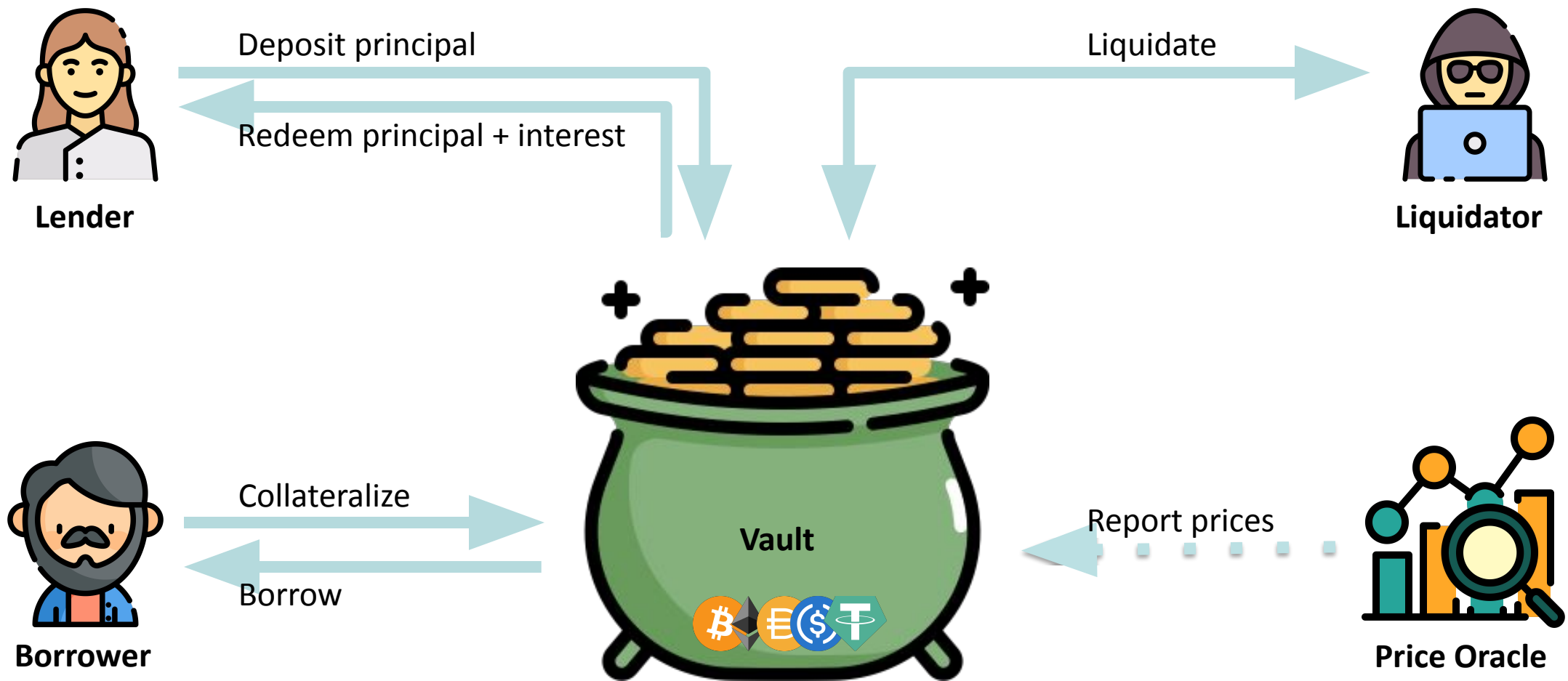# Decentralized Finance

Recap - Lending and Borrowing
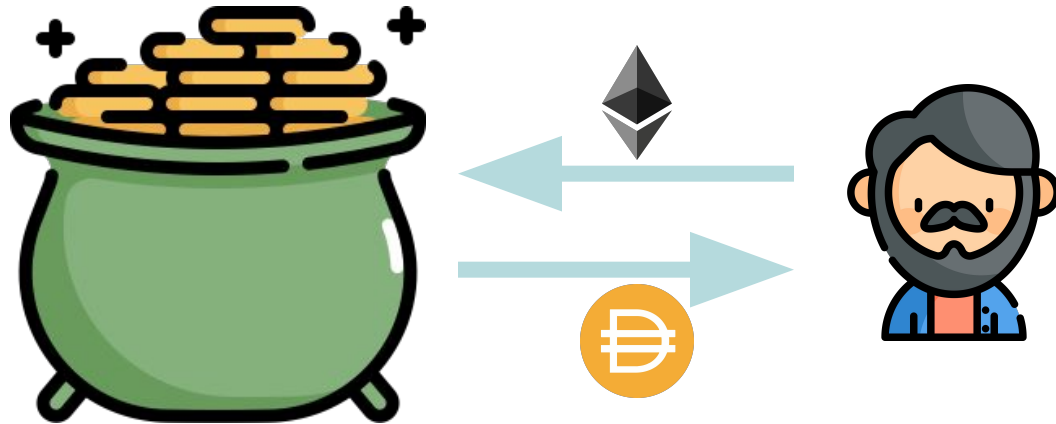
Instructors: Dan Boneh, **Arthur Gervais**, Andrew Miller, Christine Parlour, Dawn Song

