Seal(Securities Allocation)

Wall Street on the Chain-A Blockchain Designed for Finance

WHITE PAPER

SEAL

Wall Street on the Chain

White Paper of Seal Chain

·Simplified Version·

In the 2008 Sub-Prime Crisis, overrated Asset-Backed Securities as the inducement had attracted massive amount of money flow to the uncertain assets. In the meanwhile, the SMEs (small and medium-sized enterprises) in the industry of financial supply chain were not capable to get loans since the difficulties in proving the authenticity of trade. Outside of trading markets, assets such as E-Commerce, inclusive finance, ABS, etc., are difficult to become circulated and exchanged to currency due to the unclear information of the object. Uncertainties and risks of these financial transactions had implied the Pain Point: TRUST which is hard to establish! And this is exactly what blockchain technology is good at.

Blockchain technology is still not perfect; the costs of technology development and operation are high. Most cases can't afford the high costs of such expensive system. However, it is affordable to start with financial scenarios due to the sufficient income. According to Credit Suisse, the total value of global financial assets reached $280 trillion at the end of 2017, which is equivalent to 15 US GDP or 22 Chinese GDP. In addition, it is not that complicated to have technology transferred in financial scenarios: the financial data structure of each industry is homogeneous. It would not challenge current blockchain technology much. Therefore, blockchain technology can be extensively adopted in finance which makes it one of the most suitable scenarios.

Seal Financial Public Blockchain

Most of the public blockchain projects are facing trilemma in technology, which are Security, Fairness and Efficiency. Mostly the focus would be on efficiency and fairness. However, Security has to be the first priority in the financial scenarios. Because the general public blockchains are lack of focusing on security issues that made them miss the huge market where blockchain technology could be applied rapidly. In fact, the current stablecoin in blockchain world cannot be used as a bridge connecting the real economy with the digital economy. The reason is unstable value of the cryptocurrency caused by the cryptocurrency supply either too high or not enough. Another reason is unreached consensus on the matter of collateral. Therefore, there are few financial practitioners have ever used stablecoin to transact. That has left a market worth billions of U.S dollars needs to be discovered and developed.

Based on the current situation, an elite team from Wall Street--Seal Chain, is determined to use blockchain technology and their decades of financial experiences to create a security-oriented public blockchain project especially for the financial industry. Seal Chain fully aims to create a secure and reliable freeway for global asset transactions by using consortium chain and gold which is highly trusted. Seal Chain is confident in the process of accelerating human society to enter the new generation of Finance: "Machine Finance"!

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1.1 What is Seal Chain?

Seal is the abbreviation of Securities Allocation. It is the world's first financial public blockchain with a stablecoin. It transforms the financial assets of the real economy into blockchain assets through blockchain technology. Investors can use the stablecoin to purchase blockchain assets, and use the SEAL Coin as gas fee to realize free circulation of assets within the Seal Chain ecosystem.

1.2 Why Seal Financial Public Blockchain is needed?

There is a trilemma in technology, there are security, fairness and efficiency some trade-offs in these three dimensions. At present, the public chain of the blockchain market is mostly for general purpose, they don't require highest level of security and fairness. Most of the general public chain cost as long as they are just good enough to be used in most scenarios. However, it is obviously not good enough for financial industry.

The Seal public blockchain focuses on the financial industry, is specifically designed for digitization of financial assets, so it must have the highest level of security, and being highly efficient while pursuing fairness. There is no logic for any general public blockchain to do this. If it does, it would definitely not suitable for most scenarios.

The highest level of security requirements and extremely high level of fairness needed in the financial industry determine the necessity for developing Seal public blockchain – a specific blockchain for financial applications.

1.3 Features of Seal Chain

The Seal Chain is the world's first financial public blockchain, focusing on block-chain financial asset trading. It is created for the fourth-generation block-chain--Smart Securities. Seal aims to build an ecosystem for the next generation of finance - "Machine Finance"

Three major business highlights of Seal Chain:

- **Designed by Wal Street's elite team,**
- **Smart Contract Platform Designed to Guarantee Secure and Precise Execution of Smart Contracts and dApps**
- **Jointly on line with 5 application scenerios**

Three technical advantages of Seal Chain

(1) The highest level of security designed for financial industry, expanded UTXO model, non-Turing complete smart contract,

(2) Innovative RPOS consensus mechanism, with wallet Built-in Enhanced Lightning Network Support and distributed exchange.

(3) High scalability, layered structure of the main chain/side chain, with technology in integrating Corda into side chain and fourth-generation payment.

Seal chain is guided by actual applications. With its core team is rooted in a strong financial and blockchain technology background, Seal Chain has a unique approach to ecological planning and technical architecture, and is committed to creating a new generation of secure and applicable public blockchain for financial industry.

1.4 Token Economy

Seal's Tokenomics can be summarized as a "Three-layer multi-token structure". Multi-token refers to multiple tokenized assets supported by Sealchain, and the three-layer structure consist of SEAL Coin Gas Layer, Stablecoin Payment Layer and crypto asset layer, which is the Securities Token Layer.

（1）**SEAL Token Gas layer.**

The SEAL Token is the bottom of the Seal Ecosystem. All asset transactions in the Seal Ecosystem require the payment of the SEAL Token as a Gas fee. Gas costs will be returned to the Seal's Ecosystem, 50% of which will be returned to the nodes of the Seal Main Chain (Nodes), and 50% will be returned to all holders in proportion to the Token. The total amount of Seal Token is 1.8 billion, and it will never be added. It can be cut infinitely.

Price is the most effective means of self-regulation of the market economy. Only through price adjustment can the free market allocate resources efficiently. The blockchain ecosystem is the ecosystem closest to the perfect free market. The storage capacity of the blockchain is an invaluable and scarce resource. Therefore, the Gas fee model must be used for self-regulation. The blockchain ecosystem exempting the Gas fee is not economically valid.

(2) Stablecoin Transaction Medium Layer

As the transaction medium of the Seal Ecology, stablecoin is used for transaction between assets within the ecosystem, which is the key to the entire payment system and the hub that supports the flow of assets in the ecosystem. Cryptocurrency generally has two functions, Store of Value and Transaction Medium. The stored value is required to resist inflation and the token value will fluctuate. Transaction medium is required to improved transaction efficiency and currency values must be stable. Therefore, the function of store of value and transaction medium are contradictory

and cannot be realized at the same time using only one token. This is also why Seal-chain must have a stablecoin in addition to the SEAL Coin (store of value). Stable-coin has opened the deposit channel of the cryptocurrency, enabling both parties to make payment in fiat currency conveniently at anytime and anywhere.

（3）Crypto asset layer.

Seal's original Smart Securities concept advocates the tokenization of financial assets so that it can use the stablecoin for free circulation in Seal's ecosystem. Essentially the same as the emerging STO concept on the market today. STO is more focused on regulatory compliance, and Smart Securities is the essence of the CIS economy. Only when token is correlated to the entity's financial assets, the requirements by the regulatory authorities are met.

Seal's ecosystem will support the tokenization of all financial assets, including but not limited to personal loan assets that are currently online; Seal also support the ABS assets being debugging, and Equity blockchain assets that will be launched before the end of the year. The Seal Chain is the main chain ecosystem that truly supports the offer of STO.

2.1 Stablecoin Transaction Medium Layer

Finance is concerned with accumulation and circulation of currency and funds. It refers to the economic activities of financing through the circulation of currency and credit channels. The core of finance is currency circulation and credit creation. Its carriers are banks, insurance companies, trust, exchanges and other financial institutions. The modern financial industry began in 1580 at the bank of Venice, Italy; And by 1694 the first joint-stock bank, the Bank of England, established the basic organizational form. Since then, the financial industry has expanded from banks.

Finance is a virtual economy that serves the real economy. Its operation is based on the analysis of real economic information or data. Therefore, the healthy operation of finance depends on the health of the real economy and the authenticity of the data. The risks of the real economy are inherently unpredictable, so financial institutions are covered by diversification of investment and risk premiums, which is also the reason for the normal functional charges of financial institutions. The risk of poor data veracity can be eliminated, and this is currently mainly achieved by a large number of offline investigations by financial institution, with high cost but low efficiency. Blockchain technology provides real, non-tamperable data, that eliminates human interference, and the marginal cost of obtaining real data approaches zero, which is the best solution for data authenticity.

Seal Chain created a public chain ecosystem can perfectly map the original data of

the enterprise onto the blockchain, adopting the method of off-chain data storage and on-chain data verification, which not only ensures the absolute security and confidentiality of enterprise data, but also ensures that the original data cannot be changed. Investors can conduct investment analysis and risk control based on the real data of the company, completely eliminating the unnecessary risk factors brought about by data fraud, essentially reducing the cost of financing and improving the operating efficiency of the entire economy.

2.2 Realizing Free Circulation of Blockchain Assets in the Public Chain Ecosystem

Seal provides companies with the technical means to independently launch blockchain assets (stocks and bonds) and freely transfer their assets in the ecosystem of the public chain. Seal adopts the main/side chain model. Any enterprise can build its own side chain by using the functional language provided by the main chain. The side chain can be a data node, a private chain, or a consortium chain, and it can adopt its own consensus mechanism. The original data of the enterprise is stored off-chain, and then the blockchain assets are distributed based on that data. These blockchain assets can be corporate bonds, equity, or asset backed securities based on real data of business operations. Blockchain assets are released on the main chain and at the same time circulate on the main chain. Any investor can make due diligence and purchase of the assets with the approval of the assets owner.

2.3 Providing Investor with Blockchain Investment Products Based on Real Data

Seal is committed to providing investors with blockchain investment products based on real data of the enterprise. An investor can become a node on the main chain or join a shared node to view the blockchain assets published on the main chain and the data of corresponding assets on the side chain. The original operational data of the enterprise is stored in real time and can't be tampered with. It is the fundamental data for investors to conduct investment analysis.

2.4 Creating a New Financial System – "Machine Finance" using blockchain Technology

Use blockchain technology and AI technology based on blockchain ecosystem to replace most financial intermediaries and create a brand new generation of financial system - "Machine Finance". The business model of financial institutions has two core cornerstones:

•Information asymmetry;

•Professional analytical skills.

