

2021 Thesis

MONEY MARKET INTEROPERABILITY

ROLES & CAPACITY
WEB3 ERA: CREDITS MARKET
STACK & MAP
MULTICHAIN ECO: SUBSTRATE
& POLKADOT



1PAR

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Abstract

The main goal of this thesis is to explain the current development status of the interoperability of the decentralized money market protocol. Based on the industry events and market performance this year, we explained in chapters:

- **Basic definitions and concepts:**
Money market in traditional finance and blockchain, their roles; and the working principle of the money market blockchain protocol, that is, how working capacity is generated.
- **Exceeding cash to WEB3:**
the further development of the money market protocol, the concept of the credit market.
- **Stack map:**
From traditional finance to decentralized finance technology and enterprise stack. How to build a new type of money market building blocks today.
- **Mainstream crypto lending protocols:**
The definition and difference between the lending/borrowing market and the money market, the price performance this year, and the financial performance of multiple organizations.
- **Propose interoperability:**
Expert opinions, the underlying infrastructure technology Substrate, and current test products.
- **Polkadot, Substrate's first infrastructure stack:**
Analyzes Polkadot tech from the perspective of finance and markets and compares Polkadot with other L1 network DeFi market stacks.
- **Konomi Network**, one of the most potential and most promising interoperable money market protocols.

THANKS to Jayden, Konomi Network co-founder, for review!

1. Introduction: Money Market in Blockchain

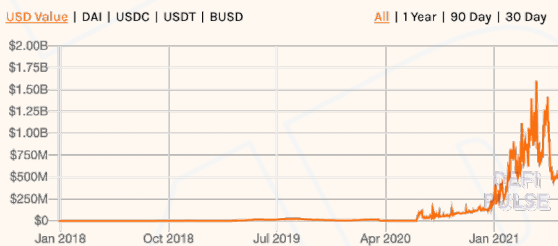
The money market is one of the pillars of the 'traditional' financial system. It involves a short-term swap of large amounts of funds between the bank and government. Most money market transactions are wholesale transactions that occur between financial institutions and companies.

Money market is to provide short-term financing or operating working capital for industrial and commercial enterprises, inter-bank financing, and the trading of various short-term securities. Money market specifically refers to a financial market composed of financial assets with a duration of less than one year.

Throughout history, in every tradable currency (from rare metals to fiat), the **interest** rate exists as the "price" of the currency. It bridges the balance between those who own the surplus currency and those who have production uses and make money for the money. The gap between people who invest. The time value of exchanging currency is beneficial to both parties, creating non-zero-sum wealth.

In the traditional financial market, individuals can invest in the money market by buying money market mutual funds, buying treasury bills, or opening a money market account in a bank. The cryptocurrency and digital blockchain asset market has developed into a vibrant ecosystem composed of investors, speculators and traders, exchanging thousands of blockchain assets. Asset owners have been able to obtain time value of money from the current money market protocol, and the interest rate protocol allows those with surplus assets and insufficient assets to benefit both parties.

Interest Per Year (USD)



Interest Per Year (USD) since Record of Lending Activities on Ethereum, 1 June 2021.

Source: [DeFi Pulse](#)

Above chart shows Ethereum-based DeFi protocols has been establishing a billion-level money market for generating interests. There are plenty of branding decentralized protocols that can be used to borrow ERC tokens frictionlessly on Ethereum and ERC-based tokens on EVM compatible platforms. It enables proper cryptocurrency markets to function and provides a safe and positive way to store crypto assets without the shortcomings of existing methods. There are teams that incorporate money market protocols are also booming on other public chains. The money market technology stacks on [Binance Smart Chain](#), [Solana](#), [Avalanche](#), and [Polkadot](#) are scaling.

2. Components of Money Market Protocol

2.1. Lending and Borrowing Market

Time value - a concept that due to its potential profitability, the value of an asset now is higher than the same amount in the future-was not really supported by cryptocurrency before the launch of Compound. Compound integrates this feature natively.

As per, Compound also creates an automated Money market: a decentralized system that offers frictionless borrowing of ETH and other supported ERC20 tokens.



The supply segments and the demand segments of the money market, the **lending** market and the **borrowing** market, constitute the two biggest components that compete for interest rates and the time value that arises. In the early stage of the money market protocol in the blockchain world, the lending module and borrowing module constituted the prototype of the function of the money market.

In comparison with the industry predecessors on the same track, an emerging multi-chain money market protocol, Konomi Network, is also worthy of attention. It also has its own unique improvements while inheriting many of the advantages of compound.

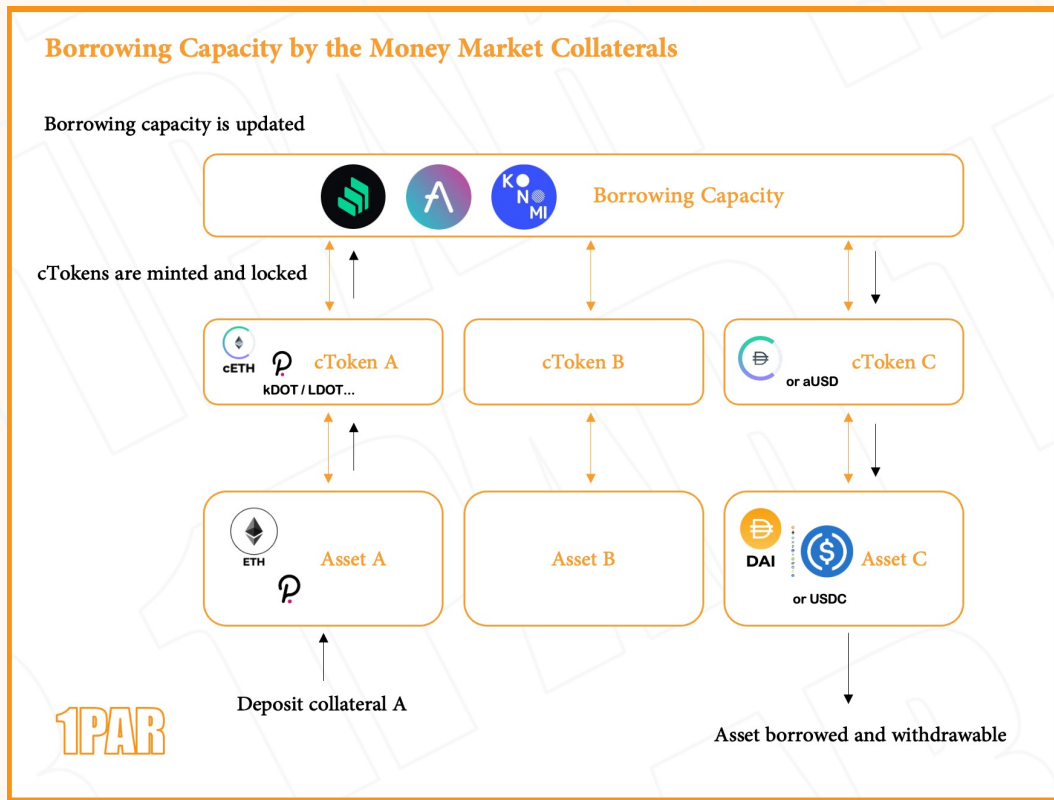
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- **Lending Side**

