PayDay Coin WhitePaper

Abstract

In the 21st century, the era of high-end technology and dynamical science, the world is still affected by power of loan discrimination. About 2 billion adults have no access to bank accounts meaning they can't afford basic day-to-day needs as all manner of payments, money transfers and access to loans.

Challenging this issue takes origin in human rights and other fundamental principles and standards that help us shape the better and more comfortable world to live in. Coming up with a solution for "loan-restricted" population is essential for indeed effective poverty elimination, cultural and economic development. It may affect other aspects of life such as social interaction and credibility.

Since blockchain technology appears to be having lots of weight and importance concerning contemporary finance and predominating the future of various business interactions, PayDay aims to contribute and create the next level loan mechanism based on the blockchain. PayDay is a coin for P2P lending solutions with an ambition to confront the low activity of small and medium businesses, general lack of funds in small and micro enterprises, investors' credibility and even the unemployment issues.

Transcontinental credit system based on blockchain technology.

There is a lot more free money in rich countries as income naturally exceeds people's vital needs. On the contrary, when it comes to developing countries, populations lack both real income and free money. Things become a lot more comprehensible when you take a closer look at the discrepancies between the statistics such as as interest rate-deposit rate-inflation rate and the impact they have in different countries. For instance, an annual deposit interest rate in Denmark is about -0.65%, but in Uruguay, the interest rate is about 9.25% and the deposit rate is 5.6% The situation in Africa, on the other hand, is undoubtedly different because the population has to face 50% of annual interest. Besides this, we shouldn't ignore the inflation rate that tends to bend depending on geography. The annual inflation rate in Denmark is about 3%; then it's 2.42% for citizens of Uruguay and 18%(!) in South Africa. PayDay's essential intention is to erase those complexities and make lives for people from different countries, prosperous or poor, a lot easier.

References :
https://tradingeconomics.com/uruguay/interest-rate
http://www.nationalbanken.dk/en/marketinfo/official_interestrates/Pages/Default.aspx

Transcontinental credit system based on blockchain technology (cont.)

All the operations related to bank loans are regulated only within a particular country, the one that has issued a credit. Countries with excessive funds are limited to give out loans through between the banks and residents of the state.People obviously profit a lot more if they had the opportunity of an international loan. Global loans would make transactions between both sides much easier and satisfactory. PayDay coin is about to take part in this financial revolution. Let's imagine a casual resident from the low deposit rate country who stores his funds in the bank and gets around 1%, or even negative annual interest, and a struggling business from the high loan rate country which is obliged to take funds and pay around 25% annually to a bank. If the bank hadn't mediated them, this resident would be able to increase his profit up to 10 times, while the business would have to pay 2.5 times less. The involvement of the banks don't make sense. PayDay's mission is to help those struggling businesses and loan-friendly people to connect and benefit.

Historically speaking, the role of banks was to bridge the gaps between investors and borrowers. P2P platforms came into play in the 21st century to put an end to the endless discrepancies that the banks were causing as economic institutions (referring to giving out loans at high rates). Also, the success of Fidor Bank and MovenBank prove that conventional banks are not getting that much attention lately. According to P2P, direct contact between the lender and the borrower became possible and immediately gained volume as the audience reaction was positive and very affirmative. When it comes to advantages, direct lending rates are way more affordable, rapid, and contractual. Moreover, they're accessible for every legal entity in the world. PayDay tends to create a transparent and reliable environment suitable for different relations between all the parties. People around the world are granted the opportunity to exchange the resources available directly with other people, regardless of interest rates for a determined period of time.

Coins and credibility

A loan is issued and repaid in PayDay coins. PayDay Bank is a personal loan wallet that takes a significant part in KYC procedures and stores the entire loan history. Starting from the estimated day, the loan might be gradually deducted due to specific time pattern chosen by the user (monthly, daily, etc.).
PayDay Bank is an utterly unique self-sustainable wallet that is smart-contract driven and is able to issue a loan based on the auditors consensus and track the insurance availability. The concept of user rating appears to be crucial. However, we will develop a whole reputation system based on mutual trust and transparency. Once obtaining the very first loan, the user gets 3 links to his loan history which is automatically updates accordingly to user activity within the system.

General interest.

The borrower interest rate most crucial factor is the application score and his trust reputation.

Credit risks

In addition to the problem of issuing a loan, neither risk assessment mechanisms nor international loan recovery tools are available. Banks carry outscoring tools, sell unsuccessful loan cases to collectors, and apply state methods of coercion to return the money. Mohammed Yunus, social entrepreneur, banker, economist, and social ideologist, described in his book "Creating a World Without Poverty" the principles of issuing loans. Fueled by the belief that credit is a fundamental and unconditional human right, he had established Grameen Bank in 1983 and was the first one to make loans for poor people who were not able to qualify for the traditional bank credit criteria. In the mid-70s, he started to give out personal loans to people in need, which were always returned to him that connoted the success of his elegant yet straightforward strategy. He got the Nobel Prize award in 2006 and many other international trophies for his excellent ideas and endeavors.