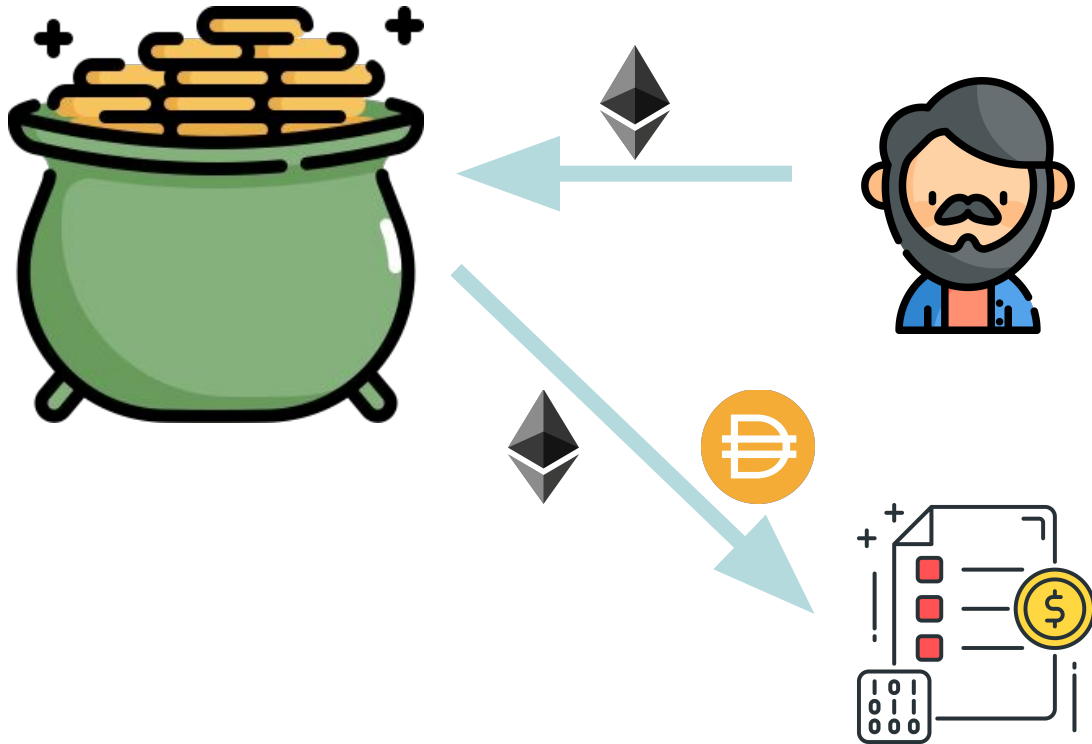# On-Chain Lending & Borrowing

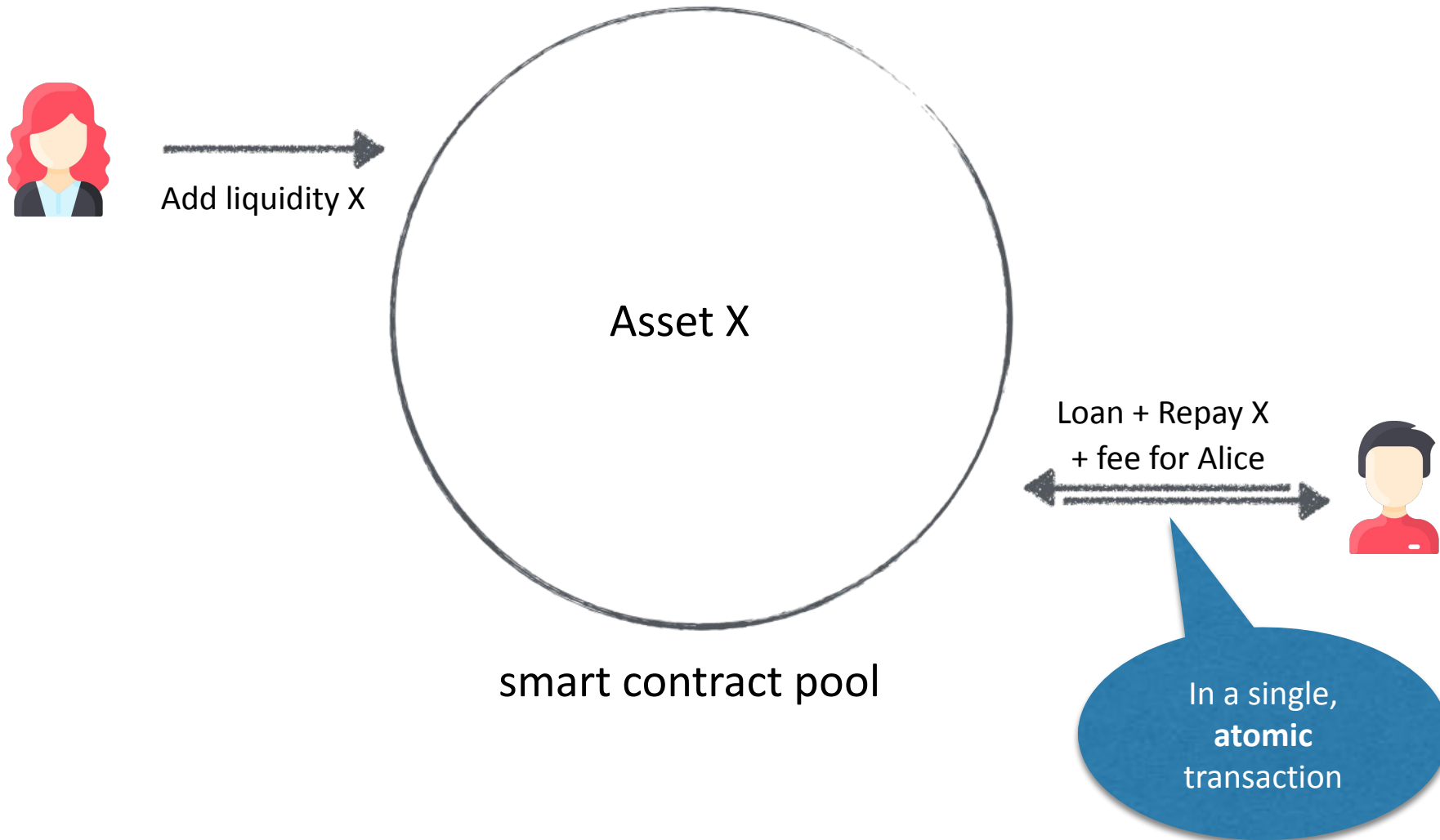# Over-collateralized Borrowing

- The borrower can use the borrowed DAI arbitrarily/freely

Under-collateralized Borrowing

- The vault remains in control of all assets.