Blockchain technology can provide real, non-tamperable data, and the data is always online and transparent which solves the information asymmetry problem for ordinary investors. Along with the rapid development of AI, advanced analysis

capabilities are no longer limited to professional financial institutions, ordinary investors can also obtain high-quality professional analysis capabilities by using the AI algorithm. In fact, one of the most popular applications for AI is the professional analysis of financial industry. By combining blockchain and AI, the future of financial industry is definitely "Machine Finance", where investors are able to make investment by utilizing AI within the blockchain ecosystem, which can greatly improve efficiency without expensive financial intermediary charges.

The blockchain is to change financial institutions instead of financial functions. The demand for financial services will always exist, so finance will always exist. However, the trend of change would largely impact current financial institutions providing financial services.

3.1 Five Technical Principles of Seal Chain

(1) Legal Compliance: Comply with relevant national laws, regulations and regulatory requirements, and provide technical support for regulatory audit;

(2) Traceability: Business and activities are recorded, traceable, and auditable;

(3) Highest Security Standard: Taking various advanced security measures to ensure the security of assets and transactions on the chain and prevent attacks;

(4) Privacy Protection: Protect the privacy of users on the chain and prevent the disclosure of user information;

(5) Business Orientation: Demand-driven technology, design and development prioritize applicable business scenarios. On one hand, utilizing the full extent of the blockchain technological features, while maintaining compliance, and on the other hand, we must also consider how to bring improvements and value creation to businesses.

3.2 Seal Chain Technology Architecture

On the basis of long-term tracking and investigation of various blockchain systems,

combined with the latest research progress in the academic field, we have uniquely selected and designed the Seal Chain's technology infrastructure in the areas of transaction model, smart contract, consensus mechanism and layered main/side chain. These features are then organically combined to create an efficient and secure financial main chain.

3.2.1 Technical Architecture Features

(1) Consensus Mechanism: With reference to the Ouroboros consensus mechanism, Casper consensus and fragmentation mechanism realization, Seal Chain designed a POS-based consensus mechanism named RPOS (Random POS) to achieve efficient resource conserving and high TPS consensus mechanism.

(2) Built-in Multi-currency Support: Compatible with UTXO model and Account model, achieving free exchange of multiple currencies directly on the chain in the form of atomic trading.

(3) Expanded Transaction Model: The Seal Main Chain has built-in support for various financial domain-specific data models. Users can easily construct existing financial business data into legal chain transactions, fully embodying the financial attributes of the main chain.

(4) Non-Turing Completeness Smart Contract: Drawing on the code is data concept of Lisp/Clojure language and Corda's contract design mechanism. To make it simple, smart contracts are data, no compiler, no virtual machine, no intermediate

language representation, and no complicated security sandbox mechanism. The contract is stored and invoked in source code form. It is not complete with Turing. It theoretically eliminates various security vulnerabilities brought by Turing completeness contract virtual machine mechanism and provides the highest security guarantee for financial business transactions.

(5) Layered Architecture design in Main Chain/Side Chain: With reference to the settlement layer/computation layer separation design concept and Ardor's side chain design concept, Seal chain adopts the layered architecture design in main chain/side chain: the main chain carries tokens, expands UTXO transactions, and some smart contracts function, the side chain carries business contracts, business data and business processes, and the token can be circulated in both directions between the main chain and the side chain.

(6) Wallet Built-in Enhanced Lightning Network Support: Improvement and enhancement made based on the implementation of existing Bitcoin Lightning Network technology, and built into the wallet. Provides a peer to peer fast payment channel for fast payment of multiple currencies including stablecoins.

(7) Decentralized exchange platform: The main chain relay node adds installable functional modules, pre-providing decentralized exchange function modules; Each node relayed by main chain can be a small exchange, users can directly make pending orders and trades through the wallet

(8) Scalability: The Seal Chain innovatively provides a standard API for side chain anchoring and an open chip-based anchoring device. Any consortium chain can

anchor itself to the Seal Main Chain through the standard API, thereby the trust level of the chain is enhanced and extended to the degree of the Seal Main Chain, which greatly enhances the professional value of the consortium chain and expands the application scenario of the Seal Chain.

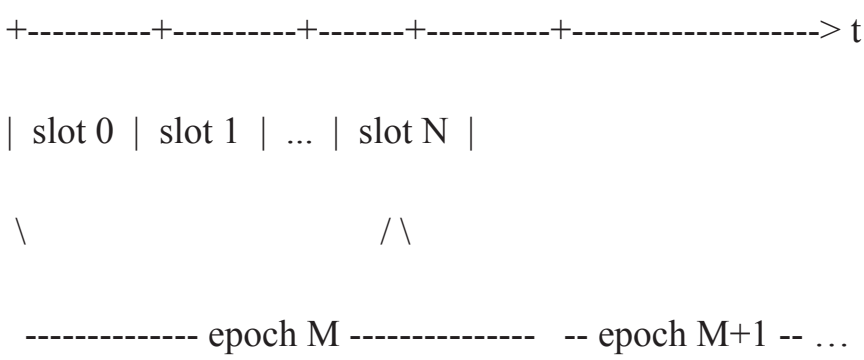
3.3 Composition of the Technical Architecture

Seal's technical architecture is based on a set of distributed business systems built on its own public blockchain architecture, including distributed smart contracts, distributed computing, automated clearing systems, and centralized public service modules, as follows:

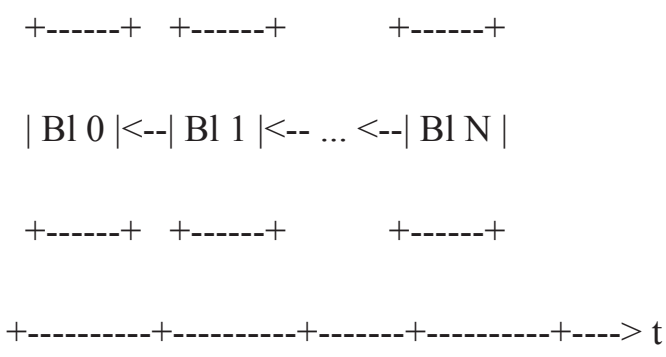
3.3.1 Consensus Mechanism

On the basis of fully examining the consensus mechanism of the existing block-chain system, referring to the Ouroboros consensus mechanism and the Casper consensus protocol, and absorbing the fragment design ideas, Seal Chain designed its own POS-based consensus algorithm named RPOS (Random POS) to avoid POW algorithm’s disadvantages of inefficiency and high energy consumption.

The consensus agreement divides the time into epoch, each epoch contains multiple slots, each slot lasts less than 1 minute.



Each slot has one and only one leader, and the leader has the right to generate a block in this slot.



How does the Slot Leadership Election Work?

Slot leaders are elected from all stakeholders, and only those with enough equity (for example, 2% of the total) are eligible to participate in the election. We call these owners "candidates". In the epoch election, a slot leader will be elected to partici-

pate in the next epoch. So at the end of epoch N, we know who the slot leader of epoch N+1 is, and this is unchangeable.

You can think of such an election as a "fair draw": any one of the equity owners can be a slot leader. But a very important idea in POS is that the more shares an equity owner has, the more likely it is to be elected as a slot leader.

Please note: Within the same epoch, an equity owner can be selected as the slot leader multiple times.

(1) Multiparty Computation

One of the fundamental requirements in the electoral process is unbiasedness. We need some randomness as the basis for the election. In this case, the result of the election is random and fair. But the question is, where does this randomness come from?

The Multiparty Computation (MPC) method is used to achieve this randomness. Each candidate independently performs a "coin toss" and then shares the results with other candidates. The idea is that the results are randomly generated by each candidate, but eventually they agree on the same final value.

(2) Submission stage

First of all, the candidate will generate a key (a special random value). Next, the candidate will form a "submission", which is a message containing the certificate of the encryption and the proof of the password.

The candidate then signs the submission with the key, specifying the epoch number and attaching its public key. In this case, everyone is able to know who created the submission and which epoch the submission belongs to. Subsequently, the candidate will submit it to the other candidates, and finally each candidate will receive the submission of other candidates.

Note: These submissions will be placed in the block, which means they will be part of the blockchain.

(3) Opening Stage

At this stage, the candidate sends an "opening" status, which is a special value for opening the submission. A submission is like a locked box (with a secret key inside), we need an activate key to open the box and get the key inside.

Note: All “opening” will be placed in the block and they will become part of the blockchain.

(4) Recovery Stage

This is the final stage. In the end the candidates would have both submission and opening. In theory, some voters can be opponents. It can advertise its submission, but does not disclose its opening. In this case, honest voters can post to rebuild the key. The idea is simple: even if some voters are opponents, the election can be successfully concluded.

The candidate then validates the submission, opens to match, and if successful,

extracts the keys from the submission and forms a seed (randomly generated number series) from those keys. Therefore, all voters will get the same seed and will be used to determine all the slot leaders for the next epoch.

According to a common random seed and the possession of the account's Seal Coin, the slot leader selection algorithm will deterministically calculate all the slot leaders for the next epoch, and the odds are directly proportional to Seal Coin possession.

3.3.2 Expanded Transaction Model

UTXO stands for Unspent Transaction Output, which is the data model of that was introduced by Bitcoin and used to record Bitcoin transactions. Each transaction contains several inputs and several outputs. The input points to the output of the historical transaction, and the output is the newly generated data which records the Bitcoin ownership for each account. It is a very sophisticated and powerful design, but with a single function. Based on the UTXO data model used by Bitcoin, Seal Chain has innovatively expanded the range of functions that input and output express: through the structure with built-in various financial domain-specific basic datas, the expanded UTXO model could encode circulation of various financial assets and transfer of ownership, that has greatly expanded the coverage of the UTXO model in the financial industry.

3.3.3 Non-Turing Completeness Smart Contract Design

The emergence and popularity of smart contracts is inseparable from the development of Ethereum: Ethereum develops a simple new Solidity development language similar to Javascript syntax. Users can easily develop smart contracts using

this development language. After compilation, they can be deployed on Ethereum network, for other people or other smart contracts to invoke. However, Ethereum's smart contracts are designed based on imperative language, and have complex functional mechanisms such as EVM virtual machines and compilers. The functions are Turing-complete, which makes it very prone to various security vulnerabilities. This has been fully verified by the numerous incidents that have emerged.

