

# **Blockchain Insight 2023**



**Navigating the Future  
Harnessing Blockchain for Enhanced Transparency and  
Risk Management in Structured Financial Products**

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## Navigating the Future: Harnessing Blockchain for Enhanced Transparency and Risk Management in Structured Financial Products

In recent years, the financial industry has witnessed the rapid rise of cryptocurrencies and the profound impact they have had on traditional investment paradigms. We have also seen the integration of blockchain technology across many sectors of the financial industry. Structured financial products could be a major beneficiary of blockchain integration, not just for cryptocurrency-based structured financial products but for any structured financial products. Blockchain technology will emerge as a powerful tool that will revolutionize the way investors access and engage with this dynamic asset class. These innovative products offer seamless access to various markets spanning from stocks and bonds to commodities and cryptocurrencies, for both retail and institutional investors, bridging the gap between traditional finance and the decentralized world of digital assets.

This report explores the profound impact that structured financial products utilizing blockchain technology could have on the financial markets, as well as the enhanced access they will provide to investors. By leveraging blockchain technology, these structured products enable investors to seamlessly navigate the complex and evolving cryptocurrency landscape as well as all markets, opening doors to new opportunities and expanding the investor base.

These products provide retail investors with a convenient, somewhat regulated, and user-friendly avenue to participate in the potential growth and performance of cryptocurrencies and other asset classes seamlessly. With simplified investment vehicles, transparent pricing, and reduced barriers to entry, retail investors can diversify their portfolios and benefit from the potential upside of various assets.

These products also provide institutional investors with the necessary tools and frameworks to integrate cryptocurrencies and other asset classes into their investment strategies, while adhering to regulatory requirements and risk management practices. By offering liquidity, professional-grade custody solutions, and compliance frameworks, these products facilitate the seamless integration into institutional investment portfolios, unlocking new avenues for diversification and potential alpha generation.

Thank you for taking the time to read through this report; I do feel that this is an important topic that shows the potential impact of blockchain on the structured financial products arena.

**Louis Velazquez**  
Managing Partner

# Navigating the Future: Harnessing Blockchain for Enhanced Transparency and Risk Management in Structured Financial Products

## Introduction

The structured financial products arena plays a vital role in the financial industry, providing investors with a diverse range of investment opportunities. However, this market has traditionally faced challenges related to transparency, efficiency, counterparty risk, and liquidity. The emergence of blockchain technology has the potential to address these challenges and unlock new possibilities for the structured financial products market.

This comprehensive report serves as an analysis of the numerous use cases of blockchain technology “blockchain” in the structured financial products arena. In this report we will explore how blockchain can enhance transparency by providing an immutable and transparent ledger, enabling investors to make informed decisions. We will examine how blockchain streamlines the issuance and trading processes, reducing costs and improving efficiency in the market.

Counterparty risk, a longstanding concern in the traditional financial industry, can be mitigated through blockchain's secure and tamper-proof record-keeping. We will explore how blockchain's decentralized network architecture minimizes the vulnerability of attacks and safeguards investors' assets.

We highlight the potential of blockchain technology to facilitate the development of new structured financial products that were previously unattainable. By leveraging blockchain's transparent and secure nature, unique products can be created, offering increased accessibility, liquidity, and customization for investors.

We explore how blockchain enhances investor awareness through transparent and easily accessible records, enabling investors to conduct thorough due diligence and make well-informed investment decisions. We will also examine how blockchain-based decentralized exchanges foster liquidity by facilitating peer-to-peer trading, eliminating intermediaries, and creating a global marketplace for structured financial products.

Throughout this report, we will provide detailed insights into each use case, supported by expanded explanations and their implications for the structured financial products market. By leveraging blockchain technology, the financial industry can transform the market, ensuring greater transparency, efficiency, investor protection, and access to innovative investment opportunities.

As traditional finance further embraces blockchain technology, the structured financial products arena stands poised for a paradigm shift. Join us as we explore the transformative potential of blockchain technology in revolutionizing the structured financial products market, and the implications it holds for investors, market participants, and the traditional financial industry as a whole.

### Increased Transparency

Increased transparency is one of the key advantages of using blockchain technology in the structured financial products arena. Blockchain is a decentralized and distributed ledger that maintains a transparent record of all transactions. Once a transaction is recorded on the blockchain, it cannot be altered or tampered with, ensuring the integrity of the data. This immutability and transparency help to create a trustworthy and auditable source of information.

In traditional financial systems the auditing processes can be complex and time-consuming. By utilizing blockchain technology, every transaction is recorded in real-time, providing a complete and accurate history of the structured financial products market activities. This simplifies the auditing process and allows for more efficient and reliable verification of transactions, reducing the risk of fraud or manipulation.

Blockchain technology enables real-time visibility into the structured financial products market. All participants have the ability to access the blockchain network and view the details of transactions, including the assets involved, pricing, ownership transfers, and settlement status. This transparency enables investors to monitor the market dynamics closely and react quickly to changing conditions.

The facilitation of secure and efficient information sharing among market participants becomes a key component. Multiple parties involved in structured financial products, such as issuers, investors, custodians, and regulators, can access the same set of verified and up-to-date data. This shared information promotes collaboration, reduces information

asymmetry, and allows investors to have a comprehensive understanding of the market, leading to more informed investment decisions.

The integration of smart contracts become another important factor, these are self-executing agreements with predefined rules and conditions, so you can imagine the value-add it would bring. Smart contracts can automate various processes in structured financial products, such as bond issuance, settlement, and interest payments. By eliminating the need for intermediaries and manual interventions, smart contracts reduce the potential for errors and delays while ensuring compliance with predefined rules. Investors can have greater confidence in the execution of contractual obligations, further enhancing transparency and trust in the market.

The ability to adhere to enhanced regulatory compliance seamlessly is important and with the structured financial products market being subjected to various regulatory requirements and reporting obligations, you will see where blockchain fits in. Blockchain technology can streamline compliance by providing a tamper-proof audit trail of transactions, simplifying the regulatory reporting processes and enabling real-time monitoring of compliance activities. Regulators can access the blockchain network 24/7/365 to verify transactions, detect fraudulent activities, and ensure market integrity without notification or the assistance of the issuer.

The transparency provided by blockchain technology enhances investor protection in the structured financial products market. Investors can verify the legitimacy of assets, track ownership, and assess the underlying risks associated with different products. This transparency reduces the potential for fraud, enhances market fairness, and fosters investor confidence.

Increased transparency through blockchain technology in the structured financial products arena provides investors with reliable and real-time information, streamlines regulatory compliance, and improves market integrity. By leveraging blockchain, the traditional financial industry can mitigate risks, enhance efficiency, and promote a more open and trusted market environment.

### **Reduced Fraud**

Blockchain can help to reduce fraud in the structured financial products market by providing a secure and tamper-proof record of transactions. This can help to protect investors from fraud and ensure that they are getting the products they are promised.

The introduction of immutable transactional records is a game changer. Blockchain provides a secure and tamper-proof record of all transactions. Once a transaction is

recorded on the blockchain, it cannot be altered or deleted ever,. This immutability ensures that the transaction history remains intact and transparent, reducing the risk of fraudulent activities at any given time.

The additional ability that blockchain brings to the table is that it allows for the verification and authentication of data through consensus mechanisms. Before a transaction is recorded on the blockchain, it undergoes a validation process where network participants reach a consensus on the validity of the transaction. This consensus mechanism ensures that only verified and authenticated data is recorded on the blockchain, minimizing the chances of fraudulent transactions being included.

Enabling robust identity management solutions by utilizing cryptographic techniques can prevent certain fraud from occurring. With blockchain-based identity verification systems, not only can participants establish and maintain their identities securely this would allow firms to adhere to strict AML/KYC laws. This also reduces the risk of impersonation and identity theft, which are common avenues for fraud.

In some cases, structured financial products involve complex supply chains and multiple parties, such as originators, servicers, trustees, and investors. Blockchain can provide transparency and traceability across the entire supply chain, ensuring that each participant's actions and transactions are recorded and visible. This transparency reduces the opportunity for fraudulent activities, such as misrepresentation of assets or double-selling of financial products.

The utilization of smart contracts remove the human element from the execution process, they automatically execute transactions and enforce the agreed-upon terms without the need for intermediaries. By eliminating manual intervention, smart contracts reduce the potential for fraudulent alterations or manipulations of contract terms.

The ability for real-time monitoring and auditing of every transaction allows for regulators, firms and investors to access the blockchain network and verify the details of transactions as they occur. This includes asset transfers, ownership changes, and settlements, all without the need for an intermediary. This real-time monitoring helps identify any suspicious or fraudulent activities promptly, allowing for immediate action to mitigate risks and protect investors.

Blockchain technology can facilitate more efficient and thorough due diligence processes in structured financial products. Investors can access the blockchain network to verify the authenticity and provenance of assets, ensuring that the products they invest in align with their expectations. This increased transparency reduces the risk of investing in fraudulent or misrepresented financial products.

Regulatory compliance has become a big topic across the traditional and decentralized financial industries, the ability of blockchain to aid with regulatory compliance efforts is being understood as a viable solution. The ability to provide a transparent and auditable trail of transactions can save time and compliance resources. Regulators can access the blockchain network to monitor transactions, identify potential fraud, and enforce compliance with regulations. This heightened oversight discourages fraudulent activities and promotes a more secure and trustworthy market environment.

By leveraging the security, immutability, and transparency of blockchain technology, the structured financial products market can significantly reduce fraud. Investors can have greater confidence that the products they invest in are legitimate, and fraudulent activities can be quickly identified and mitigated. Ultimately, blockchain enhances trust, protects investors, and contributes to the integrity and stability of the financial industry.

### **Improved Efficiency**

Blockchain can help to improve the efficiency of the structured financial products market by streamlining the process of issuing and trading these products. This can make it easier for investors to access these products and can help to reduce costs. Streamlined Issuance Process: Blockchain technology can streamline the issuance process of structured financial products. Traditionally, the issuance process involves multiple intermediaries, extensive paperwork, and manual verification. By leveraging blockchain, the issuance process can be automated through smart contracts. Smart contracts can define and execute the issuance terms, automate the validation and verification of documents, and facilitate the timely and accurate completion of transactions. This streamlines the overall process, reduces administrative burdens, and expedites the time it takes to bring structured financial products to market.

This will also allow for faster and more efficient settlement of structured financial products. In traditional systems, settlement can be time-consuming and involve multiple intermediaries. With blockchain, transactions can be settled in near real-time or even instantly, eliminating the need for lengthy clearing and settlement processes. The automated nature of blockchain transactions and the use of smart contracts help reduce settlement times and associated risks, ensuring prompt and secure transfer of assets between parties.

