

# Ormi.

The decentralized credit protocol.

# Ormi.mission

- Decentralized credit protocol for issuing undercollateralized loans/credit without relying on real world identities.
- Multi-chain, non-custodial, non-KYC, permissionless.

# Ormi.problem

- DeFi liquidity/lending protocols (e.g. Aave, Compound, MakerDAO) require 100%+ (often 150%) to secure the loan.
- Capital inefficiency.
- Existing undercollateralized loan projects are **permissioned** (i.e. lending to institution).
- DeFi lacks infrastructure to issue **permissionless** credit.

# Ormi. competitors

Undercollateralized	Permissionless	Projects
✗	✓	Aave, Compound, MakerDAO
✓	✗	Maple, Goldfinch, TrueFi
✓	✓	Ormi

# Lending system primer

Every lending system has two components:

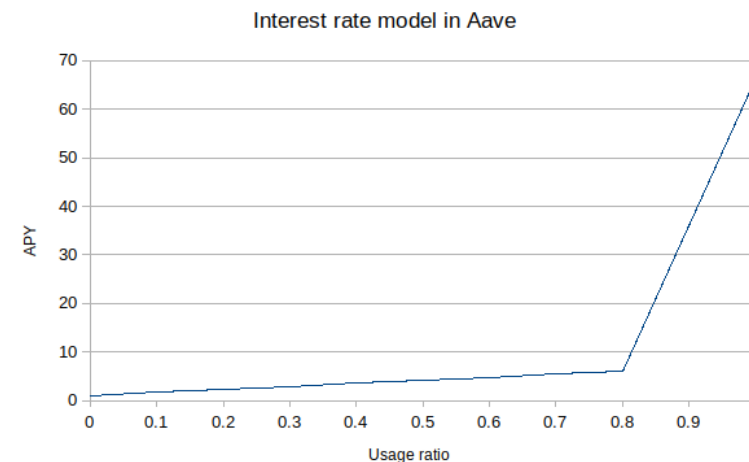
- How to secure the loan.
- How to provide liquidity.



# How does Aave do it?

Every lending system has two components:

- **How to secure the loan:**
  - Overcollateralization
  - If collateral's value falls below loan value, collateral gets liquidated.
- **How to provide liquidity:**
  - Kinked interest rate model
  - Low liquidity/high utilization ratio = high interest rate/APY.  
Incentivizes users to provide liquidity for yield.

