



# **Digital Bank**

**Decentralized Financial Chain**

Portal to economic freedom

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# 1. Overview

After being known as Bitcoin in 2009, the Blockchain has shown great value. With this new technology, we are able to validate and recognize transactions in decentralized books that cannot be changed, and we can apply them more broadly to achieve decentralized consistency.

This incredible innovation is gradually getting rid of the need for intermediaries, settlement/clearing companies and intermediary service providers in various industries around the world, step by step to change the world.

However, the cryptocurrency as an asset class is still in its infancy, as the valuation of a single company's stock may be several times larger than the entire cryptocurrency market. In this vision, a simple comparison with the market value of other asset classes shows a limited scale and also shows the huge potential of the cryptocurrency market in the future. Pointing out several figures, the global stock market is worth \$73 trillion, the debt market is worth \$215 trillion, the real estate market is worth \$217 trillion, and the derivatives market is worth \$544 trillion. We believe that the cryptocurrency market can evolve like existing asset classes, and creating a cryptocurrency asset class at Digital Bank is our mission. Our vision is to bring cryptocurrency-based financial products to major streets and financial institutions in a secure, reliable and transparent manner. This will make the future average portfolio include cryptocurrency financial products, just like stocks, fixed income and real estate financial products.

In traditional finance, each of these functions uses different tools and is subject to appropriate supervision. This helps manage system risk. Before the decentralized regulatory consensus agreement was fully established, the encryption economy faced the risk of security and fraud in unregulated exchanges, and also caused market risk due to the use of such extremely volatile currencies for purposes other than design purposes. This high-volatility digital currency generates systemic risk by crowdfunding and subsequent constraining by smart contracts.

Cryptocurrency-based derivatives based on blockchain and smart contract technology will play a key role in building cryptocurrencies into long-term mature and sustainable asset classes. The current cryptocurrency market has experienced a high degree of volatility, and the correlation of price trends during the market crash has tended to be one. Both of these tendencies give investors no downside protection. This means that most of the risks faced by investors are systemic market risks, rather than unique risks, so having more diversification of cryptocurrency types does not solve the fundamental problem of extreme downside risks. The only viable strategy for most people seems to be buying, holding and praying; this requires changing the cryptocurrency into its golden age.

Encrypted currency financial derivatives are critical because they allow the creation of diversified cryptocurrency combinations that can hedge against market risk and extreme volatility. This allows portfolio managers, asset managers and private wealth managers to build cryptocurrency portfolio investment tasks that suit their investors and meet their needs. Average investors can also participate in this market because they can get portfolios and investment capital without significant volatility and risk. Digital Bank will create a cryptocurrency index similar to Standard & Poor's and work with fund managers to create cryptocurrency funds that meet their investor's investment objectives and risk tolerance. Of course, cryptocurrency derivatives can also be used by more experienced investment professionals to take on more customization risks and leverage. Here, Digital Bank proposes an innovation called Borderless Leverage, creating a new financial public chain that structurally changes the traditional derivatives framework.

Digital Bank is a blockchain-based cryptocurrency financial ecosystem that defines protocols for financial products based on cryptocurrencies. The Digital Bank ecosystem provides investors with a comprehensive financial market filled with financial products, services and applications that meet their investment needs. Digital Bank provides investors with products and tools to properly manage their digital wealth, enabling them to build highly diversified portfolios, hedge downside risks and achieve positive returns in any market conditions.

## **2. Defects in the emerging cryptocurrency market**

The current cryptocurrency market is mainly in the spot market, so it is subject to many restrictions, making cryptocurrency not a real asset class. In addition to some bitcoin derivatives, the cryptocurrency market even lacks basic derivatives, which these derivatives are required for portfolio construction, risk management and exposure positioning. There are several key reasons for this situation.

- The overall market is not enough to include financial derivatives
- Lack of liquidity for these financial products,
- Lack of standard protocols for creating, evaluating and trading these financial products.

Digital Bank will address these challenges by creating a financial collateral and derivatives market based on cryptocurrencies. The following is a list of key restrictions for the current cryptocurrency market:

- Lack of derivatives for downside risk hedging / protecting your portfolio
- In the downturn, can't bear the bearish/short position
- Cannot take the required custom exposure (eg exposure to fluctuations)
- Unable to generate for holding cryptocurrencies
- unable to afford leveraged positions
- Lack of encrypted wealth management products
- The market is volatile, especially during the downturn, because the correlation tends to 1

All of the above integrations mean that investors cannot properly manage his/her cryptocurrency portfolio. This blocked the mainstream investors and institutional investors enter this space, which is a cryptocurrency to build a mature and long-term asset class very important. If the size of the cryptocurrency market reaches trillions of dollars instead of \$200 billion, Jamie Dimon(Jamie DBo) The dismissive comments on cryptocurrencies will be funny. The current restrictions are also given to the current plus secret currency investors have brought serious problems. We have investigated and summarized the cryptocurrency investors in the market today.

### 3. Encrypted currency power as an asset class

An asset class can be defined as a group of securities with similar characteristics that behave similarly in the market and comply with the same laws and regulations. Most portfolios, whether individuals or institutional investors, allocate investment funds to key asset classes to build a diversified portfolio. Major asset classes include money market instruments, fixed income products, stocks or stocks, real estate and derivatives. Note that the cryptocurrency is missing from the list of asset classes that receive the primary investment traffic. From the perspective of capital flows and market capitalization, the results are simple and shocking, just as the market value comparison in the “View” section has been proved. The relatively small cryptocurrency market means that it is highly volatile, institutional investors and major streets are difficult to join, and the entire market is susceptible to events such as forks.