PayDay is about to use the following entities:
- Auditor MasterNode
- KYC MasterNode

KYC MasterNode

Designed to carry out the verification procedure of the borrower. To start running, KYC MasterNode must deposit Stake, which will be used as partial security for funds non-return case. KYC MasterNode carries out the borrower's verification and collection of data on the borrower including the initial purpose of the loan. As long as the appropriate status is on, KYC MasterNode charges commission from all verified users loans interest. For additional security, KYC Node gates are designed to be built in the system to connect Civic and some other KYC-centers. The very first KYC-centers we are going to establish a partnership with is AML/KYC-blockchains such as Civic, kyc.legal, and Coinfirm.io.

PayDay is responsible for creating and operating on verification centers that are responsible for AML/KYC procedures concerning those who are interested in obtaining a loan. According to Proof-of-stake (PoS) consensus principle, to become a verification center, you need to hold a particular number of coins (N) equivalent to the stake size that will consequently mine. Verification centers receive the corresponding share of profit from the repaid loan.

Auditor MasterNode

MasterNode Auditors are responsible for decision making regarding the particular loan case based on data from KYC centers. A conclusion is consensus-based. To own an Auditor Masternode, it's necessary to place the appropriate security deposit, which will be used in case of non-return of the loan. Auditor Masternode assigns the proper rating to the borrower and loan application. Consensus In order to assess the borrower, his application is sent to several Auditor MasterNodes. The average score assigns credit rating among the nodes that have succeeded to reach a definite consensus. The loan is rejected when the consensus rate is under 60%.

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For example:
There are five credit ratings from 1 to 5 and failure = 0. The application is sent out to 10 auditors. If five auditors refuse it, the application is rejected automatically. If six auditors have assigned a rating from 3 to 5 the medium of their scores is detected, and the application receives the corresponding rate. However, high-interest loan rates may discourage the borrower from taking a loan. Thus, the Auditors will not earn their commissions from the credit. On the other hand, the assignment of a high rating raises the probability of issuing credit, but it also increases the risk of the auditing node that votes with its stake. The market itself will balance the behavior of auditors to avoid both risks. The share of income from interest on the loan is distributed between the master loggers and the auditors in proportion to the size of their stake.

Limits

Each KYC and Auditor MasterNode freezes its stake as a part of loan security. The size of the stake and the reputation of the node determine the number of loans that can be pending at the same time. If KYC MasterNode has a 100,000 PDX loan limit and the borrower is facing an unsuccessful loan number around 95.000, he will be notified about it when trying to obtain a loan for 10,000 PDX. He will get an offer to join another KYC-master to conduct another KYC.

Loan financing

Users that appear to have funds in their account can indicate the proportion of funds that can be used for financing. Moreover, users can specify the following parameters:
 - The minimum fund bid score. The user regulates the level of risk and the size of the profit himself.
 - The minimum interest rate he expects.
Market mechanisms will adjust fair lending rates themselves.
All those users shape a pool of creditors, and each loan application can be funded only by a pool and never by a single user. For pool credibility, KYC and Auditor masterware will team up and reduce the risks of the credit process to a minimum so that nobody will suffer non-return or delay drama.

Insurance structure

When issuing a loan, insurance coverage works the following way:
● A part of the credit body concerning no return is secured with KYC Masternodes stake
● Another part of the loan body in case of no return is guaranteed with the Auditor Masternodes stake
● The total amount of the support entirely depends on the level of the risk of the application. The higher the risk, the more security deposit is required by the network.

Reputation and BigData.

PayDay Coin will analyze all the information about the user including:
● KYC master data provided. Rating bends due to the amount of info given.
● Card / PayDay Card fund transfers
● Credit history
● All data will be analyzed with the help of artificial intelligence and stored in blockchain in an open depersonalized form. Thus, the community will be able to suggest any improvements during the process and monitor the evolution of the system and the decision-making mechanism. The level of trust to the user implies higher credit limit and lower loan rate. When selecting node auditors, the system will choose the auditors' sides so that there is no possibility of them taking any concerted actions.
Each Auditor masternode and KYC MasterNode has its reputation which affects the following:
● Commission share that a node receives from a credit transaction. The higher the status of the node, the more significant the share.
● The total amount of incomplete transactions which can be confirmed later by the masternode.
● Audit offer possibility. Positive reputation nodes are more likely to get an audit offer and earn money.