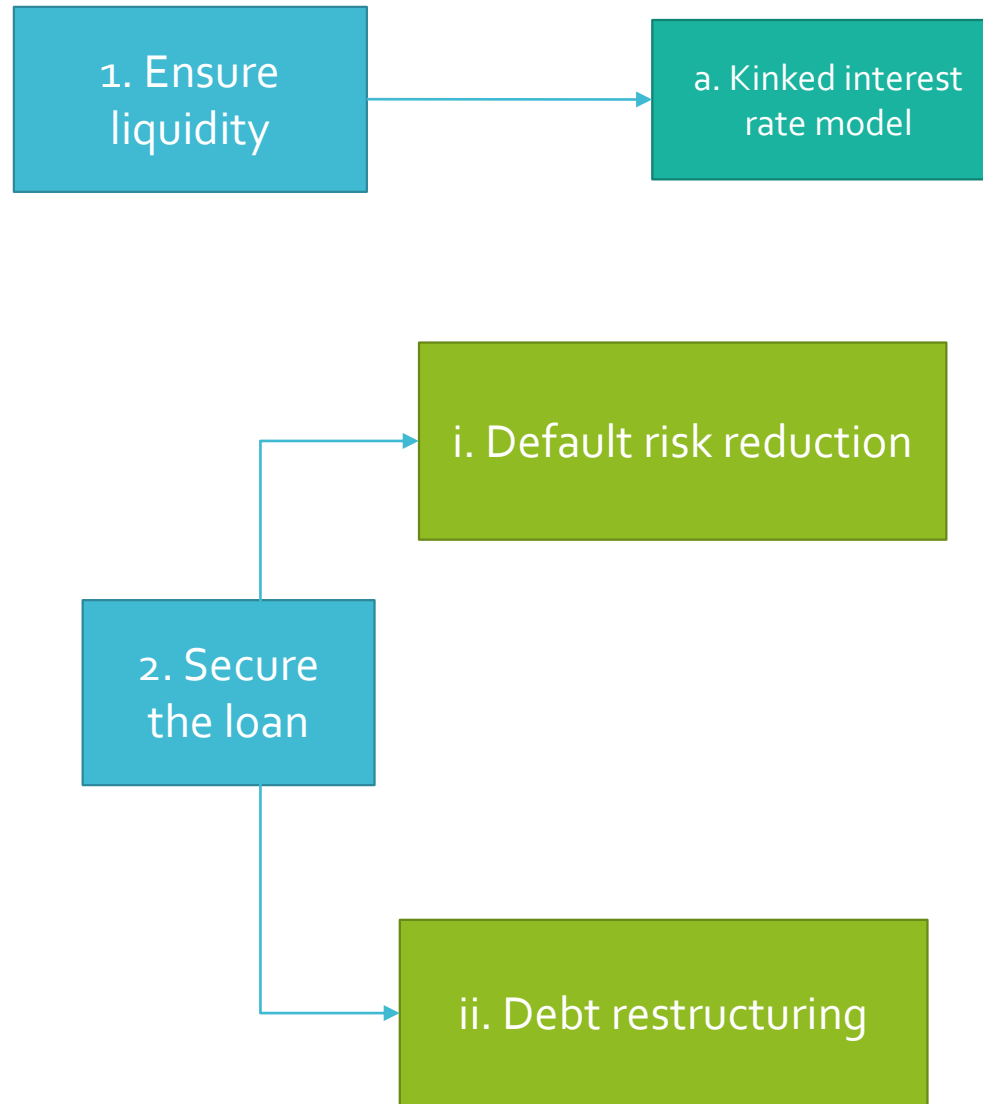


# Two key issues for undercollateralized loan

**Two key issues every undercollateralized loan system needs to address:**

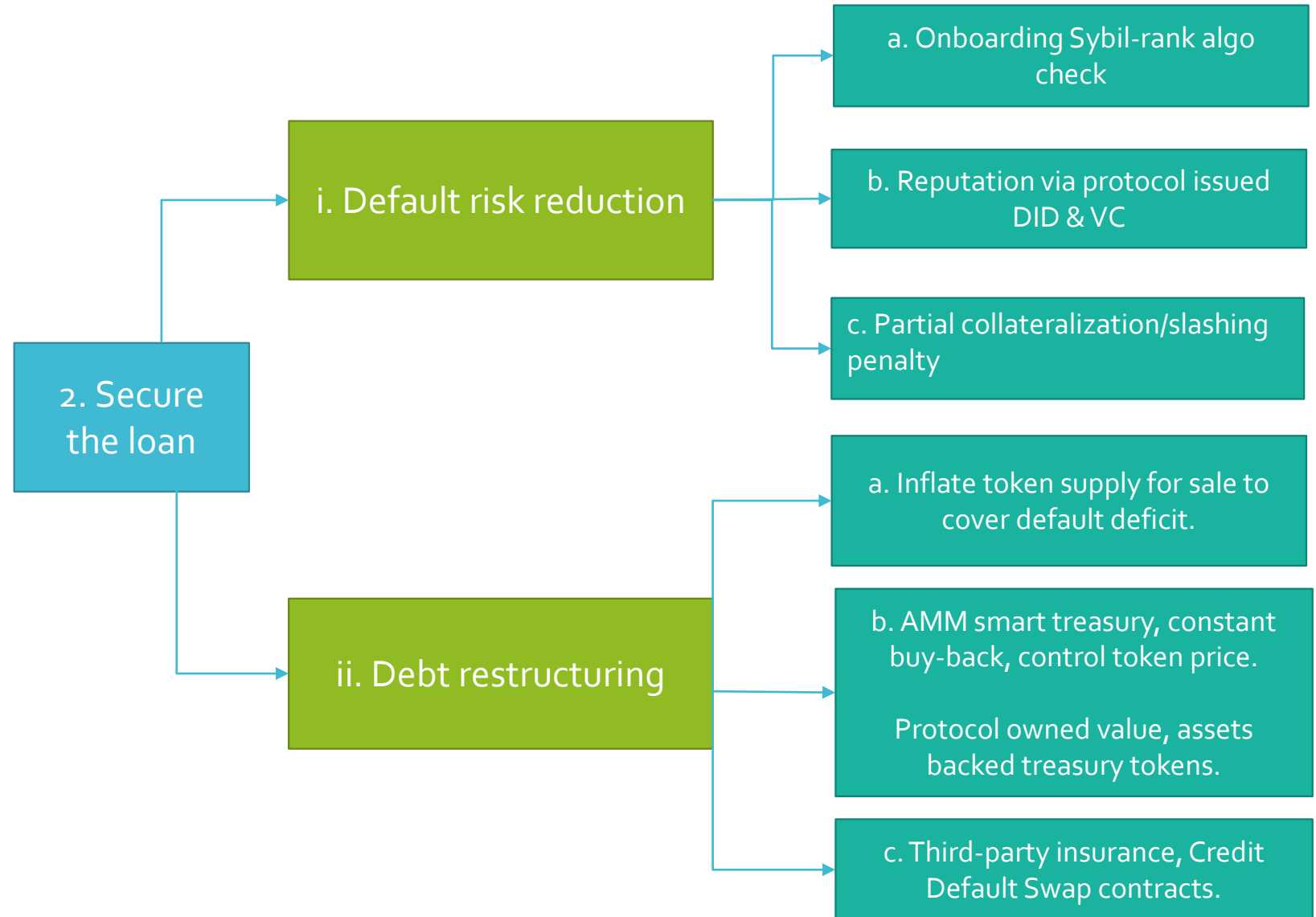
1. Default risk reduction:
  1. Sybil-control: eliminate the scammers
  2. Reputation, credit-worthiness.
2. Debt restructuring
  1. If someone defaults, how do you recover the loss.