Borrowing an ERC20 token using ETH as collateral, users deposit their ETH into the supply pool. In exchange, they will get the equivalent cToken.

cTokens are interest-bearing tokens, so the tokens represent the right to claim the underlying asset plus the interest rate. If the user wants to exchange cToken for the original asset on this platform after a period, they will get the ETH plus some extra interest rate return.

cTokens is not only a claim to a specific asset supply pool, and then it will be lent to the borrower. cTokens also have other nice features: they can be transferred out of the money market and used as collateral for some other DeFi markets.



- **Borrowing Side**

At the other end of the market, let us imagine a user wants to lend some DAI to trade for other assets:

Users need to deposit Ethereum in the money market protocol, which exceeds the required borrowing value, because loans must be over-collateralized, and they are exchanged for some other assets, such as Ethereum. They will automatically get some DAI.

At this time, according to the collateral factor (range 0-1) of the assets used as collateral, the protocol should calculate the total borrowing capacity of the borrower (the combination of #cTokens*price*collateral factor).

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2.2. Lenders and Borrowers as Credit Market Participants

Compound is one of the pillars of the money market protocols, but in order to grasp the overall logic of the DeFi money market ecosystem in terms of research, it also needs to be integrated into the role of a money market participant. As the DeFi space develops and intersects with **TradFi (traditional finance)** use cases, it is expected that money market protocols will evolve to **credit market** protocol.

- **Credits in Borrowing and Lending**

The borrower and the lender create a credit market. Compared to the TradFi market, the collateralized borrowing and lending obligation ([CBLO](#)) can be a money market tool that represents the obligations between the borrower and the lender regarding the loan terms and conditions.

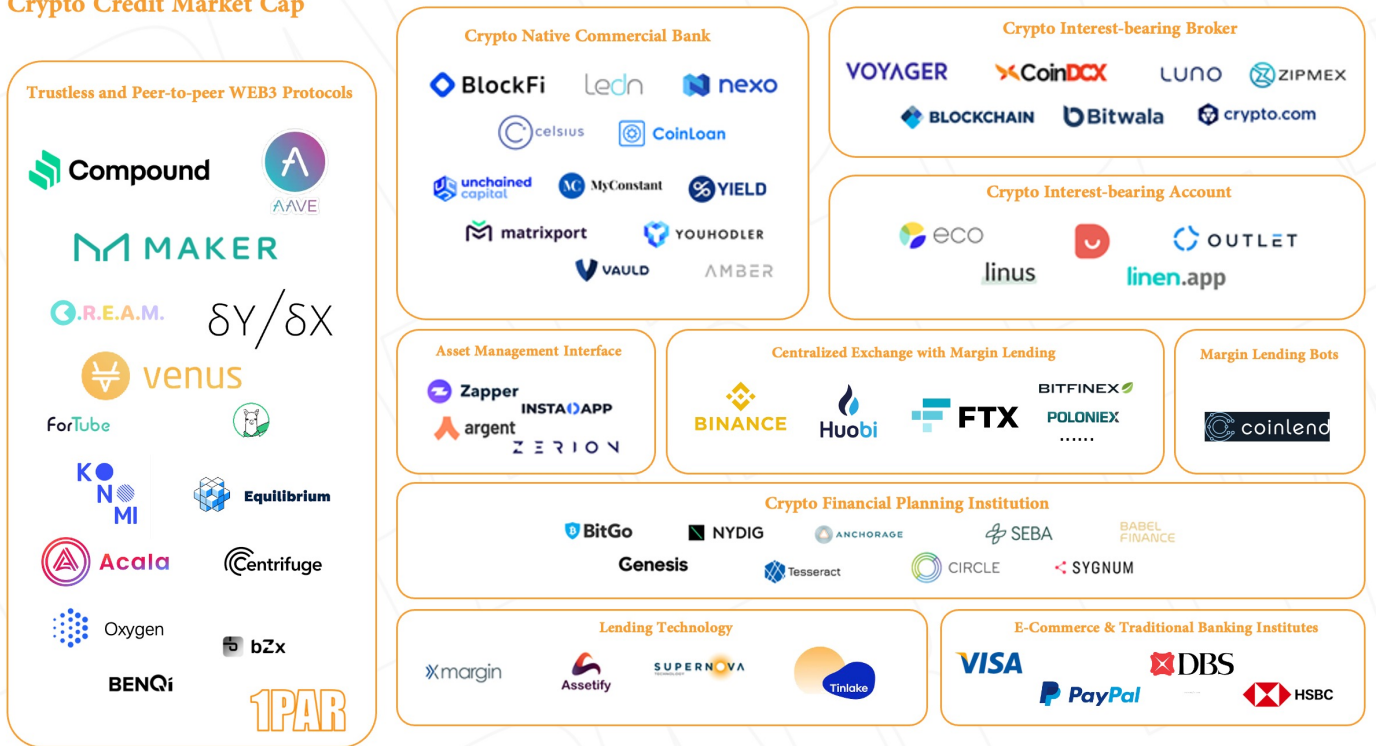
- **Collateral in Credit Market**

[Research](#) of Joseph summarizes that under certain conditions, such as identity proof (in the blockchain, such as valid on-chain identity or on-chain behavior verification), low-volatility collateral, or valid loan contracts, over-collateralization may be possible not a necessary condition, credit itself will be part of the supply side of the money market.

3. Money Market in WEB3 – Credits Market

The crypto credit market is not mainly built on the blockchain protocol layer, but the main market participants are those licensed crypto financial institutions, and the main retails and SMEs (small-to-medium enterprises) are also traders in the money market. Borrowings will be used for speculative activities with higher volatility, such as leverage, short selling, and leveraged ETFs. Among them are crypto savings & loans services such as [BlockFi](#), and, for example, some large centralized exchanges provide money market trust services.

