Abstract

Growr is an open, fair and sustainable lending protocol on top of Bitcoin. Growr enables financial inclusion globally through **fair and instant unsecured loans** based on a **self-sovereign identity** and **decentralized credit risk management**. Growr supports institutional and individual investors to fund lending pools according to their risk/reward appetite, and borrowers to apply for and receive unsecured or partially secured loans.

Financial health metrics are combined with additional off-chain data and on-chain loan reputation to create a new type of decentralized identity for borrowers that we call the Self-sovereign Financial Identity. It contains verifiable credentials from trusted parties - local organizations that has knowledge about their community. The borrowers are able to use their financial record with collected credentials to easily apply for a loan from a global marketplace and receive the money they need to achieve their goals.

By building Growr, we are addressing significant global challenges such as high price of financial services, gender inequality, lack of trust and bad financial health. Bringing true value to all protocol participants, Growr could be a catalyst for the next wave of exponential adoption of DeFi ecosystem and in particular RSK network.

Protocol Overview

Problem

Financial health is an important factor in our daily life. However, bad financial health is plaguing the world. More than half of the global population is living paycheck-to-paycheck without any savings https://globalfindex.worldbank.org/sites/globalfindex/files/chapters/2017%20Findex%20full%20report_chapter5.pdf. In addition, almost 2 billion adults in the world do not have access to financial services https://ufa.worldbank.org/en/ufa or if they do, they fall prey to financial sharks and receive loans at a very high interest rate. Moreover, there are still 72 countries where women from specific social groups do not have the right to open a bank account or obtain credit https://www3.weforum.org/docs/WEF_GGGR_2020.pdf.

Today, most financial service providers do not solve those problems. They are clueless about people's real-life problems, needs and aspirations. There's a complete disconnect between the person and the provider. Banks, and even more so non-banking lenders, have a negative image especially with younger generation, who, as a result, are more likely to go to the dentist than visit a bank.

Solution

Our research showed that most of the unbanked population are self-employed or people working for micro and small businesses. We propose the **Growr protocol** as a bridge between 2 ecosystems - DeFi and microfinance. Growr helps people in need build their global credit record, store it in their pocket, under their full control, and use it to access a marketplace with fair productive loans.

The Growr protocol combines instant unsecured loans, innovative credit assessment models, decentralized identity and financial health incentivization. How does Growr works:

1. Borrowers rely on trusted parties to assert facts about them in the form of credentials. Those trusted parties include local organizations that has knowledge about their community – cooperatives, unions, chambers, employers, merchants.
2. Those local organizations might additionally partner with fintechs, retailers or employers or other participants in the respective economy to submit a joint proposal for credit line to one or more lenders. The lenders assess the proposed loan parameters, price (rate and fees) and eligibility criteria, and depending on their risk/reward appetite, approve or reject the credit line. In case of positive outcome, the lenders publish a new loan offer to the marketplace.
3. The borrowers then are able to use their financial record with collected credentials to easily apply for a loan from the marketplace and receive the money they need to achieve their goals.

With Growr, all participants are incentivized for positive behavior.

- With regularly repaid loans, **Borrowers** improve their credit score metrics and get better lending conditions.
- The **Credential Issuers** support the economy they are part of, and additionally receive a fee for the services they provide.
- The **Liquidity Providers** rely on the local ecosystem participants to decrease their cost of default, and to receive profit from transparently allocated capital.

The key elements of the protocol are:

- **Growr core protocol** – global decentralized marketplace on top of Bitcoin where lending providers publish their targeted loan offers with predefined conditions and eligibility criteria.
- **Self-sovereign financial identity (SSFI)** – a digital identity, based on W3C's DID and VC standards, owned and managed by the user, and storing their financial record with credentials from various sources – such as bank accounts, KYC services, certificates from local organizations, as well as their financial health metrics.
- **Decentralized credit risk assessment** – a framework for establishing trust based on alternative risk assessment and verifiable credentials instead of requiring an on-chain collateral.
- **Financial Health incentivization** - embedded protocol features, such as "going through a fin health education", "creating savings habits", "building a long-term positive financial reputation", that enable borrowers to receive better financial services.