According to the existing asset class, the power of cryptocurrency to become an asset class is quite obvious. On the one hand, the market will become more stable and less volatile, making cryptocurrency investors return without high volatility. Second, the increased capital investment of institutional investors and street investors will increase the size of the cryptocurrency market by a factor of 10 or even 100 times, supporting the long-term sustainability of the money market. In addition, there will be a large number of financial derivatives based on cryptocurrencies, giving investors the ability to properly manage their cryptographic wealth. Therefore, the deep derivatives market of cryptocurrencies will give investors the power to consolidate cryptocurrencies as an important asset class.

The benefits of the deep-derived cryptocurrency market and the creation of cryptocurrency asset classes are listed below:

- Investors have positive returns on tools and products, regardless of market conditions: no matter what the market is up or is low
- Whether it is retail or institutional investors can hedge portfolio risk

- Investors can get rich encryption and wealth management products to easily build a diversified portfolio
- Cryptocurrency holders can generate holding income on their cryptographic assets maintain
- Investors can leverage without risking portfolio margin
- It will introduce large institutional investors and mainstream investors
- Market volatility and market vulnerability will decline
- Cryptographic currency will become the mainstay of asset allocation

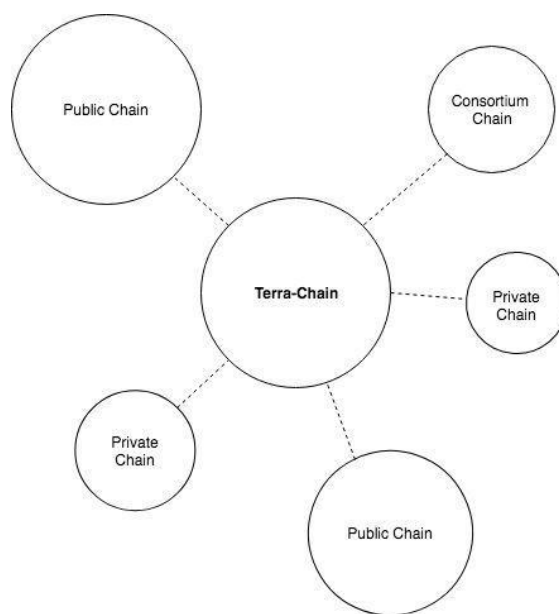
## **4. The background and significance of the birth of Digital Bank**

Before the birth of Bitcoin, the global financial mix and financial transactions were achieved through a centralized approach. However, with the development of Internet technology, the trading center has more and more control over the data, and the individual and the trading center are more and more unequal in the aspects of equality of transactions, transparency of information, and reliability of historical information. . The interests of many small and medium-sized retail investors have been severely exploited. At the same time, data monopoly and data closure between various centralized trading platforms. It also makes it impossible for the centralized organization to understand and analyze the credit status and risk level of many participants. Digital Bank came into being under this circumstance and tried to solve many problems in the current generation of Internet finance business through the latest technology.

Digital Bank's vision is to create a new financial chain that aims to create a decentralized underlying system that has tremendous influence in the global financial arena through the innovation of blockchain technology, making cryptocurrency truly an asset. Categories can be comparable to stocks, debt and real estate. We want to incorporate Digital Bank cryptocurrency products into the portfolio of millions of investors and democratize wealth creation and wealth distribution through cryptocurrency-based financial products. Digital Bank is building an ecosystem to implement our vision and turn our vision into reality.

## 5. System architecture and technology

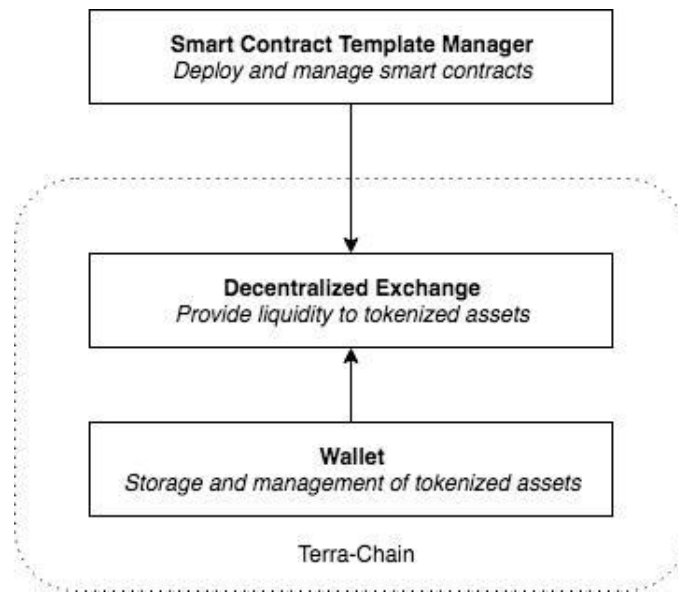
Digital Bank is dedicated to building Web 3.0 for the blockchain Internet. In the future, the Internet is in the blockchain ecosystem. In order to enable enterprises and end users to adopt this new paradigm, Digital Bank will first experiment on the Ethereum blockchain. But it will eventually run on top of Terra-Chain; an application-specific blockchain (ABC) built for Digital Bank that facilitates scalable and negotiable transactions across the blockchain ecosystem Internet. Terra-Chain will first connect with Ethereum and other popular blockchain systems.



### 5.1 Platform Layers

The Digital Bank platform is vertically integrated through the connection of the smart contract template manager, the exchange, and the wallet. The purpose of the integration is to facilitate organic and effective creation of tokenized assets while providing liquidity and and management for those assets across various blockchain systems.





