VENLOAN

[The next blockchain-based p2p money lending application]

White Paper

Version 1.0

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I. What is VenLoan?

VenLoan is a decentralized peer-to-peer lending application that connects lenders and borrowers globally by providing a secured marketplace built on top of Blockchain technology. VenLoan is based on the Ethereum protocol and uses the Smart Contracts concept. Currently, VenLoan is built and operates under Ether and Gas for the transaction but is in the process of developing an independent cryptocurrency called "VenLo" and "loJuice" which will later replace Ether and Gas and be used for the transaction. VenLo is the token that will be used for loan transfers and interest payments, and loJuice is a special unit that will be used to pay for transaction fees. Transaction fee will be paid by whoever initiates the transactions within the platform (recorded on the ledger). Borrowers can easily create accounts since VenLoan does not require "official" credit scores measured from the traditional banks. Instead, VenLoan has a "reputation system" (scaled from 1 to 100), in which the borrower's "reputation score" is determined by the amount of cryptocurrency that the borrower stakes as collateral, among other factors. The borrowers write their loan propositions and broadcast them to the marketplace. Meanwhile, the lenders read over the contracts from the pool and determine which contract to accept. Before accepting the propositions, VenLoan provides the reputation scores of the loan proposers (borrowers) to the lenders.

VenLoan accepts cryptocurrencies that are listed on the ERC-20 as collateral and determines the reputation score of the user based on the history of the user's transactions and amount of collateral. This score and a sanitized history (i.e. not the value of the loans or the identity of sellers, but a description of how many days late proportionate to the loan duration and "severity" of the missed payment with respect to the user's balance) are available to other users that are interested in loans. The borrower's reputation score can thus fluctuate based on their previous loan history and the amount of their cryptocurrency stake. After both the borrower and lender agrees on a contract, it is recorded in a VenLo Contracts, put onto the Blockchain-based ledger, and VenLo tokens are transferred to the borrower's virtual wallet. The borrower can either transparently reveal their sanitized history on the ledger or not, and this transparency level is reflected on the user's profile. If a borrower fails to repay the lender within the designated time period listed, Smart Contracts on the VenLoan platform remove portions of the borrower's collateral and pay the loan amounts or loan interests to the lender.

II. Competitor Analysis / Market Analysis

The Peer-to-Peer lending market has been rapidly growing after the 2008 - 2009 financial crisis. It is expected to reach a valuation of $897.85 Billion by 2024. The number of individual borrowers seeking loans for personal purposes has been increasing significantly ever since. Specifically, a majority of students are seeking loans from peer-to-peer platforms rather than conventional money lending institutions since their interest rates are lower. On top of this increase in demand for this financial service, technological advancements have contributed greatly to enable these people to easily access peer-to-peer platforms. One of the reasons for the growth in peer-to-peer lending market is due to the popular trend of integrating Blockchain technology into lending platforms. Lendoit, CoinLoan, ETHLend, Inspeer, Salt, Bitbond, BTCPOP, and Kiva are all dApps that are involved in the peer-to-peer lending industry. Although they all use Blockchain technology, how they handle the issue of borrowers defaulting is very different. Companies like ETHLend handle this issue by having borrowers stake their

cryptocurrencies as collateral, whereas companies like Lendoit cooperate with third-party debt collection agencies to resolve the issues of unpaid loans.

Despite a recent hype in the blockchain-based peer-to-peer lending industry, there are some commonly shared risks by these platforms: Cryptocurrency Market Volatility and Platform Security.

(1) Cryptocurrency Market Volatility

Peer-to-peer crypto lending companies cannot avoid the inherent risk ingrained in cryptocurrency. Unlike fiat money, persistent price volatility of cryptocurrencies place lenders and borrowers in difficult situations. Especially in peer-to-peer lending platforms, where borrowers stake cryptocurrency as a collateral, lenders face the risk of not receiving the full value of the loans if the borrowers default and/or the value of the token falls significantly. On the other hand, lenders only benefit from the volatility of the cryptocurrency value when the value of the token increases. Besides interest payments, lenders have less motivation to participate in this platform than the borrowers.

