

**SPLENDOR NETWORK**  
*DRAFT FOR SELECTED REVIEW*

**WHITEPAPER**

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# **SPLENDOR NETWORK**

*Brining Crypto-backed Loans to Mainstream*

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## **1. EXECUTIVE SUMMARY**

Splendor Network is a blockchain-based peer lending and alternative investing platform that provides accessible credit and investment opportunities through crypto-backed loans. The current cryptocurrency community is inefficient due to lack of liquidity, especially in fiat-currencies. Splendor addresses this crucial issue through automated crypto-to-fiat loans. Splendor allows crypto investors to retain ownership of their assets while obtaining cash without regular credit checks. Lending and borrowing process become automatic, transparent and reliable through Splendor platform. As cryptos and tokenized assets are rapidly evolving as a brand new asset class, Crypto-backed loans created a new avenue for both traditional and crypto investors. To traditional investors, crypto-backed loan offers unique risk and return characteristics, making it highly attractive. Splendor Network's mission is to bring crypto-backed loans to mainstream.

## 2. INTRODUCTION

### 2.1 Problem Statement

Financing has always been the core engine driving the global economy growth. Typical financing methods include lending and equity financing. Both individual and corporate lenders are involved in the lending activities differently. Individual lenders can apply for unsecured loans such as consumption loans or credit card loans, and secured loans such as mortgages or automobile loans. For corporate lenders, firms can issue unsecured corporate loans or secured corporate loans. Prior to the 2008 Financial Crisis, traditional banks are the major credit providers to individuals and corporates. However, the 2008 Financial Crisis led to the consolidation of stressed banks and implementation of Dodd-Frank Act and Basel III Act. The direct consequence was increasing difficulty for individual and corporate borrowers to obtain credits from the banks due to higher reserve ratio requirement. As a result, alternative-lending industry such as peer-to-peer lending evolved as a disrupter to the traditional lending market. Representative lending platforms like Lending Club and Prosper allow individual and corporate borrowers to obtain credits easier than from traditional banks. At the meantime, individual and institutional investors discovered attractive investment opportunities under the low-rate environment.

Disruptive and innovative in the nature, peer-to-peer lending industry is still facing the following challenges:

Borrowers	Lending Platforms
<ul style="list-style-type: none"><li>• Difficulty to obtain loans without personal credit history</li></ul>	<ul style="list-style-type: none"><li>• Difficulty in verification of borrower's credit history</li><li>• Malicious borrowers intentionally borrow from multiple platforms beyond their actual repayment abilities</li><li>• Difficulty to appraise and dispose borrowers' collaterals</li><li>• Investors' mistrust to platform operation</li></ul>

## 2.2 Market Opportunity

The rise of blockchain technology and cryptocurrency can effectively address the challenges in traditional lending industry. Lending platform powered by blockchain technology is decentralized, anonymous and immutable. As a result, it is easier for borrowers, lenders and the platform to establish mutual trust. More importantly, cryptocurrency can be collateralized. In crypto-backed lending, once the collateral is tokenized, monitoring and disposing the collateral is much easier than traditional lending. As a result, the reliance on credit checks is much lower than the traditional lending.

Cryptocurrency is rapidly evolving as a new asset class. According to Coinmarketcap.com, the peak market capitalization of all the coins and tokens in the public market exceeded 800 billion USD in 2018, excluding value of the private market unicorns such as Telegram and Dfinity. In addition to cryptocurrency, tokenized assets such as securities, commodities and real estate will represent a trillion-dollar market. In the near future, digital-assets-backed lending will reshape the landscape of existing traditional lending market.

Crypto-backed lending has the following unique advantages compared to traditional lending:

	<b>Crypto-backed Lending</b>	<b>Traditional Lending</b>
Reliance on Credit Checks	Very Low	High
Availability	Worldwide	Limited Jurisdictions
Approval Time	Instant	Slow
LTV of Collateral	Low	High
Interest Rate	Higher	Medium
Collateral Disposal	Very fast	Instable

Crypto-backed lending is less dependent on credit checks than traditional lending since the loan is fully collateralized. It's available to global users and loans can be

obtained instantly. Cryptocurrency has higher volatility than traditional assets, thus the borrowers are less sensitive to LTV ratio and interest rates. In general, to lending platforms, risk management is easier given the margin of safety with lower LTV ratio; to investors, crypto-backed investment products are very attractive compared to traditional loan products. Also, mainstream cryptocurrencies have very strong liquidity, allowing faster disposal of collateral than traditional collaterals. In conclusion, crypto-backed lending market is going to play a significant role in both traditional and crypto financial markets.

### **3. SPLENDOR NETWORK**

#### **3.1 About Splendor Network**

Splendor Network is a blockchain-based peer lending and alternative investing platform that provides accessible credit and investment opportunities through crypto-backed loans. Splendor Network is to be developed by Splendor Foundation and will be initially based on Ethereum blockchain for its platform token (SPN) issuance.

Splendor Network is powered by world-class lending platforms, which equips Splendor Network with the most advanced fraud detection, collateral management and risk management capabilities. More importantly, Splendor Network has existing business partnerships with these lending platforms, making access to fiat currency readily accessible. Splendor Network is expected to be the biggest fiat currency lender in the crypto-backed loan industry given its unique edge.

The core team of Splendor Foundation has a proven track record and well-established reputation in both business and technology side of the traditional lending business. The core team has consummated over 11 billion USD transaction volume in lending and accumulated over 7.5 Million accumulated users globally.

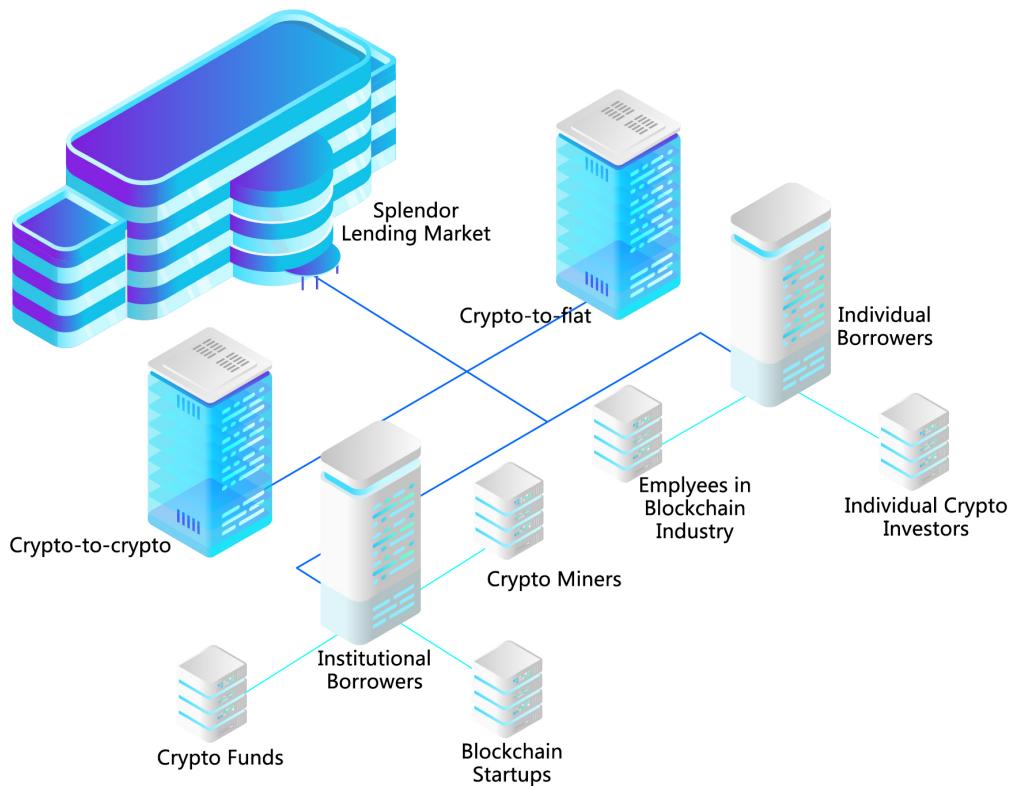
### 3.2 Splendor Network Ecosystem

Splendor Network is an ecosystem encompassing the important players throughout the lending industry chain. Splendor Ecosystem is comprised of 3 parts.