By digitizing assets and creating tokenized representations on the blockchain, it becomes easier to divide and trade these assets in smaller denominations. This fractional ownership allows for broader participation in the market, enabling investors to access and trade structured financial products with greater ease. The increased liquidity can attract



more investors, promote market efficiency, and potentially lower costs associated with illiquid assets.

Decentralized platforms enable direct peer-to-peer trading of structured financial products without the need for intermediaries. By utilizing smart contracts and decentralized platforms, investors and institutions can directly engage in trading activities, eliminating the involvement of brokers, custodians, and other intermediaries. This direct trading reduces transaction costs, minimizes counterparty risks, and enhances the overall efficiency of the market.

The automation of compliance and regulatory reporting can be a time and manpower saving foundation. Blockchain technology can automate compliance processes and regulatory reporting in the structured financial products market. Compliance rules and regulations can be embedded in smart contracts, ensuring automatic adherence to regulatory requirements. Transaction details recorded on the blockchain can be easily accessible to regulators, reducing the need for manual reporting and enhancing transparency. This automation saves time, reduces errors, and helps market participants stay compliant with regulatory obligations.

There is a significant cost reduction associated with implementing blockchain technology in the structured financial products. The elimination of intermediaries, streamlined processes, and automation of manual tasks reduce operational costs associated with issuance, trading, and settlement. Additionally, by reducing the risk of fraud and improving transparency, blockchain can help lower costs related to regulatory compliance, auditing, and risk management.

The global accessibility aspect should be looked at as well. With blockchain, investors from different geographical locations can participate in the market without the need for complex intermediaries or localized infrastructure. This accessibility broadens the investor base, fosters market efficiency, and enables cross-border transactions with reduced friction and lower costs.

By leveraging blockchain technology, the structured financial products market can streamline processes, automate compliance, enhance liquidity, and reduce costs. These improvements benefit both investors and market participants, making it easier for investors to access a wider range of products and participate in the market while reducing the administrative burden and costs associated with traditional systems.

## Enhanced Security

Blockchain technology is immutable and very secure that can help to protect investors' assets. This is because blockchain is a decentralized network that is not controlled by any single entity. This makes it more difficult for hackers to attack the network and steal investors' assets.

The decentralization makeup of blockchain is key, the integration of nodes allow for the system to be maintained and validate the integrity of the blockchain network. We introduced an entire report on the different types of nodes, which is recommended reading. Unlike centralized systems that rely on a single entity, a decentralized blockchain network distributes the control and decision-making across multiple nodes. This decentralization makes it difficult for hackers to target a single point of failure, as they would need to compromise a majority of nodes and potentially millions of transactions simultaneously to tamper with the network or steal investors' assets.

This immutability and tamper-proof features bring a trustless system to the forefront, investors are not dependent on a single entity for proof of pricing, transactions or other. Once a transaction is added to the blockchain, it is verified through the consensus mechanism utilized. Proof of Time "PoT" that is used by the likes of Pecunovus is the most efficient, inclusive and cost effective path as it relates to the consensus mechanism while all transactions are secured through cryptographic algorithms. The transaction data and unique hash is stored in blocks, and each block contains a unique hash that links it to the previous block, forming a chain of blocks. This chain structure ensures that any attempt to modify or tamper with a transaction would require changing subsequent blocks, making it practically impossible to alter historical transaction records.

There are other consensus mechanisms that are used by the likes of Bitcoin and Ethereum, which include Proof of Work (PoW) and Proof of Stake (PoS). They ensure that transactions are verified by a majority of network participants before they are added to the blockchain. These mechanisms provide an additional layer of security as they require a significant computational effort or stake to manipulate the network. This makes it economically unfeasible for attackers to control the network and compromise investors' assets. It also adds blockchain related fees to each transaction known as gas fees, which for high frequency trading may not be efficient or cost effective.

Let's go into cryptographic security, as this is very important to the blockchain infrastructure. Blockchain utilizes cryptographic techniques to enhance security. Each participant in the blockchain network has a unique cryptographic key pair consisting of a private key and a public key. The private key, known only to the owner, is used to

digitally sign transactions, while the public key is used to verify the authenticity of the transaction. This cryptographic security ensures that transactions are securely conducted, and only authorized participants can access and control their assets. The private key is what must be properly kept safe as that is literally the key to your digital assets.

Blockchain technology allows for improved data privacy in the structured financial products market. By utilizing cryptographic techniques, sensitive information can be encrypted, ensuring that only authorized parties can access and decrypt the data. This reduces the risk of unauthorized access or data breaches, protecting investors' confidential information and assets from being compromised.

This provides robust access control mechanisms, it allows for each participant in the blockchain network to control and manage their own digital assets, identities and access permissions. Access to assets and transactions can be restricted to authorized individuals or entities, ensuring that only the rightful owners have control over their assets. This reduces the risk of unauthorized transfers or fraudulent activities.

Another important aspect to look at is that due to blockchain's decentralized nature, it provides inherent resilience against data loss and system failures. As the data is distributed across multiple nodes in the network, even if some nodes go offline or are compromised, the network can continue to function and maintain the integrity of the transactions. This resilience ensures that investors' assets remain protected and accessible even in the event of infrastructure failures or attacks.

By leveraging the security features of blockchain technology, such as decentralization, immutability, cryptographic techniques, and consensus mechanisms, the structured financial products market can enhance the protection of investors' assets. The robust security measures employed by blockchain make it significantly more challenging for hackers to attack the network and steal investors' assets, instilling greater confidence and trust in the market.

## **New Product Development**

Blockchain can help to facilitate the development of new structured financial products. This is because blockchain can be used to create new types of products that were not possible before. For example, blockchain could be used to create products that are more transparent, secure, and efficient.

The tokenization of real-world assets, such as real estate, art, commodities, cryptocurrency or even intellectual property are some prime examples. Tokenization

involves representing the ownership or value of an asset on the blockchain in the form of digital tokens. These tokens can be traded and transferred on the blockchain, creating new opportunities for structured financial products. Tokenization provides fractional ownership, increased liquidity, and the ability to combine different assets into diversified products, thereby expanding the range of investment opportunities available to investors.

Of course the integration of smart contracts come into play as they can automate and enforce the functionality of structured financial products. Smart contracts enable self-executing agreements with predefined rules and conditions. By utilizing smart contracts, the execution and management of complex financial products can be automated, reducing the need for intermediaries and manual interventions. This automation enhances efficiency, reduces costs, and ensures accurate and transparent execution of contractual obligations, which leads to increased adherence to regulations.

The transparent and immutable nature of blockchain enables greater transparency and auditability in structured financial products. Investors can access the blockchain network to verify the details of the products, including the underlying assets, pricing mechanisms, risk profiles, and historical performance. This increased transparency builds trust, facilitates due diligence, and allows investors to make more informed investment decisions.

As we know blockchain technology enhances the security of both traditional and decentralized systems, this holds true of structured financial products as well. The decentralized and cryptographic nature of blockchain reduces the risk of fraud, tampering, or unauthorized access to sensitive data. The use of blockchain can enable improved risk management techniques, such as real-time monitoring, data analytics, and automated compliance checks. These features enhance the security and risk mitigation measures associated with structured financial products.

Blockchain's ability to facilitate secure and near real-time settlements can revolutionize the structured financial products market. By using blockchain for settlements, the need for intermediaries, manual processes, and reconciliation can be significantly reduced. Settlement times can be accelerated, counterparty risks minimized, and costs associated with traditional settlement systems can be lowered.

Direct peer-to-peer trading of structured financial products eliminates the need for intermediaries, making the market more accessible and efficient. By leveraging blockchain, investors can trade structured financial products directly with one another, enhancing liquidity and potentially reducing transaction costs. This peer-to-peer trading environment creates new possibilities for innovative financial products that were not previously feasible in centralized markets.

The ability to facilitate cross-border transactions with greater ease and efficiency has been a proven concept through the likes of Ripple Labs, the Lightning Network for Bitcoin and others, it works. The decentralized nature of blockchain removes the need for intermediaries and reduces the complexity and cost associated with cross-border transactions. Blockchain-based structured financial products can leverage this capability to enable seamless and faster cross-border investments, expanding the reach and accessibility of these products to a global investor base.

By embracing and unleashing the capabilities of blockchain technology, the structured financial products market can innovate and develop new types of products that are more transparent, secure, and efficient. The features of blockchain, such as tokenization, smart contracts, transparency, security, and cross-border capabilities, open up new avenues for creativity, customization, and accessibility in the financial industry.

The only issue will solely sit with the transactional cost on a blockchain “Gas Fees” , these fees can make it unattractive for High Frequency Traders “HFT”, hedge funds and firms as their cost basis will increase and it will increase their overall exposure. This is why the consensus mechanism being used becomes a key topic of discussion. Proof of Work and Proof of Stake can be costly to a HFT , while Proof of Time carries no gas fees and may be more attractive.

### *Additional Benefits of Blockchain Technology for Structured Financial Products*

#### **Reduced Counterparty Risk**

Blockchain can help to reduce counterparty risk by providing a secure and tamper-proof record of transactions. This is because blockchain transactions are recorded on a distributed ledger, which means that they are not reliant on any single party. Distributed Ledger Technology: Blockchain operates on a distributed ledger, which means that transaction records are replicated and maintained across multiple nodes in a decentralized network. This distributed nature eliminates the reliance on any single party or central authority, reducing counterparty risk. In traditional financial systems, counterparty risk arises when one party fails to fulfill its contractual obligations. By leveraging blockchain's distributed ledger technology, the risk of a single point of failure or defaulting counterparty is significantly mitigated.

### **Immutable and Tamper-Proof Transactions**

Blockchain records transactions in an immutable and tamper-proof manner. Once a transaction is recorded on the blockchain, it cannot be altered or deleted without consensus from the network participants. This immutability ensures the integrity of the transaction records and provides a reliable source of truth. The transparency and permanence of blockchain transactions reduce the risk of fraudulent activities, including the manipulation of transaction records by counterparties.

### **Reduced Dependency on Intermediaries**

Blockchain technology has the potential to reduce the reliance on intermediaries in structured financial products. Intermediaries introduce counterparty risk as they act as intermediaries between buyers and sellers. We touched on this already but it is an important one. By leveraging blockchain's decentralized and automated features, direct peer-to-peer transactions can occur, eliminating the need for intermediaries and thereby reducing counterparty risk. This disintermediation can streamline the transaction process, enhance efficiency, and lower costs associated with traditional intermediaries.

### **Improved Settlement and Clearing Processes**

Blockchain technology enables faster and more efficient settlement and clearing of structured financial products. The decentralized and automated nature of blockchain transactions eliminates the need for manual processing, reconciliation, and multiple layers of intermediaries. Settlement and clearing processes can be streamlined, reducing the risk of delays, errors, and potential disputes with counterparties. The faster settlement times and reduced settlement risks contribute to lowering overall counterparty risk.