# Two key components for undercollateralized loans

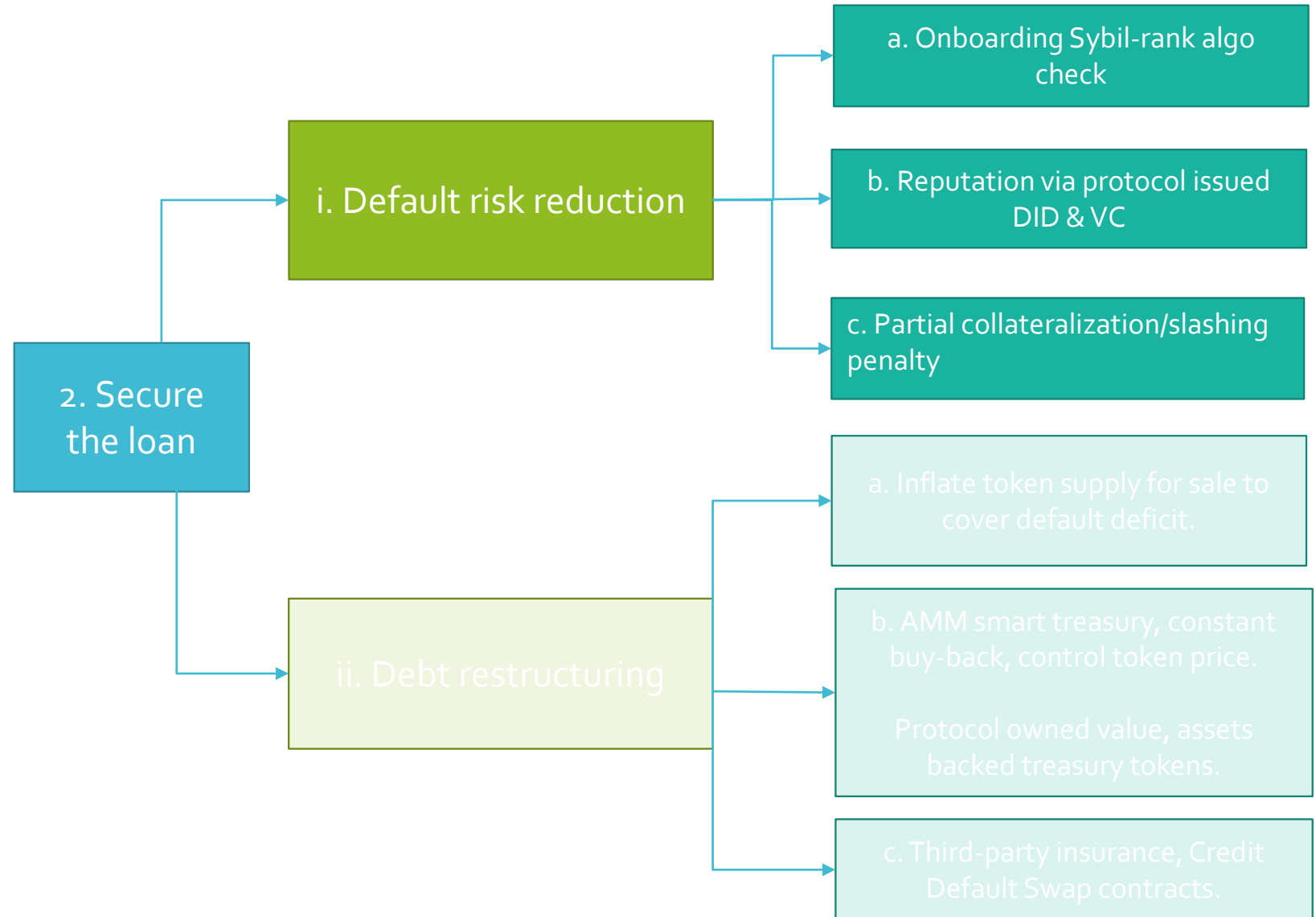




# Ormi.key innovations



# Default risk reduction – Anti-sybil onboarding



# Default risk reduction – Anti-sybil onboarding



## Anti-Sybil onboarding

1. Proof of hard-to-forge resource, i.e. half a year of transaction history
  1. Ethereum address with favorable interaction with existing DeFi protocol will result in lower collateralization ratio initially.
  2. Sybil rank type of algorithm is run on provided crypto address to assess existing reputation.
2. Social media profile/government ID.
  1. For anti-sybil purpose not for KYC. Ormi never uses such data for KYC.