***The three layers of the Digital Bank platform***

## 5.2 Smart Contract

The platform contains a diverse set of standardized smart contract templates for the creation and management of tokenized assets, enterprise users can pick, deploy and manage their desired templates through the platform's user interface. The interface abstracts out the technical complexities of creating smart contracts, and provides plugins to make them easier to interact with for end users. Assets issued through the platform on the Terra-Chain can be freely transferred onto other connected blockchains and back. Some example templates include:

- **Fungible Token**

Issuing a token can benefit businesses in a multitude of ways such as raising capital, payment processing, and community building. They achieve this by being more liquid, efficient, and transparent than their traditional counterparts. Digital Bank's platform offers general implementations of these tokens that are customizable for specific business use cases on a per-deploy basis.

- **Crowdsale**

Crowdsale is the most prominent use case of smart contracts, and a powerful tool for businesses to raise capital. Combined with the property of fungible tokens, a crowdsale contract enables the trustless purchase of tokens for users. Digital Bank standardizes the crowdsale process, creating a 'one-click' solution for businesses to run crowdsales.

- **Decentralized Exchange**

Digital Bank's decentralized exchange acts as the foundation layer for the platform, serve businesses and their end-users as a point of conversion and settlement for tokens. Tokens issued through the platform's template system are seamlessly integrated into the exchange for instantly tradability on the market. Dapps and wallet applications can also easily integrate with the exchange as the entirety of the logic of the exchange is written in smart contracts, allowing easy integrability to end-user applications.

The exchange can facilitate trading of assets from other blockchain systems such as existing tokens on the Ethereum blockchain. Users can simply transfer the tokens over from another chain to the Terra-Chain via the connection bridge, and start trading as if they were native assets. Assets can then be transferred back to their native chain afterwards as desired by the user.

- **Wallet**

There are currently approximately a mere 30 million cryptocurrency users worldwide. As more businesses adopt blockchain technology, and end-user applications become more user friendly, more users will enter the space for non-trading or investment purposes.

Digital Bank's wallet, with direct integration into the platform's exchange enables end-users with secured storage and utility of tokenized assets across various blockchain systems.

## 5.3 Terra-Chain

Terra-Chain is the first of its kind. It is an Application Specific Blockchain (ASB). ASBs are dedicated, permissioned, and high performing blockchain networks with pluggable PoA or PoS consensus. They can connect to public blockchains via an universal token bridge protocol, allowing value transfers and shared security. The ASB stack is highly modular with theoretically unlimited scalability. It's compatible with existing EVM ecosystem tools vastly simplifies the user and developer experience. To learn more about ASBs, you can review our upcoming technical paper on ASBs.

Terra-Chain runs on Proof-of-Authority<sup>3</sup> as its consensus mechanism initially, and will upgrade to PoS. Unlike the Ethereum mainnet which allows anyone on the internet to deploy turing-complete smart contracts to the network, Terra-Chain will only run a set of smart contracts necessary to support the functionality of the Digital Bank platform, and will be much lighter and performant as an ASB. The Terra Bridge is used to open up interoperability with other public blockchain networks and enable the transfer of value across different chains.

Terra-Chain mitigates blockchain scaling issues by allowing users to convert tokens from different public chains to tokens on Terra-Chain, and perform transfer and exchange operations with much lower transactions fees and faster block times. We believe Terra-Chain with its advantage on performance, cost, stability, and security over public blockchains will become a model for ASBs in the internet of blockchains ecosystem.

## 5.4 Blockchain Technology

The Terra-Chain network is fully compatible with the Ethereum protocol, and runs on the Parity client. Parity is a modular, low-footprint, and high-performant Ethereum client with pluggable consensus and adjustable chain specifications.

### 5.4.1 Aura - Authority Round Consensus

The Terra-Chain network runs on top of the Aura (Proof-of-Authority) consensus<sup>5</sup> engine for its EVM blockchain in replacement of the original Ethash (Proof-of-Work) mechanism. The Aura consensus engine depends on a set of validator nodes (authorities) to be specified, who are responsible for creating new blocks and securing the blockchain in a round robin fashion. The consensus mechanism requires a majority (>50%) sign off by the validator set, after which finality is guaranteed. The Aura consensus mechanism is a popular choice for public chains and has been battle tested on networks such as the Ethereum Kovan testnet<sup>6</sup>.

### 5.4.2 Benefits over PoW

There are many advantages of Proof-of-Authority over Proof-of-work for application specific blockchain networks; It is less energy consuming since mining does not require solving arbitrarily difficult mathematical problems, more performant since a smaller set of mining nodes provides lower transactions acceptance latency, more stable since blocks are produced in short and constant intervals of time, and it is more secure as unwanted connection from attackers cannot overwhelm the network and potential revert global state.

### 5.4.3 Validators

Terra-Chain will be initialized with 10 validators. Prior to the launch of the Terra-Chain network, a validator generation event will be held to select the validators from a pool of reputable applicants. The validator set is maintained in a smart contract on Terra-Chain. Each validator holds a key that authenticates its identity. After the initialization of the

network, validators can only be added or removed through a majority vote (>50%) from the existing validator set.

#### 5.4.4 Blockchain Economics

The token generation event for the Terra-Chain network will take place prior to the launch of the network, of which will be marked into the network's genesis block. Participant in the generation event will get their purchased tokens on the Terra-Chain network upon its launch.

Once the network is launch, the validators will start creating blocks, and receive transactions fees for providing security for the network.

The Terra-Chain network will initially be set to have a 4 seconds block time. The total number of blocks created by validators per year will be:

$$\frac{30,758,400 \text{ seconds}}{4 \text{ seconds per block}} = 7,689,600 \text{ blocks}$$

#### 1 Permission

Public blockchains optimizes for decentralization where all participants are able to perform all roles within the networks such as connect, mine, send transactions, and inspect blockchain state. The Terra-Chain network being an application specific chain for the Digital Bank platform limits certain permissions of the network for enhanced security and performance.

#### 2 Connect to Peers

Permissions on this layer determines which nodes can connect to the network and interact with other nodes. The Terra-Chain will not impose any limitations on this aspect as anyone should be able to connect to the network to use the Digital Bank platform.