(2) Platform Security

Platforms that use blockchain technologies are good targets for hackers. When the number of borrowers who stake their cryptocurrencies as collateral increases or when the value of the cryptocurrency increases, this is a good incentive for hackers to intrude into the system, find flaws in the blockchain, and steal cryptocurrency assets from investors. Because Blockchains are immutable, if there were a logical flaw in the Smart Contracts or Blockchain protocol that is used by the dApps, hackers could attack the system, take away cryptocurrencies, and record the transactions on the ledger. Both borrowers and lenders can be victims of this risk, and there are not any alternative methods to reverse this history.

III. Participants

(1) Users

Users are able to interact with VenLoan through both a website, as well as mobile applications available on both the Apple and Google Play stores. On VenLoan, once a user has set up their profile with a unique username and a password, they are able to modify their security, privacy and related settings, and perform one of two types of transactions:

- A direct, P2P loan or payment, if they know the username of the other party involved. In this case, once both sides decide on the exact amount and interest rate (if any), they can confirm and the transaction is initiated.
- Make a post on the VenLoan Marketplace by the borrower at a specified max or min interest rate respectively. Here, if the lender notices the post and wants to lend to that person at the specified terms, he or she can choose to accept it, and the original poster will be notified of this. After both parties agree and confirm to perform the transaction, transaction will be initiated.

VenLoan provides every borrower with a Reputation Score (between 1 and 100), which will be displayed once they enter the marketplace. This enables lenders to get an idea about borrowers and their history with similar loans, at a glance. Each borrower can also choose to share a more detailed but sanitized version of his or her lending history to give the lender more information about his or her credit trustworthiness.

While sharing their reputation scores and lending histories helps borrowers get more loans, the downside is that if they choose not to share any of these, then a lender might tend to assume that their history with credit is not the best, and thus they may have less opportunities to complete their loan propositions. This would further encourage making these details public.

(2) Mining Community / Consensus

The role of the mining community here is to validate blocks relating to VenLoan loans/transactions on the blockchain behind-the-scenes, maintaining the valid, decentralized nature of this to the best of their ability. In exchange for this, miners are paid loJuice as transaction fees for every block that they mine, and also receive an additional block reward in VenLos along with this, of an amount similar to that of Bitcoin's block reward (please refer to the Tokenomics section for details relating to the exact amount).

The consensus algorithm that VenLoan uses is a popularly known Proof of Work (PoW) algorithm. It is true that Proof of Work mining concept requires significant amount of fixed and variable expenses but this is because VenLoan is built on top of Ethereum protocol. Once Ethereum switches its core consensus algorithm from Proof of Work to Proof of Stake (PoS), VenLoan will also adapt and modify the consensus algorithm to PoS in near future.

IV. VenLo Contracts

To manage and facilitate the holistic process of money transfer between the lenders and buyers, VenLoan validates and records all transactions in the VenLo Contracts. Just like Ethereum Smart Contracts, once two parties agree on the loan proposition, VenLo Contracts will autonomously enforce the negotiation in a simplest decentralized form. Currently, VenLo Contracts is composed of 20+ functions to support successful and smooth money transferring process between the lenders and the borrowers. Specifically, there are 4 key functions that return the information about the transactions to the users. For instance, "getLoanInfo" function returns general information about the loan terms after the loan proposition is mutually agreed by the two parties, and "getRepayHistory" function returns the payment history of the loan, including the interest rates, dates, and other relevant information about the past transactions. In near future, we are planning to develop and implement a notification feature in the VenLo Contracts so that the users can be actively alerted whenever there is a transaction or payment update within the system.

Furthermore, VenLo Contracts is also well-equipped to deal with situations where borrowers are eventually unable to pay back their loans. Generally, if a borrower fails to repay the lender within the designated time period, VenLo Contracts will automatically remove portions of the borrower's collateral and pay the loan amount or interest to the lender.

In near future, specifically at the time of lending, the lender will be shown a maximum recommended amount they should lend out to a particular borrower (still in the developing stage & the recommended amount will be generated by our ML algorithm). This is based on multiple features derived from the lender's and borrower's lending histories, as well as the amount of collateral the borrower provides. If the lender follows the suggestion and eventually the borrower does not re-pay it, the lender will be completely reimbursed by VenLoan. We accomplish this using a separate pool of funds that we store just for this purpose, initially filled via an ICO. Otherwise, if the lender chooses to not heed

this advice, they do so at their own risk. They will still only be reimbursed upto a maximum of the specified amount (not fully covered by VenLoan) in case the borrower defaults.