Security is the core requirement in the financial industry. In order to provide the highest security, Seal Chain does not adopt a Turing-completeness contract system similar to Ethereum. Learning from the recent rapid development of functional languages (Haskell, Clojure), smart contract system is designed based on the functional language, the smart contract written by the user is non-Turing completeness, directly deployed on the main chain in source form, interpreting execution, can only access the contract local storage, no infinite loop, theoretically eliminate the possibility of various holes, that has provided the highest security for various key financial businesses.

3.3.4 Layered Structure of Main Chain/Side Chain

Until now, all kinds of main chains in operation face throughput and performance issues. Bitcoin allows 7 trades per second and Ethereum allows dozens of trades per second, as well as the rapidly growing amount of data has put tremendous pressure on the existing main chain. We believe that it is not feasible to carry all possible scenarios on one main chain, and it must be managed separately.

Seal Chain designed a separation architecture based on the main chain/side chain. Seal Chain's main chain only carries tokens, based on expanded UTXO model and

corresponding smart contracts, token only carries key and important transactions and data. Seal Chain's side chain can carry a variety of complex calculations and a large amount of business-related data. Effectively isolates risks and provides good scalability: only need to deploy different side chains based on the Seal Main Chain to support a variety of completely independent business scenarios. Seal Chain's token can flow in both directions between the main chain and the side chain.

3.3.5 Scalability of Seal Chain

We believe that in the financial sector, the consortium blockchain system will exist and develop for a long time. Seal Chain positions itself as a financial main chain, so Seal Chain has designed a hardware-based consortium blockchain anchoring device. The various consortium blockchains that financial systems currently run can be anchored to the consortium blockchain provided by Seal Chain, which is very safely and conveniently anchored to the Seal Main Chain, it greatly expands the trust level of consortium blockchains, and also increases the business coverage of Seal Chain.

Seal Chain and R3 have formally signed a cooperation agreement; we will first integrate Corda as a side chain into the Seal Main Chain, providing strong support for various practical financial services.

4.0 Seal Business Model

The Seal Ecology is divided into three phases. The first phase is to create a fundamental payment layer using blockchain technology and reshape the global financial payment system. The second phase is to build the blockchain asset transaction application layer by using the fundamental payment layer as the fulcrum. The third phase is to build the next generation of machine finance by integrating AI technology, and eventually realize bringing Wall Street (financial center) on the chain. As the most influential financial market in the United States and even the world, Wall Street is still unable to rid the risk of collapse of the “trust mechanism”. Using blockchain technology to create a new financial system, integrating AI algorithm, realizing machine finance, and eventually creating a "self-trust" system, subverting the lumersome traditional centralization of credit information, and creating a fast, intelligent and self-certifying “Wall Street on The Chain” financial center.

The first phase – Creating the fundamental payment layer using blockchain technology and reshape the global financial payment system

Through the construction of the fundamental technology, Seal will gradually build a globally integrated blockchain payment system, which will be used to link to the financial ecology, and then build an asset trading platform, a distributed smart securities exchange. The platform's smart securities assets based on authentic operational data are traceable, including equity, debt, ABS, financial derivatives, etc. Institution or retail investors can make investment decisions by evaluating smart securities products through on chain information.

Three major advantages of the blockchain payment system:

1)Security – The on-chain information is immutable, the cost of fraud is high, and the history is traceable. The parties can transact without knowing each other's identity, increasing the security of payments.

2)Fairness – The on-chain payment system removes the need for intermediary, increasing the fairness of transactions.

3)Efficiency – No matter it is cross-border or cross-chain, on-chain payment is more efficient than the traditional payment method.

4)Low Cost – Compared with the traditional payment processing fee, the on-chain payment fee is close to zero.

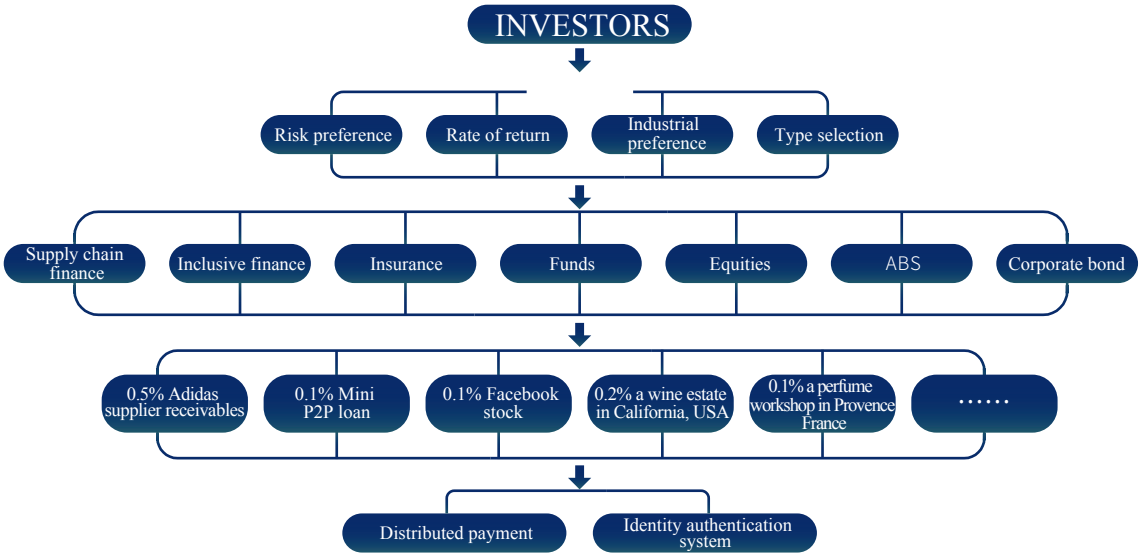
The Second Phase – Building the blockchain asset transaction application layer by using the fundamental payment layer as the fulcrum

The blockchain application layer draws similarity to the various applications of computers and smartphones. The on-chain application layer can have various application scenarios such as supply chain finance, inclusive finance and e-commerce. Seal uses the fundamental payment as the fulcrum to connect various scenarios to realize asset transaction flow, enabling real decentralization of transactions while achieving security, fairness, efficiency and low cost.

The Third Phase – Building the next generation machine finance by integrating AI, and eventually realize Wall Street on the chain

As large amounts of data are distributed across blockchain ledgers, the need to use AI is growing. The combination of AI and blockchain is reshaping the economic model and the way information is exchanged. In the second phase of Seal Ecology, third-party AI algorithms will be integrated for intelligent investment analysis. Institution or retail investors can use AI algorithms to screen smart securities products that fit their needs and automatically and intelligently distribute their investment into the Seal ecosystem.

Example:



An Investor wish to invest $10 million. On the Seal platform, the investor input individual preferences such as industry, risk, and rate of return. They can allocate investment to hundreds or even thousands of different smart securities products in a matter of seconds. The products may be stocks, bonds, or it could also be a winery in California, a perfume workshop in Provence, or an Internet company with a market value of 100 billion USD. Through effective investment diversification, AI algorithms can maximize risk dispersion and improve investment efficiency.

With the increase of investors and financial application scenarios on the chain, Sealchain will form a diversified financial ecosystem around equity, debt, ABS and financial derivatives, truly realize the Seal's vision of bringing Wall Street on the chain.

4.1 Underlying Framework of Blockchain Technology

I.Sealchain public chain online – asset bearer

SEAL main chain technical features are as follows:

1.The implementation of UTXO model supports native multi-currency

SEAL main chain supports three currencies: Gold Coin, Stablecoin and Seal Coin. Gold Coin and GD will be issued and destroyed according to the total value of gold on the chain and the market demand for GD, in order to achieve public and transparent market liquidity management.

2.Account model support

Users are able to hold and circulate various future tokens in the SEAL ecosystem, and receive dividends generated by the tokens through smart contracts.

3.Innovative contract engine support based on Clojure

SEAL is the only public chain with contract source code viewable on the chain. It deploys and invokes the contract directly from the source code, which is open and transparent.

4.Built-in token contract similar to ERC20 standard

Various standard tokens can be issued by using built-in contract without the need to write code. Support rapid blockchainization of various assets and creating a thriving SEAL ecosystem.

SEAL Sub-chain Construct

The SEAL sub-chain is a consortium chain anchored on the main chain. In 2018, the SEAL sub-chain provided privacy and customized business capabilities while inheriting the high security and trust level of the main chain, and is an important fulcrum for the diversified ecosystem of the main chain.

1.Complete the optimization of consortium chain network layer

Supports deployment behind firewall and can be deployed and operated in a complex network environment of the enterprise.

2.Complete permissions and custom contract support

Conveniently connecting with existing business systems and customized business processes.

II.Seal Investor Wallet – Blockchain Asset Transaction Platform

Seal tokens (including) will serve as a medium for all transactions, making investment in smart securities possible. Since the token is the flow of information and funds, it fundamentally eliminates the issue of trust and perfectly embodies the concept that blockchain is value chain.

4.2 Investor Wallet

SEAL Investor Wallet, in addition to meeting the basic functions of transfer, display balance, etc., also contains an investment interface, linking all asset platforms (P2P platform, supply chain financial platform, cultural art trading platform, etc.), the data of these platforms can be quickly reviewed, and investors can choose to directly invest in the corresponding product by using stablecoin in the wallet. This is not only a wallet, but also an asset transaction app that facilitates the financial investment of assets on the chain with digital currency in a convenient, fast and efficient manner.

1.Invest in quality financial assets around the globe

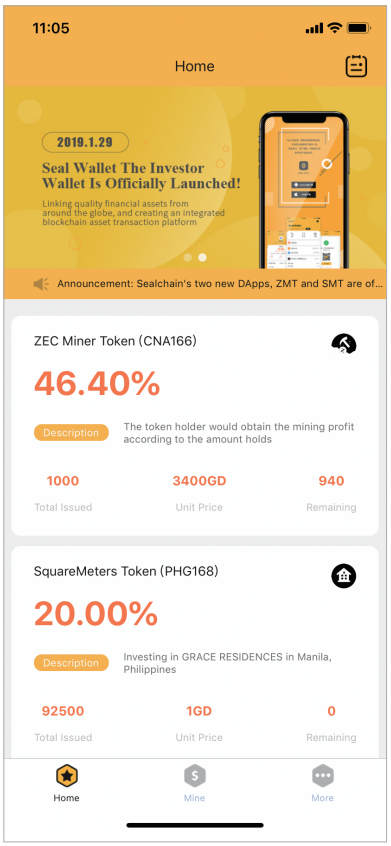
In the investor wallet, users are able to view the DApps and tokens in the SEAL ecosystem, and realize the purchase, circulation and dividend payout of the tokens.