#### 3 Mine

Terra-Chain's Proof-of-Authority consensus mechanism by default limits role of mining to the network's set of validator, enabling faster transaction confirmations, and more stable network states.

## 4 Send Transactions

There are three type of transactions on the EVM:

- Contract deployment
- Contract interaction
- Simple transfer

On the Terra-Chain network, contract interaction and simple transfers will be open to the public, while contract deployment will be only limited to network validators and existing contracts on the network. The only cases for contracts deployment on the Terra-Chain are for updates of the Digital Bank platform, which will be done through the platform's validator node. And tokenized asset creation through templates, which will be done via factory contracts on the network.

## 5 Inspect Blockchain State

The inspection of blockchain state will also be available to the general public to ensure the verifiability of Terra-Chain's state integrity.

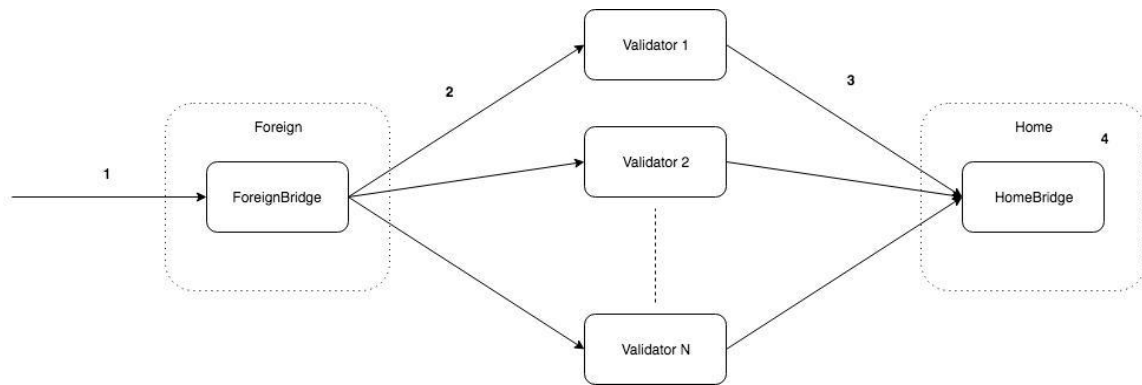
## 6 Interoperability

Interoperability is a key functionality of the Terra-Chain network. By connecting Terra-Chain to other major public blockchains, it opens up transferability and allows the Digital Bank platform to become a liquidity center for tokenized assets across chains.

### 5.4.5 Terra Bridge

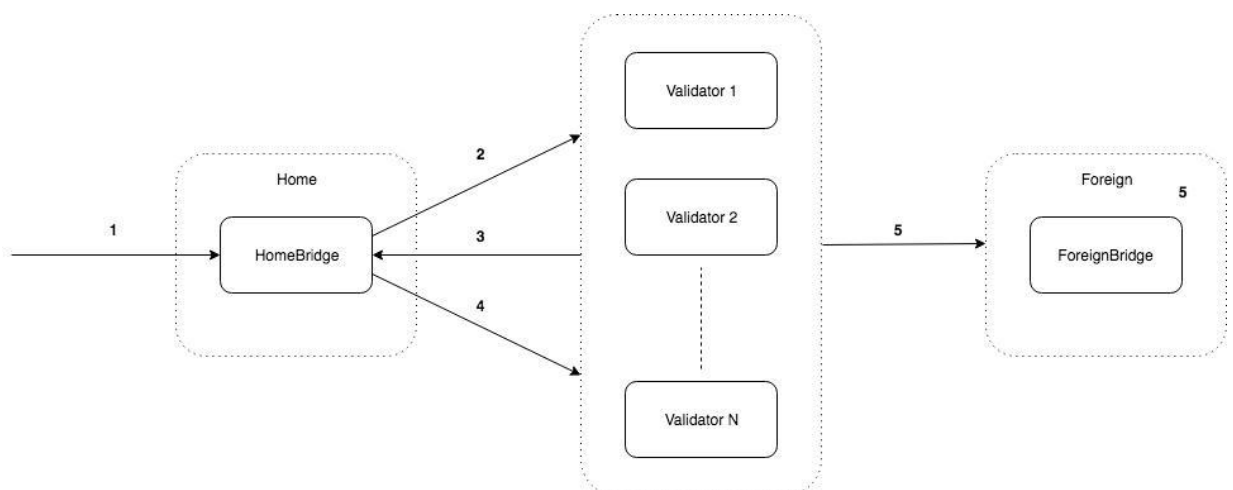
Terra Bridge is an open sourced solution for connecting blockchains and enable the transferring of tokens between them. The Terra Bridge is inspired by the Parity Bridge<sup>7</sup>, which allows the transfer of Ether between two EVM based chains, we have built on top of this original concept and have enabled the transfer of all tokens (including Ether, fungible and non-fungible tokens) between different blockchain systems beyond EVM chains. The bridge works through a *ForeignBridge* contract which takes token deposit from users on the *Foreign* chain, and the same amount of tokens will be accessible on the *HomeBridge* contract on the Home chain. The

bridge works in conjunction with Proof-of-Authority consensus mechanism, as the relay of messages between chains happen in a byzantine fault tolerant way by the validators of the Home chain. In our case, Terra-Chain will be the Home chain and connected public chains will be Foreign chains.



***Illustration of token transfer from Foreign to Home***

1. User deposit token into ForeignBridge
2. ForeignBridge emits Deposit event, and gets picked up by validators
3. For each Deposit event, validators execute deposit method on HomeBridge
4. Once a majority of the validators have confirmed the deposit, user balance will be increase on HomeBridge.



