

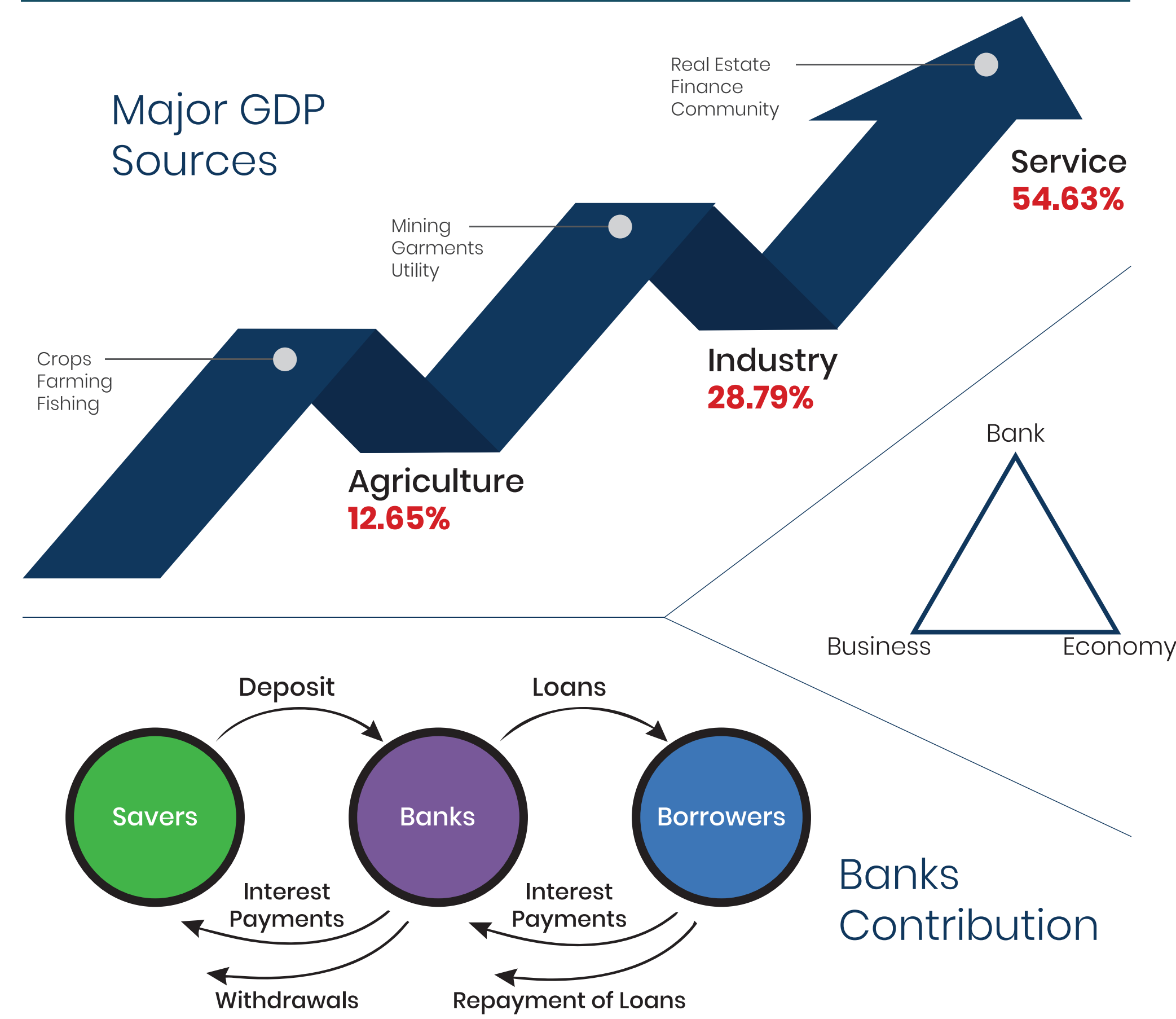
Blockchain For Preventing Loan Default

A Secure and Authentic Information Provider for The Financial Organizations

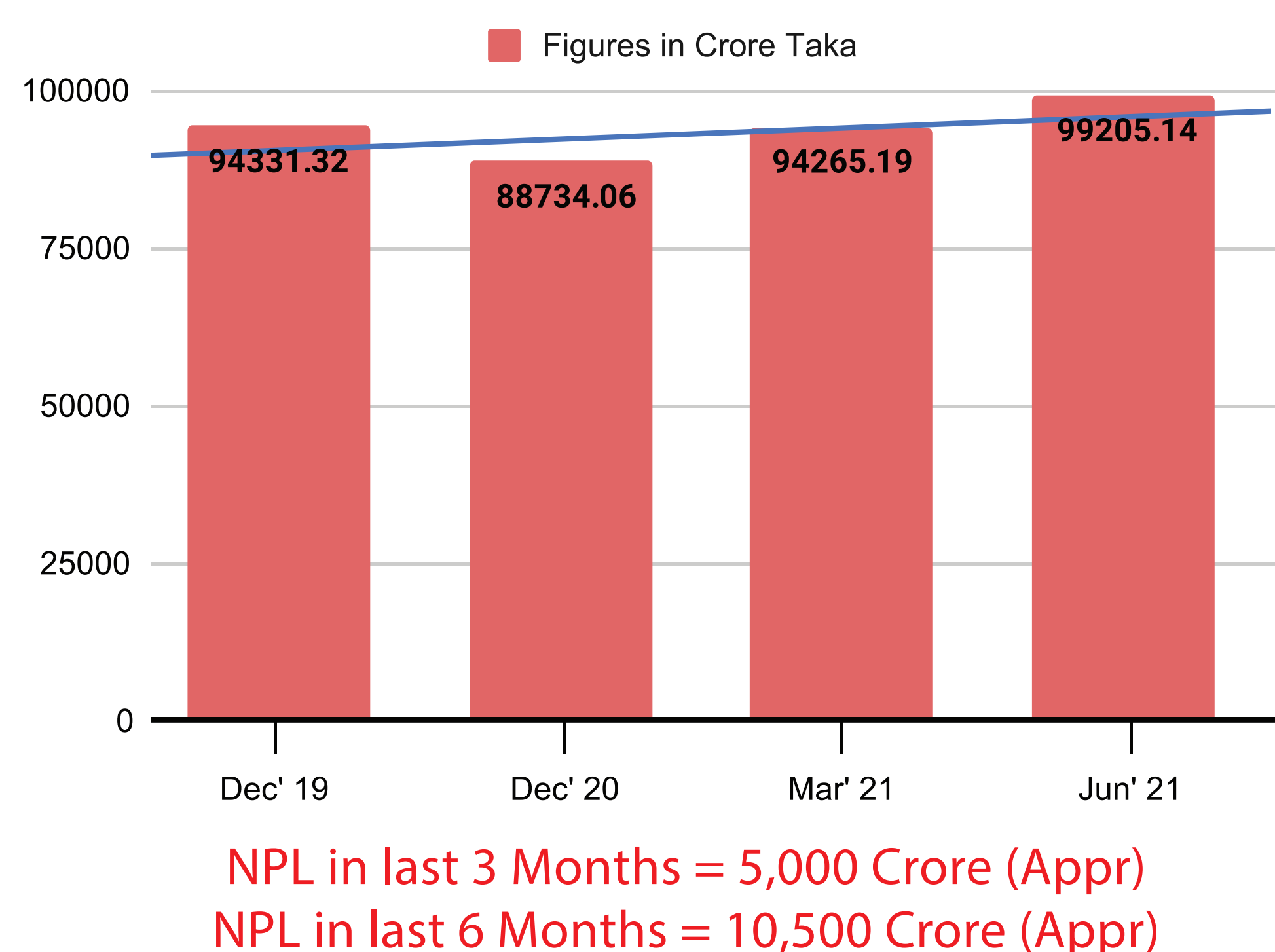
Abstract

In this project, a blockchain-based solution is proposed to provide an authentic information source and a transparent channel to prevent the way of loan default. According to this system, each and every financial institute can verify the collateral, financial, loan status, and tax-related information associated with the borrower. Anyone from a branch entity to the higher authority in a financial organization can monitor and verify the authenticity of any relevant information provided by the borrower. According to the necessity, hierarchical governance, user and institutional privacy are maintained throughout the process. Implementation of this system can connect the dots towards the overall economic development of this country.