Crypto Credit Market Cap

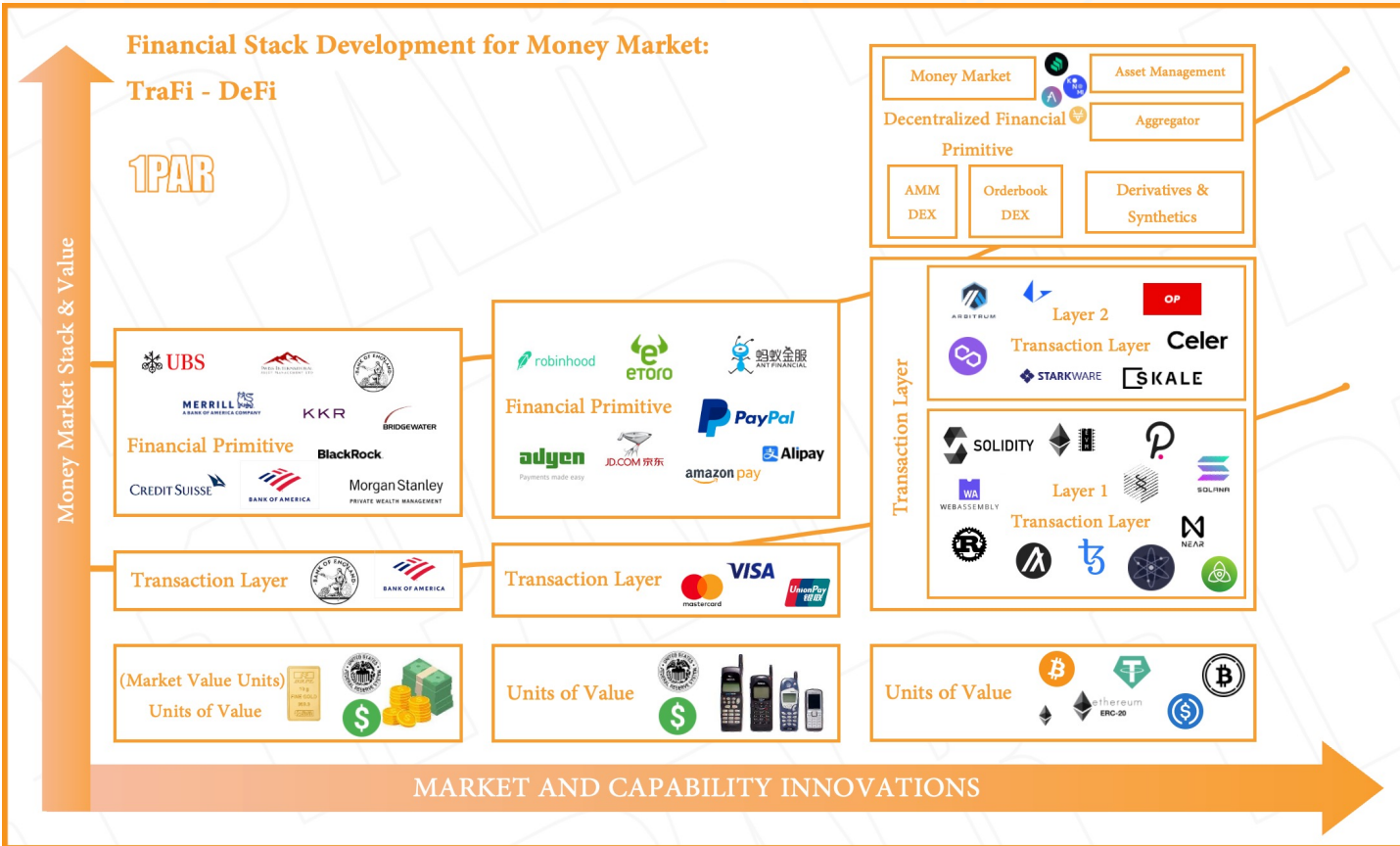


In the future of credit market, the peer-to-peer Web3 protocol based on smart contract protocols can not only attract native crypto users in a censorship-resistant way, but also can be combined with trusted agencies. In the future, many front-end users will not categorize the crypto loan apps into centralized and decentralized ones. In the back-end of the market, more institutions will adopt the DeFi protocol. At the back end, fiat cash deposits will be converted to USDC and directly borrowed globally or deployed into the DeFi lending protocol.

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4. Blockchain Tech Stack of Money Market

In the above section, we analyzed the two important components of money market protocol: the lender as the supply side, the borrower as the demand side, and the role played by the supply side and the demand side in the relatively formed credit market in the TradFi market. The embryonic form of the credit market on the chain in the future. We believe that money market protocol can become a credit market after gaining some new middleware stacks (such as credit authentication, behavior and decentralized identity authentication) in the future.



We are witnessing the continuous expansion and diversification of the entire money market and financial market, from physical entities to the Internet to deep networks (big data and AI) to distributed networks. In the first decade of this century, E-commerce and digital finance have brought about the mobile Internet, through which users can transmit available funds and assets and other values. This makes the old-fashioned financial industry receive a shock, but it also caters to adapt and realize self-reform. Also in the present ten years, the distributed ledger brought by Bitcoin and blockchain has made the Internet of Value possible, which is also the vision of Web3.0. In the future, the new distributed protocol will enrich the technology stack of the financial market, giving builders and users more choices. Everyone can own the ownership and use rights of assets, build a code-based money market and financial market with fewer trusts.

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We believe that in the future, the more innovative financial stacks added to the traditional financial markets will provide the necessary components of the money market to open the chain and real events, but in a peer-to-peer anti-censorship way, the users in the traditional financial market will be Asset certificates, credit vouchers, and past financial behaviors have been tokenized, and the DeFi protocol represented by the money market has evolved to DeFi 2.0.

5. Money Market Cross-ecosystem Performance 2021

From the perspective of money market and lending protocols that have fully met the production conditions:

- [Ethereum-based Lending Protocols](#)
- [BSC\(Binance Smart Chain\)-based Lending Protocols](#)
- [Solana-based Lending Protocols](#)
- [Polkadot/Substrate-based Lending Protocols](#)

We will first explain the reasons for using market lending protocols to express money market performance. First, the definition has not formed a unified term. The money market is still in its early stage and the number is small. They are collectively referred to by borrowing/lending (because in finance, the money market is a branch of the short-term borrowing & lending market), which allows our analysis to be better concise and more convenient.