Key Concepts

Decentralized identity

DIDs

Growr protocol implements W3C’s standard for decentralized identity (DID). DID is a new type of identifier that enables verifiable, decentralized digital identity. DIDs are URIs that associate a DID subject (e.g., a person, organization, thing, data model, abstract entity, etc.) with a DID document allowing trustable interactions

associated with that subject. DIDs have been designed so that they may be decoupled from centralized registries, identity providers, and certificate authorities. Specifically, while other parties might be used to help enable the discovery of information related to a DID, the design enables only the controller of a DID to prove control over it without requiring permission from any other party. More info about DIDs on https://www.w3.org/TR/did-core.

VCs

Growr protocol implements W3C's standard for **Verifiable Credentials (VCs)**. Verifiable Credentials (VC) are global uniformed provable claims associated with the subject of the DID. They are cryptographically secure, privacy respecting, tamper-evident and machine verifiable. They can be used to build universally verifiable presentations, which can also be cryptographically-verified.

Verifiable credentials are provided by **Credential Issuers** – that is, centralized or decentralized third parties, asserting certain facts about the DID owner. Verifiable credentials are consumed by **Verifiers** using the concepts and data models for **presentation exchange**. Verifiers verify that:

- The credential presentation is signed with the subject's DID.
- The credential is signed by a trusted Issuer.
- The credential is not expired.
- The credential is not revoked.

More info about VCs on https://www.w3.org/TR/vc-data-model.

Growr's Self-sovereign financial identity

The Growr protocol relies on a new type of decentralized identity that we call the **Self-sovereign Financial Identity (SSFI)**. The SSFI is intended to represent user's unique global identity and financial record, storing various protocol-specific verifiable credentials based on borrower's financial health metrics, on-chain activity, trusted off-chain data, peer vouching, and others. SSFI is the borrowers' financial record in their pocket.

Verifiable credentials in SSFI can be (but are not limited to):

- *KYC* credential. This credential proves successfully passed KYC process (including AML/CFT risk check) and can be issued by any last-mile provider or a traditional third-party identity verification service.
- *Financial Data* credential. This credential contains various financial data of a user (such as products and transaction history) and can be issued by any financial institution (where the user has a saving account) or trusted financial data processing service (to which the user provides account statement information).
- *Savings History* credential. This credential proves that the user is making regular micro-payments to his saving account. It could be issued by any trusted financial institution or savings account provider.
- *Financial Health* credential. This is a special credential issued by the protocol itself for successfully passed "financial health treatment" through education and/or mentoring, as well as earned through regular on-time repayments of past loans received by the protocol.
- *Community certificate* credential. This credential is issued by a local organization (cooperative, union, chamber) or an employer, asserting the membership of the borrower in the organization.
- *Social Vouching* credential. This credential is received by endorsement from other protocol users, who have certain reputation level and/or are trusted by the protocol.

- *Credit Score* credential. This is a "combined" credential, summarizing other atomic credentials, and representing the overall credit score of the Borrower.

Decentralized lending

Traditional lending

In traditional lending, a loan is given by lenders (banks and other financial institutions) to borrowers, and the borrowers repay the loan together with the lending price (the interest). But this price appears to be very high, especially for people around the world that live with less than $2 per day.

The lenders determine by themselves all loan conditions - accepted risk levels, required collaterals, interest rates, fees, and etc. Very often, lenders don't know the borrower and they lack the proper risk assessment tools to determine the creditworthiness of the borrowers. If the lenders feel there is a higher risk of not being paid back by a borrower, they will charge that borrower a higher interest rate.

With this model, being poor is actually very expensive because the poorest are either excluded from the financial system or they fall prey to financial sharks offering loans at expensive and unfair conditions.

Microfinance

Microfinance, as one of the lending models, aims at providing useful financial services to millions of people. Microfinance institutions (MFI) lend money on a large scale, usually to large group of people in dense regions, in a minimally subsidized, businesslike way. To monitor and manage multiple borrowing, MFIs rely on a combination of reputation, knowledge of the client, collateral, cosigners, and enforceable contracts. It is also very common for MFIs to use aggressive techniques to pursuit non-payers and press for repayment.

Microfinance institutions often struggle to come into direct contact with each individual and to build knowledge of millions of small accounts. They may use intermediate organizations to reach local knowledge of the individuals, which brings another layer of complexity and cost increase for the lenders. We need a radically different way to include the poor population to the formal financial system and to connect them with the wealthy people and organizations.

Decentralized lending protocols

Over the past 2 years, decentralized borrowing and lending protocols entered the DeFi space with the potential to fundamentally reinvent the financial infrastructure enabling people to transact with each other globally, securely and permissionless. Decentralized lending protocols target advanced users and let them lend or borrow digital assets without going to a centralized intermediary. Users deposit digital assets into liquidity pools, which become funds that the protocol can lend out to other users.