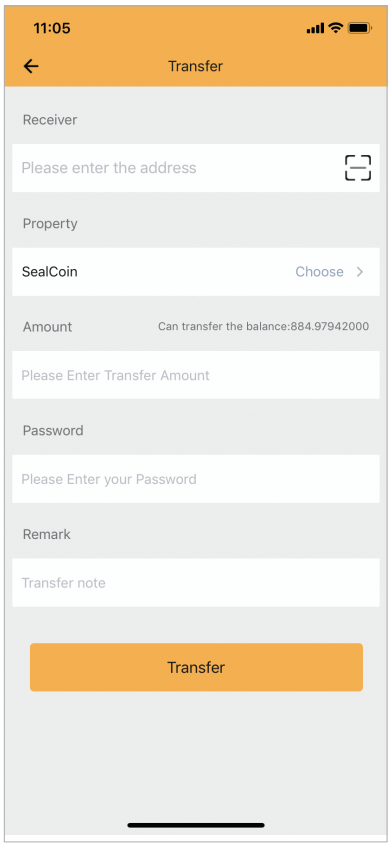
2.Authentic and transparent information

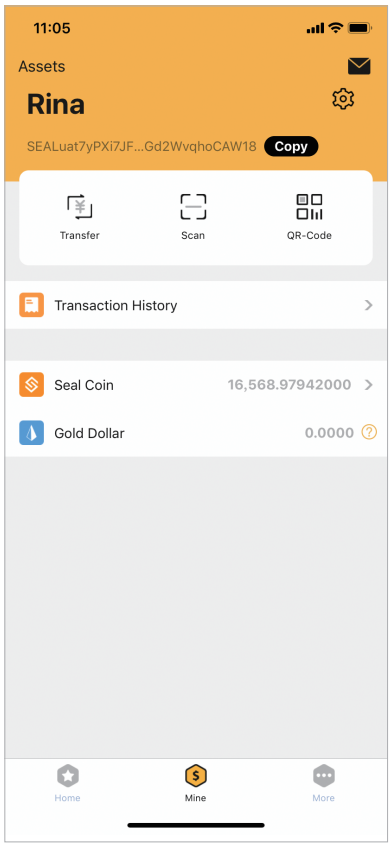
Blockchain technology guarantees the authentic status of the capital flow in the investor's account at the time of transaction, and all transaction data are traceable, and cannot be tampered with or deleted.

3.Decentralized financial management

Using blockchain technology to establish a mechanism that does not require third-party intermediary credit endorsements, thus eliminating the intermediate costs.

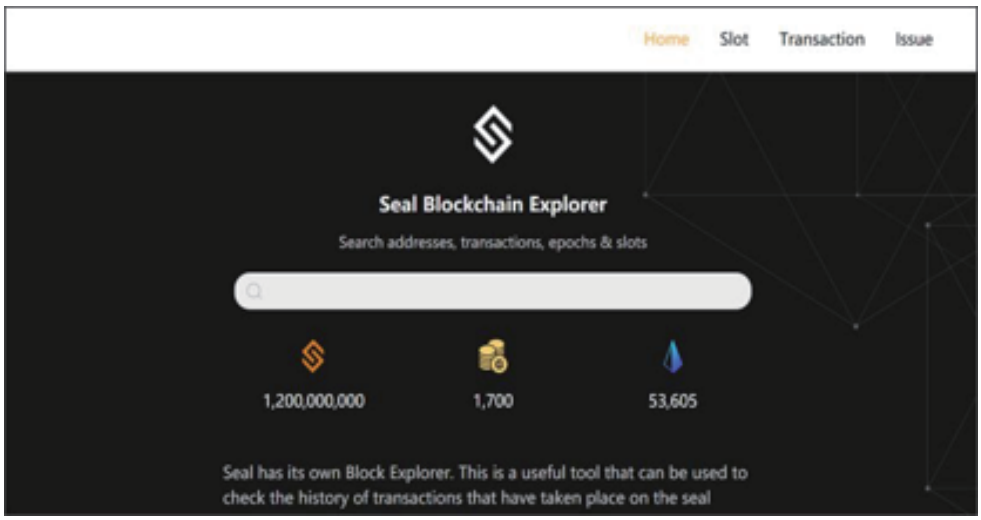


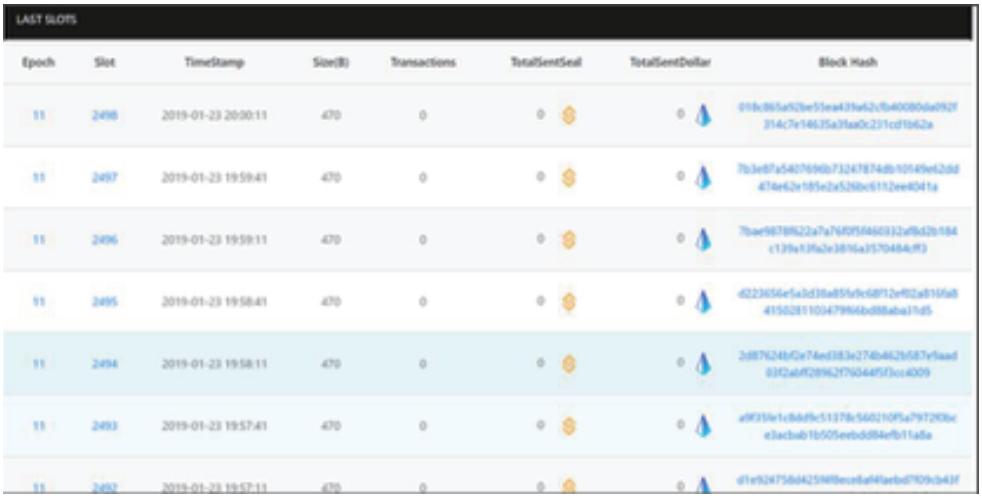




SEAL Blockchain Explorer – Public Chain Information Window

The SEAL Blockchain Explorer was officially launched on November 1, 2018. In the block browser, the issuance, circulation, income and dividend records of all the tokens, and the list of the token holder addresses are all viewable. All the tokens are transparent, immutable, and adhere to the spirit of blockchain.





4.3“Blockchain + AI” Building Wall Street On The Chain

Using SEAL's public chain as the information carrier, Seal Wallet and the Blockchain Explorer as windows to interface and display various types of tokenized securitization products. With increasing number of assets on the chain, real data is accumulated and distributed to each node. The AI algorithm concentrates the decentralized data on the chain according to demand, and intelligently screens the tokenized securitization products that meet the terminal requirements, the products that meet the requirements are handed to the terminal, and finally the funds of the terminal customers are distributed to multiple products for investment, thereby reducing investment risks and improving investment efficiency.

Blockchain can promote decentralized applications in the open data environment, and establish a "trust" system; AI fosters centralized intelligent technology on a closed data platform to achieve smart investment. "Blockchain + AI" seems to belong to two extremes, but in fact it can be combined perfectly. The introduction of AI can make up for the natural defects of blockchain distributed data, and blockchain can overcome the many shortcomings of artificial intelligence. The combination of the two can create a new generation of machine finance, which is equivalent to moving the financial system to blockchain, not only can decentralized secure computing be performed through blockchain, but also the intelligent screening of data through AI can be achieved, while ensuring data security and privacy.

Sealchain's vision is to create a new financial system that provides global investors, institutions and individuals with a portable, secure, transparent and professional blockchain asset transfer platform, subverting the centralized financial system, realizing machine finance, and ultimately achieving the grand mission of putting "Wall Street" on the blockchain.

5.1 E-Commerce

New research predicts that global E-Commerce sales will reach a new high by 2021. Global E-Commerce business is expected to grow by 265%, indicating that there is no sign of a decline in the future E-Commerce market, and it will rise steadily. Interestingly, global E-Commerce sales still account for only a small portion of global retail sales. According to data, global E-Commerce sales will account for 11.9% in 2019 and are expected to reach 17.5% by 2021. This means that the future E-Commerce market will have more growth opportunities.

In order to occupy a place in the E-Commerce market, payment and supply chain finance cannot be neglected.

5.1.1 Payment Application in E-Commerce

I.Pain Points of Payment Industry

1.Formation of oligarchy raises high moral hazard of centralization.

Data shows that the third party payment market has entered a mature stage, and the oligopoly market structure leading by Alipay, fortune pay and PayPal has been formed. The oligopoly structure can easily cause market monopoly, and transaction fees and security of user information can not be guaranteed. In recent years, the centralized payment mode has caused various privacy disturbances. A payment platform uses annual bills to improperly collect users' data, violating users' privacy.

2. Pain Points in Cross-Border Payment.

There are pain points in cross-border payment, such as high transaction fees, time

consuming and insufficient security. Cross-border payments are usually controlled in the hands of several oligarchs, and transaction fees are extremely high. Moreover, because the financial payment system between the two countries is very different, the circulation of funds in the two systems takes a long time, the cycle of capital turnover slows down. In addition, because foreign institutions are not regulated by China, the security of funds can not be guaranteed.

3. Difficulties in Online Payment Normalization

According to statistics, the network penetration rate of Thailand, Philippines, Vietnam, Cambodia, India, Indonesia, Egypt, Algeria, Ukraine and other countries is less than 10%. Moreover, in more than 200 countries around the world, there are nearly 2.5 billion people with no bank accounts and credit cards, which makes it more difficult to normalize online payment.

II. Advantages of Blockchain Payment

1.Decentralization to guard against moral hazard

The point-to-point principle of blockchain enables both parties to conduct point-to-point transactions directly and freely worldwide without third-party authoritative bodies.