By leveraging the secure and tamper-proof nature of blockchain transactions, the structured financial products market can significantly reduce counterparty risk. Blockchain's distributed ledger, immutability, transparency, automation, and real-time monitoring capabilities provide investors with greater confidence in the integrity of transactions and mitigate the risks associated with counterparties in the financial industry.

## **Decentralized Exchange Platforms and Improved Liquidity**

Blockchain can help to improve liquidity in the structured financial products market by making it easier to trade these products. This is because blockchain can be used to create

a decentralized exchange for these products. It can facilitate the development of decentralized exchange platforms for structured financial products. These platforms leverage blockchain's transparency, security, and efficiency to create a peer-to-peer trading environment. Unlike traditional centralized exchanges that rely on intermediaries and operate within specific market hours, decentralized exchanges built on blockchain allow for continuous trading and direct interaction between buyers and sellers.

Decentralized exchanges powered by blockchain technology can improve market accessibility for structured financial products. These exchanges provide a global marketplace where investors from different geographical locations can trade these products without the need for complex intermediaries or localized infrastructure. The decentralized nature of blockchain ensures that participants can access the market and trade these products 24/7/365, increasing liquidity and enabling a broader range of investors to participate.

Blockchain enables the tokenization of structured financial products, which can enhance liquidity. Tokenization involves representing ownership or value of an asset on the blockchain in the form of digital tokens. These tokens can be easily traded on decentralized exchanges, allowing for fractional ownership and the division of assets into smaller denominations. Tokenization increases the liquidity of structured financial products by enabling broader participation and facilitating the trading of smaller units, making it more accessible to a larger investor base.

Decentralized exchanges on the blockchain can enhance the efficiency of trading structured financial products. By eliminating intermediaries, automating processes, and reducing administrative burdens, decentralized exchanges can streamline the trading process. The automation of transaction settlement and clearing through smart contracts reduces the need for manual intervention and lowers operational costs. These efficiencies contribute to a more liquid market and attract a wider range of investors.

Enabling direct peer-to-peer trading without intermediaries is the cornerstone of any decentralized exchange. Participants can interact directly, submit buy and sell orders, and negotiate terms. By removing intermediaries, the trading process becomes faster, more transparent, and less reliant on the availability and participation of specific market makers or brokers. This peer-to-peer trading environment fosters liquidity by allowing participants to interact directly, increasing trading volumes and reducing barriers to entry.

Decentralized exchanges that are built on a blockchain network provide transparency and trust in the trading process. Not all decentralized exchange are equal, so this must be looked at beforehand. All transactions are on-chain and the details are recorded on the blockchain, creating a transparent and auditable history of all trades. Participants can verify the authenticity and accuracy of transactions, ensuring fair and efficient trading.

This transparency builds trust among participants, attracting liquidity and fostering a more vibrant market for structured financial products.

The integration of different markets and liquidity pools can connect market participants from around the world seamlessly, allowing structured financial products to be traded across borders. This global integration increases liquidity by expanding the pool of potential buyers and sellers, creating a more efficient and liquid market for these products.

By leveraging decentralized exchanges, the structured financial products market can benefit from increased liquidity, improved market accessibility, efficiency, and reduced costs. The peer-to-peer trading environment, tokenization, transparency, and global integration provided by blockchain-based exchanges contribute to a more liquid and vibrant market, benefiting both investors and issuers in the financial industry.

### Increased Investor Awareness

Blockchain can help to increase investor awareness of structured financial products by providing a transparent and accessible record of these products. This can help investors to make informed decisions about these products.

The very nature of blockchain technology being able to provide transparent and accessible record of structured financial products is paramount in increasing investor interest. All relevant information about these products, such as terms, conditions, underlying assets, and performance history, can be recorded on the blockchain in a standardized and easily accessible format. Investors can access this information directly, removing the reliance on intermediaries or complex information channels. This transparency empowers investors to make informed decisions by having a comprehensive understanding of the structured financial products they are considering.

Blockchain allows for real-time updates of structured financial product information, which is critical information. Any changes or updates to the product details can be recorded on the blockchain and made instantly available to investors. This real-time visibility enables investors to stay updated with the latest information, including pricing changes, interest rates, or other relevant factors that may impact their investment decisions. Real-time updates enhance investor awareness and responsiveness to market dynamics.



The data recorded on the ledger is immutable and verifiable with the need for an intermediary. This means that once information is added to the blockchain, it cannot be altered or tampered with. Investors can trust that the information they access on the blockchain is accurate, authentic, and cannot be manipulated. The verified and immutable nature of blockchain data increases investor confidence and reduces the risk of misinformation or fraudulent representation of structured financial products.

The ability for investors to perform enhanced due diligence is also important for them to make informed decisions. By providing transparent access to the details and history of structured financial products, investors can conduct thorough evaluations of the products before making investment decisions. They can analyze the performance, risk profiles, past transactions, and other relevant factors to assess the suitability and alignment with their investment objectives. The increased transparency and accessibility of information support investors in performing comprehensive due diligence, contributing to more informed investment decisions.

Blockchain-based platforms and analytics tools can provide market insights and comparative analysis of structured financial products. By aggregating and analyzing data from multiple blockchain networks, investors can gain valuable insights into market trends, liquidity patterns, historical performance, and risk profiles of different products. These insights enable investors to compare and evaluate structured financial products more effectively, facilitating informed decision-making based on a comprehensive understanding of the market landscape.

Investor protection, we can't stress the importance of this enough and that blockchain technology can be an asset to protecting investors if implemented as such. Blockchain support investor protection and regulatory compliance in the structured financial products market simply by being a beacon of truth through immutability and transparency. Regulators can access the blockchain network to monitor transactions, verify compliance with regulatory requirements, and investigate any potential misconduct. This oversight ensures that investors are protected and that structured financial products adhere to applicable regulations. The transparent and auditable nature of blockchain enhances regulatory compliance and fosters a more secure and trustworthy market environment.

By leveraging the transparency, accessibility, and verifiability of blockchain technology, investor awareness of structured financial products can be significantly enhanced. Investors have access to real-time and verified information, enabling them to conduct thorough due diligence, analyze market insights, and make informed investment decisions. The increased transparency and investor-centric features of blockchain contribute to a more informed, confident, and empowered investor community in the structured financial products arena.

## **Structured Financial Products That Would Benefit From Blockchain Technology**

In this section we are going to go over a few structured financial products that would benefit tremendously from the integration of not only blockchain technology but the utilization of decentralized exchanges which can aid in that regulatory oversight and transparency as it creates a true Peer to Peer environment. We are addressing each product in detail so there may be repetitive information but it was important to address each product as an individual product for the benefit of the readers of this report.

### **Collateralized Debt Obligations (CDOs)**

CDOs are a type of structured financial product that is made up of a pool of debt securities. Blockchain can help to make CDOs more transparent and secure by providing a tamper-proof record of the underlying debt securities. This can help to reduce counterparty risk and make it easier for investors to assess the risk of these products. **Immutable and Transparent Record-Keeping:** Blockchain technology provides an immutable and transparent record of the underlying debt securities in CDOs. Each debt security can be represented as a digital token on the blockchain, allowing for the creation of a transparent and tamper-proof ledger of these assets. This record-keeping on the blockchain ensures that the details of the debt securities, such as their issuers, ratings, maturities, and payment streams, are securely recorded and can be audited by investors.

### **Enhanced Due Diligence**

With blockchain, investors can conduct more thorough due diligence on the underlying debt securities in CDOs. The transparent and accessible nature of blockchain allows investors to independently verify the authenticity, ownership, and quality of the debt securities. They can review historical data, track the performance of the underlying assets, and assess the risk associated with the CDOs. This increased transparency enables investors to make more informed investment decisions and better evaluate the risk-return profiles of CDOs.

### **Counterparty Risk Mitigation**

Blockchain's secure and tamper-proof record-keeping mitigates counterparty risk in CDOs. By recording the ownership and transfer of the underlying debt securities on the

blockchain, the risk of unauthorized changes or fraudulent activities is reduced. Investors can verify the ownership and chain of custody of the debt securities, minimizing the risk of investing in CDOs with unclear or disputed ownership. This transparency and accountability enhance trust among investors and reduce the potential for counterparty-related losses.

### **Improved Risk Assessment**

Blockchain technology can facilitate better risk assessment of CDOs by enabling the integration of additional data sources. By leveraging blockchain's interoperability capabilities, information from various parties, such as credit rating agencies, originators, and servicers, can be securely integrated into the blockchain. This comprehensive data enables investors to assess the creditworthiness and performance of the underlying debt securities more accurately, leading to a more informed evaluation of the risk associated with CDOs.

### **Automated Compliance and Reporting**

Blockchain-based smart contracts can automate compliance checks and reporting requirements for CDOs. Smart contracts can be programmed to enforce compliance with regulatory guidelines, contractual terms, and payment obligations. By automating these processes, blockchain reduces the risk of human error and ensures that CDOs adhere to regulatory standards. Additionally, blockchain's transparent and auditable nature simplifies reporting obligations, streamlining compliance efforts for CDO issuers and reducing the risk of non-compliance.

### **Secondary Market Trading and Liquidity**

Blockchain technology can enhance the secondary market trading and liquidity of CDOs. By tokenizing the underlying debt securities on the blockchain, fractional ownership and direct peer-to-peer trading can be facilitated. Investors can buy and sell digital tokens representing fractions of CDOs, enabling broader participation and enhancing liquidity in the market. This increased liquidity can attract more investors and potentially lower transaction costs associated with trading CDOs.

### **Regulatory Oversight and Transparency**

Blockchain technology provides regulators with increased oversight and transparency in the CDO market. Regulators can access the blockchain to monitor the issuance, trading, and ownership transfer of CDOs, ensuring compliance with regulatory requirements. The transparent and auditable nature of blockchain transactions facilitates regulatory audits, promotes market integrity, and reduces the potential for fraudulent activities.

## Credit Default Swaps (CDS)

CDS are a type of derivative that is used to insure against the default of a debt security. Blockchain can help to make CDS more transparent and secure by providing a tamper-proof record of the underlying debt security. This can help to reduce counterparty risk and make it easier for investors to assess the risk of these products. **Immutable and Transparent Record-Keeping:** Blockchain technology provides an immutable and transparent record of the underlying debt securities and CDS contracts. The details of the debt securities, such as issuer information, ratings, maturity dates, and payment obligations, can be securely recorded on the blockchain. This tamper-proof record-keeping ensures transparency and enables investors to access accurate and auditable information about the underlying assets, reducing information asymmetry and increasing trust.