A specific characteristic of the most popular protocols is that they require a collateral. This means that onchain assets of the borrower are used to secure a loan. The borrower provides the asset to secure the loan, and if the borrower defaults on the loan, the lender can take possession of the asset and sell it to cover their loss. Moreover, they often require overcollateralization i.e. the amount of locked assets as collateral exceeds the loan amount.

Growr's decentralized credit risk management

Growr protocol approaches lending differently. The protocol aims at providing instant insecure loans based on risk assessment and verifiable credentials instead of requiring an on-chain collateral. How it works? Borrowers collect credentials into their own private financial record, Lenders use these credentials to better assess creditworthiness, and Trusted parties are incentivized to provide the credentials.

Growr protocol introduces an innovative approach for decentralized credit risk management, in which the responsibility is split between all protocol participants:

- *Credential Issuers* assert facts about the borrowers in the form of credentials.
- *Credential Verifiers* validates the credentials and asserts borrower's eligibility to receive a loan from a given credit line.
- *Risk Assessors* review credit line proposals and determine their credit rating.
- *Trusted Registries* validate that credentials are issued by trusted issuers.
- *Smart Contracts* take decision based on the input from the above-mentioned risk management service providers.
- *Protocol Governance Board* decides which participants are trusted and excludes the ones that misbehave.

Each participant is incentivized by the protocol to fairly fulfil its duties, as follows:

- With positive behavior in terms of regularly repaid loans, *Borrowers* increase their credit risk score. And better risk score translates to better lending conditions - increased amount limit and decreased interest rate.
- Trusted parties (*Credential Issuers* and *Risk Assessors*) receive a fee for the services they provide. In case of poor execution of their risk management function, the respective participant is blacklisted from the protocol.
- *Lenders* and *Liquidity Providers* distribute part of the profit with all participants to motivate them to properly execute their risk management functions in order to decrease their cost of default and respectively to increase their profit.

Growr's 2-level pooling

The Growr protocol is able to operate on 2 levels – global pools and local ponds. Global pools are funded by Liquidity Providers who then delegate the actual lending activity to local guilds with local lending ponds.

A lending pool can be created by any institutional investor with enough capital who specifies the initial pool parameters. Liquidity Providers can safely deposit funds into lending pools according to their preferences. Lending pools can be provided either by traditional financial service providers, as well as by DeFi lending protocols.

Lending ponds represent specific loan offers in the global marketplace. There are 2 common ways to create a lending pond. In the first use case, lending ponds are created by local lenders (FinTechs or other financial service providers). Different lenders have varying levels of risk tolerance, depending on the laws and regulations in their jurisdictions, as well as on their profit goals. Therefore, each pond can have its own parameters (such as loan amount and duration), rates and eligibility criteria.

In the second use case, local organizations or cooperatives, in partnership with retailers or employers or other participants in the respective local economy, submit a joint proposal for credit line to one or more lenders. The

lender assesses the proposed loan parameters, price (rate and fees) and eligibility criteria, and approve or reject the credit line. In case of positive outcome, the lender publishes the new loan offer to the marketplace and thus creates the pond.

The protocol supports automatic pond liquidity management. It allows local ponds to apply for funds from a pool resulting in so called "contract-to-contract (C2C) lending". Based on the Pond utilization, a Pond smart contract can automatically apply to a Pool smart contract for a loan (up to the approved credit limit). Depending on the pond financing period, fund requirements, proposed risk model and eligibility criteria, the pool owner decides to approve (i.e., to whitelist the Pond address in the Pool smart contract) or not the funding to the pond. The Pond is required to regularly repay the interest fee to the Pool. Depending on the configured utilization threshold, the Pond can repay partially or fully the loan to the Pool smart contract.

Financial health

Financial health dimensions

Dealing with money, especially borrowed from others, requires knowledge and high responsibility. That’s why it is very important that everyone gets a financial health treatment for long-term improvement of their financial health. It’s not about a single transaction, but achieving more throughout people's lives, and ultimately reaching a better lifestyle and financial independence.