# Default risk reduction – Reputation via DID & VC



## Ormi Decentralized Identifier & Verifiable Credential

1. Decentralized identifier (DID) more expressive than Eth address.
2. However, DIDs are useless without verifiable credential (VC).
3. VCs are the de facto credit history/reputation for a DID.
4. Each verifiable credential acts as part of loan history associated with a DID.
5. Issued by protocol. Cryptographically chained together and stored on IPFS.
6. Tamper-proof, privacy preserving.

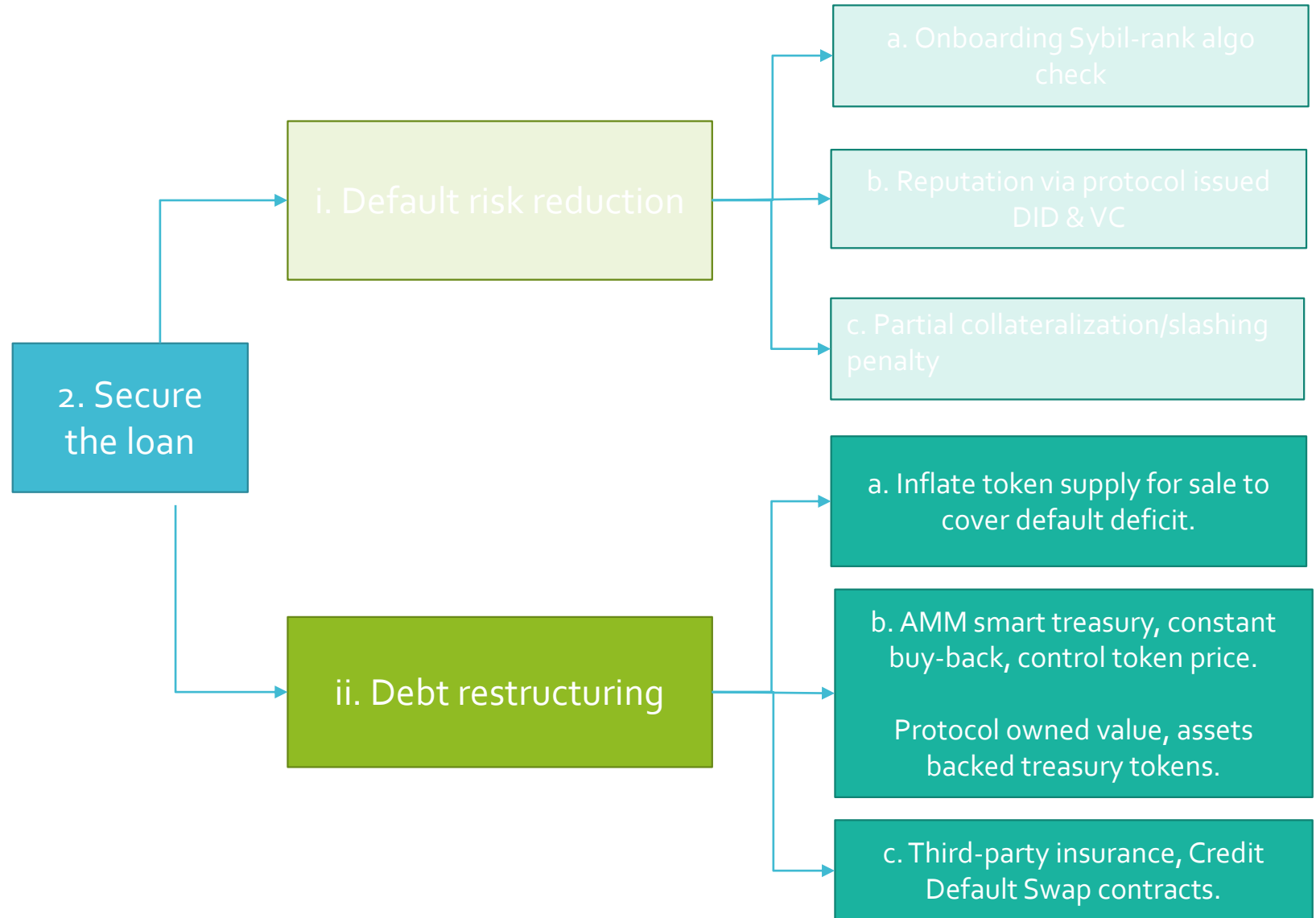
# Default risk reduction – Partial collateralization



