



# SECURING A BROKEN LENDING SYSTEM

Team Kagojer Nouka

## CURRENT SCENARIO

The lack of participation of general people specially from people of marginal and underprivileged communities and the lack of accountability in the lending process leading to corruptions and inefficiencies are the barriers of building a strong sustainable financial system

**86%**

**RURAL POPULATION WITHOUT ACCESS  
TO FORMAL CREDIT SYSTEM**

**2401.67**

**BILLION BDT IN DEFAULT  
LOANS ACCORDING TO IMF**

**417%**

**GROWTH OF NON-PERFORMING  
LOANS IN LAST 10 YEARS**

**Economic  
Stagnation Occurs**

**Borrowers Default  
on Their Loans**

**Credit and CAMELS  
Rating of the Bank  
Worsen**

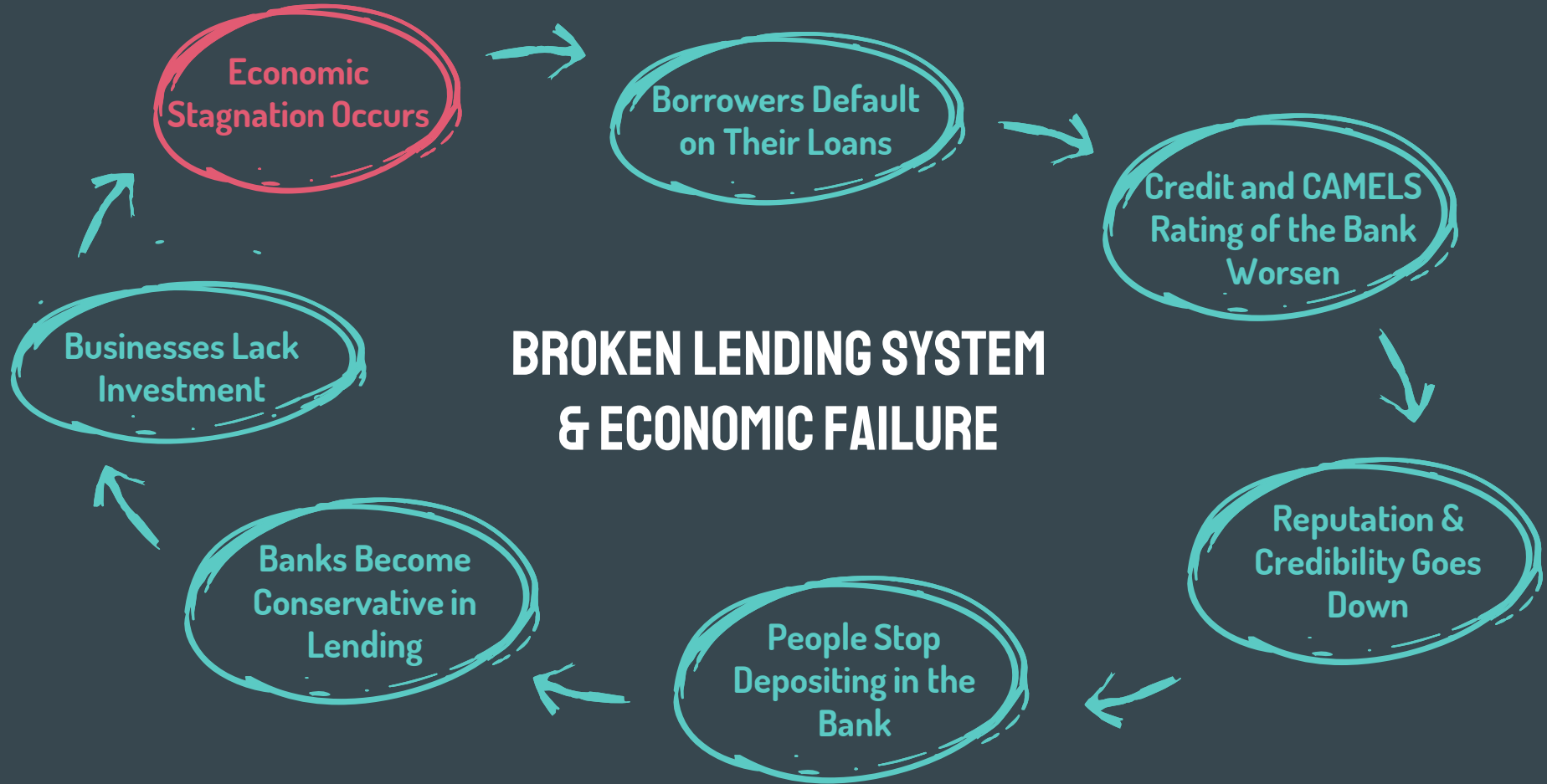
**Reputation &  
Credibility Goes  
Down**