Flash Loan

Add liquidity X

Asset X

smart contract pool

Loan + Repay X
+ fee for Alice

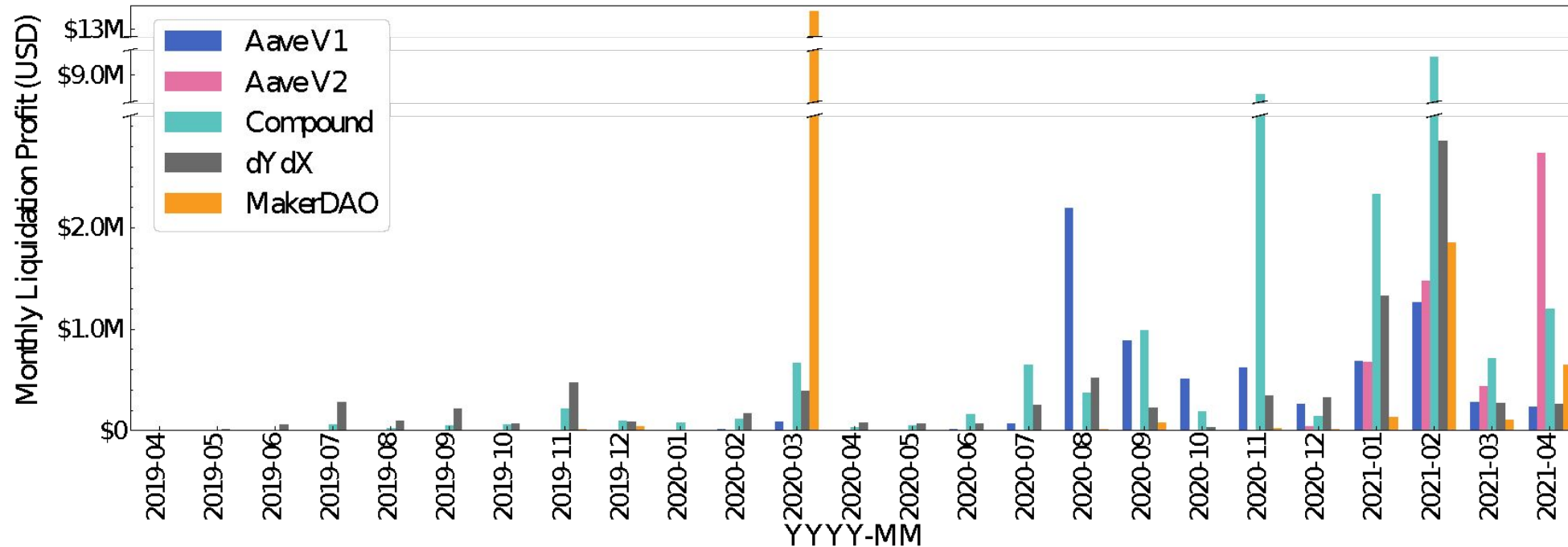In a single, **atomic** transaction

Flash Loan Use Cases

- (Risk-free) Arbitrage
- DeFi attacks
  - Price Oracle Manipulation
  - Pump and Dump
- Washtrading
- Flash Minting
- Collateral swapping

Liquidations

- Total profit: 63.59M USD

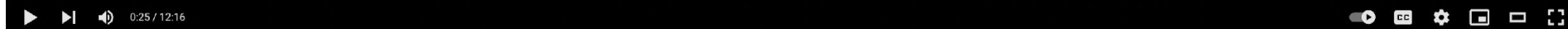- MakerDAO outlier in March 2020, caused by bot failure.

Guest Lecture

Fire Side Chats