## Incentives for borrowers to stay honest

1. Ormi v1 will be partial collateralization.  $<100\%$  and  $>0\%$
2. A User/DID starts with 100% collateralization ratio, after each complete loan repayment or favorable loan activity, CR gradually and **linearly reduces** to 90%, 80% ... 30%, etc.
3. In the event of liquidation or defaults, a DID's collateralization ratio requirement increases.
4. A User/DID's CR decreases linearly upon favorable behavior and **increases exponentially** upon unfavorable behavior.

# Debt restructuring – Inflate supply



# Debt restructuring – Inflate Supply



## Inflate token supply to cover debt default

1. Ormi treasury issues additional governance/treasury tokens to be sold on DEXs to raise fund.
2. Target inflation 2%→8%.
3. Ormi smart treasury has mechanism to ensure treasury token unit price does not depreciate given target inflation.

# Debt restructuring – Inflate Supply



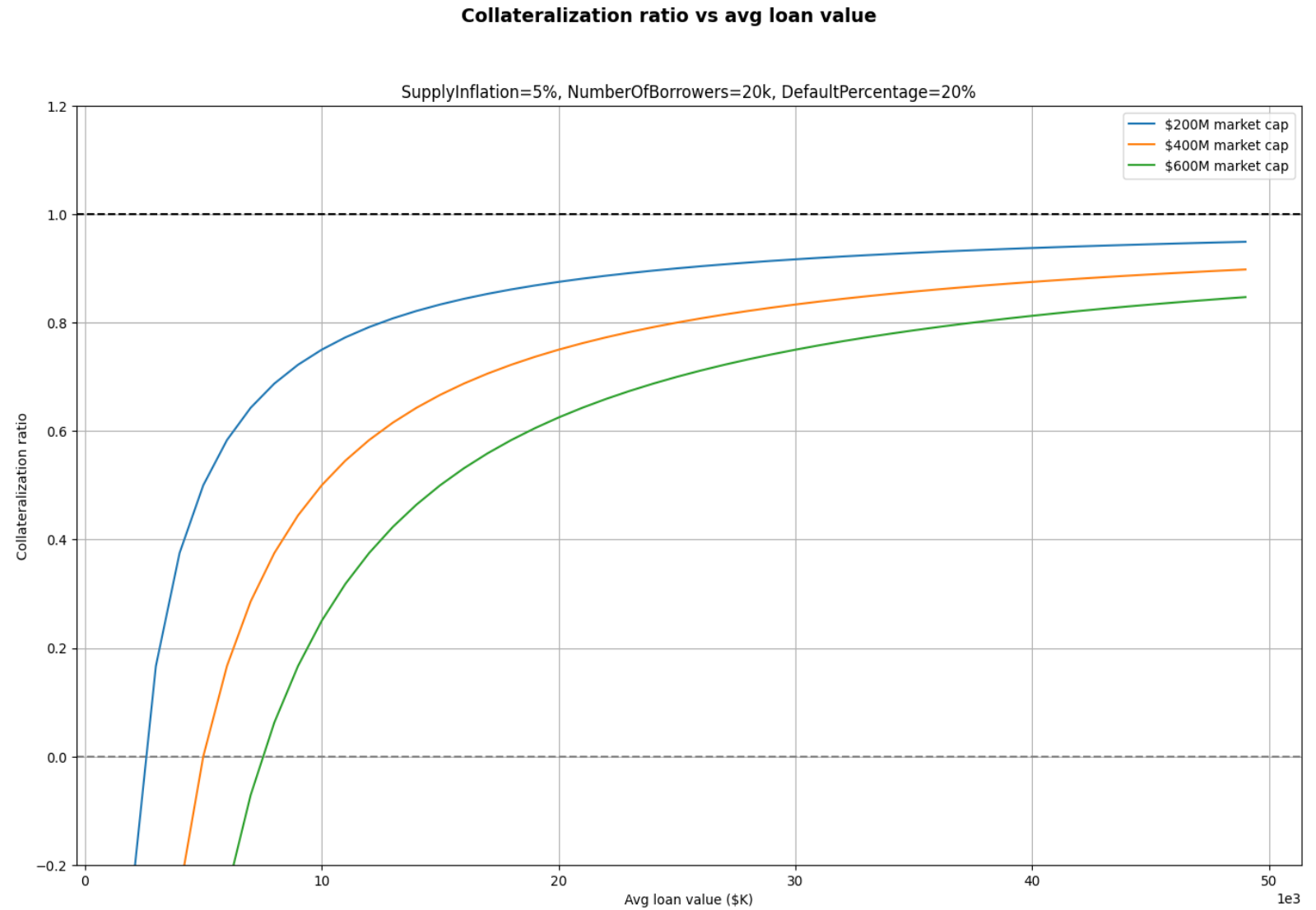
**Inflate token supply to cover debt default**