2. Improving the efficiency of cross-border payment

Using blockchain payment network for cross-border transactions, the two parties can achieve point-to-point direct transactions, and transactions can be completed in

a few seconds, and transaction fees are almost zero. Blockchain network allows transactions to be easily, cheaply and safely transferred to anyone on the network with no restriction of borders.

3. Increasing payment normalization

Cryptocurrency used for payment can effectively solve the payment problems of many countries in Southeast Asia, the Middle East, Eastern Europe, South America and other regions where internet is not efficient. Blockchain payment would make payment possible so the rate of payment normalization rate would be improved.

Case: Fucent Gateway Corporation

Seal reached strategic partnership with Fucent gateway corporation, the only financial service provider in the Philippines that cooperates with Wechat Payment. It provides lightning payment services to customers in 3,000 Philippine outlets. Users can achieve fast and low-rate transactions without network. As a start in the Philippines, the payment scenario cooperation is being carried out regarding the policy of Belt And Road.

Case: GuoChuangYuanHe

Seal Chain has reached strategic cooperation with GuoChuangYuanHe to launch in-depth cooperation in financial, E-commerce and social networking scenarios to jointly promote the implementation of blockchain payment. GuoChuangYuanHe is a large-scale high-tech software enterprise with independent research and development capability. Adhering to the corporate purpose of "Finding Precise Users for SMEs and Individuals", the company is committed to creating a platform

for long-term stable profits for partners through Mobile Internet blockchain. It is composed of many sections, such as “Quick collection of Red Envelopes", "Honey information", "Honey Mall" and "Honey Play". Token “SEAL” as a circulation media is used for payment, circulation and right confirmation in each section.

5.1.2 Supply chain finance Applied to E-Commerce

Under the traditional supply chain financial model information systems between companies is uneven, cost of business collaboration and communication between enterprises is high, information between enterprises is opaque, it is difficult for enterprises to prove the authenticity of assets and transactions in facing financial institutions, which makes the core enterprises unable to delivery trust effectively throughout the supply chain, eventually led to the difficult and expensive financing for small and medium-sized enterprises.

I. Pain Points and Solutions

1) Each link in the supply chain is independent for the rest, which lead to information silo.

In the supply chain, there are many participants, whether it is business flow, information flow, logistics or funds flow, it needs to be transmitted through many links, the span is large and the authenticity is difficult to guarantee. At the same time, the ERP systems of the participating enterprises are incompatible, which forms information silo, trade information can't be shared in real time, the transaction is difficult to be effective verified, making it difficult for financial institutions to conduct credit evaluation and dynamic risk monitoring for SMEs, thereby further increasing the difficulty and costs of financing for SMEs.

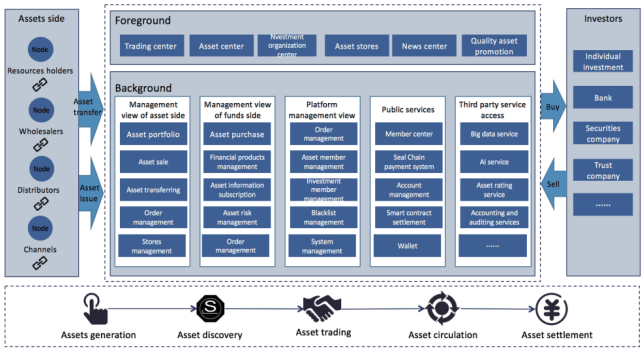
Solution: The supply chain based on blockchain technology will connect all links and change the situation of the past.

2). The source of information is uncertain; core enterprise credit can't be introduced to suppliers in multiple tiers.

In the industrial chain, purchase orders are introduced from the core enterprise to the first-tier suppliers and beyond, the funds are introduced from the core enterprise to every supplier. That is to say, the source of funds receivable for all tiers of suppliers comes from the core enterprises, but the credit rating of the core enterprises can't be introduced to all suppliers in the same way as the goods flow, funds flow and information flow. In the traditional supply chain financial service, only the first-tier suppliers can rely on the core enterprises to obtain financing, the fundamental reason is that the data is opaque, the business flow, funds flow, information flow and logistic flow are not interlocked to form a complete data link. For example, the sales order of the third-tier supplier can’t be associated with the procurement of core enterprise, and it can't be proved that the sales order funds of the third-tier suppliers is from the core enterprise. As a result, the credit rating of the core enterprise can't be introduced to the supply chain beyond the first tier suppliers.

Solution: With the traceability characteristics of blockchain technology, the anti-counterfeiting and traceability of information in all links of the supply chain could be realized, thus the credit rating of the core enterprise could be introduced effectively.

The Demo of Investor's Wallet is as follows:



3). The information recording system is not perfect and can't be verified by multiple parties.

Solution: With blockchain technology, the forensic and notarization of all links can be achieved, along with multi-party verification and effective resolution of disputes.

II. System construction

Seal Financial Public Blockchain will reshape the traditional supply chain financial model, build a smart contract platform with traceable and non-tamperable features of blockchain, so that corporation credit rating can flow and be introduced, so as to build a supply chain financial ecosystem, integrating financial institution, core enterprise, financial service platform and SMEs, to solve the financing prob- lems of SMEs.

Case 2:Oasis Future

Oasis Future is a global travel finance service company ; Relying on big data,

artificial intelligence, cloud computing, blockchain and other technologies, Oasis Future successfully develops global tourism resources, provides upstream and downstream tourism companies with a full range of financial services; At the same time, Oasis realizes the free flow and trading of tourism assets through its asset trading platform, accelerating circulation of tourism funds, hence reduces the overall financing cost.

At present, Oasis Future has more than 100,000 large B-level enterprise customers and hundreds of thousands of small B-level customers, in upstream-downstream relationship. Since 2018, the company have cooperated with Seal Chain to start the

blockchain recording of base assets, with that supervises the life cycle of the assets; Based on the chain transaction data as the core risk control means, Oasis Future has provided the supply chain financial support for the corporate customers on the chain, with the average amount around 2 million RMB. Now the accumulated loan amount has exceeded 1 billion RMB, with the overdue percentage less than 1%.

The Demo of Yiqiliuliu (a tourism platform)

DEMO of trading platform for tourism assets as belows:


客户电话0592-35672183
联系我们：
帮助中心 | 欢迎，黄先生 | 退出
SEAL 旅游资产交易
首页 我要投资 我要出售 我的帐户
我的投资
链上验真
到期清算
投资收益
资产实时数据
门店管理
我的投资交易
报价管理
订单管理
智能合约
还款管理
到期还款
还款历史
用户中心
基本信息
账户管理
账单明细
区块浏览器
投资收益统计
投资统计
收益统计
投资统计
收益统计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资产管理
交易管理
门店管理
实时数据
智能合约
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序号 资产编号 资产类型 资产金额（币） 可出售（币） 已出售（币） 资产状态 交易状态 资产开始日期 资产到期日期 操作
1 B20180420001 应收帐款资产 8000 5000 5000 部分转让 待发布 2017-5-20 2018-5-20 查看 已推荐
2 B20180420002 保理资产 10400 10000 0 有效期 交易中 2017-4-28 2018-4-28 查看 未推荐
3 B20180420001 应收帐款资产 8700 5000 5000 部分转让 待发布 2017-5-30 2018-5-30 查看 未推荐
4 B20180420002 保理资产 347000 241000 0 有效期 交易中 2017-8-20 2018-8-20 查看 未推荐
5 B20180420002 保理资产 22000 20000 0 有效期 交易中 2017-9-20 2018-9-20 查看 已推荐
6 B20180420002 保理资产 19000 10000 0 有效期 交易中 2018-4-20 2018-9-20 查看 已推荐
7 B20180420001 应收帐款资产 294000 39000 5000 部分转让 待发布 2018-6-20 2019-6-20 查看 已推荐
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5.2 Inclusive finance

At present, traditional credit investigation mode have left millions of people

without basic financial services. Statistics show that only less than 9% of citizens in developing countries have ever borrowed money from financial institutions.

5.2.1 Market capacity and beneficiaries

(1) The 2.5 billion population without any bank account and credit card, located in nearly 200 countries and regions all around the world.

(2) People without credit record and debt record in traditional financial institutions.

(3) Blue collars, white collars as well as owners of SMEs, who have strong consuming demand and good repayment ability.

(4) The students of senior high school or higher educational background, who have no fixed income but good credit.

(5) More than half of Internet users worldwide, who need digital financial services and innovative financial solution

(6) Practitioners and participants in crypto currencies market.

(7) The current over $10 trillion lending market, with compound growth rate of 14%.

5.2.2 The current status and pain points of inclusive finance

The lack of access to financial services has forced many people to obtain loans from illegal institutions, and P2P online lending is a new type of lending model based on the Internet between individuals and small/micro enterprises. P2P on line lending provides convenient financial services for individuals and small and/ micro enterprises, and provides investors with efficient and high-yield investment options. However, in the recently rapid development of the P2P online lending platform, there have been frequent financial security incidents such as platform misappropriation of funds, money-carrying and absconding. The main reasons for those problems include the following:

(1) Funds need to go through the platform, which makes fund security difficult to ensure.

The P2P online lending platforms collapse as the management misappropriates funds. The main reason is that the funds of investors and borrowers need to go through the platform, the funds are used by platform without supervision, fund security is difficult to ensure. Once the platform is not well managed or for other reasons, it will lead to above mentioned situations.

(2) The information flow is inconsistent with the funds flow, the transaction security can't be ensured.

In a typical P2P online lending platform, lending relationship will take effect immediately after the investor's lending is completed, however, the funds are still in the platform, and the borrower can't get the money in the first time, borrower needs

to withdraw cash from the platform for getting the money. This situation has created an inconsistency between information flow and funds flow. Once the platform mis appropriates funds and can't repay in time, transaction and funds security can't be ensured.

5.2.3 How does Seal Chain build scenarios of inclusive financial

Seal Financial Public Blockchain uses the stablecoin as the payment media to achieve decentralized peer-to-peer payment, and the funds don't need to go through the platform. The investor invests one-to-one borrower through the stablecoin, the borrower also receives the money at the same time as the loan relationship takes effect, ensuring the absolute security of the funds and transactions. At the same time, P2P platform lending, risk control, default and other data are recorded in the chain in real time. Therefore, the risk control capability and profitability of the platform can be continuously witnessed on the chain as well as the repayment history and credit status of each borrower, which helps to enhance the confidence of investors.