***Illustration of token transfer from Home to Foreign***

1. User withdraw token from HomeBridge
2. HomeBridge emits Withdraw event, and gets picked up by validators
3. For each Withdraw event, validators submits a confirmation message to the HomeBridge verifying the withdraw
4. Once a majority of the validators have confirmed the withdraw, the HomeBridge emits a CollectedSignature event
5. Any validator can then execute the withdraw method on the ForeignBridge with the collected signatures, and user tokens will be released from ForeignBridge



## 6. Applications

### 6.1 Decentralized Exchange

The goal of a decentralized exchange is to create a “person-to-person” market directly on the blockchain. Funds are not delivered to a single exchange or wallet owned by a single platform or institution: instead, orders and transactions take place on the blockchain. As a result, there is no middleman cost, assets are not affected by hacking attacks, and users actually have control over assets. Although most security issues are resolved, there may be inconveniences due to lack of users, lack of ability to support cross-chain trading orders, and so on.

The decentralized exchanges launched by the DB public chain not only have legally compliant US exchange financial licenses, but also world-class technology and a strong operational and marketing team. Its unique spiral value-added model will break the inherent mode of the traditional digital currency trading platform, create a decentralized exchange 2.0 era, and build a new financial digital asset platform in the future.

### 6.2 Digital Wallet

Blockchain wallet key management tool, which only contains the key instead of the exact one of the tokens; the wallet contains the pair of private and public keys, and the user signs the transaction with the private key, thus proving that the user owns the transaction The output rights; and the output transaction information is stored in the blockchain. It rules the user's money, manages keys and addresses, tracks account balances, and creates transactions and signatures. Provides basic financial functions such as creation of wallet addresses, encrypted digital currency transfers, and query of transaction history for each wallet address. The digital wallet of the DB public chain allows users to freely convert currency and transfer

money to anyone in any location in any currency without being charged the high fees typically required for such transactions.

### 6.3 Traditional / Digital Asset Exchange

By allowing traditional assets and digital assets to be exchanged freely, it is essential to sell traditional investment vehicles on a large scale to investors and entities seeking stable digital assets, and to develop a platform for institutional investors to promote low-risk and high-paying.

### 6.4 Investment Platform

Investment banks can deposit money market instruments or commodities into Digital Bank, and then sell the token DB to decentralized organizations and funds at a higher price, benefiting from the blockchain/blockchain jacket.

### 6.5 hedge certificate

Decentralized autonomous organizations and funds can purchase the money market DB and deposit it on the DB public chain. With full transparency, investors can feel confident that their funds are safe. Decentralized autonomous funds can choose from a wide range of traditional assets to complement their digital product portfolio and prevent a recession in the recession.

### 6.6 Global Transfer / Cross-Border Payment

Providing asset guarantee vouchers allows the platform to provide credentials that combine the benefits of traditional assets (especially stability and global adoption) with digital assets (unchanged features, easy to move and reliable).

With these credentials, you can implement use cases such as payment gateways, remittance channels, and other money transfers. Digital Bank is able to transfer money between legal tender and fiat money using a cryptographic compilation infrastructure to perform transactions and to perform remittance functions. Users can use the low cost of digital money to add funds and transfer money to anyone in the world, while enjoying the stability and security of traditional currency.

## 6.7 Insurance

As the underlying technology of the digital age, blockchain needs to penetrate the advantages and disadvantages of various links in the insurance industry in the process of integration with the insurance industry, and then use the characteristics of the blockchain technology to develop strengths and circumvent weaknesses, making the blockchain and insurance industry Achieve a highly compatible relationship.

First of all, from the perspective of the traditional insurance industry, the insurance industry is an industry that compensates insured persons whose financial benefits are damaged by contractual centralized funds. In the insurance business process, both parties to the insurance purchase and purchase need to sign the insurance contract to protect the interests of both parties. However, in the current market environment, the phenomenon of serious centralization and the leakage of user information on the platform has occurred. When the interests of the insured are damaged, the attempt to obtain compensation according to the contract agreement is blocked.

The development and application of blockchain technology has become more and more mature, and the call for blockchain technology to land in the insurance industry has become more and more popular. The possibility

of a blockchain + insurance combination will allow the insurance industry to usher in a great era of reform.

## 6.8 Digital notes

The success of blockchain technology in bitcoin has proven the feasibility of programmable digital currency. In recent years, the domestic bill industry has developed rapidly, and has come to the era of electronic bills from the era of traditional paper bills; electronic bills have a series of problems such as centralized accounting, circulation limitation, safety supervision, etc. Blockchain as a new type Technology, distributed decentralized, decentralized, collective maintenance, information can not be tampering and other advantages can make up for the shortcomings of electronic bills.

If the blockchain technology is applied to the bill business very well, formulating corresponding laws and regulations and establishing digital bills that meet the needs of the Chinese bill market will inevitably improve resource utilization efficiency and promote economic and social development. In the bill market, digital bills based on blockchain technology can become a safer, smarter and more convenient form of bills.

The point-to-point transaction realized by the blockchain can break the existing function of the ticket intermediary and realize the deintermediation of the value transfer of the bill; the information based on the blockchain cannot be modified, and once the transaction is completed, there will be no repayment phenomenon, thus avoiding “ The act of selling more than one ticket and not competing with endorsements effectively prevent the risk of the bill market. Based on the timestamps of the blockchain data, its fully transparent data management system provides a trusted traceability path, which can effectively reduce the audit cost of supervision.

Domestic research on the combination of blockchain and bills emerges endlessly. With the development of blockchain technology, digital bills based on blockchain have already developed conditions. In early 2017, the People's Bank of China (hereinafter referred to as the central bank) promoted The blockchain-based digital bill trading platform has been successfully tested; it indicates that the blockchain digital bills have entered the implementation stage; all major fields in China have begun to research and gradually start to use blockchain technology in many fields.

