentralized Applications: Harnessing Bitcoin's Blockchain Technology. Berkeley, CA: Apress.

The Role of Institutional Investors

- Shiller, R. J. (2015). Irrational Exuberance. Princeton, NJ: Princeton University Press.
- Schwert, G. W. (2003). Anomalies and Market Efficiency. Handbook of the Economics of Finance, 1, 937-972.

Anomaly Detector

- Hawkins, Douglas M. Identification of outliers. Vol. 11. London: Chapman and Hall, 1980.
- Aggarwal, Charu C. "Outlier analysis." Data mining. Springer, Cham, 2015.
- Zhao, Yue, Zain Nasrullah, and Zheng Li. "Pyod: A python toolbox for scalable outlier detection." arXiv preprint arXiv:1901.01588 (2019).
https://pyod.readthedocs.io/en/latest/relevant_knowledge.html
- Goldstein, Markus, and Seiichi Uchida. "A comparative evaluation of unsupervised anomaly detection algorithms for multivariate data." PloS one 11.4 (2016): e0152173.
- Zhao, Yue. "Anomaly Detection Learning Resources".
<https://github.com/yzhao062/anomaly-detection-resources>
- Goix, Nicolas. "How to evaluate the quality of unsupervised anomaly detection algorithms?." arXiv preprint arXiv:1607.01152 (2016).
- Lin, Zinan, et al. "Infogan-cr and modelcentrality: Self-supervised model training and selection for disentangling gans." International Conference on Machine Learning. PMLR, 2020.
- Ma, Martin Q., et al. "A Large-scale Study on Unsupervised Outlier Model Selection: Do Internal Strategies Suffice?." arXiv preprint arXiv:2104.01422 (2021).
- Liu, Fei Tony, Kai Ming Ting, and Zhi-Hua Zhou. "Isolation forest." 2008 eighth IEEE international conference on data mining. IEEE, 2008.
- Kriegel, Hans-Peter, et al. "Interpreting and unifying outlier scores." Proceedings of the 2011 SIAM International Conference on Data Mining. Society for Industrial and Applied Mathematics, 2011.
- James, Gareth, et al. An introduction to statistical learning. Vol. 112. New York: Springer, 2013.
- Granger, Clive WJ. "Investigating causal relations by econometric models and cross-spectral methods." Econometrica: journal of the Econometric Society (1969): 424-438.
- Schreiber, Thomas. "Measuring information transfer." Physical review letters 85.2 (2000): 461.
- Lundberg, Scott M., and Su-In Lee. "A unified approach to interpreting model predictions." Proceedings of the 31st international conference on neural information processing systems. 2017.
- Taylor, Sean J., and Benjamin Letham. "Forecasting at scale." The American Statistician 72.1 (2018): 37-45.
- Ren, Hansheng, et al. "Time-series anomaly detection service at Microsoft." Proceedings of the 25th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining. 2019.



Risk Disclosure

Holding digital assets and participating in the DeFinity Markets ecosystem involves inherent risks. While our mission and vision drive us to establish a robust infrastructure for the digital asset market, it's crucial to recognize and understand the potential risks associated with this endeavor. The following are some significant risks to consider:

Market Risks

Volatility

The digital asset market is highly volatile. Prices can fluctuate significantly within short periods, leading to potential loss.

Liquidity

Market liquidity in digital assets may vary significantly. Low liquidity can impact the ability to execute trades and result in unfavourable price movements.

Regulatory Risks

Regulatory frameworks around digital assets are evolving. Changes in regulations or unfavorable regulatory actions may impact the market, investments, and platform operations.

Technology Risks

Cybersecurity Threats

Digital assets and platforms are susceptible to cyberattacks, hacking attempts, and security breaches. Despite robust security measures, the risk of unauthorized access or theft remains.

Smart Contract Risks

The utilization of smart contracts introduces risks related to code vulnerabilities, bugs, or exploitation, potentially leading to financial losses.

Network Risks

Technical issues or disruptions within blockchain networks, such as congestion, delays, or consensus mechanism failures, may affect the functionality of the DeFinity Markets platform.

Operational Risks

Platform Performance

Operational issues, including downtime, system failures, or technical glitches, may disrupt the platform's performance and user experience.

Regulatory Compliance

Changes in regulatory requirements or compliance challenges may necessitate alterations in the platform's operations, impacting services and user interactions.



Economic Risks

Token Fluctuation

The value of the DeFinity Token (DEFX) may fluctuate due to market dynamics, demand–supply imbalances, or external factors.

External Risks

Market Conditions

External factors such as geopolitical events, economic downturns, or global financial market conditions may influence digital asset markets.

Third-Party Risks

Dependence on third-party services, partners, or infrastructure may subject the platform to risks beyond direct control, impacting operations and services.

Regulatory Environment

Changes in global regulatory landscapes or legal uncertainties in different jurisdictions may pose risks to platform operations and user interactions.

It's imperative for potential participants to thoroughly assess these risks, conduct their due diligence, and seek professional advice before engaging in digital asset trading or participating in the DeFinity Markets ecosystem. The outlined risks are not exhaustive and may evolve over time, reflecting the dynamic nature of the digital asset market and the broader industry.



Conclusion

The evolution of the digital asset trading space demands innovation, reliability, and adaptability, and DeFinity Markets emerges as a pivotal solution addressing these essential needs. Our commitment to bridging the gap between traditional finance and the crypto realm has propelled us toward a groundbreaking platform that redefines institutional-grade trading.

Bridge the Gap

By merging cutting-edge technology and a commitment to innovation, we offer a secure, transparent, and efficient marketplace that meets the demands of institutional participants.

Solve Critical Challenges

Our platform addresses the current ecosystem's challenges by segregating exchange-trading and custody-of-assets functions, mitigating risks encountered in the past, and navigating operational challenges and regulatory uncertainties.



Innovate

Through an ECN-style execution system, seamless fiat on and off-ramps, and novel deliverable fiat-to-fiat trading features, we introduce a new paradigm for institutional participants entering the digital asset market.

Embrace Technology

Leveraging robust TradFi technology and high-frequency trading capabilities, we ensure security, transparency, and efficiency in every transaction.

Establish an Inclusive Ecosystem

With our native token (DEFX), we create an ecosystem that incentivizes participation, facilitates transactions, and governs our platform, ensuring fair and sustainable economic models.

Cater to Institutional Needs

Our use cases cater to banks, funds, and corporations seeking secure exposure to the digital asset market whilst using existing TradFi infrastructure, providing them with the necessary tools and confidence to navigate this emerging landscape.

Differentiate in the Market

Analysis positions DeFinity Markets as a unique solution, offering features and capabilities unmatched by traditional crypto exchanges, solidifying our market positioning.

The Entire Package

With an expert team, strategic partnerships, regulatory compliance, robust security measures, and an engaged community, DeFinity Markets is poised to revolutionize digital asset trading, setting new standards of trust, efficiency, and innovation in the industry.

As we embark on this transformative journey, we invite you to join us in shaping the future of institutional-grade digital asset trading with DeFinity Markets.

Thank you for your consideration and unwavering support towards our vision. Together, let us chart a path toward a new era of digital asset trading excellence.