#### 3.2.1 Splendor Lending Market

Splendor Lending Market is the market for borrowers.

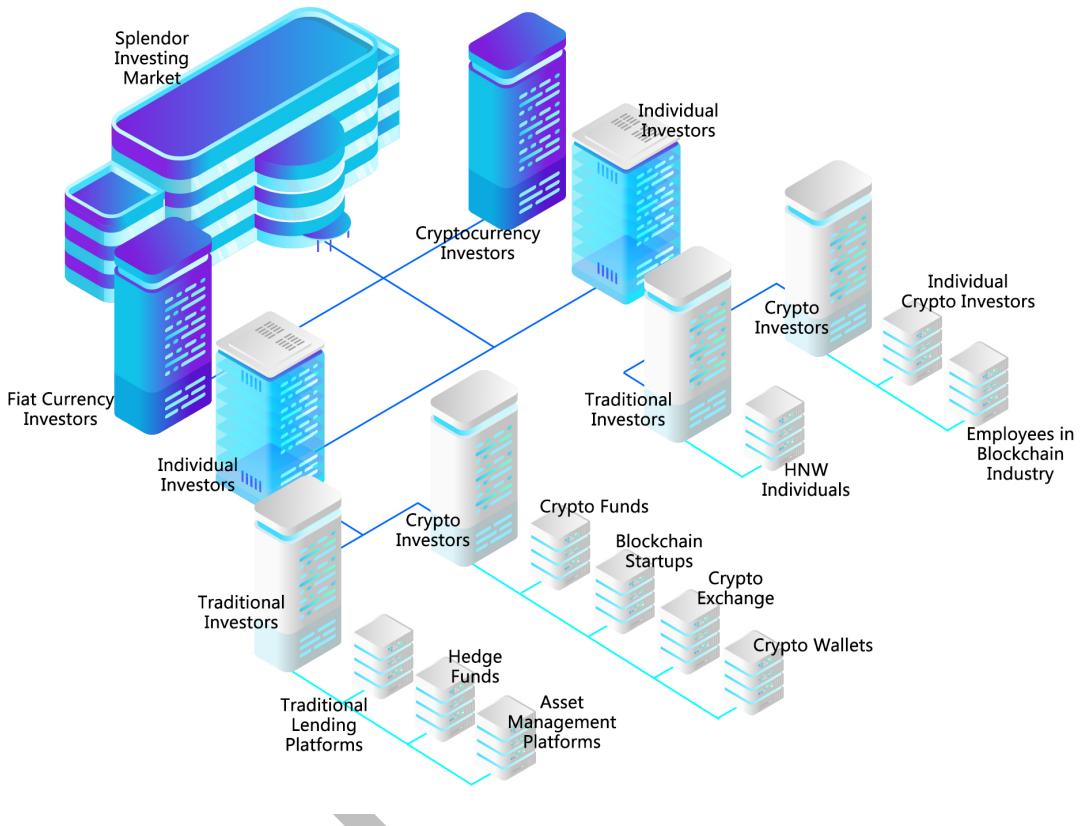
- 1) Borrowers can pledge their cryptocurrencies as collateral for access to other cryptocurrencies
- 2) Borrowers can pledge their cryptocurrencies as collateral for access to fiat-currencies



### 3.2.2 Splendor Investing Market

Splendor Investing Market is the market for lenders/investors.

- 1) Cryptocurrency lenders
- 2) Fiat-currency lenders



### 3.2.3 Splendor Exchange

Splendor Exchange is an internal exchange built for investors to mitigate potential investment and liquidity risks.

- 1) Long-term Loan Transfer: In Splendor Loan Exchange, loans originated within the exchange can be transferred to other investors. For example, a lender invested in a one-year crypto-backed loan, and wanted to sell the loan before maturity. The lender can sell the loan at discount in Splendor Loan Exchange to another investor. The new investor will have the claim of ownership of the collateral and the rest of income streams within the loan vehicle.
- 2) Loan Guarantor: Investors can pay certain premium for external institutional

guarantors to guarantee the security of their principals, adding double layers of safety to collateralized products.

### **3.3 Use-cases**

#### 3.3.1 Crypto-to-Crypto Lending

In crypto-to-crypto lending scenario, borrowers can pledge the following assets through Splendor Network to obtain crypto assets:

- 1) Mainstream coins such as Bitcoin and Ethereum
- 2) Mainstream platform tokens issued by crypto exchanges
- 3) Mainstream tokenized crypto index
- 4) Tokenized assets including stocks, bonds, commodities and real estates

As a lender, the lender can enter into a peer-to-peer transaction with designated borrowers through Splendor Network. Lenders can also invest into a pooled vehicle where the platform will lend the money to a group of qualified. In the event of borrower's default or failure to respond to a margin call, the platform will dispose the collaterals promptly to protect lenders from potential loss. The pooled investment vehicle is packed into a crypto private debt product to be available in the Splendor Investing Market, where the product has an estimated yield, duration and LTV ratio.

As long as the LTV ratio is meticulously calculated, the lenders are unlikely to lose their principal in event of debtors' defaults or sharp market decline.

Target Borrowers:

- 1) Institutional Borrowers
  - a) Blockchain startups with primary source of funding from Bitcoin or Ethereum require access to liquidity but still believe in upward potential for Bitcoin and Ethereum price.
  - b) Crypto miners with large reserve of Bitcoin or Ethereum require access to

- liquidity but still believe in upward potential for Bitcoin and Ethereum price; or when the Bitcoin and Ethereum price are below their mining costs.
- c) Token funds require leverage of their portfolios.
  - 2) Individual Borrowers
    - a) Individual crypto investors whom are long-term investors for their cryptos require access to liquidity or leverage.
    - b) Employees in blockchain startups require access to liquidity or leverage.

Target Lenders:

Target lenders include institutional and individual lenders with demand for cash management.

- 1) Institutional Lenders
  - a) Crypto funds
  - b) Blockchain Startups
  - c) Crypto Exchange
  - d) Crypto Wallets
- 3) Individual Lenders
  - a) Individual crypto investors
  - b) Employees in Blockchain Startups

### 3.3.2 Crypto-to-Fiat Lending

In crypto-to-fiat lending scenario, borrowers can pledge the following assets through Splendor Network to obtain fiat assets:

- 1) Mainstream coins such as Bitcoin and Ethereum
- 2) Mainstream platform tokens issued by crypto exchanges
- 3) Mainstream tokenized crypto index
- 4) Tokenized assets including stocks, bonds, commodities and real estates

Fiat-currency lenders on Splendor Platform are traditional lending platforms with mature infrastructure and fundraising capabilities. Users are only required to go

through KYC process on Splendor Platform once and will be given immediate access to fiat liquidity once the loan application is approved. In the event of default or failure to margin call, the platform will be able to dispose the collaterals promptly. The pooled investment vehicle is packed into a crypto private debt product, where the product has an estimated yield, duration and LTV ratio. As long as the LTV ratio is meticulously designed, the lenders are unlikely to lose their principal in event of debtors' defaults or sharp market decline. Crypto-backed loans can offer investors higher yield than traditional lending products and collateralized crypto offer safe protection of their principal.

Target Borrowers:

- 1) Institutional Borrowers
  - a) Blockchain startups with primary source of funding from Bitcoin or Ethereum require access to fiat liquidity but still believe in upward potential for Bitcoin and Ethereum price.
  - b) Crypto miners with large reserve of Bitcoin or Ethereum require access to fiat liquidity but still believe in upward potential for Bitcoin and Ethereum price; or when the Bitcoin and Ethereum price are below their mining costs.
- 2) Individual Borrowers
  - a) Individual crypto investors whom are long-term investors for their cryptos require access to fiat liquidity.
  - b) Employees in blockchain startups require access to fiat liquidity.