## 6.9 Asset securitization

Asset securitization does not have the constraints of the above problems, so it is a high-quality experimental area for blockchain applications. On the other hand, the asset securitization business has a series of pain points, such as many business participants, long chain, low publishing efficiency, and opaque underlying assets. The application of the blockchain is precisely the solution to these pain points.

From the perspective of the activity process of asset securitization, it includes asset formation and due diligence, the establishment of a specific purpose carrier (SPV), structured processing and rating of future cash flows of assets, and asset underwriting securities underwriting and duration management. At each stage, the blockchain can be applied. For example, in the early stage of the securitization process, when the underlying assets are included in the asset package, the asset data is obtained immediately by the participating institutions through the private blockchain, which not only avoids the errors that may be generated by the parties, but also facilitates the asset. Risk assessment also protects the privacy of the data. In the duration of the project, when the underlying asset data is updated, the information can be immediately transmitted. Therefore, the application of the blockchain is conducive to enhancing the participants' perception and judgment of risk. In all of these applications,

blockchain-based system integration information can directly lead to increased efficiency of financial activities. Interestingly, if GPS can be placed in the collateral, the location of the collateral can be automatically updated in the blockchain, thus also helping to prevent asset risks.

However, is the key role of smart contracts in asset securitization financial activities. When the cash flow waterfall of the transaction is programmed into the smart contract, the participating institutions in the private chain can use the same cash flow waterfall logic to predict and price the cash flow of the securities, reducing the error caused by different interpretations of the project. . At the same time, the smart contract that constitutes the trading file can collect the cash flow status of the loan, and can automatically repay and clear the principal and interest according to the cash flow waterfall setting in the SPV. The consistency and unavoidable modification of the cash flow distribution logic at the time of initial underwriting ensures the reliability of cash flow distribution and greatly shortens the payment time. Due to the intelligence of payment, supervision is also more convenient.

It can be seen that the application of the blockchain in the asset has a series of advantages, including the participation of members in the unified use of the blockchain smart contract, ensuring the consistency of the basic asset data and waterfall logic, avoiding the intermediary The resulting process handles or interprets the error.

At the same time, data security is enhanced through encryption technology. The blockchain cannot be tampered with and the data history can be used to properly audit and monitor the performance of the underlying assets and asset certificates. The application of the private chain can improve data transparency under the protection of data privacy. Obviously, the application of blockchain can eventually remove the role of some intermediary agencies, reduce business costs and improve efficiency.

## 6.10 Loan initiation, underwriting, service

Blockchain and smart contracts can be seamlessly integrated across various securitization functions. Maximizing the efficiency of structural benefits throughout the lifecycle will be possible if the technology is effectively deployed during the loan issuance and service phase to reduce costs.

a.

First, the borrower and the lender agree to the statement of the accuracy of the relevant information in the terms of the loan agreement, including the repayment plan, credit score, income verification, and tax record. Once the agreement is reached, the loan can be placed on a distributed ledger (ie, a blockchain).

b.

The next step will be for the bank to be designated as the temporary owner of the loan. At this point, the Smart Contract will automatically enter the information needed to update the service data and notify participating partners in other ecosystems.

c.

The newly created loan file contains important underwriting information that the bank makes at the time of lending, such as the borrower's credit score or company's credit rating, debt-to-income ratio, submitted loan file, bank statement, tax record, assets The balance sheet and related information and value of the underlying collateral. The secrecy of the borrower's identity information will be subject to special measures and will only be granted in the case of approval. After the borrower begins to pay the loan, the payment record is also attached to the loan token, reducing the possible payment dispute.

d.

Once these data points are placed on the blockchain, they become unalterable records and time stamps are added to the audit trail. This non-deformable modification greatly reduces the cost of inspection. In addition, data on the blockchain can be tracked through indelible audit

trails. Therefore, the risk of loss of information and the chance of tampering with records without being discovered will be minimized.

e.

If the borrower misses one or more payments, the loan service provider's smart contract will automatically send an immediate notice to the borrower, the loan owner, and the credit bureau. If the default still exists, the smart contract will automatically call the corresponding follow-up process. If any adjustments are made, the loan token will be updated. If the underlying asset needs to be resold by auction, the cash proceeds from the transaction will be paid directly to the appropriate beneficiary through the smart contract.

f.

Smart contracts can automatically transfer ownership if payment is overdue. For example, under the premise of safe and secure, the electronic vehicle is turned off; if the self-driving car becomes a reality, the car can be directly instructed to return to the location specified by the service provider. Although this method and the current legal system have not been perfected, the necessary related technologies have basically existed.

For all asset classes, a key advantage of the blockchain in loan issuance and service is that downstream participants (such as investors) can directly track loan and loan pool performance and quantify it. Through audit trails, the possibility of fraudulent tampering can be reduced. As a result, loan and asset pool data is not only more complete, but also increases reliability and timeliness, and ultimately the entire loan ecosystem will benefit.

## 6.11 Securities Rating and Supervision

Rating agencies and regulators can use the blockchain to monitor asset-backed securities and business participants faster and more effectively. Since the data can open different levels of permissions to all participants, the rating agencies can observe the changes in the asset pool



in advance through pre-setting, and can also embed their own monitoring software on the platform of the blockchain. The rating agency's smart contract software can operate in different ways depending on the agreement between the participants. For example, when the cash flow mode is far from expected or alarm rating, the software can trigger an automatic notification rating review agency to take appropriate measures to achieve zero. The early warning function of jet lag improves the timeliness of rating reports. On the other hand, supervision can enjoy super-permission in the DB public chain, monitor all processes of the business, and improve the supervision efficiency of product compliance.