$$AvgDebtRestructureAmnt = \frac{TokenMarketCap \cdot InflationPercent}{NumberOfBorrowers \cdot DefaultPercent}$$

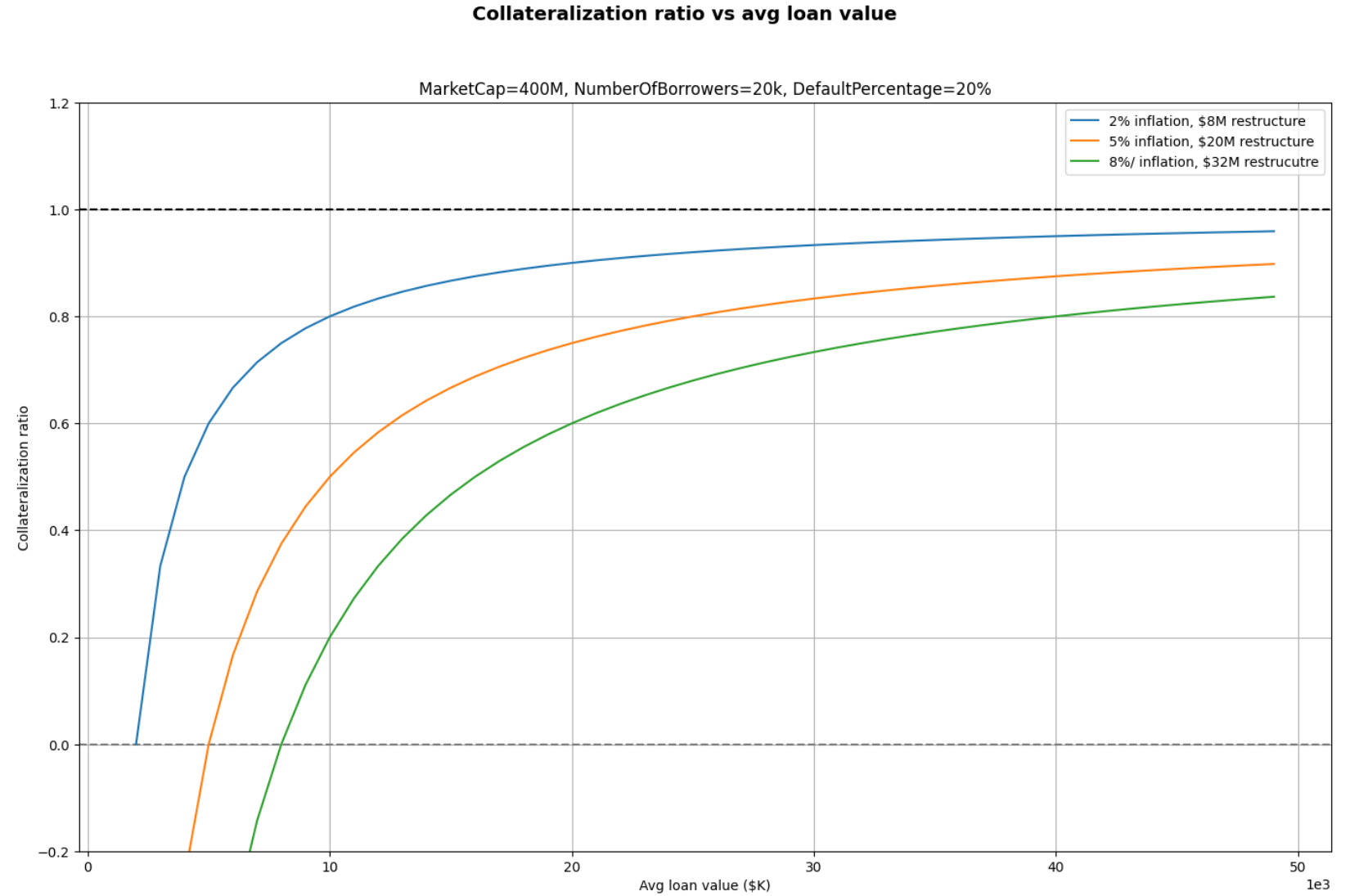
$$CollateralizationRatio = \frac{AvgLoanAmnt - AvgDebtRestructureAmnt}{AvgLoanAmnt}$$