Target Lenders:

- 1) Institutional Lenders
  - a) Traditional lending platforms
  - b) Hedge Funds
  - c) Asset Management Platforms
- 2) Individual Lenders
  - a) High-net-worth Individuals

### **3.4 Procedures for Crypto-to-Fiat Lending**

Typical Lending Process:

➤ *Step 0: ID Verification and Certification*

The borrowers have to clear Splendor platform's KYC and AML procedures, with in-house and 3<sup>rd</sup>-party credit profile database. Splendor Network builds its own white list and black list mechanism to identify potential frauds.

➤ *Step 1: Loan Application*

The borrower submits loan application, confirming the loan period, type of collateral and nominal value of the collateral.

➤ *Step 2: Loan Confirmation*

According to borrower's credit history and external credit information, Splendor Network will confirm the lending terms. Splendor Network will calculate the loan to be released according to type of collateral and its LTV-ratio. LTV-ratio is calculated through the historical volatility and prediction of the future price trend of the underlying collateral.

➤ *Step 3: Loan Disbursement*

Once the borrower agrees to the terms, the borrower has to transfer its crypto collateral to designated escrow account address.

➤ *Step 4: Post-lending Management*

Prior to borrower's payment or pre-payment, Splendor platform will monitor the marked-to-market value of the underlying collateral and issue margin call or dispose the collateral if the pre-set watermark is triggered.

### **3.5 Key Features of Splendor Network**

#### 3.5.1 Custody of Assets

For transparency and security, all the crypto collaterals pledged by the borrowers will be deposited into multi-signature custodian account with reputable independent third-party digital assets custodians. Splendor platform does not have sole discretion to dispose the collaterals in the custodian account until a default event happens. In this

way, borrowers are able to retain the ownership of their crypto assets with collaterals secured by a credible third-party.

### 3.5.2 Auditing

Transparency is the key to build mutual trust between lending platform and its investors. Investors will invest funds into the lending stake pool to fund different borrowers. Audit trials for the investment activities and investment returns are important. Splendor Network works with independent third-party auditors to verify the account net asset value. The third-party auditors include the traditional big-four auditors and auditors specialized in cryptocurrency.

## **3.6 Splendor vs. Other Crypto-backed Lending Platform**

Compare to the existing secured or non-secured lending platforms, Splendor Network instantly distinguishes itself from the following aspects:

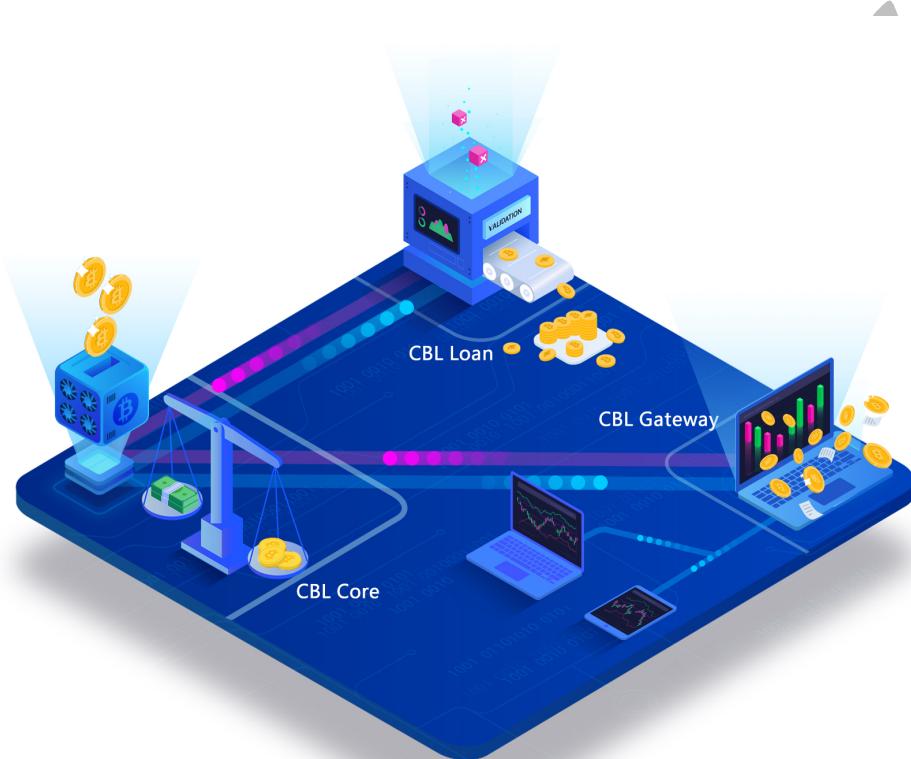
1. Proven track record in traditional lending business, completed over 11 billion USD lending volume and served more than 7.5 Million users.
2. Strong access to fiat currency from world-class lending platforms in different currencies.
3. Well-established internal risk management and compliance procedures.

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Project (Symbol)	Splendor Network (SPN)	SALT Lending (SALT)	Libra Credit (LBA)	ETH Lend (LEND)	Nexo (NEXO)	Celsius (CEL)	Lending Block (LND)	BlockFi
<b>Crypto-to-crypto lending</b>	√	✗	√	√	✗	√	√	✗
<b>Crypto-to-fiat lending</b>	√	√	√	√	√	√	✗	√
<b>Custody of Assets</b>	√	√	✗	✗	✗	✗	✗	✗
<b>Third-party Guarantor</b>	√	✗	✗	✗	✗	✗	✗	✗
<b>Transfer of Loans</b>	√	✗	✗	✗	√	✗	✗	✗
<b>Funding from Traditional Lending Platforms</b>	√	√	√	√	√	√	✗	√
<b>Past Experience in Traditional Lending</b>	√	✗	✗	✗	√	✗	✗	✗
<b>Past Experience in Collateral Management</b>	√	✗	✗	✗	√	✗	✗	✗
<b>Global Regulatory Compliance Track Record</b>	√	√	√	✗	√	√	√	√
<b>Third-party Auditor</b>	✓	✗	✗	✗	✓	✗	✗	✗

## 4. TECHNOLOGY

Splendor Network is driven by 3 sub-systems: CBL Loan, CBL Core and CBL Gateway. Splendor Network has 9 building blocks: Wallet, Assessment, Loan Management, Profile Management, Vault, Collateral Management, Liquidation & Settlement, Oracle and Notification.



### 4.1 CBL Loan

CBL Loan consists of Wallet, Assessment and Loan Management. CBL Loan deals with loan generation and management.

Wallet provides the communication channel, including website and mobile apps, to allow borrowers to sign up and sign in; apply for loans; conduct status check; receive notifications from Oracle & Notification.

Assessment conducts KYC and compliance checks on the borrower in order to determine the loan terms.

Loan Management keeps all the records of approved loan applications and the status of each loan, such as payment on time, late payment and default, etc.

#### **4.2 CBL Core**

CBL Core is the controlling system that comprises of Profile Management, Vault and Collateral Management.

Profile Management records a borrower's loan and repayment history. It automatically generates credit score of a certain borrower.

Vault is where the pledged crypto currency is kept, by using escrow wallet and cold storage to improve the security against theft and misuse of the fund. Escrow wallet uses multi-sig to maintain correct custody of the fund.

Collateral Management is the core system that issues margin calls and other risk mitigation actions. The system manages the approval of collateral liquidation.

#### **4.3 CBL Gateway**

CBL Gateway interacts with outside systems such as Crypto Exchanges in sending orders. It also keeps CBL Core up-to-date with latest prices and borrowers notified with actions to be taken. CBL Gateway serves such purposes by Liquidation & Settlement, Oracle and Notification.

Liquidation & Settlement takes orders from Collateral Management to sell portions of pledged fund to return LTV to acceptable level.