## 6.12 Currency & Merchant API

With the underlying credentials, Digital Bank can provide a currency API that allows users to freely switch between currencies. In addition, Digital Bank provides merchants with an easy-to-use payment gateway that accepts payments in any currency and pays in local currency. No exchange or transfer fees are required. Once the network is established, merchants can use Digital Bank's easy-to-use link library and API to set up a currency agnostic payment gateway.

## 6.13 Securities Trading

The potential of blockchains in securities trading has been widely recognized. Many exchanges, banks, and clearing centers are researching and developing transactions in the secondary securities market, including managing stock issuance, trading complex financial instruments, and clearing and closing a series of transactions.

In the securitized asset market, liquidity and transparency are not ideal products. The blockchain can fundamentally improve its pricing efficiency and strengthen the market. Since investors can track the security value by tracking loan payments, secure pricing may become more accurate and

reduce spread risk. As the asset pool is disclosed, its performance and benefits can be automatically and almost immediately updated to reflect the latest portfolio performance.

Direct data transfer from the blockchain can also automate analysis and develop more sophisticated investment strategies, making risk management techniques more effective. For example, investors, rating agencies, and regulators can simulate concentrated risk factors, systemic risk factors, etc. in a portfolio by examining the interrelationships between cash flow models associated with different securities.

## **7.DB public chain advantage**

### **7.1 new business model**

Digital Bank is a public chain based on blockchain technology. It is a decentralized, open account and direct transaction between accounts. Now, financial institutions such as cash loans are centralized business models. In the DB public chain, the direct transaction between the asset side and the capital side does not require any intermediary. Therefore, Digital Bank's business model is essentially different from traditional financial institutions.

### **7.2 Excellent customer access channels**

The blockchain technology underlying Digital Bank ensures that the credit history of users on the chain is truly untamed. Premium customers who use lending applications on the DB public chain for a long time can borrow from more cash lending companies on the network based on their good credit. Since the cash lender knows that the credit history of the customer's chain is real, it is safe to offer a more favorable loan. Similarly, users with creditworthiness will be willing to accept higher lending rates. Those who have fraudulent motives and bad credits will give up looking for opportunities on this network. In this way, the DB public chain will gradually accumulate more and more quality users.

In terms of getting customers, Digital Bank is essentially different from the existing customer-facing platform. Customer growth in Digital Bank is organically grown by its own appeal, rather than by buying traffic. All financial data will be deposited on the chain, which is the big data that the usual diversion website is not available. More importantly, Digital Bank is an open, freely traded financial network. Rather than a centralized diversion or flow delivery system like Alipay, WeChat and Fusion 360.

### 7.3 Solving the problem of insufficient cash flow in traditional financial institutions

One problem currently facing traditional financial institutions is the lack of cash flow funds. The financial services in Digital Bank are completely supported by blockchain technology. The various information on lending is guaranteed by technology and real-time. Any company can do asset securitization based on its own credit assets.

The credit assessment application on the DB public chain can price the current financial company's credit asset package and can provide this asset package to asset buyer users directly on the digital application on the Digital Bank public chain. Such an asset securitization process is more efficient, less costly, and more authentic than the existing asset securitization process. The benefits of both parties are therefore higher and safer.

### 7.4 More financial business development space

The DB public chain provides a solid foundation for a variety of financial businesses. It provides the various foundations needed to carry out financial business.

Basic components and services, such as account systems, financial instruments, and mechanisms to ensure the smooth completion of financial transactions.

Basic financial operations such as payments, loans and liquidation can be successfully completed between the accounts and accounts in Digital Bank.

The Digital Bank public chain can carry out more and richer financial business and products. In the basic application of DB, transactions between accounts are only the exchange between the simplest financial product tokens. But more types of financial products, such as digital property rights

and digital asset packages, can be developed based on smart contracts. More digital financial products offer more choices for financial services in Digital Bank.

With the development of the business, DB will introduce more users besides credit evaluation companies and financial management, such as small and micro enterprise users, guarantee companies, collection companies and insurance companies. Digital Bank can easily support the introduction of new types of users.

Digital Bank easily supports multi-party transactions. The strongest application scenario for blockchain technology is support for multiparty transactions. The combination of consensus mechanisms and smart contracts ensures the smooth completion of multi-party transactions. With the increase in financial products and user types, the demand for more abundant trading business naturally arises, and the Digital Bank public chain can provide good support for this.

In general, the DB public chain not only has the function of digital banking, but also integrates various ecological applications such as currency transactions, digital currency storage, various financial wealth management products, economic games, etc., and realizes a cross-chain with extremely high difficulty coefficient. Technology, so that a number of public-chain assets based on different standard protocols can be freely exchanged at any time.

Starting from the decentralized exchange, Digital Bank gradually built the foundation of financial business and established a financial ecological environment. As more and more types of users, more and more financial products, and more and more financial services, Digital Bank The value of the chain is getting bigger and bigger.

## 8. Team and investment

DB is developed by Oasis, a US financial technology company. It is currently in deep strategic cooperation with several well-known financial technology companies and is led by many famous American capitals. The core team graduated from world-renowned universities and is a successful continuous entrepreneur. Therefore, whether it is educational background, capital strength, or social network, the team is rich in resources and has a solid foundation.

### 8.1 Core Team

#### Alexander Baldwin (CEO)

Alexander is a pioneer in the field of innovation and blockchain and was named "the most active blockchain angel investor in the United States". He is the founder of VentureClub.co, the largest venture capital crowdfunding platform in Europe and America. With great interest in blockchain and financial technology, he has been involved in the investment, leadership and operations of more than 70 projects. Alexander Baldwin's marketing skills in financial technology and blockchain have made him the founder of the Digital Bank public chain, as he has invested in a number of Ethereum blockchain zero-boundary decentralization projects.