Financial Health treatment includes building knowledge and proper habits in 4 financial dimensions:

- *Spending*. The Spending dimension is measuring how well people are balancing between the money they earn and the money they spend. Surprisingly, even people who earn a lot can spend their income without thinking too much. As a result, they live a paycheck-to-paycheck lifestyle, which prevents them to follow their long-term goals and dreams. Budgeting is a powerful tool in this dimension.
- *Savings*. The Saving dimension shows how people are doing in terms of putting some money aside. Many people do not understand where to keep their money in order to protect it from inflation and other dangers that may prevent it to keep its value over time. Savings are very important as they can take people's financial life in their hands.
- *Borrowing*. The Borrowing dimension demonstrates how well people are able to manage their debt. It assesses whether people are debt-free, whether they feel comfortable having a loan, and whether their debt is manageable or too much and leading to overdue payments. Remember that debt is not always bad – if people know how to use it.
- *Planning*. The Plan dimension is perhaps the most important indicator for people's ability to maintain financial health in the long run. Most people do not have a systematic approach to considering two key elements in financial planning - potential risks and key life events in the future. However, tomorrow starts today.

Growr's financial health tools

We, in Growr, understand that delivering money and financial services to the poor does not automatically reduce their poverty. Therefore, the Growr protocol is designed to incentivize good financial health – that is, improving financial literacy and behaviors.

To promote improving financial literacy and behaviors, Growr protocol includes a set of embedded features that will enable borrowers to receive better financial services:

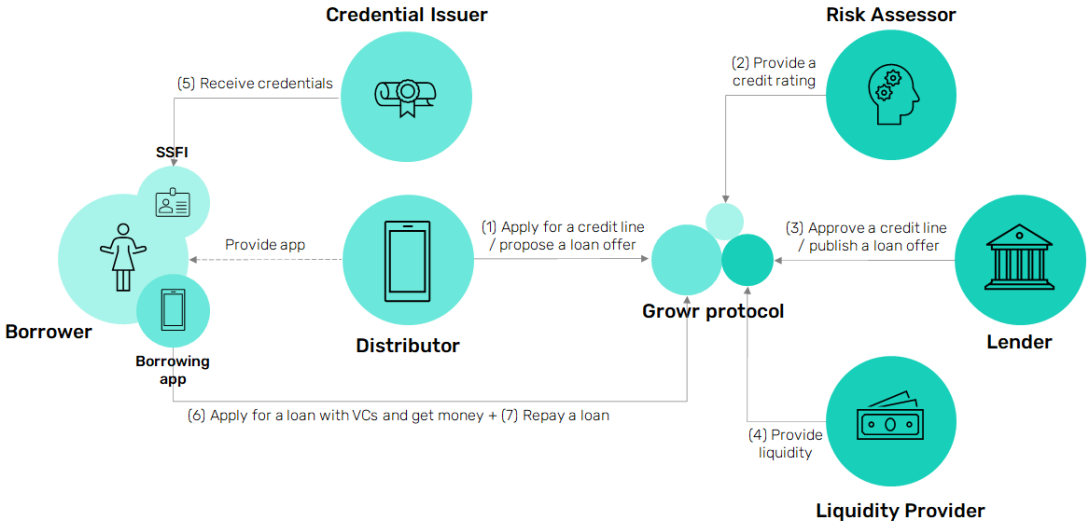
- **"Learn and earn"**; that is, before applying for a loan, the user must go through education and mentoring program in order to collect credentials for financial health improvement.
- **"Goal-based" financing"**; that is, before applying for a loan, the user must declare a specific goal related to his/her real-life need, and deposit initial savings towards it.
- **"Savings discipline"**; that is, before applying for a loan, the user must create a saving habit by executing regular micro-payments to his saving account.
- **"Financial reputation"**; that is, with regularly repaid loans and controlled spending habits, the user creates a long-term positive financial reputation that ultimately provide him access to benefits such as cash-back amounts and future loans with better conditions.

The tools above are just the starting point of Growr's incentivization program, other tools will be designed and implemented with each future protocol version.