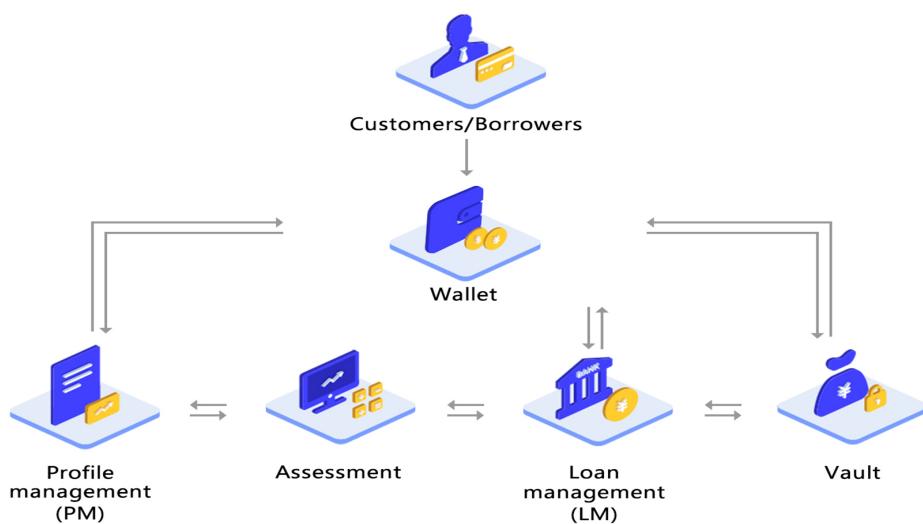
Oracle and Notification is the information channel, such as retrieving crypto prices from exchanges, updating the status of repayment of fiat currency, sending action notifications to borrowers.

#### **4.4 Components in Detail**

##### 4.4.1 Wallet

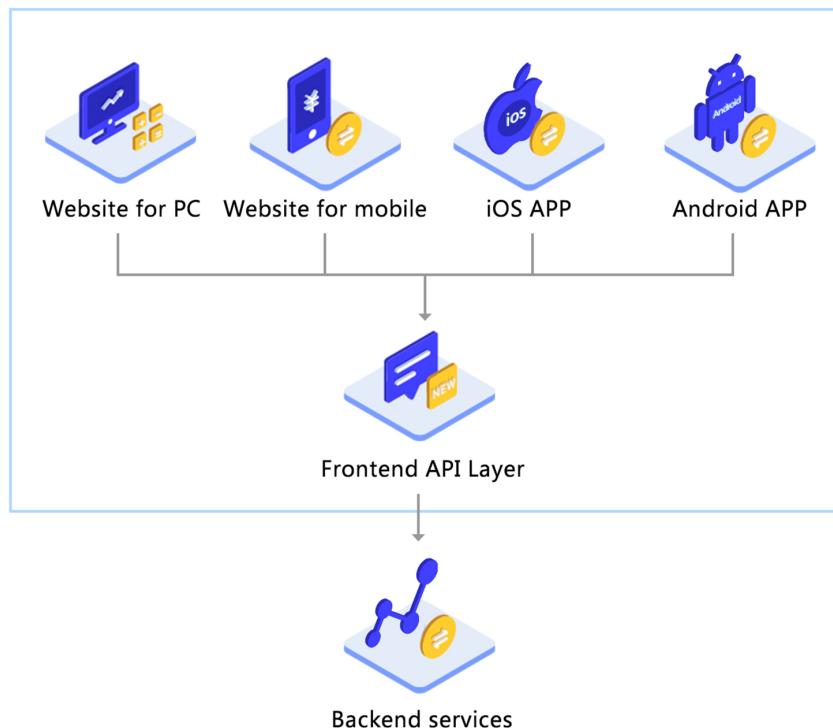
This is the front-end of and point of access to Splendor Network, features include:

- Get to know about Crypto-Backed Loan;
- Register and login;
- Maintain account information;
- Manage crypto assets;
- Submit personal information for KYC/AML;
- Apply for a CBL;
- Pledge cryptocurrency;
- View loan status;
- Commit repayment;
- Ask for help;
- View notifications.



To provide a seamless and convenient access to Splendor Network's services, Wallet takes the form of PC website, HTML5 mobile pages and iOS /Android applications.

An API intermediate layer is developed as a bridge between front-end and back-end services, providing an universal invocation method, which allows smooth horizontal expansion of front-end development on various platforms.



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Typical user interfaces are depicted as follows:

1. The borrower choose to pledge BTC for USD

The screenshot shows a mobile application interface for a loan application. At the top, there is a status bar with signal strength, battery level (100%), and time (04:21). Below the status bar, the word "Loan" is displayed. The main form has the following fields:

Loan type	Mortgage loan —flat currency >
Token type	BTC >
How much do you plan to borrow	
\$1,000	
The actual amount of the loan is determined by the mortgage amount	
Mortgage amount	0.334298
Interest rate	3.8%
Term of loan	5 days    15 days    30 days
Interest payable ⓘ	0.0034509 btc
<b>Confirm</b>	



2. The borrower chooses to pledge BTC for EOS

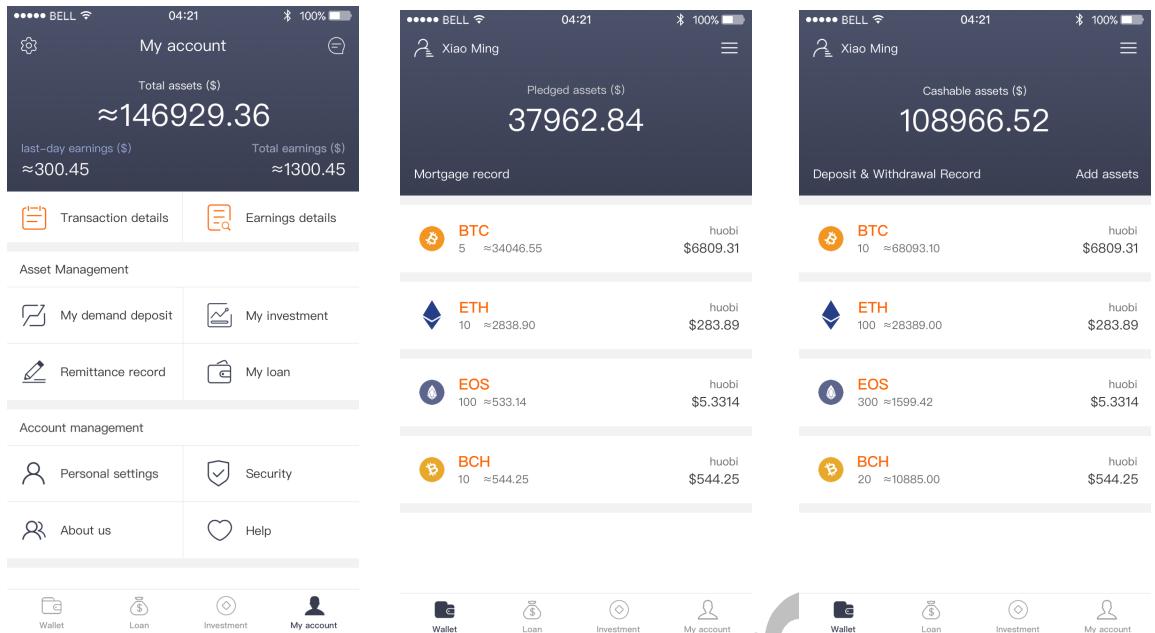
The screenshot shows a mobile application interface for a loan application. At the top, there is a status bar with signal strength, battery level (100%), and time (04:21). Below the status bar, the word "Loan" is displayed. The main form has the following fields:

Loan type	Mortgage loan —crypto currency >
Token type	BTC >
Borrowed currencies	EOS >
How much do you plan to borrow	
300 EOS	
Mortgage amount	0.334298
Interest rate	3.8%
Term of loan	5 days    15 days    30 days
Interest payable ⓘ	0.0034509 btc
<b>Confirm</b>	