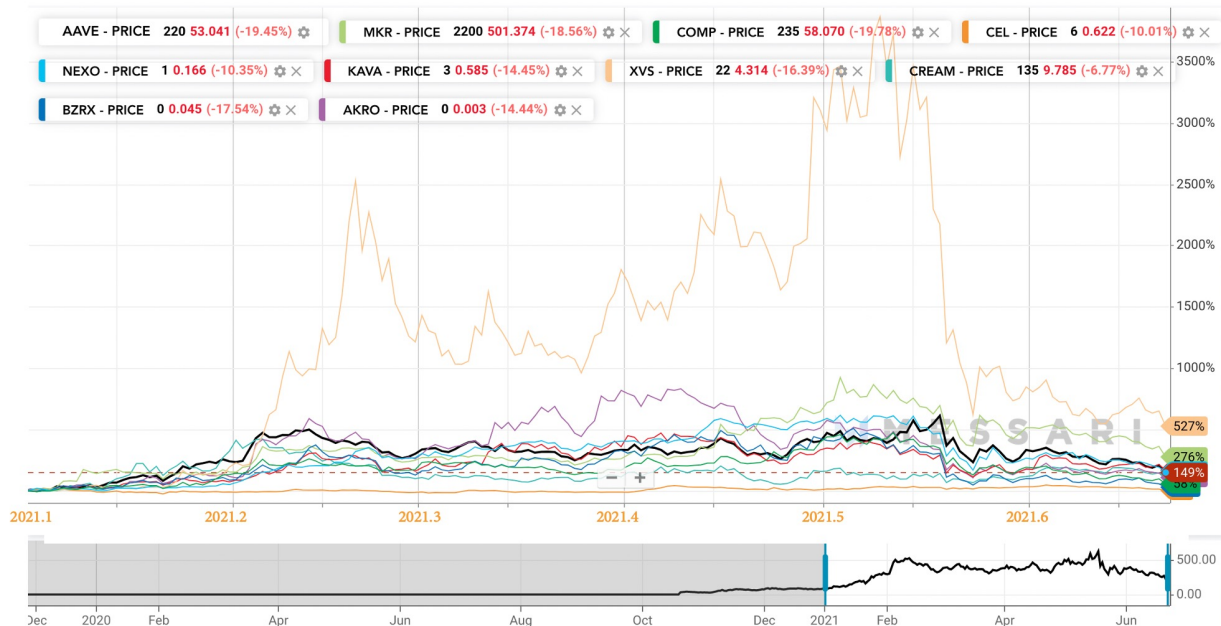
Majority of the the current lending protocols are short-term over-collateralized loans of fungible tokens. Therefore, the functional classification of lending protocols can be approximately equal to the money market. Money market protocols built on Ethereum and the most developed from the perspective of various financial data, has proved their robustness.

Honestly, the performance of the broader market in the 2nd quarter did dampen the confidence of many people and many other funds (of many forms). It is often said in the industry that liquidity has no sense of loyalty, not just the most direct price performance of per token, but also the performance of various financial indicators. The market before and after mid-May is a watershed for the current 2021 market.

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Accumulate Price Performance - Top Lending Protocols in 2021

Source: Messari, Collected by: **1PAR**

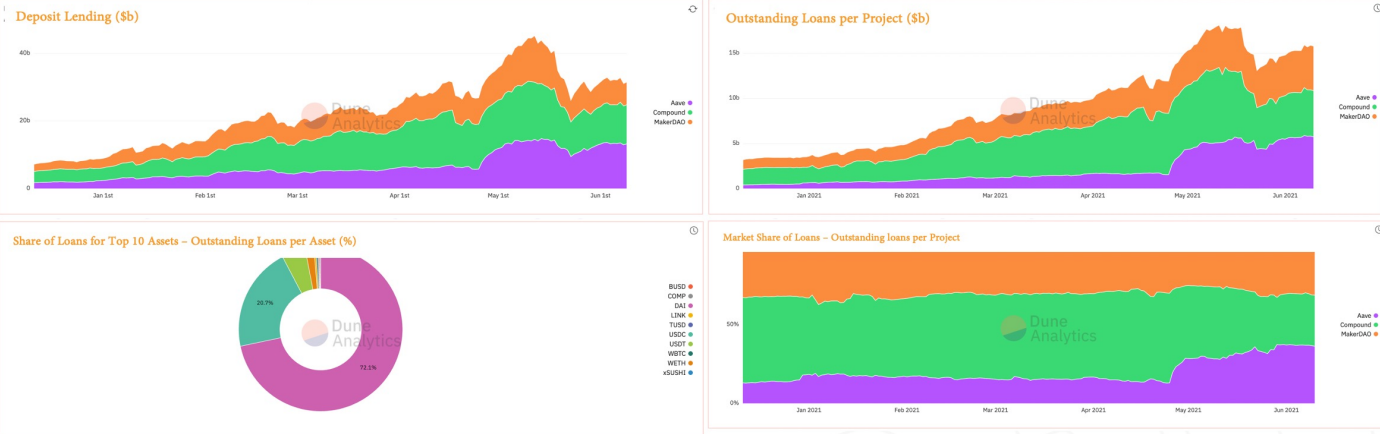


Then we return to the price performance. Coincidentally, the defi protocol is strongly correlated with the overall market and has greater alpha fluctuations. The performance of lending protocols on the public chain ecosystem, which has been widely adopted this year, is surprising, especially the lending protocol, Venus, [one of the fastest-growing](#) on the BSC. Refer to our thesis <2021 Thesis of Infrastructure Blockchain> to find the price review of the overall public chain platform. More microscopically, as of the data we have produced (June 21, 2021), the overall price of lending protocols returns at a price of YTD ~100% or more. This return is relatively objective. Bitcoin's YTD increase is 10-20 %, so it is still outperforming.

- Venus used to be the fastest growing number of pledges in all lending protocols, but an unexpected liquidation event occurred on May 31 and caused \$77 million in bad debts. From the analysis of the associated address, the reason behind it may be the [insider](#). The price of Venus has fallen back to the level of February this year.
- As the one of the most important stablecoin and lending protocols, MakerDAO has a relatively high price performance this year (+276% YTD). On 27 May, MakerDAO released the latest [roadmap](#), discussing the choice of the two roll-up schemes of Optimism and Arbitrum, and MakerDAO's current cooperation status with Starkware and zkSync.

Financial Performance - Top Lending Protocols in 2021 (Aave, Compound, MakerDAO), YTD 6.20.2021

Source: Dune Analytics, Collected by: 1PAR



In the performance of financial data, deposit lending and outstanding loan represent the amount of loan amount generated by the current pledge amount and the amount of excess that does not produce benefits, which to some extent represents the source indicator of future platform revenue. In terms of financial data, the callback of DeFi lending data is much better than the token price, maintaining at the level of April. The \$DAI and \$USDC used for lending are the main asset components (Share of Loans for Top 10 Asset - \$DAI & \$USDC – 92.8%).

Currently, most of the lending protocols that have been put into production are mainly based on Ethereum or Ethereum's fork chain. They are compatible with the EVM ([Ethereum Virtual Machine](#)) and the same Solidity smart contract. Therefore, developers and applications native to Ethereum can be migrated indiscriminately, including Binance Smart Chain, Heco chain and more centralized-exchange-backed chain platforms. Since the beginning of this year, the adoption of a huge increase in the number of compatible with its own innovative WASM ([WebAssembly](#)) smart contract-based Layer 1 public chain: Solana, Avalanche, NEAR are the first to launch, as well as the Layer 2 Scaling solutions led by Polygon.