Protocol Mechanics

How it works

Below is a high-level overview of Growr protocol:

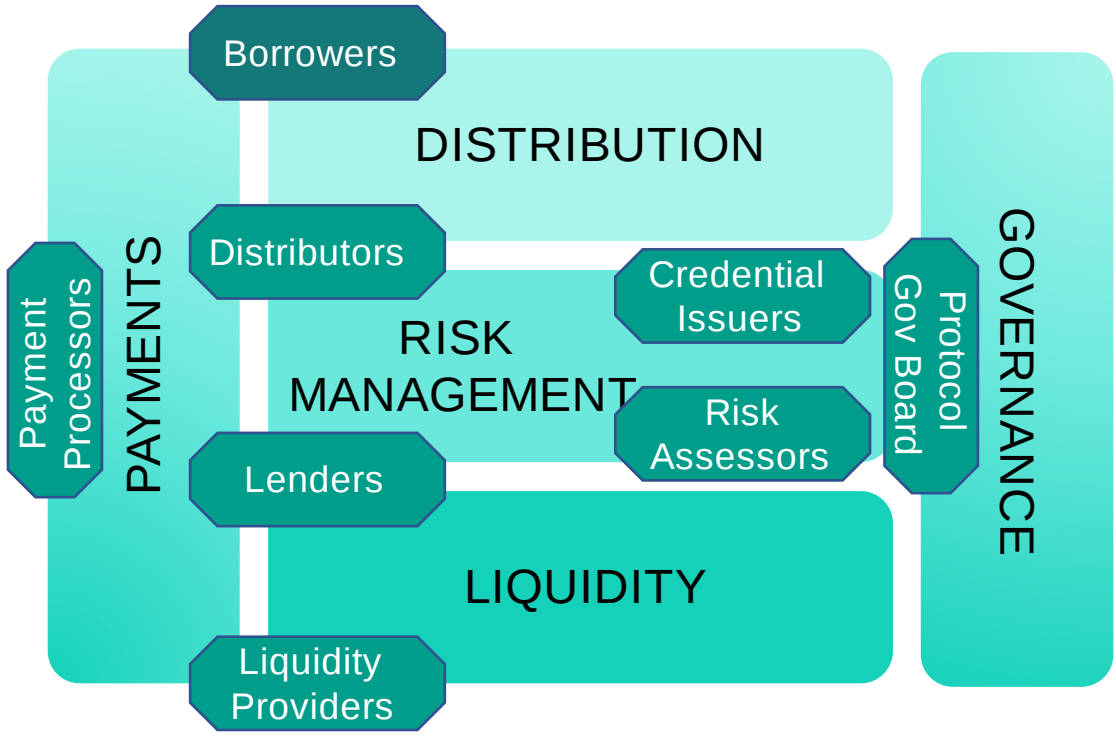


The Growr protocol aims at standardization of the protocol mechanics. However, depending on the protocol participants and the tools and services they use, implementation details might vary. In general, we can distinguish the following use case specifics.

- Protocol access: Custodial vs Non-custodial
- Liquidity: Separate Lender and Liquidity provider vs Lender providing the liquidity
- Distribution: Separate Lender and Distributor vs Lender covering the distribution process
- Loan payments: On-chain vs Off-chain

Protocol Layers

Before reviewing the participants in the protocol and their role, it is important to understand the abstract *layers* of the protocol:



Growr is a DeFi protocol with processes split on the several layers:

- The processes in **Liquidity layer** are related to provisioning of the necessary funds for the protocol operation. Liquidity Providers and Lenders are collaborating on this layer.
- The **Risk Management layer** is the key layer of the protocol, it's the "magic" of the protocol. All processes related to risk scoring and assessment, as well as loan management are happening on this layer.
- The **Distribution** layer covers the processes of onboarding and providing Borrowers with access to the protocol.
- The **Payments** layer combines all payment processes that occurs across all layers.
- The processes for smart contract governance and fraud prevention are covered in the **Governance layer**.

Detailed description of the processes can be found in the Protocol Specification on https://growr-xyz.github.io/growr-documentation.

Protocol Participants

Borrowers

Borrowers get easy access to fair loans. They apply for funds from a loan marketplace and then repay the funds with added interest and/or fees. Borrowers gradually receive better conditions for positive financial behavior. They can receive “cash back”-style rewards based on their improved financial health (i.e., regular loan repayment and proof of financial learning), as well as for referral of other well-behaved Borrowers.

Borrowers can access the protocol via a Distributor in custodial model or via a decentralized App in non-custodial model. Borrowers usually operate on the *Distribution* layer.

Distributors

Distributors, or also called **Last-mile Providers**, intermediates access to the protocol to a specific group of Borrowers in a custodial model with a simple UX. Distributors can be local communities and cooperatives, employers, merchants, or regulated financial institutions/fintechs. The role of the Distributor is to onboard and vet the users into its own digital means (e.g, a mobile application) and then facilitate access to the protocol. Financial institutions can combine the role of a Lender and a Distributor.