**People Stop  
Depositing in the  
Bank**

**Banks Become  
Conservative in  
Lending**

**Businesses Lack  
Investment**

## **BROKEN LENDING SYSTEM & ECONOMIC FAILURE**



# PROBLEMS

## NO STANDARD EVALUATION SYSTEM

No standard way of determining the integrity of a borrower and likelihood of default

## LACK OF COOPERATION

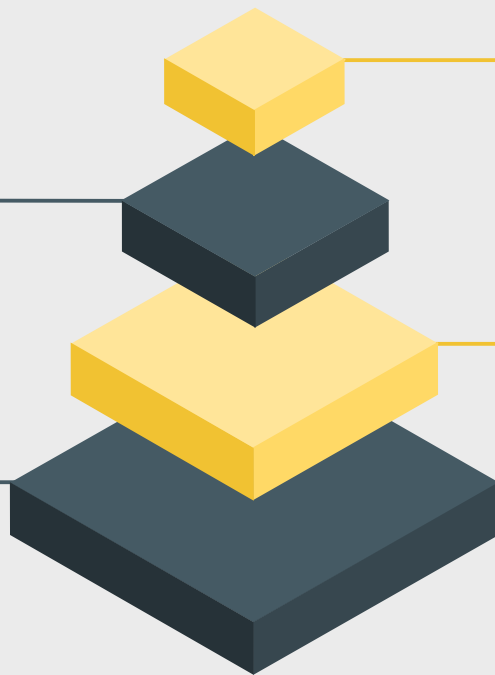
Banks have no trustworthy way to share data for mutual benefit without harm

## BROKEN ASSET MANAGEMENT SYSTEM

Most assets are verified manually for irregularities which is very inefficient and error-prone

## BAD GOVERNANCE AND CORRUPTION

No framework in place to detect and hold people accountable which leads to widespread corruption



# STAKEHOLDERS



## BORROWERS

Individuals or businesses who take loan showing some of their assets as collaterals



## LENDERS

Banks who lend borrowers loans against those collaterals based on certain conditions



## ISSUERS

Land Registry, National Board of Revenue and other offices who issue documents that verify the ownership of those collaterals,



## REGULATORS

Government representatives like Bangladesh Banks who monitor the lending practices, quality of loans and likelihood of defaults

# SOLUTIONS

## ASSET DOCUMENTATION & VERIFICATION



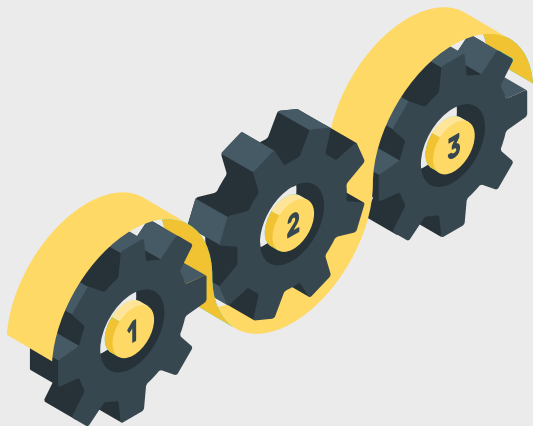
Issuers can document assets and verify them at borrowers request