In this way, VenLoan accommodates almost all possible use cases that a lender or borrower would require, while still being extremely cheap to use and maintaining a certain guarantee of safety at the same time.

V. Tokenomics

Once we successfully develop an independent currency and replace Ether and Gas with VenLo and loJuice, we are planning to sell 5,250,000 VenLos (VLO) on this Initial Coin Offering and retain 5,250,000 VenLos. Going forward, coins will enter the system through block rewards, whose influx will follow the influx of Bitcoins starting at reward era 2 (instead of reward era 1). Note that 10,500,000 BTC were mined in the first era of Bitcoin, so this influx rate is analogous to the growth rate of Bitcoin, jump-started to the second era. The funds raised from this ICO will go towards further development of the VenLoan platform and rewarding early contributors to the DApp. As with Bitcoin, the influx of VenLos will decrease exponentially with respect to the number of blocks mined in order to ensure that the VenLo supply will eventually approach a constant amount (so that VenLos will hold a stable value as the platform ages).

Our application will indeed use more than one coin. While VenLos will be the “main” value token that are exchanged between users as loans and interest payments, our application will also use a token known as “loJuice”. “loJuice” will have a purpose similar to the purpose of “gas” on Ethereum, ensuring that the fees associated with transactions are tied to a price-stable token. Thus, transactions like starting a loan will require a modest amount of “loJuice” to initiate, proportionate to the cost of the operation on the system (e.g. a loan with more frequent payment collection dates will have a higher “loJuice” cost), regardless of how high or low demand for VenLo is.

We believe that the right price for VenLo is $1 per VenLo (VLO), for a total ICO funding goal of $5,250,000. This pricing is based on a high-level comparison against similar competitors within the space. Specifically, competitors of interest which we believed served as reasonable pricing benchmarks were Lendoit, which is selling 60% of their total tokens with an ICO goal of $10,200,000, and Coinloan, a more mature competitor which sold ~$3,200,000 worth of tokens (approximately 15% of their tokens) during their ICO at the beginning of the year.

VI. Why VenLoan?

Why is VenLoan necessary? VenLoan solves the complex, inefficient, and laborious process of lending money. Everyone has needed a loan at some point in their lives, whether it be a small loan of only a handful of dollars to pay for that lunch where you forgot your wallet, or a larger loan to finance that new personal projects, or even the huge loan to help finance the purchase of your home. VenLoan facilitates this commonplace, yet inefficient process.

VenLoan makes the lending process between peers -- with a particular focus on people that already know each other -- extremely simple and painless. Instead of purely relying on trust between both parties (which includes faith in the borrower’s memory in addition to their ability to acquire funds), VenLoan, through its use of VenLo Contracts, guarantees that loans are repaid in full to the lender while also removing the hassle on the borrower’s side of tracking when their interest/loan payments are due.

In addition, the “reputation score” system of VenLoan, where every user has the option of sharing the sanitized version of their loan history, and the corresponding “loan marketplace” give VenLoan a huge advantage over existing loan procurement methods like person-to-person “trust-based” loans and bank/institutional loans with their complex credit score checks.

VenLoan is well suited for the blockchain platform and makes good use of the decentralized nature of blockchain because at an ideological level, peer-to-peer loans are decentralized. When two friends and acquaintances are loaning money between each other, they do not consult their friends’ banks and ask for credit scores or require validation from a nameless authority, they simply make an agreement and ensure that the terms of the agreement will be followed to the best of their ability. All VenLoan does is facilitate these agreements, capitalizing on the “automatic” procedure structure of smart contracts and taking advantage of the immutable ledger that blockchain networks provide. Unlike traditional banks or small-loans companies, VenLoan has a much lower barrier to entry and provides the same utility of connecting sellers and borrowers -- all without imposing arbitrary, profit-generating fees that take advantage of customers. By using blockchain, we give users the authority over their own money and control over how they want to use the application because all of the behavior of the application is well-defined and a borrower’s fate is not dependent on the will of a distant authority.