A Discussion on TrueFi and DeFi Lending

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TrueFi: TrustToken Entering Uncollateralized Lending

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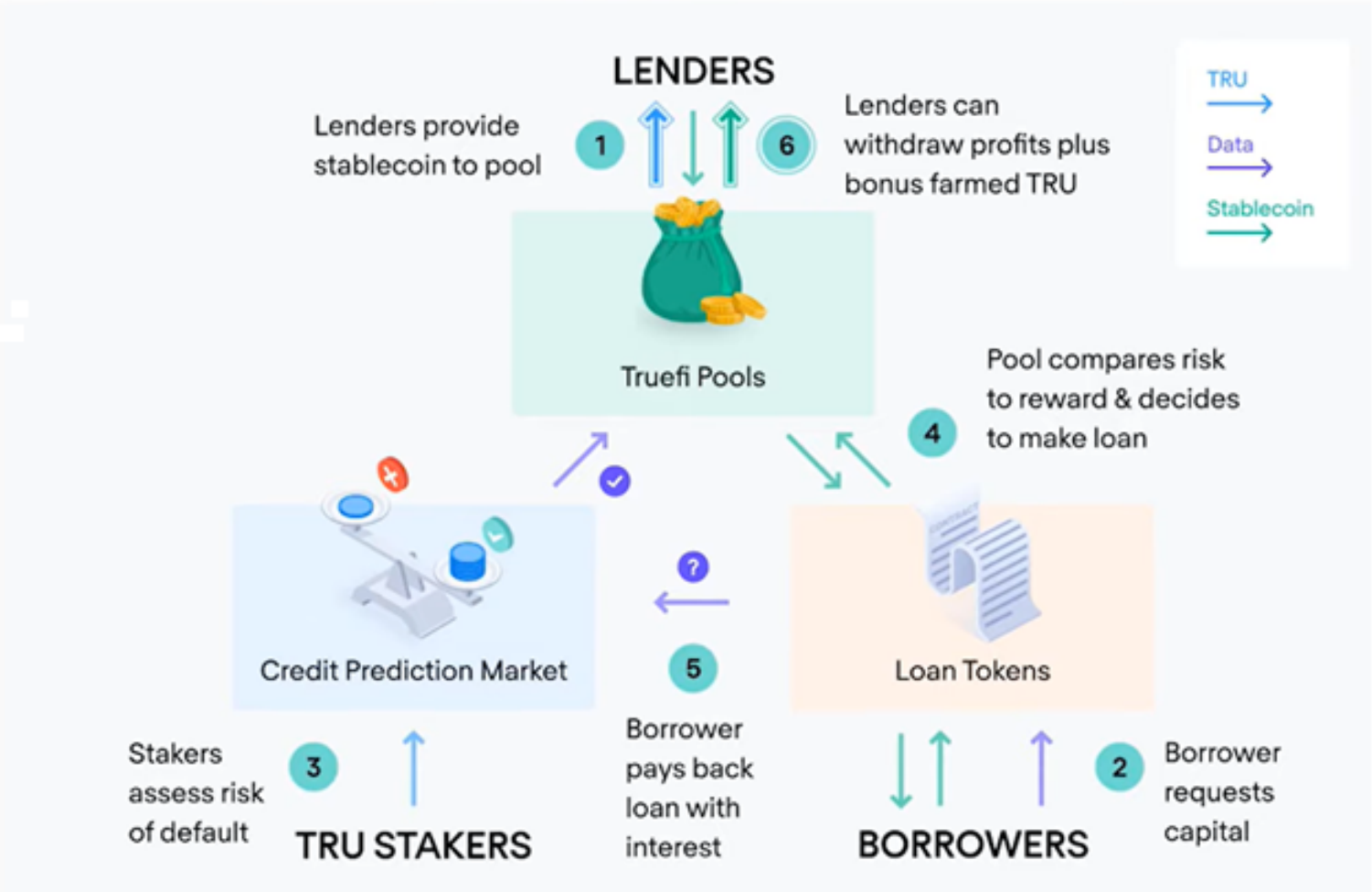

FIGURE: A schematic diagram on how TrueFi works. Source: TrustToken.com (2020).