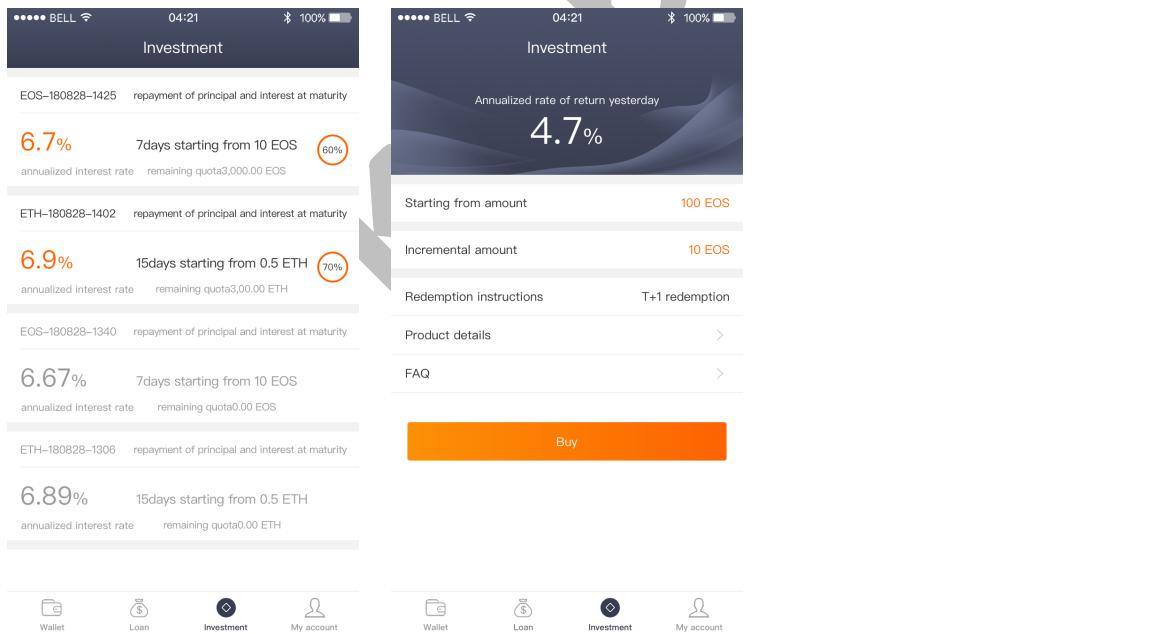


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### 3. Dashboard of user center



### 4. Loans displayed as investment products



#### 4.4.2 Assessment

Loan applications from Wallet is sent to Assessment, which conducts data queries from User Profile and Loan Management to collect the applicant's historical and current loan repayment information. Together with KYC and credit score, detailed

loan terms such as LTV baseline, loan limit, interest rate and duration of the loan will be confirmed. Oracle is also utilized in order to calculate how much crypto assets are required as the collateral at the time of calculation.

The borrower's risk profile plays a critical role in assessment process, which gauges the probability of late payments by borrowers. Early warnings at the initial stages of loan generation could drastically reduce the risks in Loan Management and Collateral Management processes. Splendor Foundation will develop its proprietary AI engine based on learning historical data of the crypto market, industrial statistics of repayment status in different markets as the input and platform borrowers repayment behavior over time. We expect the AI engine could provide sharpened risk profiles of the borrowers to generate more accurate decisions.

Once the borrower accepts the terms, Assessment generates a Loan ID and passes it to Loan Management. Loan ID is created when pledge is made to Vault and also passes the ID to Loan Management. With 2 matching Loan ID, Loan Management generates a loan to be filled by investors.

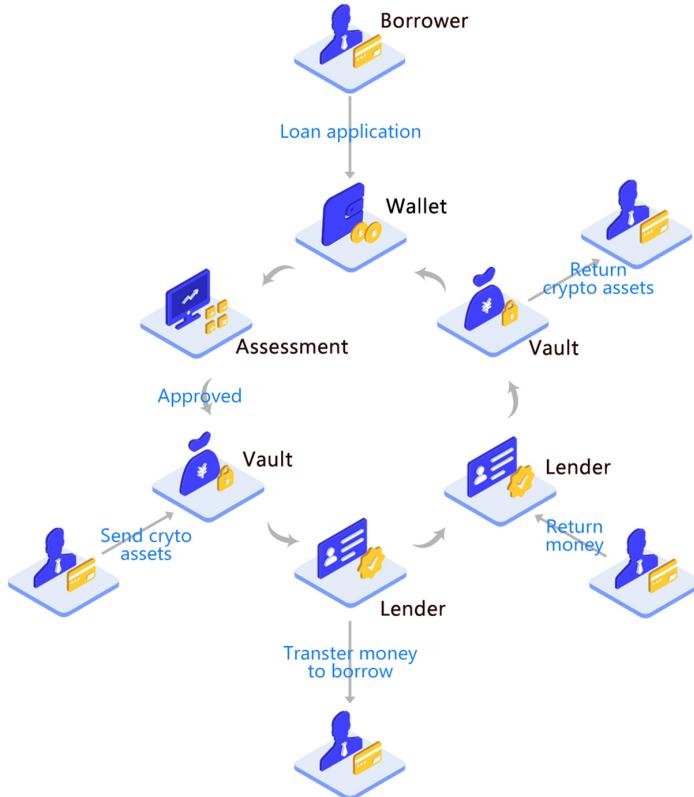
#### 4.4.3 Loan Management

Loan Management records the entire life cycle of a loan, from the application to the completion of the final repayment.

The life cycle of each loan has the following stages:

1. Loan application (loan amount, maturity, interest rate, repayment method, type and quantity of crypto currency to be pledged).
2. Evaluation of the application by Assessment.
3. If approved by Assessment, the borrower needs to pledge determined amount of crypto assets.
4. Upon receiving the pledged crypto assets, loan is granted and transferred to the borrower's designated bank account or receiving address.

5. The borrower makes repayment as agreed in the loan term sheets.
6. With a complete repayment, the borrower could choose to withdraw the collateral or start a new loan application.



For each normal repayment, late payment and default of payment, Loan Management will send events to notify Collateral Management, which in turn, execute the pre-defined smart contracts to determine if notifications need to be sent to the borrower or liquidation actions should be taken.

#### 4.4.4 Vault

The Vault is where borrower's collateral is safely kept and stored. The Vault tracks and records all the movements of a borrower's crypto assets. When a borrower's application for a CBL is approved, crypto currency needs to be pledged into the Vault. When the borrower has completed the repayment, the pledged crypto assets could be withdrawn. During the period of loan repayment, all transaction records of borrower's crypto assets are kept by Vault.

The total crypto assets pledged by the borrower is divided into 2 parts:

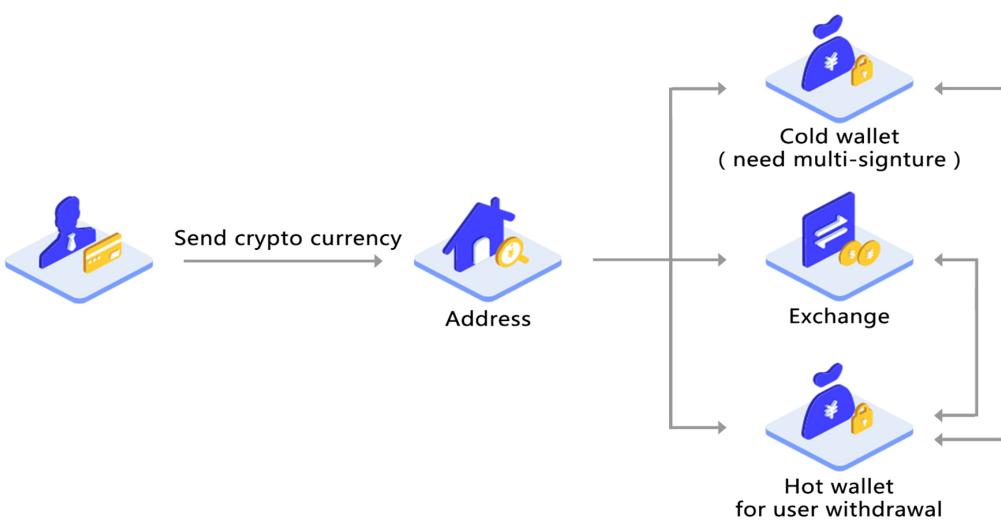
1. Locked assets: locked by Splendor Network and is subject to liquidation if triggered by Collateral Management
2. Liquid assets: free to withdraw by the borrower

There are 2 types of pledges, depending on the borrower's choice:

1. Pledge on Splendor Network Platform
2. Pledge in custody

For Pledge on Splendor Network, Splendor generates a new address to receive the assets for each deposition of crypto assets. Once the finality is reached, assets will be sent to 3 places:

1. The majority is transferred to a cold wallet as the locked assets;
2. A certain portion, still locked assets, is sent to partner exchange for potential liquidation events;
3. The rest, if any, is sent to hot wallet as the liquid assets.