## CREDIT HISTORY SHARING



Banks share credit history of borrowers to assess credit worthiness

# BLOCKCHAIN



## DATA IMMUTABILITY

Asset data can be signed and recorded by owner and registry and there after remain safe from external influence

## DISTRIBUTED DATA SHARING

Banks can share credit history of borrowers with other banks to establish credit worthiness of borrowers

## ENFORCE TRANSPARENCY

Regulators are able to monitor the banks and their lending practices and hold them accountable if they don't follow proper standards

# PARTICIPANTS

## ROLES

Participate in the lending process using collaterals and return dues timely

### BORROWER



Issue digital documents against assets and let borrowers verify their ownership

### ISSUER



Issue loans against collateralized assets, record loans and share credit history with banks and regulators

### BANK



Responsible for monitoring banks and their lending practices, prevent defaults and hold participants accountable

### REGULATOR



## INCENTIVES

Get standard credit rating from the system and also verifiable immutable records of assets

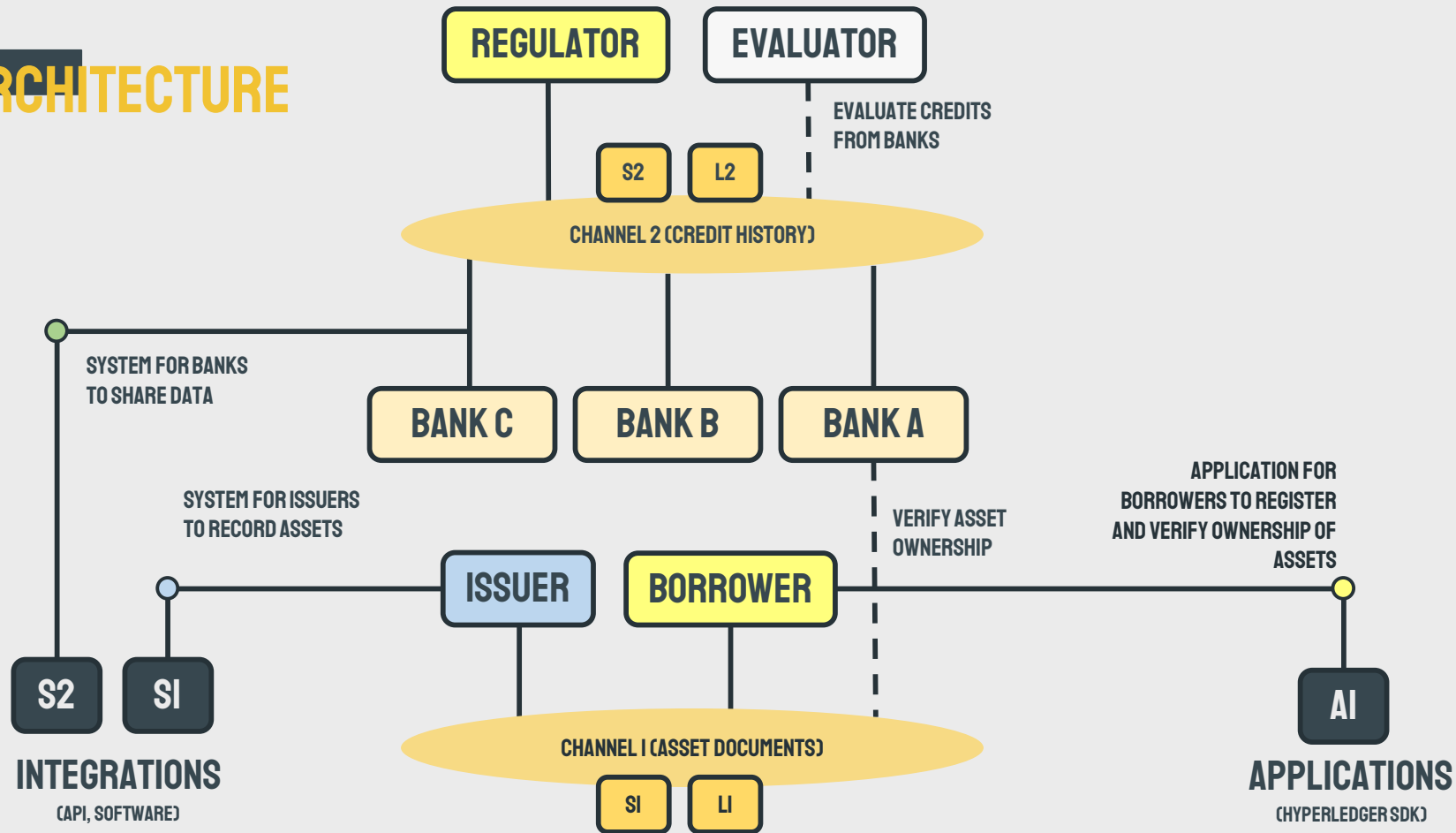
Digital immutable documents will reduce their operational costs significantly and also protect them from external influence