To establish a free and transparent circulation mechanism for borrowing and lending assets, with the advantages of blockchain in distributed ledgers, smart contracts and other technologies, Seal Chain could achieve the following targets:

(1)Breaking geographical constraints of the traditional financial system and allowing funds to circulate globally in a efficient way.

In Seal's inclusive financial scenarios, anyone can borrow and lend money at low cost, in nearly real time, anywhere in the world, making microfinance more

efficient, convenient, safe and transparent. Interest rates of this global lending market will be determined regardless of locations, and it solves the problem of interest rate differences, which affect countries worldwide. Specifically, developing countries (such as most African countries) suffer the most; interest rates of their microloans are dozens of times those of other regions. Through Seal's inclusive financial scenarios, digital currency holders all over the world can lend funds to countries and regions with higher interest rates, free from influence of exchange rate. When supply and demand are constantly balanced, the gap in loan interest rates between countries will gradually narrow, and ultimately all people of the world will truly receive “inclusive” financial services.

(2) Achieving the integration of funds flow and information flow into one, establishing an efficient and transparent two way credit risk assessment model.

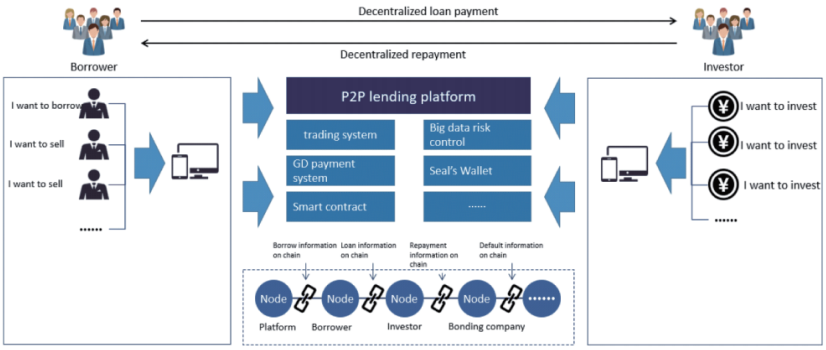
In Seal's financial scenario, investors and borrowers correspond one-to-one, lending relationship and funding relationship will be established at the same time. Funds flow and information flow are combined into one to avoid the risk of money abscond by platform, and ensure the efficiency and transparency of funds flow. At the same time, all records of investor information, borrower information, risk assessment model and lending behavior are recorded on the chain. No third party can tamper it, gradually credible information will be assessed; an efficient and transparent two way credit risk assessment model will be established; a credible “portrait” of investors and borrowers will be established and a highly trusting blockchain inclusive financial system will be built.

(3) Innovating the inclusive financial model to cover diversified financial needs.

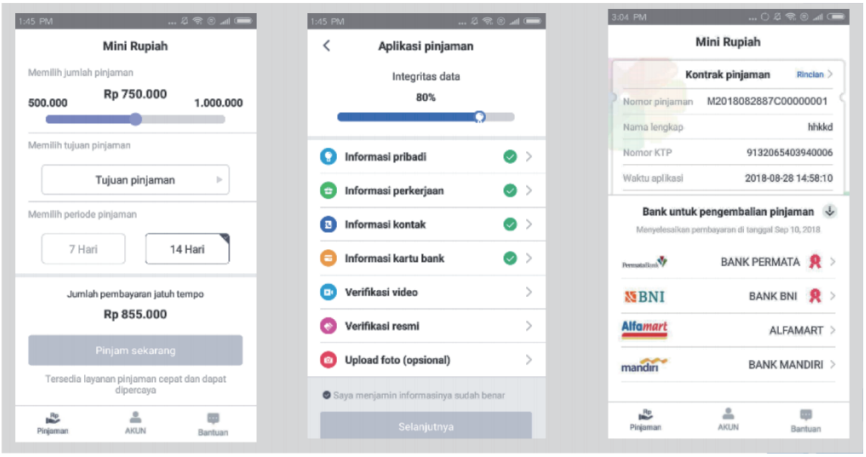
In the Seal's financial scenario platform, digital assets holders can become investors by directly lending digital currency to obtain stable and safe returns; At the same time, they can use these digital assets as collaterals without giving up ownership, borrow money at market interest rates to solve their own financing problems, thus become borrowers in this new inclusive financial model. As the digital currency market keeps increasing, the related participant will have strong demands for this kind of financial service.

5.2.4 Cooperation Case 1: Mini Group

Mini Group is one of the first unsecured lending platforms in Indonesia, provides safe, comfortable and convenient payday loans to Indonesian people. With big data risk control, only identity authentication will be needed on the platform and the loan will be completed within 20 minutes, no collateral or guarantee is needed. The circulation of funds is conducted through stablecoin, which realizes decentralized payment and promotes the combination of funds flow and information flow to enhance the credit of platform. At the same time, by building the consortium blockchain and recording the data such as borrowing, risk control overdue and bad debts onto the chain, the control ability and profitability of platform are proved, so more and more investors will be attracted to invest.



The interface of Financing APP:



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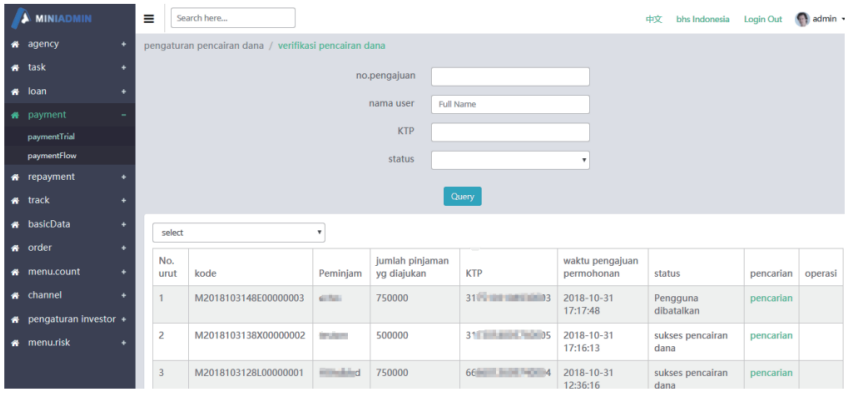
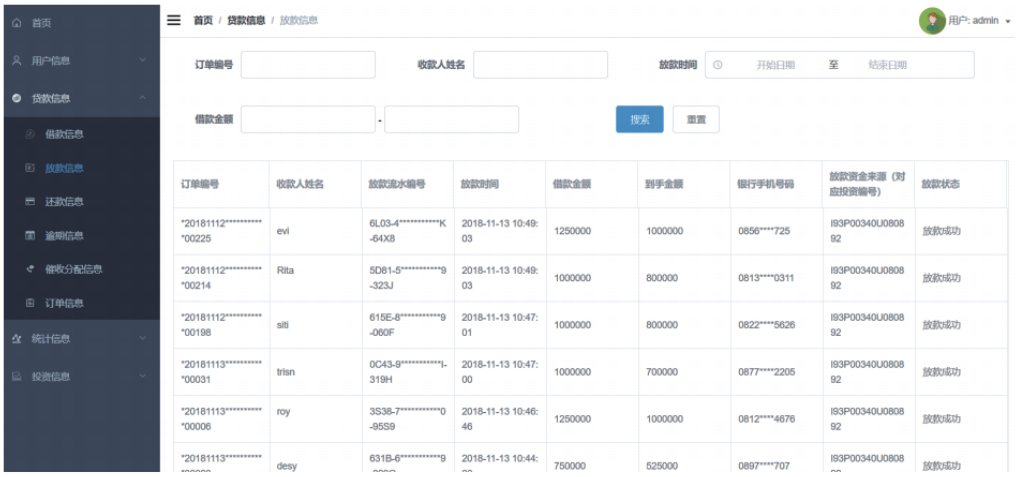


The interface of Financing APP:



5.3 ABS

5.3.1 The pain points of ABS business

The scale of China's SMEs continues to expand, and their contribution to thenational economy is increasing. However, they still face difficult and expensive financing. This is an important issue that needs to be solved in China's economic development. Asset securitization is based on the future stable and predictable cash flow generated by the base assets. After the credit enhancement through structured design, the securities that can be sold and circulated in financial market are issued. Through assets securitization, asset holder could activate financial assets which lack liquidity, reduce the cost of comprehensive financing, optimize corporate statements, and improve the efficiency of financing for SMEs eventually.

However, in the process from the formation of the base assets in supply chain to the securitization of assets, the following challenges remains:

Too many parties and information transmission links are involved ;

The financing entity of supply chain finance do not have enough qualifications. The issue of ABS thus lacks strong credit enhancement, the market pays too much attention to subject ratings and ignores the quality of core assets;

The structured and dynamic assets move in and out of the dynamic asset pool, making it difficult to use traditional technical means in conducting accurate credit evaluation and dynamic risk monitoring. Even if it can be done, because the evaluation method is centralized and opaque, it is difficult to obtain the trust of investors.

With the rapid development of ABS business, ABS faces the problems of information asymmetry, and information black box also hinders the development of the industry. Only through breaking the information black box of ABS assets, investors can obtain real raw data of the assets, and then conduct investment analysis independently, with all that, the market can really achieve explosive growth.

The pain points in the difficult growth of specific businesses are reflected in:

(1) The validity of due diligence is doubtful, lacks a grasp of risk identifica□tion;

(2) It is difficult to conduct risk warning and monitoring in the post-investment management;

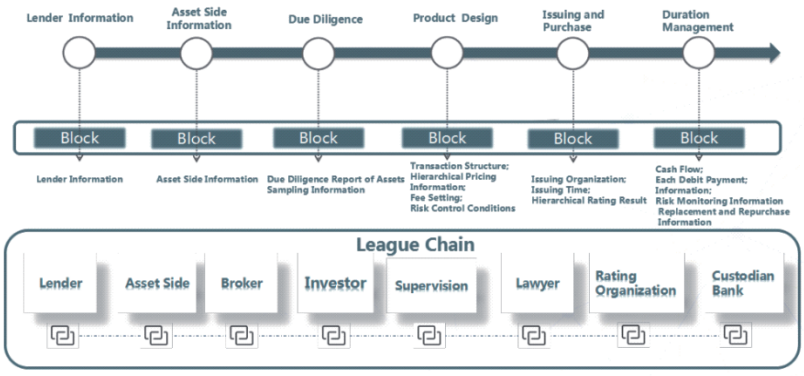
(3) Information disclosure is not timely and sufficient;

(4) The management capability of the asset service provider has yet to be verified;

For the above reasons, the institutions that actually carry out ABS business in China mainly focus on large institutions with high subject ratings. Because investors basically do not trust the debt rating, they only choose ABS products issued by institutions with high subject ratings; Regardless of the debt rating, at least the subject rating is good.