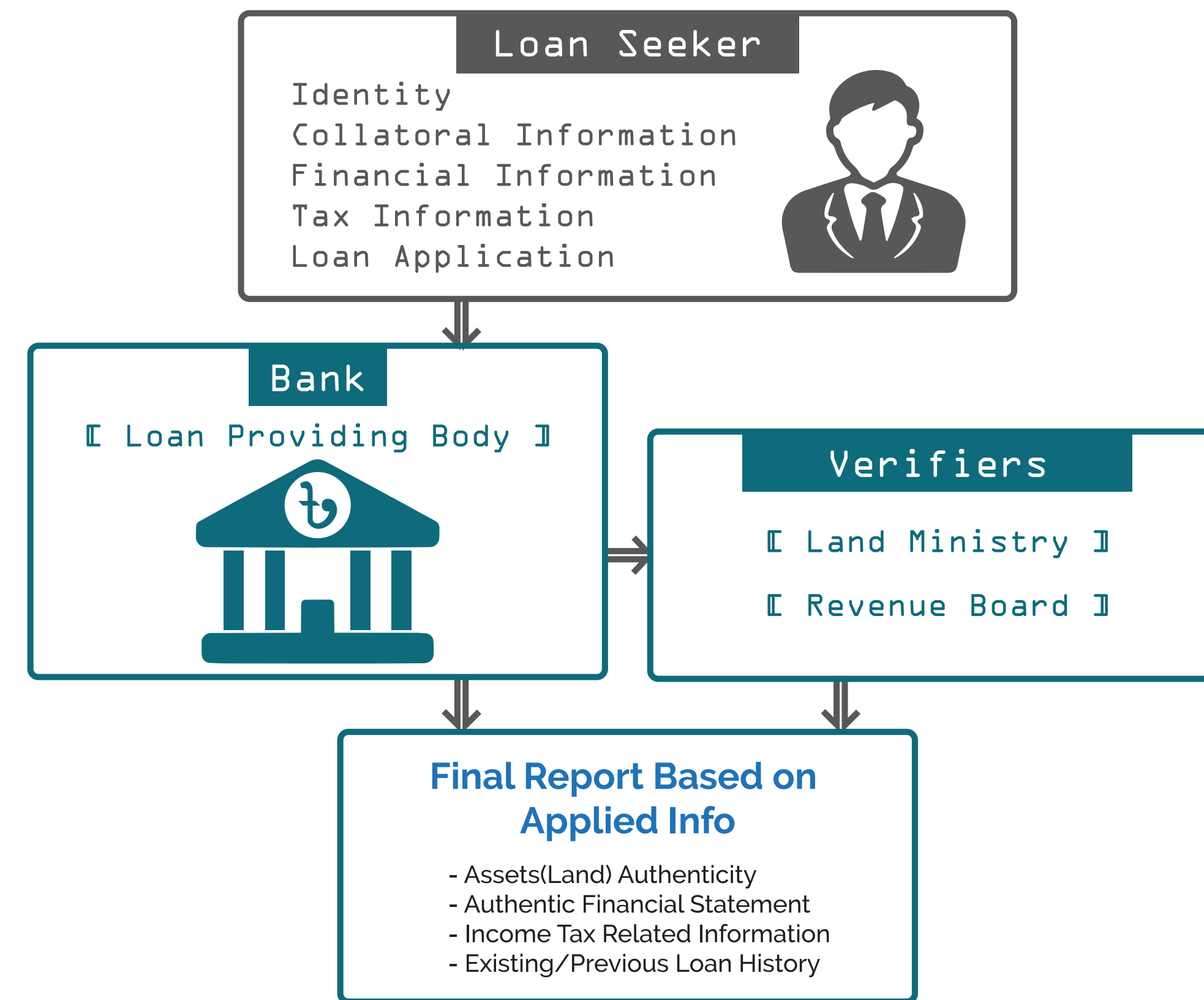
Economy of Bangladesh