TRU and Lending Pool Tokens

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- TRU is TrueFi's utility token. TRU can be purchased on different centralized and decentralized exchanges. It plays an important role in the operation and direction of the platform. It can be used for "Staking on TrueFi", for allowing new loans to be approved or rejected and for providing some protection to lenders in case of defaults. It can also be used for TrueFi's governance.

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- Lending pool tokens, tfUSDC, tfUSDT, tfTUSD, are tradeable tokens that represent a lender's claim to the assets underlying a specific TrueFi pool. They can also be used to "earn TRU". They can be redeemed for the respective asset or the underlying pool holding. Loan token values will not remain equal to the value of the loanable asset as they also reflect the interest income and potential loan losses.

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On-Chain Governance & Risk Management via Staking

- Staking is the process of transferring TRU to the protocol's staking contract (stkTRU) to ensure the safety of lenders to some extent. In exchange, the so-called stakers receive some portions of the protocol fee income and additional TRU tokens. Currently, stakers earn 100% of the protocol fees. Protocol fees appear to be 10% of the interest income.

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- TrustToken relies on TRU staking to risk manage the TrueFi lending pools. In case of a default in the lending pool, a certain percentage of the TRU staked (*Maximum Liquidation Rate*) will be liquidated and transferred to the lending pool.

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- According to TrustToken, "*the grand vision for TrueFi credit is .... a composable and decentralized gauge of creditworthiness ... to bring nuance to crypto finance across protocols*."

DeFi Lending: Potential Benefits

- DeFi protocols aim to disintermediate finance. The value of digital assets locked into DeFi services grew from less than $\$1$ billion in 2019 to over $\$80$ billion in May 2021. See Wharton and World Economic Forum - DeFi Beyond the Hype (2021) and the references therein.

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- DeFi lending has the potential to increase efficiency, transparency, innovation, and financial inclusion in lending markets.
- DeFi lending protocols facilitate the matching of borrowers and lenders - they create markets for loanable funds. These protocols are not functionally equivalent to banks. Banks provide financing through money creation (Jakab and Kumhof (2015)). DeFi lending protocols can complement (and not replace) banks and the traditional bank credit provision.

Centralized vs Decentralized Governance

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- DeFi protocols may ultimately lead to concentration of decision/economic power. See the U.S. official sector 2021 Report on Stablecoins.

Risks and Financial Stability

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- TrueFi borrowers appear to be highly leveraged firms. High leverage exacerbates procyclicality, (Adrian and Shin (2014)). Leverage enables trading firms to purchase more assets for a given amount of capital. In distressed market conditions, investors often need to reduce debt through asset fire sales. This procyclicality could be particularly pronounced for markets during their early stages of development.

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- Unlike bank deposit insurance and bank capital and liquidity regulation, shock absorbing mechanisms do not exist (or are weak) in DeFi. If stablecoins do not perform as expected, we could have "stablecoin runs". Procyclical leverage and stablecoin run risk in the absence of solid shock absorbers could increase risks to financial stability.

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- TrueFi's reliance on a specific credit model creates model risk. Model risk management does not appear to be considered/well-defined by the uncollaterlized lending protocol.
- Also, as noted in the U.S. official sector 2021 Report on Stablecoins, operational risk is of critical importance in DeFi. It is not clear how TrustToken is planning to manage the operational risk associated with the uncollateralized lending protocol.

Concluding Remarks

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- The TrueFi's incentives-based loss absorbing mechanism and the model-based credit assessment approach along with the incentives-based and (at least) partially decentralized governance structure may not qualify the protocol for large scale uncollateralized lending, particularly when/if non-stablecoins would be added to the current lending pool.