### Verification of Contractual Terms

With blockchain, the terms and conditions of CDS contracts can be recorded as smart contracts. Smart contracts are self-executing agreements that automatically enforce the contractual terms once predefined conditions are met. By utilizing smart contracts on the blockchain, the terms of CDS contracts can be programmed, ensuring transparent and automated execution of payment obligations, events of default, and settlement processes. This increases the efficiency and reliability of CDS contracts while reducing the risk of errors or disputes arising from manual processing.

### Enhanced Due Diligence

Blockchain's transparency and accessibility enable investors to conduct thorough due diligence on the underlying debt securities and the associated CDS contracts. Investors can independently verify the authenticity, ownership, and quality of the debt securities and assess their creditworthiness. By reviewing the historical performance and payment records recorded on the blockchain, investors can make more informed decisions regarding the risk-reward profile of the CDS contracts.

### Counterparty Risk Mitigation

Blockchain technology mitigates counterparty risk in CDS contracts by providing a secure and tamper-proof record of the contractual agreements. The immutable nature of blockchain transactions ensures that the terms and obligations of the CDS contracts

cannot be altered without consensus. This reduces the risk of counterparties defaulting on their payment obligations or engaging in fraudulent activities. Investors can verify the status of CDS contracts, monitor the payment flows, and assess the creditworthiness of the counterparties, leading to a more transparent and secure market for CDS.

### **Efficient Settlement and Risk Management**

Blockchain can improve the settlement process and risk management practices associated with CDS contracts. By automating the settlement process through smart contracts, blockchain eliminates the need for manual intervention and reconciliation, reducing operational costs and potential errors. Additionally, blockchain's real-time tracking and recording capabilities enable effective monitoring of credit events and timely settlement of CDS contracts. This enhances risk management practices by enabling proactive management of credit risk and reducing the potential for disputes or delays in the settlement process.

### **Regulatory Compliance and Reporting**

Blockchain-based systems can streamline regulatory compliance and reporting requirements for CDS contracts. Compliance rules and reporting obligations can be embedded within smart contracts, ensuring automatic adherence to regulatory guidelines. Blockchain's transparent and auditable nature simplifies regulatory audits and enables regulators to monitor CDS transactions and related data more effectively. This promotes regulatory compliance, reduces the risk of non-compliance, and enhances the overall integrity of the CDS market.

### **Enhanced Secondary Market Trading**

Blockchain technology can improve the liquidity and transparency of CDS contracts in the secondary market. By tokenizing the underlying CDS contracts on the blockchain, investors can trade digital tokens representing fractions of CDS contracts, enabling fractional ownership and direct peer-to-peer trading. This increases liquidity, broadens market participation, and facilitates price discovery for CDS contracts.

## **Exchange-Traded Funds (ETFs)**

ETFs are a type of investment fund that is traded on an exchange like a stock. Blockchain can help to make ETFs more efficient and liquid by providing a decentralized exchange

for these products. This can make it easier for investors to trade these products and can help to reduce costs.

### **Decentralized Exchange Platforms**

Blockchain technology enables the creation of decentralized exchange platforms for ETFs. These platforms leverage blockchain's transparency, security, and efficiency to facilitate peer-to-peer trading of ETFs. By eliminating the need for intermediaries and central clearinghouses, decentralized exchanges on the blockchain provide a more efficient and accessible marketplace for investors to trade ETFs. This decentralized nature promotes liquidity by allowing investors to interact directly with each other, increasing trading volumes and potentially reducing transaction costs.

### **Increased Market Accessibility**

Blockchain-based decentralized exchanges broaden market accessibility for ETFs. Traditional ETFs are typically traded on centralized exchanges with specific market hours. In contrast, decentralized exchanges powered by blockchain operate 24/7, allowing investors from different time zones and geographical locations to trade ETFs at their convenience. This increased accessibility attracts a wider range of investors, thereby enhancing liquidity in the market.

### **Enhanced Efficiency and Lower Costs**

Blockchain-based decentralized exchanges improve the efficiency of trading ETFs. By eliminating intermediaries, reducing the need for manual processes, and leveraging automation through smart contracts, decentralized exchanges streamline the trading process. Settlement times can be accelerated, transaction fees can be minimized, and the overall cost of trading ETFs can be reduced. These efficiencies contribute to a more liquid market for ETFs and attract investors with lower trading costs.

### **Fractional Ownership and Divisibility**

Blockchain technology enables fractional ownership and divisibility of ETFs. By tokenizing ETF shares on the blockchain, investors can own fractions of an ETF, allowing for more precise investment amounts and increased liquidity. Fractional ownership facilitates greater participation from smaller investors who may not be able to afford whole ETF shares. Additionally, tokenization enables the creation of innovative ETF products that combine different underlying assets, diversifying investment opportunities and attracting a broader investor base.

### **Real-Time Trading and Settlement**

Blockchain-based decentralized exchanges facilitate real-time trading and settlement of ETFs. Traditional settlement processes for ETFs often involve multiple intermediaries and lengthy settlement periods. By leveraging blockchain's inherent capabilities, such as automated smart contracts and decentralized consensus mechanisms, trading and settlement processes can be executed in near real-time. This reduces counterparty risk, minimizes the settlement time, and enhances overall market liquidity for ETFs.

### **Transparency and Auditability**

Blockchain technology provides transparency and auditability in the trading of ETFs. All transactions executed on the blockchain are recorded in a transparent and immutable manner, allowing investors to independently verify the transaction history, ownership changes, and other relevant details of ETF trades. This transparency enhances investor confidence, reduces the risk of fraudulent activities, and fosters a more trustworthy and secure environment for trading ETFs.

### **Global Market Integration**

Blockchain technology enables global market integration for ETFs. Decentralized exchanges on the blockchain provide a global marketplace where investors from different countries can trade ETFs without being constrained by geographical boundaries or regulatory differences. Blockchain's decentralized nature and interoperability capabilities facilitate seamless cross-border trading, enabling greater liquidity, and expanding the investor base for ETFs.

### **Security Tokens**

Security tokens are a type of digital token that represents ownership of a real-world asset, such as a share of stock or a bond. Blockchain can help to make security tokens more secure and transparent by providing a tamper-proof record of ownership. This can help to reduce fraud and make it easier for investors to trade these products. **Immutable Ownership Records:** Blockchain technology provides a tamper-proof record of ownership for security tokens. Each security token represents ownership of a real-world asset, such as shares of stock, bonds, or other financial instruments. By recording ownership on the blockchain, the history of transactions and transfers is securely stored and cannot be altered without consensus from the network participants. This immutable ownership record reduces the risk of fraudulent activities, enhances investor confidence, and provides a reliable source of ownership verification.

Blockchain technology enhances the security of security tokens by leveraging cryptographic techniques. Each token is uniquely identified and secured using cryptographic keys, making it virtually impossible for unauthorized parties to tamper with or counterfeit the tokens. Blockchain's decentralized nature eliminates the risk of a single point of failure or hacking vulnerability, as the ownership records are replicated and maintained across multiple nodes in the network. This heightened security reduces the risk of fraud, unauthorized transfers, and theft of security tokens.

### **Transparency and Auditable Transactions**

Blockchain's transparent nature ensures that all transactions involving security tokens are recorded on the blockchain and can be audited by investors and regulators. The transparent transaction history allows investors to verify the authenticity, accuracy, and ownership of the security tokens they hold or intend to acquire. This transparency reduces information asymmetry, increases investor trust, and helps prevent fraudulent activities by providing a public and auditable record of transactions.

### **Efficient Transferability**

Blockchain technology enables efficient transferability of security tokens. Traditionally, transferring ownership of securities involves a complex and time-consuming process that requires intermediaries, manual paperwork, and reconciliation. By leveraging blockchain's smart contract functionality, the transfer of security tokens can be automated, eliminating the need for intermediaries and reducing the time and cost associated with ownership transfers. This efficiency facilitates faster settlement and improves liquidity in the market for security tokens.

### **Fractional Ownership and Liquidity**

Blockchain enables fractional ownership of real-world assets through security tokens, thereby enhancing liquidity and accessibility. By tokenizing assets on the blockchain, ownership can be divided into smaller fractions, allowing investors to buy and sell fractional ownership of high-value assets. This fractional ownership model lowers the barriers to entry, enabling a wider range of investors to participate and increasing liquidity in the market for these assets. Blockchain-based platforms facilitate the trading of fractional ownership, thereby unlocking new investment opportunities and enhancing market liquidity.



## **Compliance and Regulatory Benefits**

Blockchain technology can facilitate compliance and regulatory oversight in the trading of security tokens. Regulatory requirements can be embedded in smart contracts, ensuring that transactions comply with regulatory guidelines. Blockchain's transparent nature also enables regulators to monitor transactions, verify compliance, and identify any potential regulatory breaches. This increased compliance and regulatory oversight contribute to a more secure and trustworthy environment for trading security tokens.

## **Global Market Access**

Blockchain-based platforms enable global market access for security tokens. The decentralized and borderless nature of blockchain allows investors from different jurisdictions to trade security tokens seamlessly. Blockchain technology removes the geographical barriers and reduces the complexities associated with cross-border transactions, enabling a broader investor base and enhancing liquidity in the market for security tokens.

## **Synthetic Assets**

Synthetic assets are a type of financial instrument that is not backed by any physical asset. Blockchain can help to make synthetic assets more transparent and secure by providing a tamper-proof record of their creation and ownership. This can help to reduce fraud and make it easier for investors to trade these products.

## **Immutable Creation and Ownership Records**

Blockchain technology provides a tamper-proof record of the creation and ownership of synthetic assets. Each synthetic asset can be represented as a digital token on the blockchain, allowing for a transparent and auditable ledger of their creation and subsequent ownership transfers. This immutable record ensures that the details of the synthetic assets, including their creation parameters, underlying reference data, and ownership history, cannot be altered or manipulated without consensus from the network participants. This reduces the risk of fraudulent activities, enhances investor confidence, and provides a reliable source of information about the synthetic assets.

## **Transparent Composition and Performance Tracking**

Blockchain enables transparent composition and performance tracking of synthetic assets. By leveraging smart contracts, the rules and parameters governing the creation and functioning of synthetic assets can be programmed on the blockchain. Investors can easily access and verify the composition, pricing mechanisms, and performance of synthetic assets, enabling them to make informed investment decisions. This transparency reduces information asymmetry, promotes fair pricing, and helps investors assess the risk and potential return associated with these assets.

### **Counterparty Risk Mitigation**

Blockchain technology mitigates counterparty risk in synthetic assets. The decentralized nature of blockchain eliminates the need for a central counterparty, reducing the risk of default or non-performance by a single entity. By leveraging smart contracts, synthetic assets can be designed to automatically execute predefined actions, such as collateralization, margin calls, or settlement, removing the reliance on a centralized authority. This increases the reliability and reduces the counterparty risk associated with synthetic asset transactions.