Some Distributors could be also **Guarantors** providing first-loss capital and cover for missing credentials certain specific borrower groups (e.g., women, employees, unemployed, community members, etc). Guarantors deposit funds into a Safety Fund, from which certain ponds can claim money in case of payment incidents.

Distributors usually operate on the *Distribution* layer and interact with *Risk Management* and *Payments* layers.

Lenders

Lenders publish offers to the loan marketplace as they create and fund ponds using own funds or by borrowing from global pools. Lenders can be financial service providers (regulated lenders) or local communities (informal lenders). They receive yield based on the pond profitability, and the pond yield tend to be higher than the pool yield, rewarding the skin-in-the-game participation of the Lender. Some Lenders might fully cover the role of a Liquidity Provider.

Lenders operate on *Risk Management* and *Liquidity* layers.

Liquidity Providers

Liquidity Providers (LPs) are global investors or DeFi pools who provide funding and then delegate the actual lending activity to the Lenders. Liquidity Providers allocate capital to lending pools and get rewarded with yield based on the pool profitability. Generally, the global pool yield will tend to be lower that the pond yield due to the wholesale lending nature of the pools.

Liquidity Providers operate on *Liquidity* layer.

Credential Issuers

Credential Issuers serves an important risk management role in the protocol. They are centralized or decentralized third parties (financial providers, local cooperatives and communities, merchants, employers, NGOs) that provide **verifiable credentials** to borrowers to assert facts about them. Credential Issuers receive a fee for the credentials they are issuing.

Credential Issuers operate on *Risk Management* layer.

Risk Assessors

Credit risk assessment is a crucial component of the Growr protocol and the **Risk Assessor** is a key participant. They review applications for new credit lines, assess the proposed loan parameters, price (rate and fees) and eligibility criteria, and calculate a credit rating. The Risk Assessor is rewarded with a fee according to its usage. The Risk Assessor could be "owned" by Lenders or Liquidity Providers to ensure they can manage their own policies, or could be provided by the protocol or trusted third parties.

Risk Assessors operate on *Risk Management* layer.

Other Risk Assessment roles

Credential Verifier

Credential Verifiers consume credential presentations and verify that the credentials are valid i.e. the credentials are issued from trusted Issuer, they not expired and not revoked. This role is usually covered by the protocol but some Lenders might integrate their own verification service.

Credit Risk Scorer

In case of a more sophisticated pond eligibility requirements, Lenders might integrate a module for additional credit assessment/scoring techniques, including scorecards, ML models, and others. The result of this additional assessment is a credit score, which is then matched with the pond's credit score requirements. The Credit Risk Scorer could also participate in the protocol as a standalone Credential Issuer and issue a credential with the calculated score.

Credit Risk Reviewer

Risk Reviewers are employed by a Risk Assessor (or the protocol itself) to review a loan application and interview the Borrower in order to generate additional confirmation or vouching credentials used to endorse her/him. The Credit Risk Reviewers could also participate in the protocol as a standalone Credential Issuer and issue a credential with the calculated score.

Payment Processors

Payment Processors facilitates the payment processes in the protocol by providing different off-chain payment services. On the one side, they can provide on-ramp and off-ramp services, and on the other side, they facilitate and settle fiat payments between Borrowers and Lenders, and between Lenders and Liquidity Providers.

Payment Processors operate on *Payments* layer.