6. Interoperability of Money Market in WEB3

[Dr. Jia](#) , [Parity Technologies Asia lead](#), [mentioned](#) the progressive relationship between Web3.0 and interoperability in Wangxiang Blockchain Hive College's article,

'Web 1.0 era is only readable, Web 2.0 era is the era of social networks, allowing us not only to browse, but also to create content, the era of Web 3.0 is the era of value network', allow us collect and browse content more Going forward, we can use blockchain technology to achieve no evil in finance. The code is the law, open and transparent, and point-to-point value transmission without the risk of centralized monopoly.

'Web3.0 is an application and product native to the peer-to-peer protocol of the blockchain', which corresponds to our vision of the protocol used in the back-end of the future money market application.

The concept of interoperability is also based on capacity expansion. Every financial application, regardless of traditional banking and wealth management applications, and products built on blockchain protocols, try to solve the problem of capacity expansion-that is, transaction throughput.

In a distributed blockchain network, in order to solve the throughput, choosing a high-throughput single-chain solution plus a safe and efficient cross-chain solution will be a feasible solution.

Then these cross-chain solutions require different public chains to support interoperability, and different application scenarios have different public chains. In the future, we will see a money market system with extremely blurred boundaries, that is, private chains, alliance chains, and public chains are connected to each other in some way.

6.1. Money Market Protocol Interoperability

The cross-chain interoperability of money market protocols has been led by the initial pioneers. As early as December 17, 2020, it was still the one of the earliest money market protocol dev company, Compound Labs, released the Compound Chain white paper, which is now named as Gateway. Gateway is a blockchain based on [Substrate](#), a blockchain development framework made by [Parity Technologies](#), the dev company behind [Polkadot](#), Gateway is currently running as the [Gateway testnet](#).



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Substrate is a blockchain construction framework led by Parity technologies. It was launched in 2018. Parity is the development company of the well-known Ethereum client [OpenEthereum](#) and Parity signer wallet. The co-founder of Ethereum and the former CTO Dr Gavin Wood is the founder of Parity. He's also the project lead of Polkadot and Substrate. Gavin once demonstrated on-site using Substrate to build a public chain from scratch and complete the on-chain upgrade within 30 minutes.

In general, Substrate is a custom blockchain building tool with many qualitative improvements. Based on the consensus of [NPoS\(Nominated Proof of Stake\)](#) and [BABE/GRANDPA](#), the blockchain can realize the modular design of the chain, no-fork upgrades, and decentralization. Governance and treasury functions.

Compound may use the Gateway to help alleviate the high gas fees of Ethereum. This is contrary to the solutions sought by most other important DeFi projects, which use Layer2 or sidechain platforms to scale their capacity rather than build their own cross-chain interoperability solutions.

We chose Substrate so that we could focus on building application code, instead of inventing consensus algorithms; it's a modern framework built on a modern language, Rust.

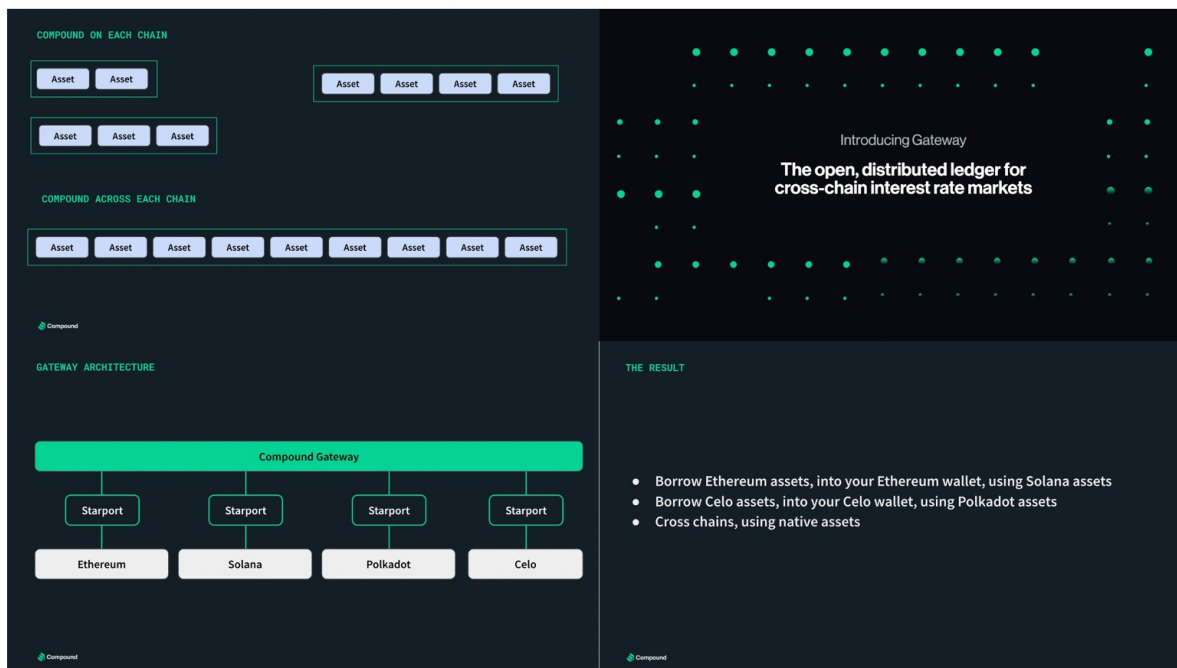
-- Robert Leshner, [Introducing Gateway](#)

Gateway is more like a stand-alone blockchain, and its entire architecture is built around cross-chain interoperability. Gateway users can upload supported assets from various public chains through its connected "peer chain" system. There is a bridge protocol called "Starport", which is associated with each peer chain and can lock or unlock assets on the Gateway.

Gateway can be one of the earliest major attempt of money market protocols, and it is also a breakthrough in the money market protocol on Ethereum. But in general, the main player of the cross-chain functionality, the infrastructure used by Compound chain is Substrate. The most important blockchain network and cross-chain protocol that use the Substrate framework is Polkadot, Polkadot's DeFi building blocks, and asset interoperability, as well as the native money market protocols, including its non-audited network, [Kusama Network](#), the new protocols may play important roles in money market.

Architecture of Compound Chain, Gateway

Source: Compound Labs



Source: Compound Labs, [presentation slides](#).