When LTV decreases below the base line, certain portion of locked assets will be labeled as liquid assets. If the borrower needs to withdraw from liquid assets, crypto currencies could be withdrawn from the hot wallet. If there are not enough crypto currencies in the hot wallet, more funds will be transferred from the cold storage with multi-sig to the hot wallet, until the reserve of liquid assets reaches zero.

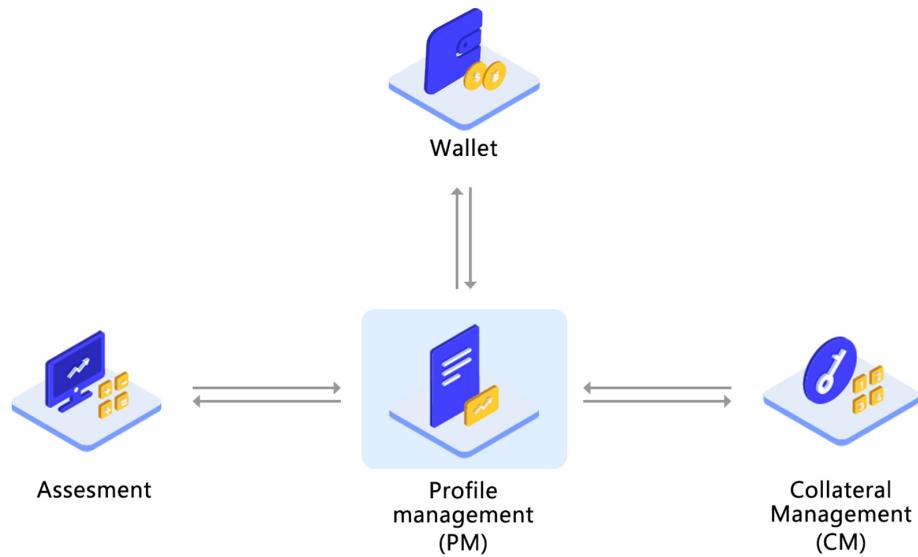
When LTV increases beyond the base line, partial or all liquid assets flow into locked assets to maintain the LTV level. If liquid assets depletes and the LTV level is still higher than the base line, margin call will be triggered to ask the borrower either pledge more crypto currencies or make further repayments.

To avoid unnecessary movements of crypto currencies that involves transaction fees and time, Splendor Network will employ AI technology in analyzing market statistics and patterns of borrowers' withdrawals to determine the distribution among cold storage, exchange holdings and hot wallet to minimize transaction fees while maintaining sufficient liquidity.

#### 4.4.5 Profile Management

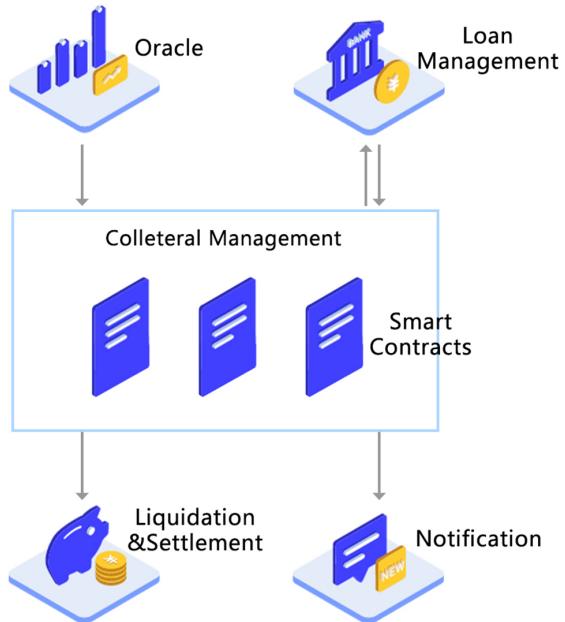
Splendor Network is only available for eligible borrowers, whose identity and loan history information is managed by the Profile Management system. By getting information from the user and integration with other 3<sup>rd</sup>-party credit score providers, Profile Management could analyze the data to construct a profile for each borrower. This profile information is used by Assessment to determine loan terms and approval of loans.

User authentication is a part of Profile Management. It provides login verification and 2-factor authentication for movements of crypto assets, such as pledging and withdrawing crypto assets.



#### 4.4.6 Collateral Management

All collaterals are managed by CMSC (Collateral Management Smart Contracts), which has the loan terms related to risk level, margin call, liquidation embedded as part of the smart contract.



CMSC's logic centers around LTV (Loan-to-Value), which is the percentage value of the loan plus unpaid interests to the underlying marked-to-market value of the collateral. LTV is calculated as follows:

$$LTV = \frac{V_{pi}}{V_{cy}}$$

$V_{pi}$  = principal + unpaid interests  
 $V_{cy}$  = market value of pledged crypto

Setting a reasonable LTV is critical to the overall risk management. Lower LTV ratio means lower risk to the lenders, but it reduces the leverage of the borrower. When LTV ratio is higher than 100%, in event of default, lenders will incur loss. If LTV is too low, the borrower may switch to other platforms in seeking more liquidity. We will set up 3 risk control thresholds: baseline LTV, margin-call LTV and disposal LTV, with such relationships:

$$LTV_{baseline} < LTV_{margin} < LTV_{disposal}$$

Baseline LTV is calculated based on loan terms, user profile and grade of the crypto used as the collateral.

Loan terms are mainly about the amount to be borrowed, duration of the loan, repayment method and interest rate. For each combination of the above factors, there is a preset LTV, which is called  $LTV_{initial}$ .

To calculate  $LTV_{baseline}$ , user profile and grade of the crypto need to be factored in:

$$LTV_{baseline} = LTV_{initial} \times F(grade_{user}, grade_{crypto})$$

The AI engine at User Profile extracts data from borrower's historic borrowing records, repayment records, certification levels, and information from social networks. The raw data is calculated and merged by machine learning algorithms; features were extracted from neural networks; logistic regression (LR) models were used to predict bad debt rates and calculate user credit scores. The credit score is mathematically calculated as follows:

$$\text{Score} = \text{BaseScore} - \text{Scale} \times \ln(\text{odds})$$

$$\text{odds} = \frac{Y}{1 - Y}$$

$$Y = \frac{e^{\sum w_i * x_i}}{1 + e^{\sum w_i * x_i}}$$

Y is between 0 and 1, and obeys a 2-dimensional Boltzmann distribution.

w is the vector parameter, while x is the value of the vector, reflecting one aspect of the borrower, such as concurrent loans.

BaseScore is the anchor point where we set as the basic score, beyond and below which a scale moves the borrower's credit up and down.

Throughout the loan period, LTV fluctuates due to 2 major factors: loan repayment and market price of the collateralized crypto asset. For the first factor, Loan Management provides a subscription channel, based on Message Queues, to allow Collateral Management to stay up-to-date with each loan's status and conduct necessary calculations for the LTV of each loan. For the valuation of collaterals, CMSC constantly collects global market price indicators regularly through Oracle to perform LTV evaluation.

Margin-call LTV is triggered when the market value of the underlying collateral declines or the borrower failed to make repayment on time. Once reached, Notification will be sent to contact borrower through multiple channels for a margin call, such as message, APP notification, email, voicemail and others. Borrower usually has to respond within  $m$  hours on receiving the notification by pledging additional crypto collateral or paying portion of the debt to bring the LTV lower than  $LTV_{margin}$ .

If the borrower chooses to pledge more crypto assets lower the LTV, the amount that is needed ( $Crypto_{margin}$ ) is calculated as follows:

$$Crypto_{margin} = \frac{V_{pi}}{Price \times LTV_{margin}} - Crypto_{pledge}$$

$Price$  is the prevailing market price of the crypto asset. Oracle retrieves the price information from multiple exchanges and aggregates them into the reference price.