### **Enhanced Risk Management**

Blockchain-based systems can enhance risk management practices associated with synthetic assets. By recording and tracking synthetic assets' performance on the blockchain, investors can assess and manage the risk exposure more effectively. The transparent and auditable nature of blockchain transactions enables real-time monitoring of risk parameters, such as market value, collateralization, and liquidity, providing investors with greater visibility and control over their investments. This facilitates proactive risk management and helps investors make informed decisions regarding their synthetic asset holdings.

### **Efficient Trading and Liquidity**

Blockchain technology can improve the trading and liquidity of synthetic assets. By tokenizing synthetic assets on the blockchain, fractional ownership and direct peer-to-peer trading can be facilitated. Investors can trade digital tokens representing fractions of synthetic assets, enabling fractional ownership and enhancing liquidity. Blockchain-based decentralized exchanges provide a global marketplace where investors can trade synthetic assets, increasing accessibility and attracting a broader investor base. The elimination of intermediaries and automation of settlement processes through smart contracts also contribute to increased efficiency and liquidity in the market for synthetic assets.

### **Regulatory Compliance and Transparency**

Blockchain technology can enhance regulatory compliance and transparency in the trading of synthetic assets. Compliance rules and regulatory requirements can be embedded in smart contracts, ensuring that transactions and asset compositions comply with regulatory guidelines. The transparent and auditable nature of blockchain transactions simplifies regulatory audits and enables regulators to monitor transactions, detect potential risks, and enforce compliance. This fosters a more secure and compliant environment for the trading of synthetic assets.

### **Auditable Pricing and Valuation**

Blockchain enables auditable pricing and valuation of synthetic assets. By recording and timestamping pricing data on the blockchain, investors and auditors can easily access historical pricing information, ensuring transparency and accuracy in the valuation process. This enhances investor confidence and facilitates independent verification of synthetic asset valuations, reducing the risk of valuation manipulation or misrepresentation.

Through the integration of blockchain technology the structured financial products market can benefit from increased transparency, security, efficiency, and liquidity in the trading of synthetic assets. The tamper-proof and auditable record-keeping provided by blockchain reduces fraud, enhances investor confidence, and simplifies ownership transfers. So whether it is a CDO, CDS, Security Token or Synthetic Asset, blockchain's transparent and programmable nature enables more effective risk management, improves trading efficiency, and enhances regulatory compliance.

## **Structured Financial Products in the Cryptocurrency Space**

In this section we are going to address the pros and cons of traditional financial institutions issuing structured financial products based on cryptocurrency, individually and as a basket, as well as other digital assets. This transition is seen as a positive development, we are seeing major financial institutions such as Blockrock, Fidelity and others venturing into this space with fury, so this may be the next bit step in the cryptocurrency space.

## Pros

### Increased Investor Access

Structured financial products based on cryptocurrency can help to increase investor access to this asset class. This is because these products can be more accessible than buying cryptocurrency directly.

### Reduced Risk

Structured financial products can help to reduce risk for investors. This is because these products can be designed to hedge against the volatility of cryptocurrency. Volatility Hedging Mechanisms: Structured financial products can be designed to mitigate the inherent volatility of cryptocurrencies. These products can incorporate various hedging mechanisms, such as options, futures contracts, or derivative instruments, to offset the potential losses stemming from price fluctuations. By utilizing these hedging strategies, structured financial products can help investors manage and reduce their exposure to cryptocurrency price volatility, thereby reducing risk.

### New Investment Opportunities

Structured financial products can create new investment opportunities for investors. This is because these products can be designed to track a variety of different cryptocurrency assets. It also allows for financial institutions to provide such opportunities in the most secure manner possible through the use of blockchain technology.

## Some Important Pro Points to Consider

### Lower Barriers to Entry

Blockchain-based structured financial products allow investors to gain exposure to the cryptocurrency asset class without directly owning the underlying cryptocurrencies. This lowers the barriers to entry for investors who may find it challenging to navigate the complexities of buying and storing cryptocurrencies themselves. Structured financial

products provide a familiar investment vehicle that is more accessible and easier to understand for traditional investors, thereby increasing their participation in the cryptocurrency market.

### **Reduced Technical Complexity**

Investing in cryptocurrencies directly often requires technical knowledge and proficiency in managing digital wallets, private keys, and exchanges. By utilizing structured financial products based on cryptocurrencies, investors can access the asset class without the need for in-depth technical expertise. The complexity of cryptocurrency ownership and storage is abstracted, allowing investors to focus on the investment strategy and potential returns rather than the technical intricacies.

### **Regulatory Compliance and Investor Protection**

Structured financial products based on cryptocurrencies can offer a higher level of regulatory compliance and investor protection. These products are designed to comply with applicable regulations, ensuring investor safeguards and adherence to Know Your Customer (KYC) and Anti-Money Laundering (AML) requirements. Regulatory compliance provides investors with a sense of security and confidence, attracting a broader range of participants to the market.

### **Diversification Opportunities**

Blockchain-based structured financial products offer investors the ability to diversify their investment portfolios with exposure to cryptocurrencies. These products can be designed to provide exposure to a specific cryptocurrency, a basket of cryptocurrencies, or even actively managed cryptocurrency strategies. By diversifying their holdings with structured financial products, investors can mitigate risk and potentially enhance their overall investment returns.

### **Professional Management and Expertise**

Investing in structured financial products based on cryptocurrencies allows investors to benefit from the professional management and expertise of asset managers specializing in the cryptocurrency market. These managers have in-depth knowledge of the cryptocurrency ecosystem, market trends, and risk management strategies. By relying on their expertise, investors can access the potential opportunities in the cryptocurrency market without the need for extensive research or constant monitoring.

### **Enhanced Liquidity**

By structuring cryptocurrency investments as financial products, liquidity can be improved compared to direct cryptocurrency trading. These structured products can be traded on established exchanges, providing investors with access to a deeper pool of liquidity. Enhanced liquidity allows investors to enter or exit their positions more efficiently, providing greater flexibility and reducing the risk of illiquid holdings.

### **Downside Protection**

Structured financial products can offer downside protection mechanisms to shield investors from significant losses during periods of high volatility or market downturns. For example, products may be designed with predefined stop-loss thresholds or built-in risk management features that trigger actions to limit losses or protect a certain percentage of the invested capital. By incorporating these protective measures, structured financial products can help investors preserve their capital and minimize downside risk.

### **Risk Diversification**

Structured financial products can provide investors with exposure to a diversified portfolio of cryptocurrencies or a combination of cryptocurrencies and other traditional assets. By diversifying across different cryptocurrencies or asset classes, investors can spread their risk and potentially reduce the impact of volatility associated with individual cryptocurrencies. This diversification strategy helps to mitigate risk and stabilize investment returns, enhancing the overall risk-adjusted performance of the structured financial products. Structured financial products based on cryptocurrencies can incorporate risk management features such as stop-loss orders, downside protection mechanisms, or built-in diversification strategies. These features help investors mitigate the inherent volatility and risks associated with cryptocurrencies, enhancing risk-adjusted returns and providing a level of comfort for risk-averse investors.

### **Professional Risk Management**

Structured financial products often involve the expertise of professional asset managers who specialize in risk management strategies. These managers can actively monitor and respond to cryptocurrency market dynamics, implementing risk management techniques to minimize potential losses. Through careful portfolio management, these professionals can rebalance allocations, adjust hedging strategies, or actively trade derivatives to mitigate risk and protect investors against extreme volatility.

### **Transparency and Auditable Risk Management**

Blockchain technology provides transparency and auditability, which can enhance risk management in structured financial products. The use of blockchain allows for real-time tracking and recording of transactions, pricing data, and risk management actions. This transparency enables investors to independently verify the risk management processes and evaluate the effectiveness of the strategies employed by the asset managers. Auditable risk management practices promote trust and confidence among investors, ensuring that appropriate risk mitigation measures are in place.

### **Compliance with Regulatory Standards**

Structured financial products based on cryptocurrencies and leveraging blockchain technology can be designed to comply with applicable regulations, ensuring investor safeguards and adherence to regulatory requirements. By embedding compliance rules within smart contracts, these products can enforce regulatory requirements and risk management protocols automatically. Compliance with regulatory standards provides investors with an added layer of protection and ensures that risk management practices are aligned with industry best practices, contributing to a more secure and trustworthy investment environment.

### **Broad Exposure to Cryptocurrency Market**

Structured financial products can provide investors with a convenient and accessible way to gain exposure to the broader cryptocurrency market. These products can be designed to track a diversified portfolio of cryptocurrencies, allowing investors to participate in the potential upside of multiple digital assets. By offering exposure to a range of cryptocurrencies, structured financial products enable investors to capture the overall market performance, rather than relying on the performance of a single cryptocurrency.

### **Customizable Investment Strategies**

Structured financial products can be tailored to meet the specific investment objectives and preferences of investors. These products can be designed to track different combinations of cryptocurrencies, weightings, or specific indices. By offering customizable investment strategies, structured financial products provide investors with the flexibility to align their investment decisions with their risk appetite, investment goals, or market views.

### **Simplified Investment Process**

Investing in structured financial products based on cryptocurrency eliminates the need for investors to individually research, purchase, and manage multiple cryptocurrencies themselves. Instead, investors can access a single structured product that represents a diverse portfolio of cryptocurrencies. This simplifies the investment process and reduces the complexities associated with managing multiple digital assets, making cryptocurrency investments more accessible to a wider range of investors.

### **Risk Management and Diversification**

Structured financial products can incorporate risk management strategies and diversification techniques. These products can be designed with predefined risk limits, rebalancing mechanisms, or active management strategies to optimize risk-adjusted returns. By diversifying across different cryptocurrencies within a single product, investors can mitigate the risk associated with individual cryptocurrencies and potentially achieve more stable and diversified investment outcomes.

### **Exchange Listing and Market Access**

Structured financial products can be listed on established exchanges, providing investors with increased market access and liquidity. By trading on exchanges, these products can benefit from the existing trading infrastructure and investor base, which facilitates a more efficient buying and selling process. This exchange listing enables investors to easily access structured financial products and participate in the cryptocurrency market without the need for direct ownership of digital assets.

### **Increased Trading Volumes**

By offering structured financial products on exchanges, the liquidity of the cryptocurrency market can be significantly enhanced. These products attract a broader range of investors who may prefer the convenience and familiarity of trading on traditional exchanges. As a result, the trading volumes of structured financial products increase, bringing additional liquidity to the overall cryptocurrency market.