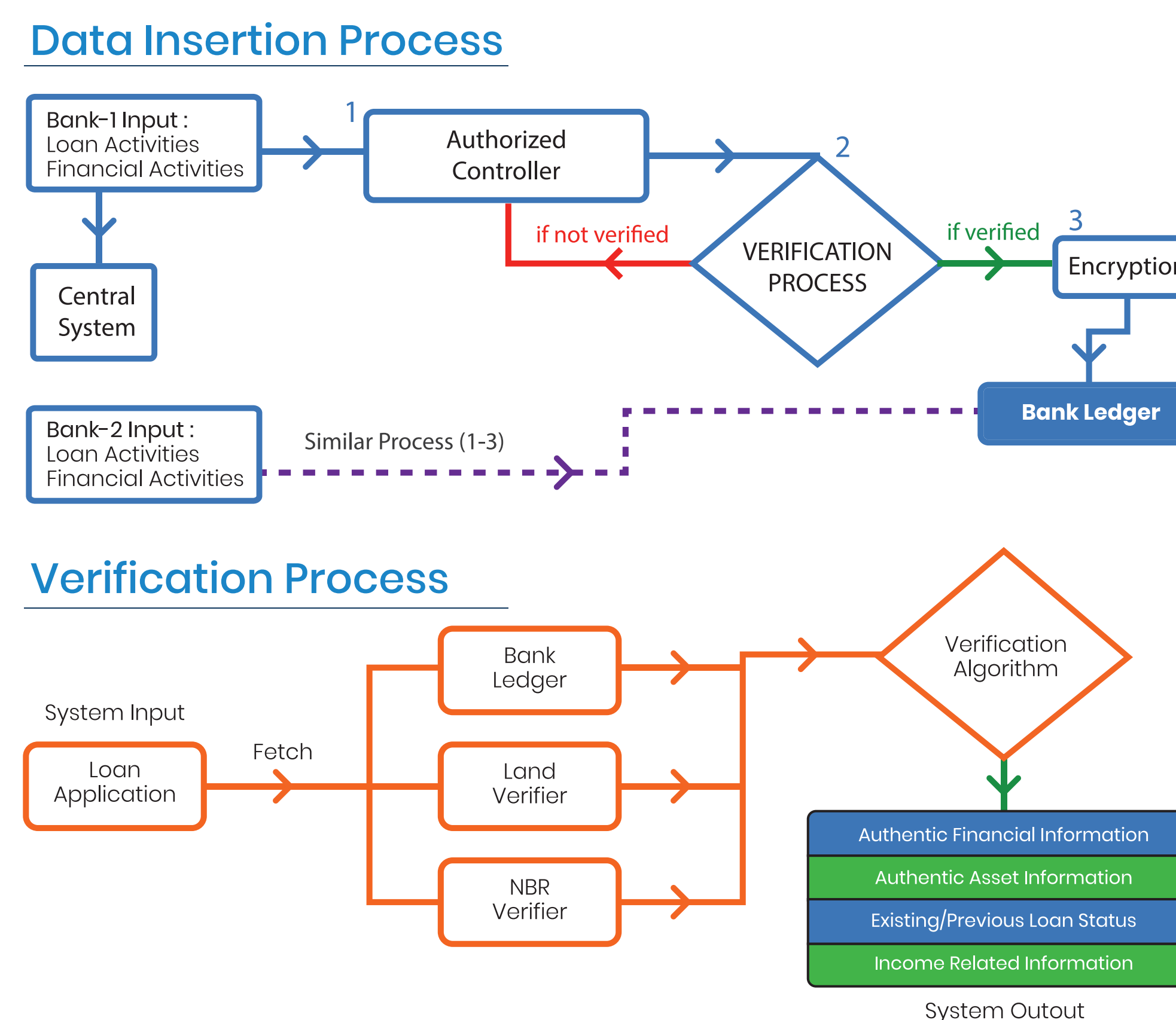
Non-Performing Loans (Dec'19 - Jun'21)