When  $LTV_{disposal}$  is triggered, the platform will sell the collateral through exchanges to pay portion of the loans until LTV is lower than  $LTV_{margin}$ .

Pseudo code:

```
func manageLTV (uid, loanID, cryptoPrice) {
    LTV := User.getLTV(uid, loanID);
    loanOutstanding := LoanManager.getOutstanding(loanID);
    pledgedNum := Vault.getPledge(uid, loanID);
    currentLTV := (loanOutstanding) / (cryptoPrice * pledgedNum);

    if currentLTV < LTV.baselineLTV {
        numLiquidCrypto := pledgedNum - loanOutstanding / (cryptoPrice *
        LTV.baselineLTV);
    }

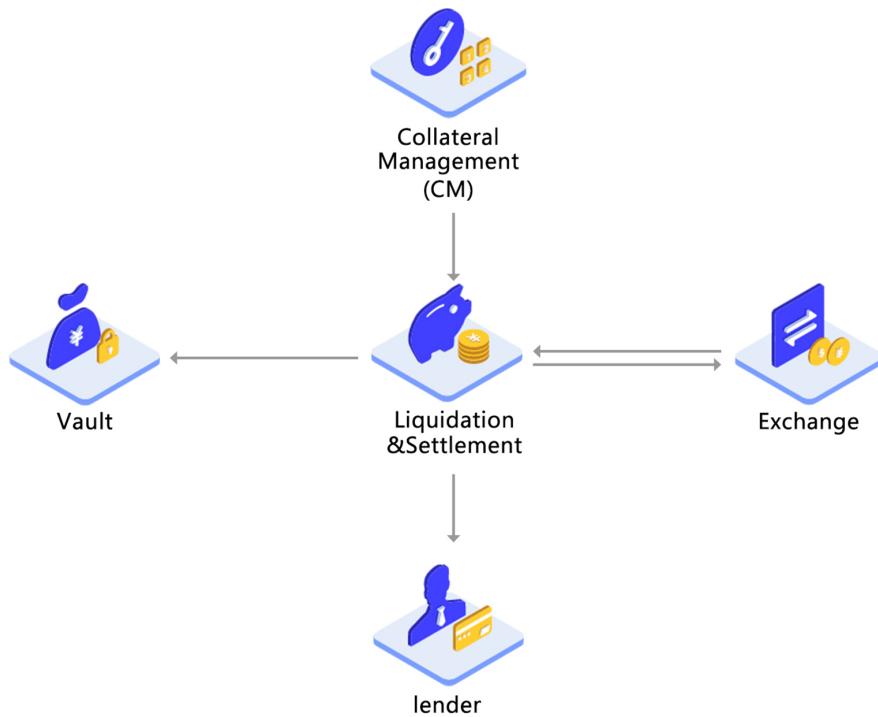
    if currentLTV > LTV.marginLTV {
        numMarginCrypto := loanOutstanding / (cryptoPrice * LTV.marginLTV) -
        pledgedNum;
    }
}
```

```
Notification.sendNotification(uid, numMarginCrypto, MARGIN);
}

if currentLTV > LTV.disposalLTV {
    numLiquidateCrypto := pledgedNum - loanOutstanding / (cryptoPrice *
LTV.marginLTV)
    Liquidation.sellCollateral(uid, numLiquidateCrypto,
        func (result, err) {
            if err != nil {
                return;
            } else {
                Notification.sendNotification(uid, result.numLiquidateCrypto,
LIQUIDATE);
            }
        });
}
}
```

#### 4.4.7 Liquidation & Settlement

If there are no proper actions taken by the borrower after a pre-determined period upon margin calls, Liquidation actions are triggered. This is where Liquidation & Settlement happens.



The first part is liquidation, where Vault is consulted for the value of remaining locked assets. Partial or all locked assets will be transferred by Vault to Exchange. Once the assets are with the Exchange, a market order of sell will be listed with the Exchange. Liquidation strikes a balance between timely action and savings on transaction fees by aggregating reasonable number of trades to be sent to the Exchange.

Once the sell order is filled, Settlement sends the received funds to the lender and notifies Loan Management to update the status of the affected loans.

#### 4.4.8 Oracle

Due to the fluctuation of prices of crypto assets on the market, monitoring the value of collaterals is necessary to make sure actions could be triggered to allow LTV stays in a safe range. Splendor Oracle gathers price indicators from various Exchanges and aggregates data to generate accurate and timely price information about the collaterals. This information is used by Collateral Management to conduct evaluation of the

collateral related to each loan.

#### 4.4.9 Notification

Notification system is mainly used by Collateral Management to issue margin calls, other functions such as loan repayment notifications, account status changes are also provided to Loan Management and User Profile. The physical method of sending notifications include: in-mail, email, SMS, telephone calls, App Push, to ensure that the user is kept up-to-date with important information.

### **5. Token Ecosystem**

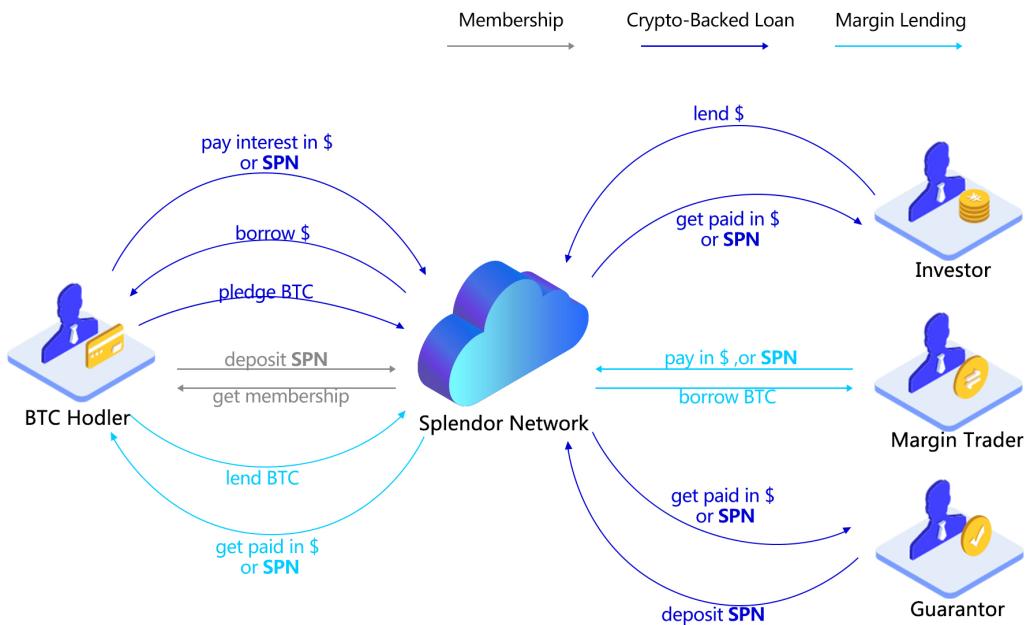
#### **5.1 Splendor Foundation**

Splendor Foundation will be responsible for the development, operation, and maintenance of Splendor Network. The Splendor Foundation is committed to maintaining the healthy growth of the entire ecosystem.

#### **5.2 Token Economy**

Splendor Network Token (Token Symbol: SPN) will be issued by Splendor Foundation to circulate within the Splendor Network Ecosystem (see details in Token Distribution). SPN tokens can be obtained through token sale. After the token sale, SPN tokens will be available through crypto exchanges listing and ecosystem rewards.

SPN token has multiple utilities and functions in the Splendor Network Platform, such as Membership access, payment, and proof of stake. The following diagram depicts a BTC holder and other players utilizing SPN token on the Splendor Network for multiple purposes.