7. The Key to Scale the Money Market in the Polkadot Ecosystem

7.1 Review of Polkadot in 2021, a Layer0 solution to connect Layer1 Networks

Compared with the years-long Layer 1 platform, that is, the public chain/smart contract platform, such as Ethereum, and the new public chain that started this year, the Binance Smart Chain, Polkadot's native DeFi platform has not yet begun to deploy but has already established a wealth of multiple sectors, various subdivisions of the DeFi field have projections under development and deployment in the future.

Substrate-based DeFi Project List, 6.20.2021

Source: PolkaProject.com

<p>Acala Network</p> <p>Acala is the all-in-one DeFi hub of Polkadot</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Katal</p> <p>Standard Framework for Finance</p> <p>Substrate-based DeFi</p>	<p>Bifrost Finance</p> <p>Bifrost is the DeFi and Staking service for PoS tokens, that includes staking and liquidity pools.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Akropolis</p> <p>Unlocking the potential of informal economy with DeFi</p> <p>Substrate-based DeFi</p>	<p>Compound Gateway</p> <p>The open, distributed ledger for cross-chain interest rate markets</p> <p>Substrate-based DeFi</p>
<p>Sora</p> <p>Sora is a Decentralized Autonomous Economy chain</p> <p>Substrate-based DeFi</p>	<p>Kylin Network</p> <p>Building a Cross-chain Platform Powering the Data Economy on Polkadot</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Laminar</p> <p>Open Finance Platform, powering synthetic assets and margin trading.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Rio Chain</p> <p>Rio Chain is built for DeFi with the security, speed, scalability, accessibility, and interoperability needed.</p> <p>Substrate-based DeFi</p>	<p>Cyan Network</p> <p>Cyan is a decentralized cross-chain asset management platform to provide investors with easy.</p> <p>Substrate-based DeFi</p>
<p>Stafi</p> <p>Liquid Your Staking Assets. Elevating the risk of price fluctuations when staking.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Conversation Protocol</p> <p>Conversation Protocol is a synthetic asset issuance protocol and decentralized contract trading exchange.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Zenlink</p> <p>Zenlink is a cross-chain DEX protocol based on Polkadot.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Clover Finance</p> <p>Clover, Polkadot-Based All-Round DeFi Service Platform, is committed to providing easy-to-use.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Bandot</p> <p>Bandot is a decentralized and smart contract management platform that helps you use its.</p> <p>Substrate-based DeFi SmartContracts</p>
<p>OAX Foundation</p> <p>Making DeFi easy with Substrate</p> <p>Substrate-based DeFi</p>	<p>Polkadex</p> <p>A decentralized peer-to-peer cryptocurrency exchange for DeFi ecosystem in Substrate</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Keylans Network (KEN)</p> <p>Keylans facilitates infrastructural assets for maximizing efficiency of consensus and bonding.</p> <p>Substrate-based DeFi</p>	<p>Definex</p> <p>A financial market protocol</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Equilibrium</p> <p>The first cross-chain money market that combines covered trading with synthetic asset generation and</p> <p>Substrate-based DeFi SmartContracts</p>
<p>DeFi DAO</p> <p>DeFi DAO, initiated by DeFi DAO Labs, aims to build an open financial network. DeFi DAO enables customers.</p> <p>Substrate-based DeFi</p>	<p>Hangula Finance</p> <p>A cross-chain AMM (Automated Market Maker) DEX (decentralized exchange) with low fees, without.</p> <p>Substrate-based DeFi</p>	<p>HydraDX</p> <p>CROSS-CHAIN LIQUIDITY PROTOCOL BUILT ON SUBSTRATE</p> <p>Substrate-based DeFi</p>	<p>TIDAL Finance</p> <p>HydraDX enables users to trade in custom balanced liquidity pools</p> <p>Substrate-based DeFi</p>	<p>ETHA Land</p> <p>ETHA Land is a compatible protocol that abstracts the complexity in DeFi to provide algorithmically.</p> <p>Substrate-based DeFi</p>
<p>DeFior</p> <p>Shoring down Cross-chain DeFi Insurance Protocol built on Polkadot, aiming to empower DeFi services.</p> <p>Substrate-based DeFi</p>	<p>Karura</p> <p>The all-in-one DeFi hub of Kusama</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Shadows Network</p> <p>Shadows is a decentralized synthetic asset issuance protocol developed based on Substrate.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Nouns Network</p> <p>Open Insurance Platform for Open Finance. Create an insurance market to trade risk.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Konomi</p> <p>Konomi is a decentralized liquidity and money market protocol for cross-chain crypto assets.</p> <p>Substrate-based DeFi SmartContracts</p>
<p>BitGreen</p> <p>BitGreen, a decentralized nonprofit organization incorporated in Wyoming U.S.A, was founded in 2017.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Standard Protocol</p> <p>Standard Protocol is Polkadot's standard for synthetic assets, building a new paradigm for a.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>X Predict Market</p> <p>X Predict Market is a decentralized cross-chain prediction platform designed to provide diversified.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Vera Protocol</p> <p>Vera is an open protocol that enables peer-to-peer DeFi use cases of digital and real-world NFT assets.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Nuts Finance</p> <p>Nuts Finance is a digital financial instruments on the blockchain and launch your own proprietary peer-to-peer.</p> <p>Substrate-based DeFi SmartContracts</p>
<p>Evanesco</p> <p>Evanesco is based on Polkadot ecology, committed to building the next generation of decentralized new.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Skyrim Finance</p> <p>Skyrim Finance is the First Multichain Decentralized Structured Finance Marketplace aiming to build the.</p> <p>Substrate-based DeFi SmartContracts</p>	<p>Crafting Finance</p> <p>Crafting Finance is a synthetic asset issuance protocol and decentralized contract trading exchange.</p> <p>Substrate-based DeFi SmartContracts</p>		

Source: Substrate-based DeFi Projects, [PolkaProject](https://polkaproject.com)

The key to the native project deployed on Polkadot is its [crowd-loan launch mechanism](#). At present, Polkadot's twin experimental network, [the estimated launch order of each parachain on Kusama](#) has been relatively clear, and the first deployed one is Karura Network (Kusama version of Acala Network), Shiden Network (Kusama version of Plasm Network), and Moonriver Network (Kusama version of Moonbeam Network).