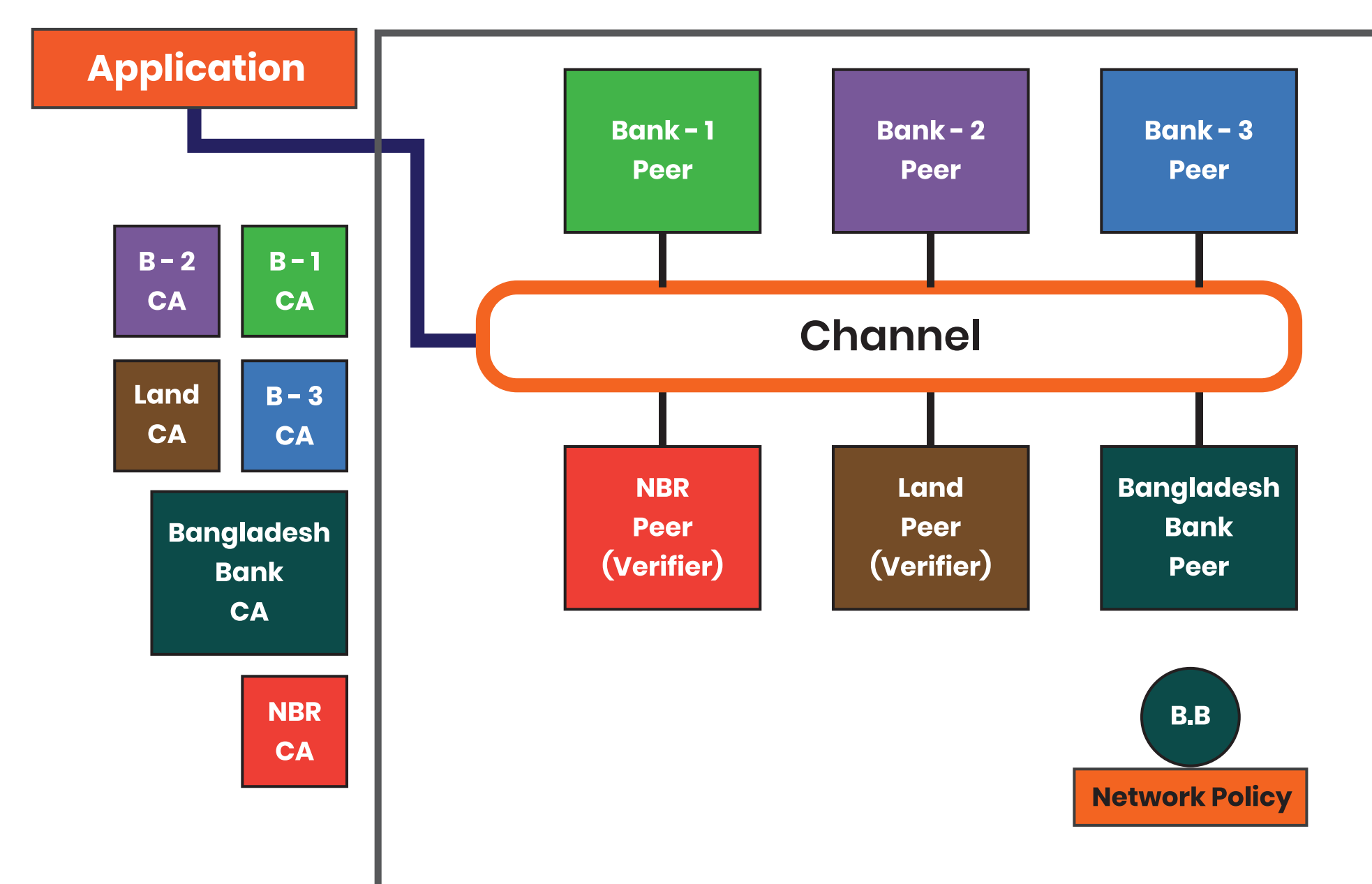
System Overview



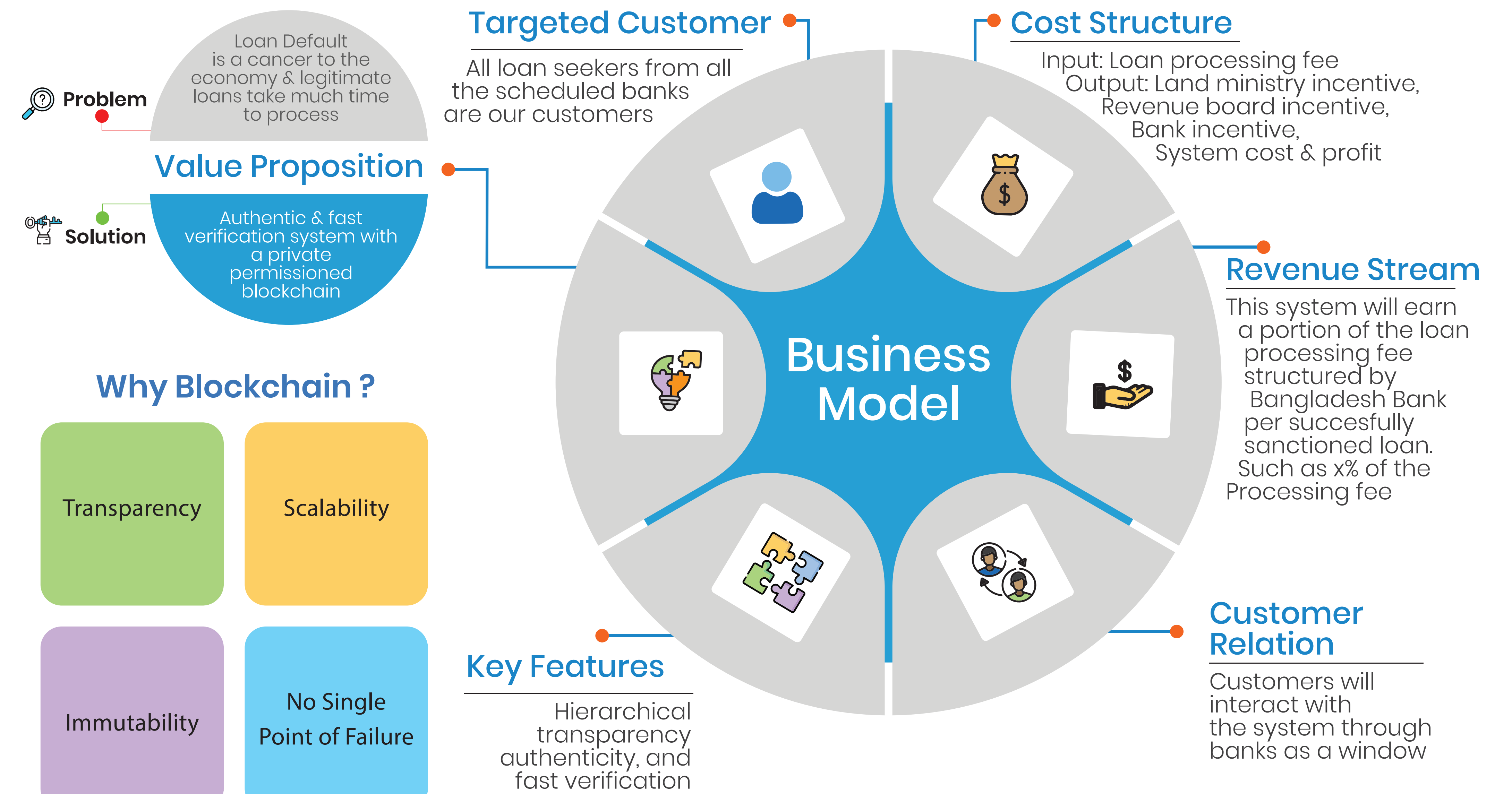
Functional System Flow



Hyperledger Architecture



Developed In Hyperledger Fabric



Governance Table

Type	Details
Membership Governance	-> Bangladesh Bank will select the participants of this system. -> Each bank will select and control its operating peers.
Network Governance	-> Bangladesh Bank will regulate the business network of this system.
Verifier Governance	-> The land verifier will be selected and monitored by the land ministry. -> The NRB verifier will be selected and regulated by the national revenue board.
Technical Governance	-> The developers of this system will control the technical control of this system.

Market - Partner

Market	Partner
-> The market size of this system counts on each successful loan. -> All scheduled banks and 30 NBFIs disbursed Tk 1,53,496.15 Crore last year.	-> Bangladesh Bank -> 6 state-owned banks -> 3 special banks -> 42 private commercial banks -> 9 foreign commercial banks -> 30 NBFIs -> Land Ministry -> National Revenue Board

SWOT Analysis

Strength

- Secure infrastructure to provide authentic information
- Prevention to data forgery
- Transparency and necessary governance throughout the existing system
- Fast verification process

Weakness

- The implementation of our architecture will require a decent amount of time
- System is so much complex

Opportunities

- The data that are stored in the blockchains of our system can be used in big data analysis and machine learning for further analytical purpose

Threads

- Our system mainly depends on some cryptography. If those cryptographies are cracked then our system will fall. This situation is very unlikely
- Lack of enough expertise may cause an operational issue

Conclusion

- The proposed framework refrains the non-eligible loan seekers from taking loans, thus saving a large amount of borrowed money from being lost.
- Our system requires that the loan seeker must provide the payment evidence of a large amount of tax before taking macro-scale loans, which in turn can remarkably contribute to the financial state of Bangladesh.
- Faster processing time, improved transparency, and no additional deployment cost for both the loan-providing organizations and the borrowers eventually make our system feasible both economically and technically.