# Debt restructuring - Inflate Supply



# Debt restructuring - Inflate Supply



# Debt restructuring – Smart Treasury



## Token price control - Smart treasury for constant buy

1. Utilizes existing AMM, Balancer pool with 80%ORMI/20% ETH allocation.
2. Balancer Smart Pool ensures automatic buy-back from market. More efficient than buy-back and burn.
3. Backstop Module, prevents excess flow of ORMI into the open market that would further reduce the value of ORMI itself.
4. Inspired by Aave's Safety Module.

# Debt restructuring – Smart Treasury



## Smart treasury for constant buy-back, token price control

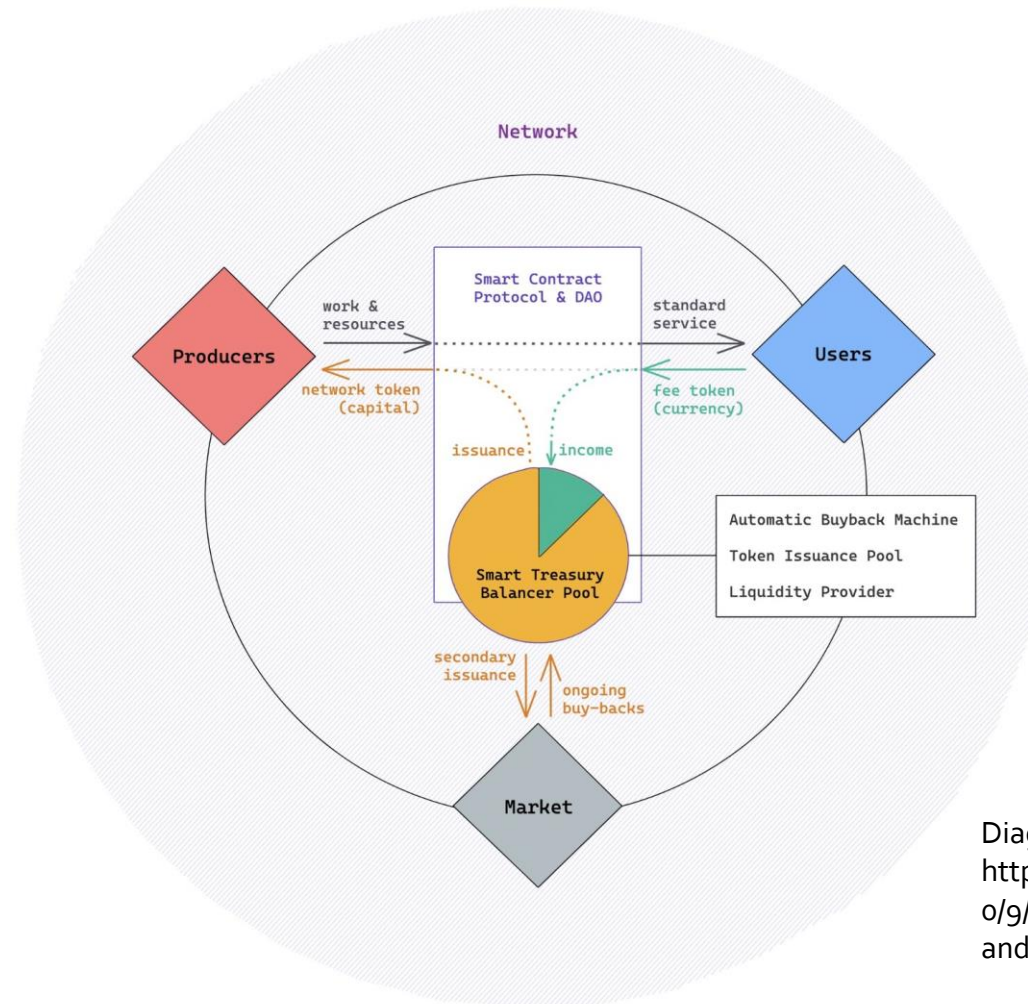


Diagram source:  
<https://www.placeholder.vc/blog/2020/09/17/stop-burning-tokens-buyback-and-make-instead>

# Debt restructuring – Protocol owned value



## Token Price control - protocol owned value, assets backed ORMI treasury tokens

1. Protocol owned value/liquidity, same as OlympusDAO.
2. Bonding for treasury to accrual asset in exchange for ORMI.
3. Staking ORMI reduces supply on the market.
4. For more info on value accrual system, look up OlympusDAO.