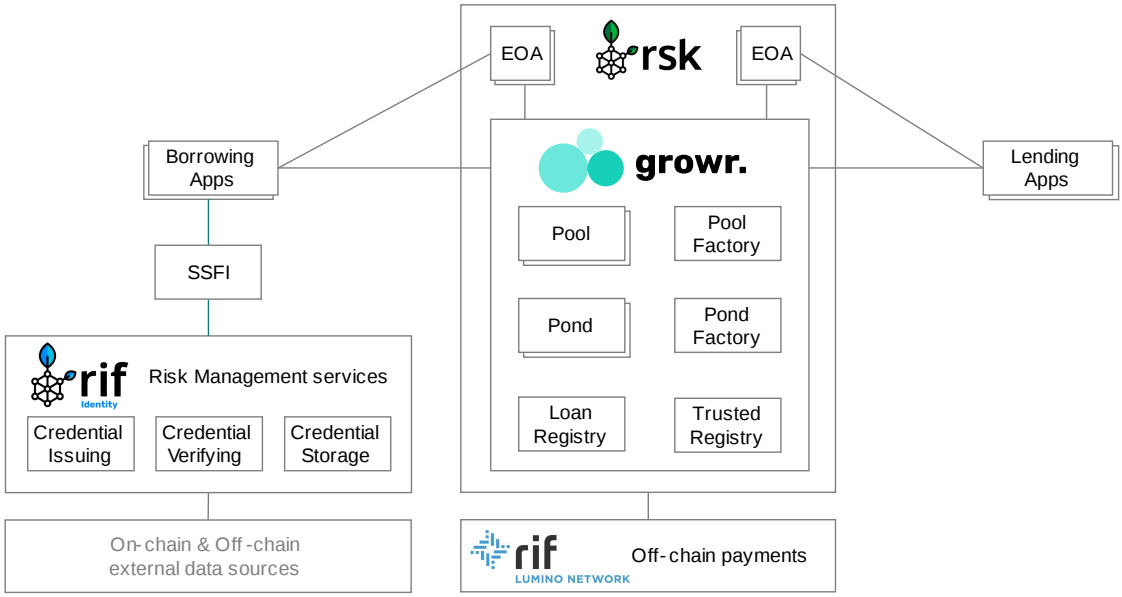
Growr Protocol

The Growr protocol and its components are supposed to cover the following functions:

- Loan Marketplace: Growr provides infrastructure and tools and for decentralized loan management.
- Integrations: Growr provides integration with Lenders' systems for credit line management, integrations with Liquidity Providers' systems for liquidity management, and integration with Payment Processors' systems.
- Protocol Access: Growr provides web and mobile applications to access the protocol.
- Credential Verification: Growr provides credential verification service asserting that a given Borrower matches the eligibility criteria of a given pond.
- Risk Assessment: Growr provides credit line assessment service.
- Governance Board for protocol monitoring, changes implementation and fraud prevention.

Protocol Components

Components Overview



Core Protocol

Growr core protocol represents a global decentralized marketplace where Lenders publish their targeted loan offers with predefined conditions and eligibility criteria. It is implemented as a smart contract system on top of blockchain. The protocol will be deployed on RSK mainnet, powered by the most secure network - Bitcoin. The Growr protocol consists of set of smart contracts:

- *Pool Factory* smart contract. Enables creation of new lending pools.
- *Pool* smart contracts. Support deposit & withdrawal operations from its owner, enable ponds to apply for credit lines.
- *Pond Factory* smart contract. Enables creation of new lending ponds.
- *Pond* smart contracts. Support deposit & withdrawal operations from its owner, provide loan offers and enable users to apply for loans.
- *Trusted Service Registry* smart contract. Supports verification of risk assessment results.
- *Loan Registry* smart contract. Registers privacy-preserving history of loan repayment commitments, supports issuing of on-chain verifiable credentials.

SSFI

SSFI is a unique global decentralized identity storing various protocol-specific verifiable credentials. The SSFI is owned and managed by the user, and their data is cryptographically encrypted and stored in a secure data store. The SSFI includes a DID and set of verifiable credentials stored in secure encrypted storage.

Protocol Apps

Protocol Apps are custodial or non-custodial web and mobile applications, integrated with the protocol. Include:

- *Borrowing Apps* (Distribution Apps). End-user web or mobile application for the Borrowers to onboard, collect credentials and apply for loans to the protocol. Such applications can be provided either by an independent last-mile financial service providers in a regulated custodial scenario, by local communities or as completely decentralized dApps providing the necessary access to the protocol.
- *Lending Apps* (Liquidity Apps). dApps for lending pools and pond management. Those applications include creation of pools/ponds, depositing and withdrawal of funds, and monitoring utilization and profitability performance.
- *Governance Apps*. dApps for protocol monitoring, changes implementation and fraud prevention.

Protocol Services

The Growr core protocol and applications is integrated with various internal or third-party services, covering mainly risk management functions.

- *Credential issuing services*. Issue verifiable credentials asserting certain facts about the borrower.
- *Credential verification services*. Verify that presented credentials are trusted and valid, and owned by the subject.
- *Credential storage services*. Securely store the credentials and the declarative details, part of borrower's SSFI.
- *Payment services*. Cover various on-ramp, off-ramp services, and fiat settlement services.
  To implement the above services, the protocol utilizes various building blocks from RSK Infrastructure Framework (RIF).