5.3.2 Blockchain ABS

Based on the risk characteristics of asset securitization, along with the characteristics of blockchain as distribution, encryption technology, non-tamperability, traceability, and etc., it is possible to build an asset securitization consortium blockchain, allowing the base asset holders, securitization service provides, and investors to jointly participate in maintaining the account books, thereby linking the information silo of the participants, promoting information transparency, improving risk discovery and control capabilities, realizing the life cycle management of the base assets from generation, packaging, rating, sale, to post-investment management, realizing penetrative regulation on underlying assets; With all above mentioned, the current market size of ABS could reach dozens of trillion US dollars.



Blockchain Technology Realizes Full-Process Information' s Authentic Disclosure and Traceability

5.3.3 Application values

The value of the blockchain-based asset securitization consortium blockchain is as follows

(1) Multi-party joint maintenance of the account books, presenting real assets.

Parties involved in asset securitization jointly maintain the account books and witness the formation of assets until asset exit. Since the formation of the basic assets, the assets are digitized and blockchained, and the transaction data corresponding to the basic assets is recorded on the chain. Data cross-validation is realized on the consortium blockchain to ensure the authenticity of the assets from the beginning. The data on the chain is not tamperable to ensure the authenticity of the assets during the life cycle. Chained storage account books is used to achieve asset traceability, thereby preventing fraud, significantly reducing moral hazard, improving risk control capabilities and enhancing investor confidence.

(2) Penetrating supervision on underlying assets, returning to the essence of assets.

Penetrating supervision on the underlying assets and making the assets transparent will allow participants to face the lowest-tier and most realistic asset details directly, returning to the essence of the assets. It minimizes the investor's distrust of the assets, along with the rating agencies, and reduces the difficulty of due diligence by intermediaries such as issuers, accounting firms, law firms and rating agencies.

(3) Digitization of assets, laying the foundation for asset securitization.

After the asset data is recorded on blockchcain, the assets are characterized by

digitization and blockchainization, which facilitates the circulation and supervision of assets. At the same time, the asset data is standardized through the blockchain to meet the regulatory requirements of the exchange, facilitate regulatory review, and lay the foundation for asset securitization.

(4) Realizing life cycle monitoring of financial asset securitization.

Through the consortium chain management platform, the life cycle management of base assets and asset securitization is realized. First, real-time monitoring of the entire process from the formation of the base assets in the asset pool to the exit of assets; Secondly, the life cycle monitoring is carried out, from the due diligence, product design, audit, rating, issuance, purchase, and duration management of asset securitization, realizing the real-time comprehensive monitoring of the quality and risk of the dynamic asset pool.

At the same time, the asset securitization consortium blockchain brings strong business changes to the management of asset securitization by issuers (brokers), reduc-ing the cost of due diligence and communication, improving business efficiency, expanding assets, and accelerating the circulation of assets and securities. In particular, the technical realization of penetrating on underlying asset at any time greatly helps in cooperating with the regulatory authority for enhancing regulation, achieving the non-nest and transparency of assets.

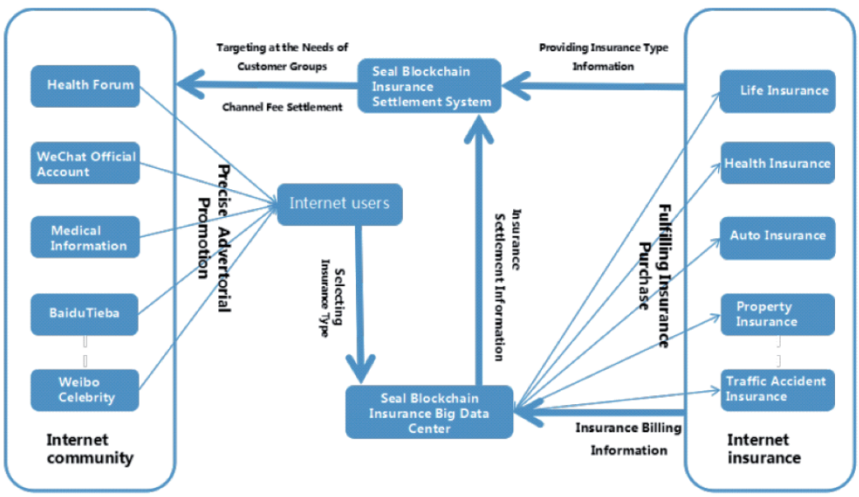
5.4 Insurance

With the development of blockchain technology, the availability and convenience of blockchain insurance big data has improved the environment for insurance

innovation implementation, it provides real data which is characteristic of traceability, time-stamp efficient query, multi-party storage multi-party verification, smart contract of quick claims, thus provides the reference and basis for the insurance industry to decide the direction and focus of future development.

For insurance industry, using blockchain technology to record claims information can ensure that the information is true and accurate and can't be tampered, and that traceable underwriting and claims can be realized. Application scenarios, cost reduction, efficient operations, shared information and anti-fraud are the top five keywords for future insurance blockchain applications.

In the insurance field, blockchain is expected to influence the entire insurance industry chain, such as product development, sales channels, product pricing, underwriting and claims. The blockchain can provide the insurance industry with solutions to automatic compensation and electronic insurance policy, which are based on smart contract; it will play a role in the discovery of insurance scenarios.



How does the insurance business utilize the characteristics of the blockchain to solve the problems?

(1) With blockchain technology, the identity and information verification of the applicant can be quickly carried out (publicly verifiable and unforgeable);

(2) Realization of data separation from enterprises, enabling authorized third party to sort and analyze data; replacing manual contracts with smart contracts, facilitating the fair carrying out of contracts, and eliminating false information and malicious fraud (smart contract enforcement to ensure fairness);

(3) It can effectively trace and mark the information of the insurance subject, which will help to further improve the product, accurately assess the risk, etc. (nontamperable)

5.5 Smart investment advisory

5.5.1 The investment management of blockchain fundsThe investment management of the blockchain funds can achieve the following functions:

(1) Trusted circulation of data

Based on Seal Chain, it can design the distributed flow of data such as basic information, operation status, risk warning and historical performance of specific investment projects.

(2) Multiple evaluation system

The project operator, investors, partner institutions, upstream and downstream enterprises, etc. can provide objective facts related to the project and endorse based on their own identity.

(3) Project reputation management

On the basis of data collection, data collaboration can be carried out, such as the reputation evaluation of the project according to the analysis rules set by investors.

5.5.2 Equity entrustment and circulation of blockchain Funds

Based on Seal Chain, it can realize the multi-party recognition of equity entrustment and the effective record of exercise, and provide credible evidence for possible entrustment disputes. At the same time, based on Seal's trust ecology, the fund's equity can be designed to be digitized and entrusted. At the same time, the whole process of entrustment and transfer is recorded on the chain, and the opening and transparency of blockchain ensures the credible record and supervision of equity transfer.

5.6 Equities

5.6.1 The legal status of company's equities (shares)

Companies are divided into two main categories: Joint stock companies and limited companies. Joint stock companies correspond to shares , and limited companies corresponds to equities. Joint stock companies are also divided into two main categories: "listed companies" and "unlisted stock companies". The shares of listed companies are registered in China Securities Depository and Clearing Corporation

Limited (CSDC).

Shares of non-listed companies comply with the provisions of Company Law of China, shares treated as rights certificates and registration booklet needed to record shareholders. It is worth noting that the shares issued by non-listed companies do not need to be registered by a third party. They rely solely on the company's own issuance of shares and maintenance of share registration to determine equities.

For limited companies, because there are no such shares as certificates, equity certificate becomes the "shareholder registration" maintained by the company itself.

Above all, Company Law of China gives relatively big autonomy to all compa□ nies: allows companies to provide the final proof of equities (shares).

5.6.2 The legal effects of blockchain equities (shares)

Company Law of China allows a company to create and maintain shareholder registration in any written format, not limited to any specific carriers. As a public ledger, blockchain not only complies with Company Law of China, but also determines the trend. By comparison, early stocks were paper made and required manual book keeping of transactions, which was later electronized; Similarly, there is a process for money to evolve from banknote to digital currency.

The company equity registration in China is also increasingly approaching and adopting the matured experiences from developed countries. Equities are not registered in state authorities, but are registered in autonomous bodies such as chambers of commerce and trade unions, and proof of entitlement regarding

equities (shares) is provided by a market-approval third party.

Therefore, if equities are registered through the blockchain, the trusted third party will be thoroughly decentralized, that is, equities register will be no longer limited to a specific third party, it will rely on all participants to maintain a registra□ tion system. The system has four characteristics as follows:

(1) Pass the right of registration to the company, reflecting the spirit of self-governance;

(2) Ensure the transparency, authenticity and credibility of the equity registra□tion , reducing disputes;

(3) Promote equity circulation and resource sharing, the registration and trans□fer of shares would be more convenient and safe;

(4) Data is stored in time, permanently and safely.