### **Fractional Ownership and Divisibility**

Structured financial products based on blockchain can be tokenized, allowing for fractional ownership and divisibility. This fractional ownership model enables investors to purchase and trade fractional shares or units of the structured products, making them more accessible and affordable. By enabling smaller investment sizes, structured



financial products attract a larger investor base, leading to increased liquidity in the market.

### **Market-Making and Liquidity Providers**

The introduction of structured financial products can attract market makers and liquidity providers to the cryptocurrency market. Market makers play a crucial role in providing continuous liquidity by actively quoting buy and sell prices for the structured products. These market makers facilitate trading and contribute to maintaining liquidity by ensuring there are ready buyers and sellers in the market at any given time.

### **Arbitrage Opportunities**

The availability of structured financial products on exchanges creates arbitrage opportunities that can help improve liquidity. Arbitrageurs can take advantage of price discrepancies between the structured product and the underlying cryptocurrencies. By simultaneously buying and selling these assets, arbitrageurs help align prices and reduce market inefficiencies, enhancing liquidity in the process.

### **Enhanced Market Efficiency**

The introduction of structured financial products can lead to enhanced market efficiency in the cryptocurrency market. With increased liquidity, bid-ask spreads tend to narrow, reducing the cost of trading for investors. The availability of structured financial products also improves price discovery mechanisms, as the continuous trading and liquidity on exchanges provide a more accurate reflection of the market value of the underlying assets.

### **Secondary Market Trading**

Structured financial products can be traded on secondary markets, allowing investors to buy and sell these products even after their initial issuance. This secondary market trading increases liquidity and provides investors with the flexibility to enter or exit positions as per their investment objectives or market conditions. Investors can actively trade structured financial products on exchanges, benefiting from the increased liquidity and price transparency.

## Cons

### High Fees

Structured financial products in the cryptocurrency space can have high fees. This is because these products are often complex and require a lot of management. They also carry not only exchange fees but they also carry gas fees from the blockchain itself. It's important to note that while structured financial products may have higher fees, they are designed to offer unique investment opportunities, risk management strategies, and tailored solutions to investors. The fees associated with these products aim to cover the costs of designing, managing, and delivering the benefits they offer.

### Lack of Regulation

Structured financial products based on cryptocurrency are not yet regulated in many jurisdictions. This can create uncertainty for investors and make it difficult to assess the risk of these products.

### Volatility

The price of cryptocurrency is volatile, which can lead to losses for investors. Structured financial products based on cryptocurrency can magnify this volatility, so investors need to be aware of the risks involved.

## Some Important Con Points to Consider

### Complexity of Design

Structured financial products often involve complex underlying structures and strategies. These products are designed to provide specific investment outcomes, such as risk management, enhanced returns, or exposure to unique asset classes. The complexity of designing and implementing these structures requires specialized expertise and extensive research. The costs associated with analyzing market conditions, developing investment strategies, and ensuring regulatory compliance contribute to the fees associated with structured financial products.

### **Risk Management and Active Management**

Structured financial products may incorporate risk management and active management techniques to achieve the desired investment objectives. This includes monitoring market conditions, adjusting portfolio allocations, hedging against risks, and implementing dynamic investment strategies. The ongoing management and active decision-making involved in these products require skilled professionals, sophisticated technology, and dedicated resources. The costs associated with active management and risk mitigation strategies contribute to the fees associated with structured financial products.

### **Customization and Tailored Solutions**

Structured financial products are often customized to meet the specific needs and preferences of investors. This customization involves additional effort and resources to design, implement, and manage the tailored solutions. The costs associated with tailoring the products to meet individual investor requirements contribute to the higher fees.

### **Technology Infrastructure and Security**

Blockchain-based structured financial products require robust technology infrastructure to ensure security, reliability, and compliance. Implementing and maintaining blockchain networks, smart contracts, secure storage, and transaction processing systems involve significant costs. Additionally, the cybersecurity measures necessary to protect the integrity and confidentiality of digital assets add to the overall cost structure.

### **Regulatory Compliance and Legal Frameworks**

Structured financial products must adhere to various regulatory requirements and legal frameworks. Ensuring compliance with these regulations involves additional costs, including legal and compliance professionals, regulatory filings, audits, and ongoing monitoring. The complexity of navigating the regulatory landscape and ensuring compliance contributes to the fees associated with structured financial products.

### **Investor Education and Support**

Structured financial products may require additional investor education and support due to their complex nature. Educating investors about the features, risks, and potential benefits of these products requires resources and expertise. Providing ongoing support to investors, including addressing inquiries, clarifying product details, and offering assistance, also adds to the overall cost structure.

### **Scalability and Liquidity**

The scalability and liquidity of structured financial products can affect their fees. If the product has a limited investor base or is relatively illiquid, the costs per investor may be higher to cover the expenses of managing the product with a smaller asset base. Additionally, the costs associated with facilitating liquidity in secondary markets, such as market-making activities or maintaining a liquid market, can also impact the fees associated with these products.

### **Regulatory Landscape**

The regulatory landscape surrounding structured financial products based on cryptocurrency is still evolving in many jurisdictions. Regulators are grappling with the unique characteristics and challenges presented by cryptocurrencies and blockchain technology. As a result, there may be a lack of comprehensive regulations specifically tailored to structured financial products in the cryptocurrency space. The absence of clear regulations can create uncertainty for investors, making it challenging to assess the regulatory framework under which these products operate.

### **Investor Protection**

The absence of robust regulations can potentially expose investors to higher risks. Without clear regulatory guidelines, investors may face challenges in assessing the level of investor protection provided by these products. The lack of standardized disclosure requirements, transparency obligations, and safeguards may leave investors vulnerable to fraudulent schemes or misleading practices. This uncertainty can deter some investors from participating in these products, particularly those who prioritize regulatory oversight and investor protection.

### **Risk Assessment**

The limited regulatory framework for structured financial products based on cryptocurrency can make it difficult for investors to assess the risks associated with these products. Investors may find it challenging to determine the extent of counterparty risk, operational risk, or market risk embedded in these products. The absence of regulatory requirements for risk disclosures, risk management practices, and standardized reporting can further hinder investors' ability to evaluate the risk-reward profile of these products accurately.

### **Lack of Standardization**

Due to the nascent stage of the regulatory framework, structured financial products based on cryptocurrency may lack standardization across jurisdictions. Regulatory variations and inconsistencies can create a fragmented market, with different jurisdictions imposing different rules and requirements. This lack of harmonization makes it difficult for investors to navigate the landscape and compare products across different jurisdictions, further adding to the complexity and uncertainty surrounding these products.

### **Investor Education and Awareness**

The relatively new and complex nature of structured financial products based on cryptocurrency requires investors to have a sufficient understanding of the underlying technologies, risks, and potential rewards. However, the lack of regulatory guidance and standardized investor education initiatives can hinder investors' ability to make informed decisions. The absence of clear guidelines on investor education and awareness can impact market participation and hinder the adoption of these products.

### **Market Integrity and Anti-Money Laundering (AML) Concerns**

The lack of comprehensive regulations in the cryptocurrency space raises concerns regarding market integrity and anti-money laundering measures. Without robust regulatory oversight, there is a potential for market manipulation, fraudulent activities, and misuse of structured financial products for illicit purposes. This lack of regulatory framework can create challenges in ensuring proper governance, transparency, and compliance with anti-money laundering regulations.

### **Price Volatility**

Cryptocurrencies are known for their inherent price volatility, characterized by rapid price fluctuations within short periods. The value of cryptocurrencies can experience significant increases or decreases due to various factors, including market sentiment, regulatory developments, technological advancements, or macroeconomic conditions. When structured financial products are based on cryptocurrency assets, the underlying volatility can impact the performance and value of these products, potentially leading to substantial gains or losses.

### **Amplified Risk Exposure**

Structured financial products based on cryptocurrency can amplify the exposure to cryptocurrency price volatility. These products may use leverage, derivatives, or complex

strategies to enhance potential returns or achieve specific investment objectives. While this amplification can lead to higher returns in favorable market conditions, it also magnifies the downside risk. If the price of the underlying cryptocurrency declines, the potential losses for investors in these products can be larger than investing directly in the cryptocurrency itself.

### **Risk of Capital Loss**

Due to the volatility of cryptocurrency prices, investors in structured financial products based on cryptocurrency are exposed to the risk of capital loss. If the price of the underlying cryptocurrency significantly decreases, the value of the structured product may decline accordingly, leading to potential losses for investors. It is crucial for investors to understand that the value of these products is directly linked to the performance of the underlying cryptocurrency and can fluctuate accordingly.

### **Market Illiquidity**

Cryptocurrency markets can be subject to periods of low liquidity, especially during extreme market conditions or periods of heightened volatility. The liquidity of structured financial products based on cryptocurrency can be influenced by the liquidity of the underlying cryptocurrency market. If the market for the underlying cryptocurrency becomes illiquid, it may impact the ability to buy or sell the structured product at desired prices. Investors need to consider the potential challenges of executing trades and the associated impact on pricing during illiquid market conditions.

### **Counterparty Risk**

Structured financial products based on cryptocurrency may involve counterparty risk. These products can be issued and managed by financial institutions or other entities, which introduces the risk of default or non-performance by the issuer. If the issuer fails to fulfill its obligations, investors may face challenges in recovering their invested capital or receiving expected returns. It is important for investors to thoroughly assess the creditworthiness and reputation of the issuer when considering structured financial products based on cryptocurrency.

### **Investor Education and Risk Awareness**

Given the unique risks associated with cryptocurrency price volatility, investor education and risk awareness are crucial. Investors need to understand the inherent nature of cryptocurrency markets, including the potential for significant price fluctuations and the associated risks. It is important to thoroughly evaluate investment products, consider risk

management strategies, and have a clear understanding of the potential outcomes and potential losses that can occur in volatile market conditions.

### **Risk Mitigation Strategies**

Despite the volatility, structured financial products can incorporate risk mitigation strategies to help manage the risks associated with cryptocurrency price volatility. These strategies can include options, futures, or other derivative instruments that aim to hedge against downside risk or protect against extreme market movements. Investors should carefully evaluate the risk management mechanisms and understand how these strategies are implemented within the structured financial product.

As you can see there are Pros and Cons that come with any investment vehicle, structured financial products are no different. Whether the structured financial products are representing a single security, bond, asset or cryptocurrency or a basket of them, there is an inherent risk on both ends. One of the benefits as it relates to the creation of structured financial products is that they can be listed on decentralized as well as centralized cryptocurrency exchanges. This can impact the liquidity in the cryptocurrency markets and basically significantly enhanced that liquidity as the interest increases in the structured product.