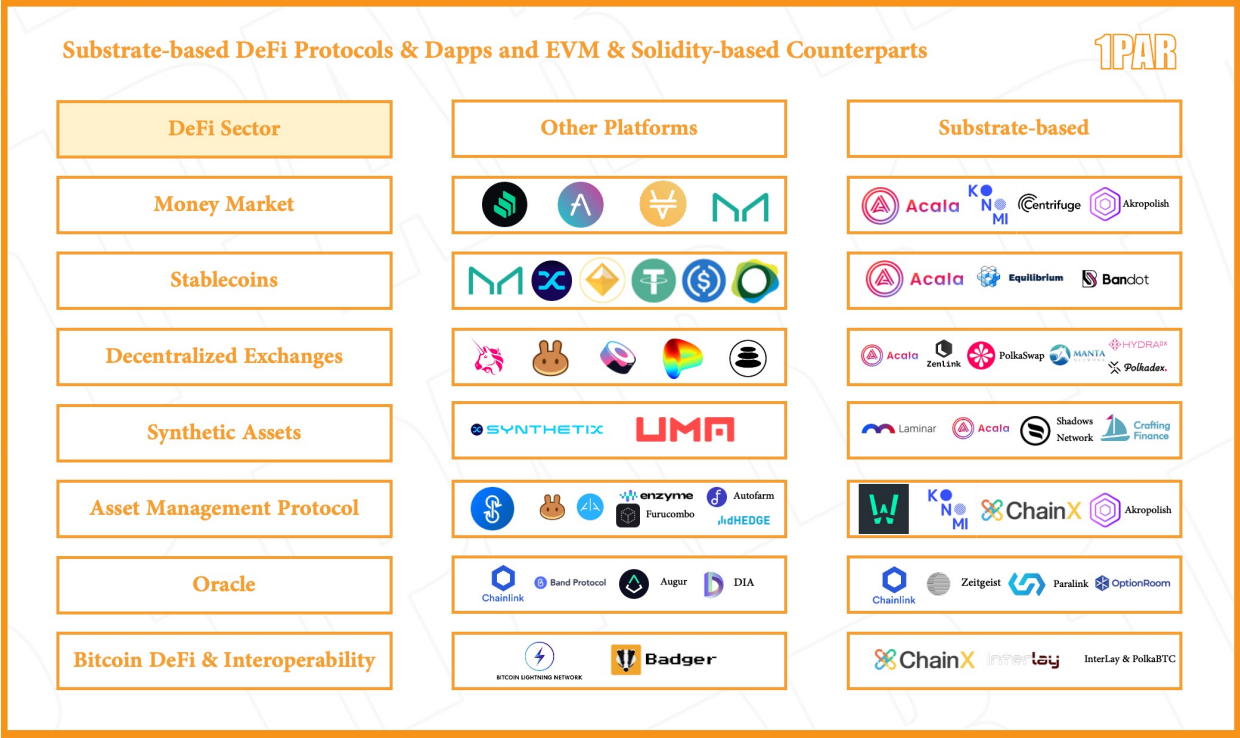
The mechanism behind it is that these Substrate-based chains with smart contract functions called parachains need to attract and bind votes by themselves or others (the holders of the original token KSM/DOT are the ticket warehouses). Connect with Polkadot, to be able to further communicate with other parachains, and furthermore, it will relate to other public chains through the future bridge. Our concluding thought it can be said that (Polkadot Network):

"it's a Layer 0 solution that can connect other Layer 1 blockchains (internal like Acala or external like Bitcoin or Ethereum) and their applications. Polkadot sits underneath these networks, facilitating cross-chain interactions and allowing connected chains to process transactions in parallel."

-- Mira Christanto, [Source](#)

7.2. Money Market as DeFi Building Block in the Polkadot Ecosystem

Not only from the current crowd-loan parachain auction on the Kusama Network, but also from the ecosystem projects in development, a large part of which will become parachains or applications are DeFi projects. We can find the counterpart to the DeFi protocols on Ethereum from the current native Substrate-built and Polkadot ecosystem projects.



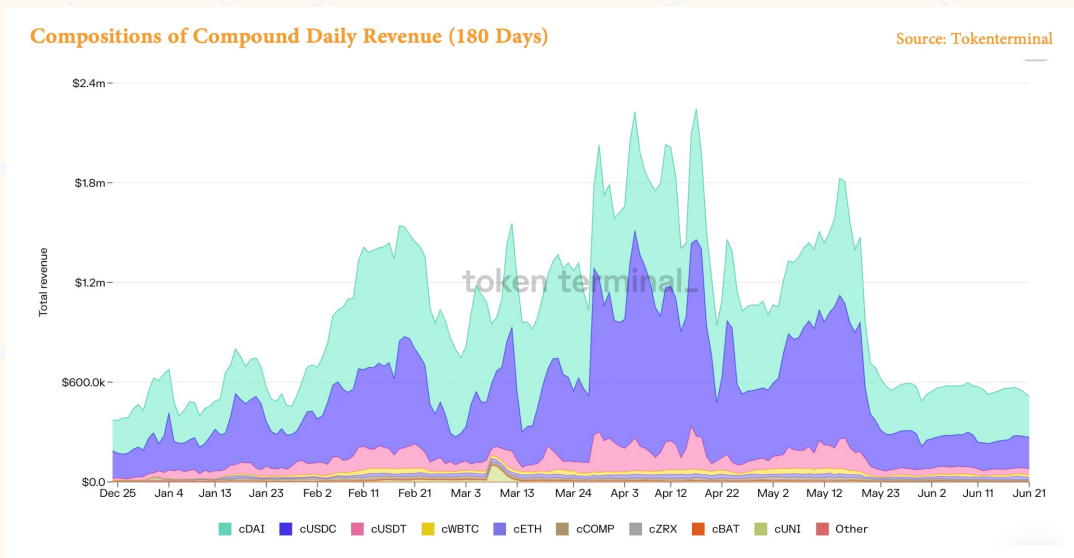
In terms of money market, we believe that the stablecoins, lending protocols and credit markets included in the money market protocols will achieve cross-chain interoperability in the Substrate framework. Other components are provided, including important modules such as oracle, synthetic asset, asset management, etc.

Compound's cross-chain solution is different from the scaling solutions of other major lending protocols. For example, [Aave chose to scale to Polygon](#). Several advantages of the DeFi protocol's upgrade may include:

- (i) **Wrapped tokens:** Through cross-chain technology such as cross-chain transfer bridges, the tokens of each platform asset may be able to directly exchange and interact without wrapping, even at the smart contract level. At present, the largest part of wrapped ERC20 tokens is mainly WBTC, and the adoption of Bitcoin in DeFi requires more effective means than wrapped tokens.

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(ii) **Stablecoin access:** The current major lending protocols need to wrap native tokens into their own platform format tokens or liquidity tokens when generating interest rates, to claim their future interest. Stablecoins are currently the main source of revenue for money market protocols.