### 5.2.1 Membership Access

Splendor Network offers different levels of membership access to its users. Users will be able to access standard and premier features on Splendor Network based on the number of SPN tokens they deposit in exchange for such Membership. Membership features include the following:

- 1) Standard Features of Splendor Membership:
  - a) Right to create a profile and apply for loans
  - b) Access to automated web-end and mobile-end loan application and management portals
  - c) Market Information & resources
- 2) Advanced Features
  - a) Customized loan terms
  - b) Discounted interest rates
  - c) Prolonged payment period
  - d) No prepayment Penalties
  - e) Access to new loan products

- f) Access to more fiat currencies
- g) Access to new wealth management products

#### 5.2.2 SPN as Collateral

SPN tokens can be used as collateral in crypto-to-crypto and crypto-to-fiat lending. Using SPN tokens as collateral can unlock the advanced features of Splendor membership and some unique features if large amount of SPN tokens are collateralized.

#### 5.2.3 Transaction Fee

SPN token is the medium of exchange for the services throughout the Splendor Network platform. If external lending platform request the credit history of existing Splendor Network lenders, SPN is the network currency.

#### 5.2.4 Ecosystem Rewards

The major rewarding program is based on activities taken by participants of the Splendor Network. We encourage frequent loan applications and on-time payments; such ‘good’ behaviors will be rewarded by SPN tokens granted to the participants.

SPN tokens will be rewarded to developers worldwide contributing to the development of Splendor Network platform.

SPN tokens will also be rewarded to the users participating into the referral program by bringing friends into the platform.

#### 5.2.5 Guarantor’s deposits

Institutions as loan Guarantors can provide an extra layer of security to the loans that are already backed by certain amount of crypto currencies. In order for an institution to act as a Guarantor, it must pledge SPN tokens deposit. Guarantors earn a service fee for each loan they vouch for.

### 5.2.6 Buyback Scheme

Splendor Foundation will introduce a buyback scheme to spend a portion of its net income to re-purchase SPN tokens in the open market to ensure the stability of SPN token's value.

## **6. TOKEN OFFERING**

### **6.1 Allocations**

Total of Tokens available: 1,000,000,000 SPN

Token Sale Duration: Ends when all available tokens are sold out

Payment methods: ETH or BTC

1. **250,000,000** SPN or **25%** of the total amount will be sold to participants of the ICO (private and public). This amount includes tokens available during both pre-sale and main sale. Subject to lock-up periods.
2. **350,000,000** SPN or **35%** of the total amount will be reserved to be gradually released as incentives and rewards to active participations from participants of Splendor Network.
3. **150,000,000** SPN or **15%** of the total amount will be issued to Splendor Foundation. Subject to lock-up periods.
4. **150,000,000** SPN or **15%** of the total amount will be provided to Strategic Partners and Advisors. Subject to lock-up periods.
5. **100,000,000** SPN or **10%** of the total amount will be provided to the Team as incentivization and to cover ICO preparation expenses. Subject to lock-up periods.

## 6.2 Use of Proceeds

1. **40%** of the total proceeds will be used for developing Splendor Network, including hiring and growing software development, business and operation team.
2. **20%** of the total proceeds will be used for business development & marketing in terms of user acquisition, corporate partnership and global expansion.
3. **15%** of the total proceeds will be used for operational and miscellaneous expenses.
4. **10%** of the total proceeds will be used for legal and compliance to make sure Splendor Network is compliant with laws in different jurisdictions.
5. **5%** of the total proceeds will be used for consultancy with industry experts to make sure Splendor System is equipped with advanced technologies and networks.
6. **10%** of the total proceeds will be used for risk reserve fund to respond to potential operational risk.

## 7. TEAM

### 7.1 Core Team

#### **Gang Wang**

Gang has decades of senior management experience in Fintech industry. Most recently, he was the Senior Vice President of Phoenix Finance, in charge of the company's blockchain strategy and technology development. Prior to that, he was the software development manager at Amazon. Gang has a MBA degree from Tsinghua University and a Master degree in Computer Science from North China Electric Power University.

#### **Kenny Chen, CAIA**

Kenny is an expert in alternative investments, including cryptocurrency, hedge funds, private equities, commodities, structured products and derivatives. Kenny has been an investor and consultant in blockchain since 2017. Prior to entering the blockchain

industry, he was the Managing Partner of a multi-strategy fund of hedge funds Cloud and Wind Global Capital. He is a Chartered Alternative Investment Analyst (CAIA). Kenny graduated from the University of California, Los Angeles (UCLA) with a Bachelor degree in Economics.

### **Xi Yan**

Yan is an experienced software engineer. Prior to joining Splendor Network, Yan was an associate director of software engineering at Phoenix Finance. He was also a researcher at Phoenix Finance Blockchain Research Institute. Before Phoenix Finance, Yan was a senior software engineer at Amazon China. Yan graduated from Beijing University of Posts and Telecommunications with a Bachelor degree in Telecommunication engineering.

### **7.2 Advisors**

#### **Vince Zhang President of Phoenix Finance**

Mr. Zhang is the President of Phoenix Finance, a leading Fintech firm with businesses in P2P lending, mutual funds, wealth management, asset management and insurance. Phoenix Finance has over 8.5 Million users globally and completed over 11 billion USD accumulated lending transaction globally. Mr. Zhang has a MBA degree from the University of Oxford.

### **7.3 Ecosystem Partners**

#### **Phoenix Finance**

Phoenix Finance is a strategic ecosystem partner of Splendor Network. Phoenix Finance powers Splendor Network through fiat-currency funding, technology and user traffics. Phoenix Finance will be the main fiat-currencies lenders to Splendor Platform through its global access to high-net-worth investors. Leveraging Phoenix Finance's advanced technology infrastructure and expertise in lending, Splendor Network is equipped with world-class knowledge in lending. In addition, Phoenix Finance has

more than 8.5 Million users globally, giving Splendor Network unique advantages than the other peers in the crypto lending industry.

#### **7.4 Early Investors**

##### **Phoenix Finance**

Phoenix Finance is an early investor in Splendor Network.

### **8. PROJECT ROADMAP**

#### **2018 Q2**

- Idea generation & market research

#### **2018 Q3**

- Seed fund from Phoenix Finance for 1-million-USD equivalent resources
- Core team formation
- Secure strategic lending partner
- Complete MVP

#### **2018 Q4**

- Satisfy initial legal & compliance requirements in lending business under major jurisdictions
- Complete seed fundraising
- Complete version 1.0 front-end and back-end development
- Crypto-to-crypto loan launched: crypto-backed loans in GUSD backed by BTC

#### **2019 Q1**

- Global team expansion
- Crypto-to-fiat loan launched: Crypto-backed loans in USD backed by BTC and ETH
- Establish partnerships with 5+ fiat-lending platforms
- Start apply or acquire relevant financial licenses in more jurisdictions

#### **2019 Q2**

- Second round of fund-raising
- Increase number of supported tokenized assets as collateral
- Tokenized-assets-backed Lending Business Launch
- Security Token Offering

**2019 H2**

- Increase number of supported fiat-currencies for loans
- Increase maximum loan limits

Aik Kurbanov

## 9. DISCLAIMER

This document describes the plans for the Splendor Network by Splendor Foundation (the “Company”).

This document is of an informational nature and is not an offer. The information contained in the document may be incomplete. The content of this document is not binding for either the Company or its individual employees and authors of the document. Neither the company nor the authors of the document are responsible for any decisions and their consequences made by readers after reading the document.

This document is also not an investment recommendation, nor a request for investment or the purchase of any financial instruments or securities. All the provisions of this document, including financial information, are forecast statements. The actual course of events depends on many factors beyond the control of the Company and may differ materially from the forecast presented in the document.

We remind that purchase of tokens during the initial token offering is fraught with risks and may result in financial losses. We strongly urge you to carefully approach the planning of your personal financial policy.

If you want to purchase SPLENDOR tokens, we strongly recommend that you consult with your personal investment, financial, tax, legal advisor to determine the potential benefits, risks, threats and other consequences of the transaction.

We remind that in some countries there are legislative restrictions related to purchase of tokens or other forms of participation in the token sale events, secondary market of tokens, holding, reselling of tokens. Verification of the fact of the absence of these restrictions is the responsibility of the individual who purchases the tokens. The

company does not conduct business in countries where transactions in relation to or using digital tokens are prohibited, limited or require registration and / or licensing in government bodies.

Aik Kurbanov