Exchange listing enables investors to access these products easily, increases trading volumes, and attracts market makers and liquidity providers. Especially as it relates to decentralized exchanges, the access is simple. Fractional ownership, arbitrage opportunities, enhanced market efficiency, and secondary market trading all contribute to creating a more liquid market for cryptocurrency investments. These factors combined help investors buy and sell cryptocurrencies more easily, ultimately enhancing liquidity and contributing to the growth and maturity of the cryptocurrency market. Decentralized cryptocurrency exchanges, such as HootDex, that offer various cryptocurrency based structured financial products will be the beneficiaries of the increased interest.

### **Financial Benefits to Financial Institutions and Retail Investors**

The level of financial benefits to financial institutions and retail investors from structured financial products based on cryptocurrency will vary depending on a number of factors, including the specific product, the terms of the product, and the market conditions. Structured financial products based on cryptocurrency could offer the potential for higher

returns than traditional investments. This is because the price of cryptocurrency has the potential to grow significantly in the future.

Cryptocurrencies have demonstrated the potential for significant price appreciation over time. The decentralized and innovative nature of cryptocurrencies, combined with increasing adoption and technological advancements, can contribute to their value appreciation. Structured financial products based on cryptocurrency provide investors with exposure to the potential growth of the underlying digital asset. If the price of the cryptocurrency increases, the value of the structured product may also grow, offering the potential for higher returns compared to traditional investments.

The cryptocurrency market itself has experienced substantial growth in recent years, driven by increasing awareness, acceptance, and adoption. As cryptocurrencies become more integrated into mainstream financial systems and gain wider acceptance, the potential for market growth and value appreciation increases. Structured financial products can enable investors to participate in this growth and capture the potential upside by providing exposure to the cryptocurrency market.

Investing in structured financial products based on cryptocurrency can offer diversification benefits to investors' portfolios. Cryptocurrencies have shown a relatively low correlation with traditional asset classes, such as stocks, bonds, or commodities. By including structured financial products based on cryptocurrency in a diversified portfolio, investors can potentially enhance the risk-return profile of their overall investment strategy. Diversification across different asset classes with varied risk characteristics can contribute to higher potential returns and reduced portfolio volatility.

Cryptocurrencies and blockchain technology represent an innovative and rapidly evolving sector. The potential for groundbreaking advancements, new use cases, and disruptive technologies within the cryptocurrency ecosystem can create unique investment opportunities. Structured financial products can be designed to capture specific themes or investment strategies within the cryptocurrency space, allowing investors to participate in the potential growth of emerging sectors or technologies.

The cryptocurrency market comprises a vast array of tokens, including established cryptocurrencies and emerging tokens with specialized utility or functionality. Structured financial products can offer investors exposure to niche markets, specific token projects, or innovative blockchain applications that have the potential for substantial growth. By investing in structured products that track these niche markets or tokens, investors can access opportunities that may be difficult to access or evaluate individually.

A key point to consider is that structured financial products based on cryptocurrency often involve transparency, perhaps active management and strategy implementation.



Professional asset managers and fund managers with specialized expertise in cryptocurrencies can actively manage these products, utilizing their knowledge and insights to identify potential investment opportunities. Active management can enable the capture of market trends, timely portfolio adjustments, and strategic allocation of investments, potentially contributing to higher returns compared to passive investment approaches.

Blockchain technology, the underlying technology behind cryptocurrencies, continues to advance rapidly. Technological developments, such as scalability improvements, enhanced security measures, and interoperability solutions, can contribute to the growth and adoption of cryptocurrencies. As the technology matures and network effects strengthen, structured financial products based on cryptocurrency can capture the potential value created by these advancements, offering investors the opportunity for higher returns.

### Reduced Risk

Structured financial products can incorporate various hedging strategies to mitigate the volatility of cryptocurrency prices. Hedging involves using derivatives or other financial instruments to offset potential losses from price fluctuations. For example, structured financial products can utilize options contracts to hedge against downside risk by acquiring the right to sell a specified amount of cryptocurrency at a predetermined price within a given timeframe. These hedging strategies help protect investors from potential losses and stabilize their investment portfolios.

Structured financial products for cryptocurrencies that utilize blockchain technology can integrate risk management techniques to mitigate the impact of cryptocurrency volatility. By actively managing exposure to cryptocurrency assets, these products can dynamically adjust portfolio allocations or implement risk mitigation strategies. Risk management may involve employing diversification techniques, rebalancing holdings, or using sophisticated algorithms to monitor and respond to market conditions. These risk management practices help protect investors from excessive downside risk and reduce the potential impact of cryptocurrency price volatility.

They can also be designed to track volatility indexes specific to cryptocurrencies. These indexes provide a measure of the expected volatility in cryptocurrency markets, allowing investors to gain exposure to volatility as a tradable asset. By investing in products linked to volatility indexes, investors can hedge against fluctuations in cryptocurrency prices and potentially benefit from market volatility. These structured products offer a way to

manage risk associated with cryptocurrency price swings and can be used to protect against adverse market conditions.

Such structured financial products can utilize futures or forward contracts to hedge against cryptocurrency volatility. These derivatives enable investors to enter into contracts to buy or sell cryptocurrencies at pre-agreed prices on future dates. By utilizing futures or forward contracts, investors can establish predetermined prices for buying or selling cryptocurrencies, thereby managing the risk of price fluctuations. These contracts help hedge against adverse price movements and provide investors with greater certainty and control over their investments.

Digital asset derivative tokens pegged to single or baskets of cryptocurrencies, can be used in structured financial products to mitigate the volatility of cryptocurrencies. These tokens provide investors with exposure to cryptocurrency markets. A seamless entry point for an investor are when such structured financial products are listed on a decentralized cryptocurrency exchange.

Blockchain-based smart contracts can be utilized in structured financial products to automate risk mitigation mechanisms. These contracts can be programmed to trigger predefined actions or adjustments based on predetermined conditions or price thresholds. For example, if the price of a cryptocurrency falls below a certain level, the smart contract may automatically rebalance the portfolio or execute hedging strategies to limit potential losses. Smart contracts provide transparency, efficiency, and enforceability, enabling risk mitigation measures to be implemented seamlessly.

Structured financial products can also employ option strategies to hedge against cryptocurrency volatility. Options provide the right, but not the obligation, to buy or sell assets at a predetermined price within a specified period. By incorporating option strategies such as protective puts or covered calls, structured financial products can protect investors from downside risk or generate income from their cryptocurrency holdings. These option strategies provide flexibility and risk management capabilities to investors, reducing the potential impact of price volatility.

By incorporating hedging strategies, risk management techniques, and derivative instruments, structured financial products based on blockchain technology can help reduce risk for investors by mitigating the volatility of cryptocurrencies. These products provide investors with mechanisms to protect against losses, stabilize investment portfolios, and manage exposure to price fluctuations. However, it's important for investors to understand the complexities of these strategies, assess their risk tolerance, and seek professional advice when considering structured financial products as risk mitigation tools.

## New Investment Opportunities

Structured financial products can be designed to provide investors with exposure to a wide range of cryptocurrencies. Rather than investing directly in individual cryptocurrencies, investors can gain access to a diversified portfolio of digital assets through a single structured product. This diversification allows investors to participate in the potential growth and performance of multiple cryptocurrencies, spreading their risk across different assets and reducing the reliance on any single cryptocurrency.

They can be tailored to specific investment themes or strategies within the cryptocurrency space. For example, a structured product can focus on a specific sector, such as decentralized finance (DeFi), non-fungible tokens (NFTs), or privacy-focused cryptocurrencies. By aligning investments with particular themes or sectors, investors can capitalize on emerging trends and capture potential opportunities within the cryptocurrency ecosystem.

Structured financial products can be designed to track cryptocurrency indices, which represent a basket of cryptocurrencies selected based on predefined criteria. These indices can be broad-based, covering a wide range of cryptocurrencies, or specialized, targeting specific segments or market capitalizations. By investing in structured products linked to cryptocurrency indices, investors can gain exposure to the overall performance of the cryptocurrency market or specific market segments.

They can offer passive investment strategies for investors who prefer a hands-off approach. These products can be designed to replicate the performance of a cryptocurrency index or a specific set of cryptocurrencies. Through passive investment strategies, investors can gain exposure to the cryptocurrency market without the need for active management or individual asset selection. This provides an accessible and convenient way for investors to participate in the potential growth of cryptocurrencies.

Structured financial products can enable investors to access emerging tokens and initial coin offerings (ICOs) in a structured and regulated manner. ICOs are a fundraising method used by blockchain projects to raise capital by issuing tokens. By investing in structured products that include exposure to ICOs or emerging tokens, investors can participate in early-stage projects and potential token appreciation, while benefiting from the risk management and compliance framework provided by the structured product.

They can be utilized for risk mitigation and asset allocation purposes within an

investment portfolio. By incorporating cryptocurrency-based structured products, investors can diversify their portfolio holdings and balance their exposure to different asset classes, such as stocks, bonds, and cryptocurrencies. This diversification helps manage risk and potentially enhances risk-adjusted returns by aligning investments with specific investment objectives and risk tolerance.

Investing directly in cryptocurrencies often requires technical knowledge, secure storage, and access to cryptocurrency exchanges. However, structured products can offer a more user-friendly and regulated investment vehicle, enabling a broader range of investors to participate in the cryptocurrency market without the complexities and risks associated with direct cryptocurrency ownership.

Structured financial products in the cryptocurrency space are a great tool and can create new investment opportunities by offering diversified exposure to multiple cryptocurrencies, customizable investment themes, and access to emerging tokens and ICOs. These products may provide investors with a convenient, somewhat regulated, and potentially less complex way to participate in the cryptocurrency market, align investments with specific strategies or sectors, and achieve diversification within their investment portfolios.

The potential benefits of structured financial products based on cryptocurrencies are significant. However, it is important to be aware of the risks involved before investing in these products, understanding what it represents and how each digital asset can be track is important.

### **Real World Companies Creating Cryptocurrency Based Structured Financial Products**

Real-world companies are leveraging blockchain technology to create cryptocurrency-based structured financial products, offering several benefits for retail investors and decentralized cryptocurrency exchanges.

For retail investors, these products provide increased access to the cryptocurrency market, which has traditionally been limited to sophisticated investors or those with technical expertise. By investing in structured financial products based on cryptocurrencies, retail investors can gain exposure to digital assets without the complexities of directly owning and managing cryptocurrencies. This accessibility allows a broader range of investors to participate in the potential growth and performance of the cryptocurrency market, democratizing investment opportunities and fostering financial inclusion.

These structured financial products offer risk mitigation strategies for retail investors. Cryptocurrencies are known for their price volatility, which can be a deterrent for risk-averse investors. However, structured products can incorporate risk management techniques, such as hedging strategies or derivative instruments, to help mitigate the impact of price fluctuations. These risk management features provide retail investors with tools to manage their risk exposure and potentially stabilize their investment portfolios.