Use Cases

Microfinance

The global microfinance market amounted to $124B in 2018 https://www.convergences.org/wp-content/uploads/2019/09/Microfinance-Barometer-2019_web-1.pdf. 139.9 million borrowers benefited from the services of microfinance institutions, compared to only 98 million in 2009. Of these 139.9 million borrowers, 80% are women and 65% are rural borrowers. The main regions of microfinance are Latin America with $48.3B, South Asia with $36.8B, East Asia and Pacific with $21.5B, Africa with $10.3B. Connecting this market to a protocol for a global loan marketplace will bring efficiency in capital allocation, fair conditions, and transparency of the impact.

Agriculture microfinance

TBD

Lending to vulnerable social groups

Vulnerable populations such as victims of violence, natural and man-made disasters, as well as micro-merchants from poor communities are a prime beneficiary of the protocol. Such populations can rely on memberships within local associations, who can become both credential providers and funding donors. In addition to lending, donations can also benefit from a global and open protocol, giving the donors a complete transparency of the impact of each dollar they give.

Informal community savings groups

Over the last 25 years, development organizations have trained about 750,000 savings groups, with over 15M members, across 73 countries https://mangotree.org/what-are-savings-groups. Digitalizing such savings groups can bring about a global revolution in financial health as more communities get access to and begin to utilize this concept.

Crowdfunding

The crowdfunding business model continues to grow fast globally. In addition to the established platforms for investment in startups and product R&D, impact finance providers such as Kiva are helping micro-businesses with loans for as little as $25. Crowdfunding transition to the blockchain is a matter of time, as the example of Kick-starter shows https://techcrunch.com/2021/12/08/kickstarter-plans-to-move-its-crowdfunding-platform-to-the-blockchain.

Example

Challenges

Regulatory compliance

Lending services are regulated everywhere in the world. Crypto lending, in particular services provided by decentralized protocols, has succeeded in achieving regulatory arbitrage. The Growr protocol will aim to strike a balance between covering regulation at the "last mile" of consumer financing depending on the jurisdiction and the locally residing stakeholders through which the protocol services are delivered, and the supranational decentralized space outside of the reach of traditional regulators.

Credit risk assessment

While we plan to leverage verifiable credentials from traditional credit bureaus, we envision a future with more decentralized credit risk assessment based on alternative data sources. This is mostly uncharted territory and may lead to lower yield for investors or even losses due to incorrect calculation of the cost of risk.

Governance

While protocol governance is not novel, setting up a global DAO with complex roles and coordinating them poses still unknown challenges. We will continue to explore the best practices in the space and leverage DAO success stories.

User experience

Setting up Bitcoin and RSK wallets is still complicated for technically unsophisticated users. As part of the work on the Growr protocol, we will seek the most user-friendly implementations for accessing the protocol and interacting with its smart contracts, including facilitating access through custodial solutions.

Fraud

We expect that such a protocol will be a high-interest target of fraudsters. We will work on developing the right anti-fraud measures including permanent blacklisting of users from accessing the protocol services.

Technology maturity

Some of the technologies described in this whitepaper are new and unproven at such scale. We aim to leverage as much as possible the experience of other projects and avoid technology pitfalls.

Final Notes

ToDo

You are reading Growr protocol documentation in progress, intended to present the high-level design of the protocol for public feedback. It should not be considered complete or final. Future revisions will address incomplete elements and currently unforeseen aspects and issues.

The present Growr documentation version is *0.3.0*.

Feedback

Our goal is to develop Growr as an open source protocol. Lending, and especially *decentralized uncollateralized lending*, is a very complex topic and there are many aspects that are yet to consider. We welcome your input on how to improve the protocol.

Please, submit an issue or pull request at Growr documentation repo in GitHub on https://github.com/growr-xyz/growr-documentation/.

Contribution

Growr protocol is an open-source decentralized project and anyone can permissionlessly contribute to its development. Developing the protocol, the team abide to the following values:

- **Freedom**. Growr ensures equal starting point and free access to the protocol for everyone.
- **Transparency**. Growr provides services with fair conditions, end-to-end transparency in the process and visible impact.
- **Contribution**. Growr promotes open-source, community-driven, and safe environment.
- **Empowerment**. Growr delivers global life-first innovative financial services.

We truly hope that the mission and values we describe inspire teams across the world to join us and help contribute to the protocol.

Join us!

- Growr repos in GitHub https://github.com/growr-xyz
- Growr protocol specification https://growr-xyz.github.io/growr-documentation/
- Growr official web site https://www.growr.xyz
- Growr in Twitter/Discord