5.6.3 Blockchain equity advantages

(1) Equity registration management

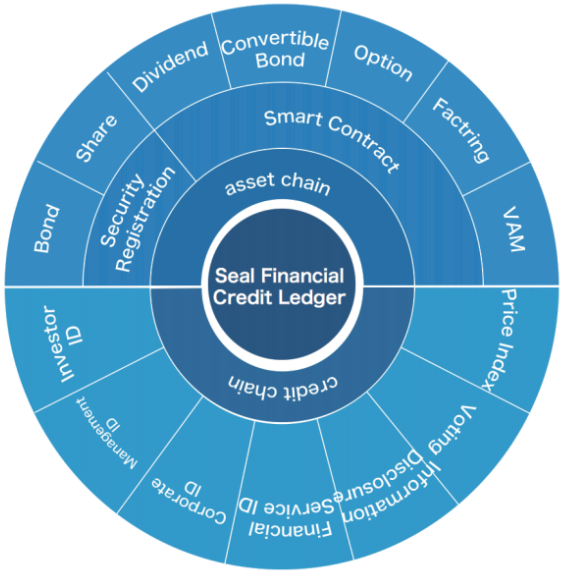
Equity registration plays a role in informing the public, allowing potential trading entities to understand the status of ownership; Registration also plays a key role in the transaction since it records the transfer of ownership. Equities of non-listed companies are often need to be handled manually in nowadays, the maintenance of the shareholder registration is very complicated which makes it difficult for the maintenance and tracking of historical transactions.

Blockchain ownership registration is completely digitalized , and it owns the blockchain characteristics of being secure, transparent, non-tamperable and easy to track. Blockchain brings in great advantages.

(2) The transfer and circulation of equities

The transfer and circulation of equities is crucial. The traditional OTC equity transaction is based on the credit of both parties which brings the necessity to establish a two way trust before conducting a transaction, the credit risk is on both parties; By contrast, the trading platform takes all the accumulated credit risks from all market participants.

Blockchain can effectively reduce the credit risk of transactions. As equity ownership is registered on the blockchain, the equity transaction must be signed with the owner's private key for verification. After the transaction is confirmed, the change made will also be recorded in the blockchain, which would protect the interests of both parties.



In summary,

The adoption of blockchain technology not only realizes the functions of blockchain equity registration, transfer, inquiry, pledge, financing, etc., but also provides the following advantages:

（1） Efficiency: It takes more than 15-20 days to make changes in traditional business registration; it take much less time in blockchain equity transfer.

（2） security: Solve the compliance challenge in shareholding entrustment;

（3） Convenience: Mobile APP would be used to conduct a shareholder meeting or a board meeting to vote for financing of business rapidly;

（4） Public Trust: All transaction information and disclosure information are recorded on the blockchain, and the record will be available permanently and cannot be tampered with.

5.7 Corporate bonds

In the current bond market, bond issuance requires registration, filing, custody, listing and many other processes; bond transactions include inquiry, transaction, order confirmation, order matching, transaction amount confirmation and more procedures, settlement of accounts will still be needed after all above procedures. It is a long and cumbersome process from the preparation of bonds issuance to the final completeness. As the bond market development demands higher standard on transaction costs and efficiency, such cumbersome business processes can not meet the needs of investment and financing entities.

Blockchain technology provides a new and feasible solution. Blockchain owns the characteristics of internal trust, decentralization and high transparency, and its data is non-tamperable and unforgeable. These characteristics of blockchain technology enable it to provide full-process, multi-angle technical solutions for bond registration, distribution, trading, clearing and settlement. Blockchain brings disruptive changes in business processes.

Corporate bond transactions based on the super-ledger technology achieve a high transparancy, i.e., transactions on the platform can present the entire life cycle of commercial bond. The blockchain also allows the list of participating traders to change dynamically. In this case, all three parties – the issuer, the central custodian and the investor – receive a decentralized blockchain ledger to process the transaction. Each participant can exchange digital documents online and track the transaction status in real time, which greatly improves the efficiency of post-investment asset management.

Marvin Zhang

Seal Founder

1990 – Studied at Renmin University China, majored in international economics.

1994 – Received a master's degree from State University of New York.

1998 – Received an MBA in Finance from New York University. Employed by Lehman Brothers, a large financial institution on Wall Street, ABN AMRO Hong Kong, UBS Hong Kong and etc.

2016 – Co-founded the largest blockchain association in North America, North American Blockchain Association (NABA). Elected Chairman of Global Supply Chain Blockchain Association, Seal Foundation and First Chairman of the Fujian Province Blockchain Association.

September 8, 2018 – Marvin Zhang and the Sealchain team were invited to participate in the "Founder World Championship 2018" in Silicon Valley and won the second place.

October 24, 2018 – Marvin Zhang lead the Sealchain team to top 3 in the "Block Battle – Who's the next Satoshi" in Seoul, South Korea, produced by acclaimed South Korean TV station Asia Economy Channel.

November 21, 2018 – SEAL company founded by Marvin Zhang won the "2018

Asian Brand Award" and "Company with Most Investment Value in Asia" award in Seoul, South Korea.

Haifan Ge

Co-founder

Graduated from Renmin University Faculty of Economics, MBA from the University of Rochester, USA.

1997 – Joined Credit Suisse (CSFB) electronic stock trading department in Zurich; CSFB hired the first Chinese at the Zurich Branch.

Experienced the 1999/2000 tech bubble.

1999 – Returned to New York to act as the COO of the Credit Suisse US Stock Exchange, including the operation of the New York Stock Exchange, during which also participated in the DLJ buy-up.

2004 - 2007 Managed Credit Suisse global asset account (capital and balance sheet).

2007 - 2009 Asset account management of Global Markets Equity and Bonds at Barclays.

2009 - 2011 Returned to Credit Suisse for asset account management.

2011 – 2016 Served as the COO of Deutsche Bank's North American Bond Options Branch. During the financial crisis, the company was in the midst of a whirlpool, and the team managed to be ranked first by customers for four consecutive years. Earnings was on par with industry giants such as Goldman Sachs and Morgan Stanley.

2016 – 2018 New York finance startup.

Introduction of Seal Consultants

R3

The world's largest blockchain consortium, focused on providing blockchain technology to banks such as Wells Fargo, New York Mellon Bank, Citigroup and Commerzbank.

Chris Kingsbury

Graduated from George Mason University in Computer Science.

He is currently the CTO of TS Corporation, responsible for pushing and accelerating the application of crypto currencies in the financial sector. With more than 20 years of technical experiences, he was ever responsible for the development of the Earth Observing System (EOS) project at NASA. Since the beginning of 2011, he has been committed to introducing crypto currency transactions into the TS

platform, thereby facilitating the adoption of crypto currency in traditional financial industry.

Guo Lijing

He is currently the senior director of the Open Cloud Business Unit and the Public Cloud Business Unit of Jingdong Cloud Platform, with 12 years of develop□ment experience and 6 years of experience in the cloud computing industry.

Worked for well-known Internet companies such as Alibaba, Shanda, Jinshan, he led the team to the deployment of the world's first MariaDB database cloud service and the first MariaDB database cloud service which could support data recovery as well. He has nearly ten cloud computing related IP.

Zou Hao

He is currently the vice president of Lending Club Risk Control and has over 15 years of management experience in the financial industry， performed well in his professional career. Lending Club is the world's largest P2P online lending company, also the pioneer of the global online loan industry.

07 Token Issuing Plan

Total issued SEAL Coin is 1.8 billion and will never be increased. Of which 10% is used for financing, 15% is used for team incentives, 20% is used for community and open source incentives, 25% is used for project incubation, 30% is used for foundation operations. Different lock-up rules are applied to ensure the goals of the team and platform development are always in line.

Allocation Plan	Ratio	Lock-up Period
Angel Round	3%	after listing, spreading over 12 months
Private Sale	7%	after listing, spreading over 6 months
Team Incentives	15%	Unlocked 6 months after exchange listing, spreading over 5 years, 3% a year
Community and Opensource Incentives	20%	Distributed according to community development and open source contributions
Project Incubation	25%	Strategic business cooperation, unlocked according to project plan
Foundation Operations	30%	Daily operation of the foundation, unlocked over 5 years

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and/or currency fluctuations, including but not limited to the market value of crypto currencies.

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Please note that the company is conducting a legal and regulatory analysis of the functionality of the Seal Token. Upon completion of the analysis, the Company may decide to modify the intended functionality of the Seal Token to ensure compliance with any legal or regulatory requirements that we are subject to. If the company decides to modify the expected function of the Seal token coin , the company will update the relevant content of this white paper and upload its latest version to the company's website.

Any seal Token may be affected by regulatory actions, including the ownership, use or ownership of these tokens. Regulators or other circumstances may require that the mechanism of seal Token be changed in whole or in part. The company may modify the mechanism to comply with regulatory requirements or other government or commercial obligations. However, the company believes that it has taken all commercially reasonable steps to ensure that its planning mechanism is correct and in line with current considerations.

Cautious reviewing to forward-looking statements, this white paper contains forward-looking statements or information relating to the company's current expectations and future events. (collectively referred to as "forward-looking statements"). In some cases, these forward-looking statements may use “may”, “will”, “expect”, “anticipate”, “goal”, “estimate”, “intended”, “plan”, “seek”, “ Words or phrases such as "potential", "continuation", "very likely", or other similar expressions intended to show forward-looking statements. The Company's forward-looking statements are based on its current expectations and projections of its future events and financial trends that may affect its financial condition, results of operations,

corporate strategy, financial needs or TGE results, or the value or price stability of the seal token.

In addition to the statement listed herein, this white paper contains forward-looking statements relating to the company's proposed operating model. This model can only explain its objectives, not forecasts, predictions or expectations of future operational results.

The company makes certain assumptions and analysis based on its experience and its historical developments, current conditions, expected future developments and other appropriate view. Based on this, the company makes forward-looking statements that they are subject to risks and uncertainties. Although the forward-looking statements contained in this white paper are based on reasonable assumptions that the company believes, these risks, uncertainties, assumptions and other factors may cause the company's actual results, performance, achievements, experience, implied or perceived to differ materially from those expressed in the forward-looking statements. In view of such risks, potential participants of TGE should not place over reliance on these forward-looking statements. Risks and uncertainties include, but are not limited to, the risks and uncertainties identified in TGE's terms and conditions. This list does not fully cover all the factors related to contributing to the company's operations.

The Company is under no obligation to update any forward-looking statements to reflect events or circumstances that occur after the date of publication of this White Paper.

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The company's business is subjected to various laws and regulations in the countries in which it operates or intends to operate. Certain activities of the company may be deemed to be in violation of certain laws or regulations. Any penalties for such potential violations are unknown. In addition, changes in laws or regulations or evolving interpretation of the current law, which may lead to an increase in compliance costs or capital expenditures in some cases. This may affect the company's profitability, or hinder the company's ability to implement the business model and seal token model presented in this white paper.