Decentralized cryptocurrency exchanges benefit from the introduction of cryptocurrency-based structured financial products. These exchanges, operating on blockchain technology, enable the seamless trading and settlement of these products. By listing and facilitating the trading of structured financial products, decentralized exchanges, such as HootDex, enhance liquidity and market efficiency, creating a robust marketplace for retail investors to buy, sell and swap these assets. The transparency and security offered by blockchain technology further strengthen the trust and integrity of decentralized exchanges, mitigating concerns of manipulation or fraud.

Such decentralized cryptocurrency exchanges provide a platform for retail investors to access a diverse range of structured financial products. The exchanges that offer a wide selection of cryptocurrency-based structured products are scalable, they allow investors to choose products that align with their investment objectives and risk tolerance. The availability of different investment themes, customized strategies, and exposure to multiple cryptocurrencies enables retail investors to diversify their portfolios and capitalize on emerging trends within the cryptocurrency ecosystem.

The emergence of real-world companies creating cryptocurrency-based structured financial products brings significant benefits for retail investors and decentralized cryptocurrency exchanges. It provides retail investors with increased accessibility, risk mitigation strategies, and exposure to the potential growth of the cryptocurrency market. Simultaneously, decentralized exchanges benefit from enhanced liquidity, market efficiency, and a wide variety of structured products, fostering a vibrant and inclusive marketplace. As blockchain technology continues to advance, these benefits are expected to further evolve and contribute to the continued growth of the structured financial products arena in the cryptocurrency space.

### **Short List of Financial Institutions Creating Structured Cryptocurrency Based Products**

**Grayscale Investments:** Grayscale Investments is a digital asset management firm that

offers a variety of structured financial products based on cryptocurrency. These products include trusts, funds, and derivatives.

**CoinShares:** CoinShares is a digital asset investment firm that offers a variety of structured financial products based on cryptocurrency. These products include exchange-traded funds (ETFs), investment trusts, and derivatives.

**Galaxy Digital:** Galaxy Digital is a financial services company that specializes in digital assets. The company offers a variety of structured financial products based on cryptocurrency, including exchange-traded products (ETPs), security tokens, and derivatives.

**Bitwise Asset Management:** Bitwise Asset Management is a digital asset management firm that offers a variety of structured financial products based on cryptocurrency. These products include trusts, funds, and derivatives.

**Goldman Sachs:** Goldman Sachs is a global investment banking firm that has been exploring the use of blockchain technology in the structured financial products arena. In 2018, the company filed a patent for a blockchain-based system for issuing and trading structured financial products.

**Morgan Stanley:** Morgan Stanley is another global investment banking firm that is exploring the use of blockchain technology in the structured financial products arena. In 2019, the company launched a blockchain-based platform for trading digital assets.

**UBS:** UBS is a Swiss multinational investment bank and financial services company that has been exploring the use of blockchain technology in the structured financial products arena. In 2020, the company launched a blockchain-based platform for issuing and trading tokenized securities.

**BNP Paribas:** BNP Paribas is a French multinational banking group that has been exploring the use of blockchain technology in the structured financial products arena. In 2021, the company launched a blockchain-based platform for trading digital assets.

**DBS Bank:** DBS Bank is a Singaporean multinational bank that has been exploring the use of blockchain technology in the structured financial products arena. In 2022, the company launched a blockchain-based platform for issuing and trading tokenized securities.

**BlackRock:** BlackRock is the world's largest asset manager, and it has been exploring the use of blockchain technology in the structured financial products arena since 2017. The company has filed a number of patents for blockchain-based financial products, and

it has also partnered with a number of blockchain startups. They have filed for a Bitcoin ETF with the SEC.

**Charles Schwab:** Charles Schwab is a leading investment firm, and it has been exploring the use of blockchain technology in the structured financial products arena since 2018. The company has partnered with a number of blockchain startups, and it has also launched a number of blockchain-based products, such as a blockchain-based platform for trading digital assets. They have backed institutional cryptocurrency exchange EDX Markets.

**Citadel:** Citadel is a leading hedge fund, and it has been exploring the use of blockchain technology in the structured financial products arena since 2019. The company has partnered with a number of blockchain startups, and it has also launched a number of blockchain-based products, such as a blockchain-based platform for trading derivatives. They have backed institutional cryptocurrency exchange EDX Markets.

**Fidelity:** Fidelity is a leading asset manager, and it has been exploring the use of blockchain technology in the structured financial products arena since 2020. The company has partnered with a number of blockchain startups, and it has also launched a number of blockchain-based products, such as a blockchain-based platform for trading mutual funds. They have backed institutional cryptocurrency exchange EDX Markets.

**KKR:** KKR is a leading private equity firm, and it has been exploring the use of blockchain technology in the structured financial products arena since 2021. The company has partnered with a number of blockchain startups, and it has also launched a number of blockchain-based products, such as a blockchain-based platform for trading debt securities. They backed Anchorage Digital.

### BITCOIN ETFs

A Bitcoin ETF (Exchange-Traded Fund) is a structured financial product designed to provide investors with exposure to Bitcoin, the pioneering cryptocurrency. As an ETF, it is traded on traditional stock exchanges, allowing investors to buy and sell shares of the fund throughout the trading day. The primary objective of a Bitcoin ETF is to track the performance of Bitcoin's price, enabling investors to gain exposure to the cryptocurrency without the need to directly own and manage Bitcoin themselves.

A Bitcoin ETF functions by holding a portfolio of Bitcoin as its underlying asset. This portfolio is managed by the fund's issuer or an appointed custodian, who is responsible for acquiring and storing the Bitcoin on behalf of the ETF. The number of Bitcoins held

by the ETF determines the value of its shares, which are issued and redeemed by authorized participants in large blocks, known as creation and redemption units.

The value of a Bitcoin ETF's shares is intended to closely correspond to the value of the Bitcoin held by the fund. This is achieved through various mechanisms, such as arbitrage and portfolio management techniques. The ETF's shares are priced based on the Net Asset Value (NAV) of the underlying Bitcoin holdings, taking into account factors like transaction costs, management fees, and other expenses.

One of the main advantages of a Bitcoin ETF is that it provides investors with a regulated and accessible vehicle to gain exposure to Bitcoin. Unlike direct ownership of Bitcoin, which requires technical expertise and secure storage, a Bitcoin ETF offers a familiar investment structure and can be held within traditional brokerage accounts. This increases accessibility for retail investors and allows for seamless integration into existing investment strategies.

A Bitcoin ETF provides liquidity to investors, as shares of the fund can be easily bought and sold on stock exchanges. This liquidity ensures that investors have the ability to enter or exit their positions at prevailing market prices, reducing the risk of price slippage and increasing overall market efficiency.

**VanEck:** VanEck is an asset management firm that filed for a Bitcoin ETF in 2017. The SEC rejected the filing in 2018, but VanEck has refiled the application several times since then.

**ProShares:** ProShares is an asset management firm that filed for a Bitcoin ETF in 2018. The SEC rejected the filing in 2019, but ProShares has refiled the application several times since then.

**Virtu Financial:** Virtu Financial is a financial services firm that filed for a Bitcoin ETF in 2019. The SEC has not yet ruled on the application as of this report.

**Valkyrie:** Valkyrie filed for a Bitcoin futures ETF in February 2023. The SEC has not yet ruled on the application as of this report.

**BlackRock:** BlackRock filed for a Bitcoin futures ETF in March 2023. The SEC has accepted the application as of July 14, 2023 and it is under review. Ark Invest: Ark Invest filed for a Bitcoin futures ETF in April 2023. The SEC has not yet ruled on the application as of this report.

**Fidelity:** Fidelity filed for a Bitcoin spot ETF in April 2023. The SEC has not yet ruled on the application as of this report.



**Invesco:** Invesco filed for a Bitcoin spot ETF in May 2023. The SEC has not yet ruled on the application as of this report.

**NYDIG:** NYDIG filed for a Bitcoin futures ETF in March 2023. The SEC has not yet ruled on the application as of this report.

**Galaxy Digital:** Galaxy Digital filed for a Bitcoin spot ETF in March 2023. The SEC has not yet ruled on the application as of this report.

**Grayscale Investments:** Grayscale Investments filed to convert its Grayscale Bitcoin Trust (GBTC) into a spot ETF in April 2023. The SEC has not yet ruled on the application as of this report.

**ETFMG:** ETFMG filed for a Bitcoin spot ETF in April 2023. The SEC has not yet ruled on the application as of this report.

These are just a few of the many companies that have filed for a Bitcoin ETF with the SEC in 2023. As the demand for Bitcoin ETFs continues to grow, we can expect to see even more companies filing for these products in the future.

It is important to note that the SEC has not yet approved any Bitcoin ETFs in 2023. However, the agency has been considering these applications for several months, and it is possible that an ETF could be approved in the near future.

If a Bitcoin ETF is approved in the United States, it would allow investors to gain exposure to Bitcoin without having to buy the underlying asset directly. This could make Bitcoin more accessible to a wider range of investors, and it could also help to increase the liquidity of the Bitcoin market.

## CONCLUSION

The application of blockchain technology in the structured financial products arena offers a myriad of real-world use cases and benefits. From increased transparency and enhanced security to improved liquidity and diversified investment opportunities, blockchain-based structured financial products have the potential to revolutionize the financial industry. These products provide investors, including retail investors, with access to previously untapped markets, such as cryptocurrency, while offering risk mitigation strategies to hedge against volatility.

The decentralized nature of blockchain technology ensures that transactions are securely recorded and cannot be tampered with, reducing fraud and counterparty risks. The transparency provided by blockchain also empowers investors by providing them with a clear and accessible record of structured financial products, enabling them to make informed investment decisions. Additionally, the use of blockchain in the creation and trading of these products enhances efficiency and reduces costs by streamlining processes and eliminating intermediaries.

As the financial industry continues to embrace blockchain technology, it is crucial for regulators, market participants, and investors to collaborate in developing a robust and standardized regulatory framework. Such regulation will help address challenges, promote investor protection, and foster market confidence. By doing so, the potential of blockchain technology can be fully realized, transforming the structured financial products landscape and opening up new possibilities for investors.

The integration of blockchain technology in structured financial products holds immense promise for increased transparency, improved security, enhanced liquidity, and expanded investment opportunities. As the financial industry adapts to this transformative technology, it is essential to strike a balance between innovation and regulation to safeguard investors and ensure market stability. Decentralized cryptocurrency exchanges that offer cryptocurrency based structured financial products will be direct beneficiaries of the growth with careful considerations, strategic implementation, and continuous collaboration, blockchain-based structured financial products have the potential to reshape the financial industry and provide investors with a more inclusive, efficient, and secure investment environment.

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