Source: Composition, [Tokenterminal](#)

As more public chain assets can be exchanged on cross-chain bridges, access to stablecoins will become more convenient. But because of the interoperability platform as Polkadot, its construction of the DeFi protocol and dapps will be different from that of Ethereum. This is because the public chains such as Ethereum, Binance Smart Chain, Solana, Avalanche are still Layer 1 chains, which is the same as the system-level parachain 'Statemint' (parachain 'Statemine' on Kusama) on the tech stack. Therefore, money market protocols also play the role of the public chain settlement layer and enable smart contract execution. At the same time, allowing dapp to be built on it will become an edge breaker for money markets. This is broader than the single-chain-based DeFi protocols and dapps on Ethereum and it will be derived more composability.

8. Konomi Network to Bring Market Market Interoperability to Polkadot

8.1. Connected to Konomi, Money Market Adoptions on Polkadot

Konomi Network builds on the Polkadot and Kusama Network based on Substrate and supports decentralized liquidity protocols and lending protocols for cross-chain assets, developed by the Singaporean team. As a [WXblockchain Web3.0 Bootcamp candidate](#) and [Web3 Foundation grantee](#), Konomi aims to provide cross-chain asset trading, lending and asset management services for participants in Substrate chains. According to the official website plan, Konomi Network will support three functions: **lending, transaction, and wallet**. The latest product progress is currently being launched on the lending hub test network product demo.

(i) Decentralized Money Market

Konomi provides a money market protocol to support the borrowing and lending of assets on Polkadot. In terms of interest rate calculations, it is mostly based on both supply and demand of liquidity pool. Konomi lending pool uses a polynomial interest rate model. Compared with the linear interest rate model used by Compound, Konomi can stimulate early market supply and demand, and the market incentives for asset lending in the Polkadot ecosystem.

(ii) Decentralized Trading Protocol

Konomi Network establishes the liquid asset pool of the Polkadot ecosystem through the automatic market maker AMM transaction mechanism, provides users with decentralized asset transaction services, supports the constant product market maker system and external oracles to feed prices to determine the active market making of asset prices Commercial system (PMM).

(iii) Cross-chain Transactions

Konomi will use the cross-chain messaging (XCMP) function to support cross-chain transactions of assets. XCMP can enable a channel between two parachains for message communication.












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8.2. Expecting the chaos, Money Market Interoperability on Kusama Network

The biggest difference between Konomi and Compound is that Konomi can run as both a stand-alone Substrate-based chain and parachain. If based on single chain, it will naturally bring restrictions including fee settings and supported asset classes. As a money market chain project, Konomi can support other DeFi dapps to achieve more synergy.

Comparison of Konomi and other Money Market Protocols

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HQ Team	Singapore	United States	United Kingdom	United States & Europe
Chain Functionality	Substrate-based chain (dual-chains on Polkadot and Kusama)	Substrate-based chain subsidiary – Gateway		
Scaling Functionality	Polkadot parachains & chain bridges (5+)	Startport, self-owned chain bridge	Polygon	In plan <A Multichain Strategy and Roadmap for Maker>
Liquidity Assets	Konomi liquidity pool (Testnet: 5 assets – KONOMI/DOT/KSM/ETH/BTC)	Compound liquidity pool (total 11 assets)	Aave liquidity pool (total 25+ assets)	Borrow only (\$DAI), \$ETH & \$DAI
Protocol Standardized v. Customized	Allows customization of chain modules – based on Substrate	Gateway allows customization of chain modules	Standardized - Protocol built on EVM contracts	Standardized
Token Buy-back	Regular token buy-back & burn			
DEX Asset Exchange	YES, in future product			YES, by cooperation wallet
Governance & Treasury	On-chain voting, council, committee & decentralized governed treasury	Direct vote & centralized treasury (for Compound)	Direct vote & centralized treasury	Direct vote & centralized treasury
Market Cap (fully-diluted)	~\$39M	~\$2,320M	~\$3,230M	~\$2,256M

The major feature of Compound's liquidity pool lending is that lender and borrower can be regarded as two liquidity pools. The borrowing demand is running in the liquidity pool, as the borrowing interest rate and collateral value are automatically adjusted according to market demand through the smart contract algorithm. Konomi not only integrate the advantages of the Compound lending mechanism, but also based on the advantages of the Kusama and Polkadot relay, we believe that Konomi's interest rate update speed will be faster, and the curve will be relatively smoother.

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In the demonstration of the Chainlink channel, Konomi has realized simple deposit and lending in the testnet stage and has officially integrated Chainlink to update the money market price-feeding. In the third quarter's roadmap, Konomi will launch a peer-to-peer fixed-rate lending system and protocol, and with the opportunity of the parachain going live, Konomi will start the cross-chain transaction function.

At present, there are still relatively few chain projects that can do liquid pool lending in the industry, but it is indeed an indispensable financial infrastructure. We believe that Konomi is an excellent product that uses a horizontal line with Compound chain (Gateway). With the improvement of decentralized identity and credit infrastructure, Konomi will also design a credits mechanism to reduce the burden on mortgages for users with good credit.



9. Concluding Thoughts

The main goal of this thesis is to explain the current development status of the interoperability of the decentralized money market protocol. Based on the industry events and market performance this year, we explained in chapters:

- 1.1 Demand and supply, borrowing and lending play an important role in the working principle of the money market blockchain protocol.
- 1.2 The wrapped token generated by deposits plays a key role in the generation of borrowing capacity.
- 2.1 Develop towards WEB3, the credit market conceives a new generation of behavioral financial system that is not produced solely by cash and pledge.
- 2.2 This requires a lot of stack additions of new protocols in the WEB3 protocol, such as identity, collaboration, credit building, and decentralized social networks.
- 3.1 Stack map: The technology and enterprise stack from traditional finance to decentralized finance.
- 3.2 From the 'old' banks to the latest defi protocol, new financial technologies are available in every information age.
- 3.3 This makes the choices and entry conditions of creators and users more diversified, and is positively beneficial to the overall market size.
- 4.1 Money market protocols can be classified as a subset of lending protocols.
- 4.2 The price performance of these protocols this year has shown a sharp correction trend (return to January), and the bottom is still confirmed, but overall it outperformed the market by more than 1 times.
- 4.3 The financial performance of multiple protocols showed a solid tone with fewer corrections (return to April).
- 5.1 Interoperability is different from scaling in nature, and lies in improving throughput, but in improving the interoperability and diversity of protocols and markets.
- 5.2 Substrate, as a modularized blockchain rapid development framework, provides many easy-to-use tools.
- 5.3 Among them, Compound chain and gateway are relatively well-known current attempts.
- 6 Affirm that Polkadot belongs to the view of the Layer 0 solution, and build mega infrastructure in the form of connecting different public chains externally and internally.
- 7 Konomi Network has an underestimated market cap, but its rich and superior functional design, and multiple excellent chain functions that are inherently empowered by Substrate, are worthy of attention from users and institutions.

THANKS FOR READING!

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