Reduce the number of non-performing loans by issuing loans against credit-worthy borrowers following proper lending practices

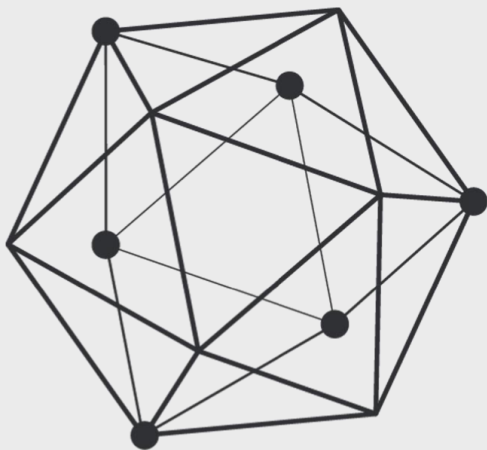
Economic growth from reduction of defaults, restoring the reputation of banks and encouraging investors to invest again



# ARCHITECTURE



# HYPERLEDGER FABRIC



## PERMISSIONED BLOCKCHAIN

Allow private data channels to ensure privacy and access control features to restrict some participants from changing sensitive data

## MATURE ECOSYSTEM

Having a wide ecosystem of developers and backing of big tech companies and open source foundations like the Linux Foundation and IBM

## CROSS-DOMAIN ENTERPRISE APPLICATIONS

Tried and tested for use cases like asset documentation-verification and enterprise data sharing among cross-domain entities

# LENDING PROCESS

## 01 ASSET DOCUMENTATION

Issuer documents assets  
to establish ownership

## 02 BORROWER APPLIES FOR LOAN

Borrower applies for loans  
against those collaterals

## 03 BANK VERIFIES COLLATERAL

Bank verifies collaterals  
via digital certificates

## 04 BANK RECORDS TRANSACTION

Bank records loans on the ledger  
and shares them with others

## 05 VERIFY CREDIT WORTHINESS

Other banks can verify integrity  
of borrower from credit history

## 06 REGULATOR MONITORING

Regulators monitor these loans  
and holds banks accountable

# ACTION PLAN

List banks currently most vulnerable to corruption



Work with 3 registries to digitize their assets to certify ownerships



Evaluate the interactions between borrowers, issuers and lenders and improve governance structure



Conduct a survey into the common types of collaterals and their registries



Work with a bank to create a system to verify collaterals and track loans on the blockchain



Onboard new banks into our network to allow secure data sharing



# BUSINESS ANALYSIS

## STRENGTHS

Ability to work on improving efficiency and collaboration without major systemic or policy changes

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## WEAKNESSES

Lack of existing collaborative mindset between diverse organizations

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Government initiatives to digitalize public services and emergence of new blockchain technologies

## OPPORTUNITIES

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Partners may face technical difficulties and may be unwilling to continue with the project

## THREATS

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# VISION AND MISSION

## PEOPLE

Individuals get the ability to verify ownership of their assets and get access to a standardized credit rating system



## GOVERNMENT

Government will have a lot more oversight over the government banks and enforce secure lending practices which will make the system more accountable

*Thank you!*