#### Mike Podesta (CTO)

Born in the United States in 1980, he is a Ph.D. in Information Technology at the Massachusetts Institute of Technology. He was the head of the Information Security Department at Citibank and the Principal Engineer at PayPal. Mike is currently the CTO of the team, senior architect and big data expert of the National Key Laboratory of the United States; has deep knowledge in the fields of distributed computing, parallel processing, image recognition, language recognition, natural language understanding, deep learning, data mining, etc. Theoretical research and rich practical experience have directly participated in the management of four blockchain

projects, and participated in more than ten blockchain project research work, with rich experience in the commercial application of blockchain.

## Jame Miles (CMO)

Jame graduated from Stanford Business School and earned the No. 1 sales honor during his time as an executive at Prudential Group. He has served as Marketing Director of the Bond Market at Barclays Bank in the UK, and his knowledge in digital marketing has brought invaluable value to the company, and her strategic experience in IPO is also important to the company's future. In addition, Jame has served as the chief operating officer of the Japanese division at Macquarie Group and Deutsche Bank. His skills in product and brand promotion are mainly responsible for the company's brand promotion, helping the Digital Bank public chain to attract from the UK, Japan, Indonesia, Internationally renowned customers in Singapore and other countries.

## 8.2 Strategic Partner

In 2011, four Stanford Business School graduates founded SoFi, which provides student loan refinancing, mortgages, personal loans, wealth management and life insurance. More than \$25 billion in loans have been provided, with more than 300,000 members and a market capitalization of more than \$8 billion. The deep cooperation between SoFi and Digital Bank will bring a large number of members to its ecosystem.

Founded in 2012, Avant is a high-tech online lending platform dedicated to financial product innovation and lending to lenders to provide lending information solutions, using database and blockchain matching to select the lowest financing cost. The company has served more than 500,000 customers and has a \$3.5 billion loan portfolio. At present, Avant and Oasis have reached an initial cooperation intention to optimize their lending services using the Digital Bank public chain.

Founded in 2013, Oscar combines insurance and technology to provide a transparent and fast medical claims process to improve the healthcare system and customer experience, making the customer's healthcare system simple, efficient and cost effective. Well-known companies such as Fidelity, Google Capital and Khosla Ventures have made Oscar a key investment project. The strategic cooperation between Digital Bank's public chain and Oscar is not only technical, but also a deep cooperation of capital.

## 8.3 Investment institutions

### 1. Fidelity Investment Fidelity

Fidelity Investment Group was founded in 1946 by Edward C. Jensen II and headquartered in Boston, USA. The initial commitment of the company was: more diligent + more astute work every day, helping small investors to achieve their goals. After more than half a century of development, Fidelity Group has accumulated rich experience in investment management and is able to provide customers with convenient and professional services. It has grown from a pure mutual fund company to a diversified financial services company, providing customers with Comprehensive services including fund management, trusts and global brokerage services. It is the first fund management company to launch a "money market mutual fund account."





## 2. Google Capital

In February 2014, the Google Capital Investment Fund was officially launched. In November 2016, Google's investment department changed its name to "CapitalG" and quietly invested in Snapchat, with a focus on investing in companies with relatively mature technologies and a certain development base. Google Capital is a late-growth capital fund funded by Google that focuses on larger growth-stage technology companies and invests in Google's profits rather than strategically. In addition to capital investments, Google Capital's approach includes providing portfolio companies with guidance in the areas of data science, engineering, marketing and product management.

The logo for CapitalG, featuring the word "capital" in a dark grey, lowercase, sans-serif font, followed by "1G" in a bright green, lowercase, sans-serif font. The "1" is slightly smaller than the "G".

capital1G

## 9. Disclaimer

### A Legal declaration

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### B Risk warning

This white paper does not represent investment advice, or licenses to agree to sell, and to guide and attract any purchases. Any similar offer or levy will be made under a trusted clause and with the applicable securities laws and other relevant laws, and the above information or analysis does not constitute investment decisions or specific recommendations.

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- any errors, omissions or inaccuracies arising from personal understanding;
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# References

- Nakamoto, Satoshi, *Bitcoin: A peer-to-peer electronic cash system*, 2008 - URL - {<https://bitcoin.org/bitcoin.pdf>}
  - Brennan and Lunn, Credit Suisse Equity Reports - *Blockchain - The trust disruptor: Shared ledger technology and the impact on stocks*, 2016 - URL {<http://www.the-blockchain.com/docs/Credit-Suisse-Blockchain-Trust-Disrupter.pdf>}
  - Golem, *The Golem Project: Crowdfunding White Paper*, 2016 - URL {<http://golemproject.net/doc/DraftGolemProjectWhitepaper.pdf>}
  - Wilkinson, Shawn, *Storj Project: A Peer-to-Peer Cloud Storage Network*, 2014 - URL {<https://storj.io/storj.pdf>}
  - Tether Ltd, *Tether: Fiat currencies on the Bitcoin blockchain*, 2016 - URL {<https://tether.to/wp-content/uploads/2016/06/TetherWhitePaper.pdf>}
  - Eufemio, Chng and Djie, *Digix: The Gold Standard in Crypto-Assets*, 2016 - URL {<https://dgx.io/whitepaper.pdf>}
  - Buterin, Vitalik, *Ethereum: A Next-Generation Smart Contract and Decentralized Application Platform*, 2013 - URL {<http://ethereum.org/ethereum.html>}
  - Solidity, *Solidity: A contract-oriented, high-level language for the Ethereum Virtual Machine*, Release 0.4.10 Documentation - URL {<http://solidity.readthedocs.io/en/v0.4.10/>}
- Ben-Sasson, Chiesa, Garman, Green, Miers, Tromer and Virza, *Zerocash: Decentralized Anonymous Payments from Bitcoin*, 2014 - URL {<http://zerocash-project.org/media/pdf/>}

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