ORMI are always backed up by assets in the treasury. Have **floor price** based on treasury assets.

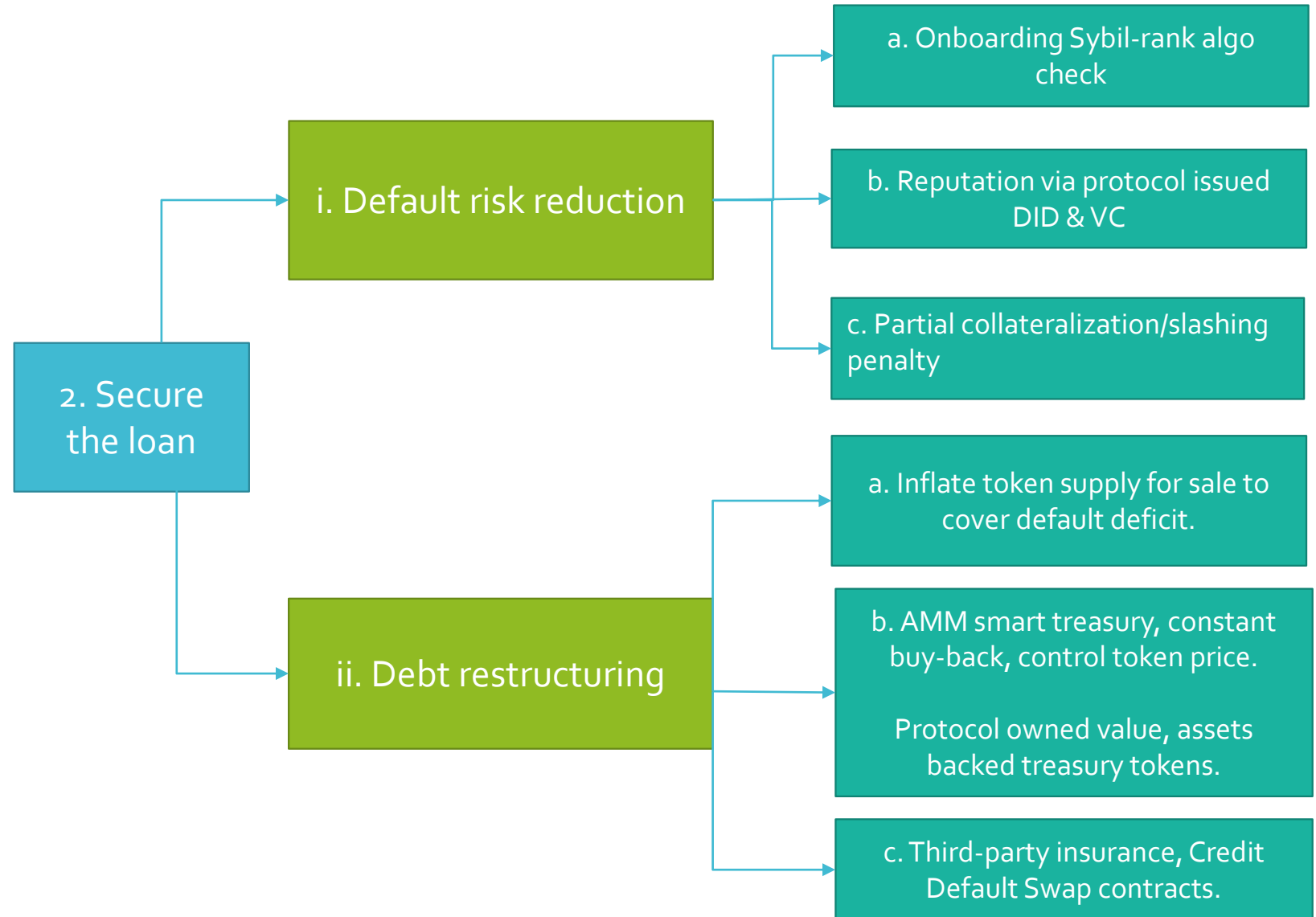
# Debt restructuring – Insurance



## Insurance, Credit Default Swap contracts

1. Ormi will negotiate with third-party insurance contracts for coverage on lending pools.
2. Lenders can individually opt in for insurance on their lending.
3. Future support for Credit Default Swap contracts.




# Ormi components



# Team



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- Chromium, Committer 
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# Q & A

Ormi | The decentralized credit protocol.