Collectors

We are entirely against collectors as a specific loan institution. It's quite evident that most common weaknesses of borrowers are forgetfulness and laziness. Not anymore since we are about to equip them with a brilliant interface urging them to cover the loan in time. RTB systems and mobile application developers will be able to detect the borrower who has a credit overdue and remind him of it. Apparently, developers of mobile applications and advertising platforms will be able to earn a commission for their contribution.

PoS and MasterNode mining

PDX coins generated by minings. Mining works on PoS and MasterNode principle. 2% of total coins emission will be premined. Total emission is 294 336 000 PDX coins. There will be issues as Block Reward for miners. [1] At the very beginning, 720 blocks a day to be generated and their reward will consist of 280 coins divided into following proportions: Year POS Mining MasterNode 1 25% 75% 2 20% 80% 3 15% 85% 4 10% 90% the following 10% 90% 7 Block Reward to be decreased by 25% each year. First-year reward (in PDX Coins) example. Mining MasterNodes online MasterNode reward 10 15 120 PDX 20 7 560 PDX 30 5 040 PDX 50 3 024 PDX 100 1 512 PDX 200 756 PDX 300 504 PDX
Find full PayDay Coin Specification here:

Year	POS	Mining MasterNode
1	25%	75%
2	20%	80%
3	15%	85%
4	10%	90%
the following	10%	90%

Block Reward to be decreased by 25% each year.

First-year reward (in PDX Coins) example.

Mining MasterNodes online	MasterNode reward
10	15,120 PDX
20	7,560 PDX
30	5,040 PDX
50	3,024 PDX
100	1,512 PDX
200	756 PDX
300	504 PDX

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System commission framework

Each transaction in the system can impose a miner fee as a donation (similar to Bitcoin). 98% of miner fee goes to POS and Mining MasterNodes according to the proportions mentioned above. 2% goes to the system as a devfee.

Loan operations income distribution

The total income from the loan is distributed among the following participants:
- Providers/Actual loan investors who are granting credits to the specific borrower(s)
- Auditor MasterNodes who meet the consensus, in proportion to the size of the stakes.
- KYC MasterNodes
- PayDay Coin network, as a non-profit devfee

The better blockchain - the better business

To predict the possible problems related to the volume of transactions and accommodate everything up to a business model, PayDay Coin will implement MassPayment transactions.
Bitcoin and other cryptocurrencies are designed for peer-to-peer operations, for instance, salary or commission payments organized by various partner programs. PayDay Coin will aggregate all these operations which will significantly reduce the transaction size and increase the transfer speed (from and to PayDay Bank for loans, for instance).

Possible applications for PayDay Coin

These cases are not necessary will be effective nowadays, or even with PayDay Coin. This is how we see future, and where we're going to go.

Confident ICO

ICOs are welcome to raise funds within the PayDay Coin ecosystem. First, they will be audited by Auditor masternodes, and the successful confirmation will prove the ICO quality. When raising funds for the ICO, a company may take over the responsibility for the loan amount sized by tokens. In the case of success of an ICO and growth of the token, PayDay Coin ecosystem receives a profit distributed among all creditors and involved in the crediting process of KYC and Auditor MasterNodes. If ICO fails or funds are not returned (or tokens are impossible to sell at the estimated price) the loss is compensated using the KYC and Auditor Masternodes stakes.

PayDay Card

Every system user can receive a PayDay Card issued by PayDay Bank and link it to his address. The card can be used for loan repay, funds withdrawal and recharge at various ATMs all around the world. Automatic PayDay Card overdraft The PayDay Card supports an automated credit line: a user will be granted a loan automatically if his account lacks funds.

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Smart contracts for shopping

Most of the short-term loans are issued for everyday purchases, such as electronics, software, and others. We believe that this case is the best for integration with PayDayCoin within the following scenario:

1.   When buying an authorized item with the help of the loan using PayDay Coin a smart contract is created automatically;

2.   Information about the smart contract is stored within this item;

3.   If there's a payment overdue, the gadget will determine the current status of the smart contract and limit the functionality until the debt is settled up.

 4.   You can afford expensive software or even a vehicle - any device that can verify the status of a smart contract is available for purchase via PayDayCoin. We expect a way more accurate attitude to loan and lower interest rates due to lower risks.

Business Lounges, Priority Pass, Loyalty programs.

Airport business lounges, various discount programs, cash back - everything is eligible for integration with PayDay Card.

Financing of margin trading

Decentralized crypto-exchange are at the stage of burgeoning right now though they happen to be DEX as well. We will provide an interface for financing margin trading on DEX.

Insurance gateways

Each member may have an insurance agent which is responsible for the return of members loans equal to a stake they hold. Insurepal.io, Etherisc.com, Aigang.network, Rega.life are just a few we are going to establish gateways with.