

Pre-Class Discovery: DeFi Lending

Digital Finance – BSc Course

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Complete before class. No prior knowledge required. Work alone or in pairs.

Activity 1: Why Does Your Bank Charge 7%?

When you borrow \$10,000 from a bank at 7% interest, you pay \$700 per year. But the bank pays depositors only 1–2%. Where does the rest go?

- (a) Estimate how the \$700 is split across these five categories. Fill in approximate percentages (they should sum to 100%):

Cost category	Your estimate (%)
Branches & staff	
Compliance & regulation	
Non-performing loans	
IT infrastructure	
Bank profit	

- (b) A DeFi lending protocol charges 0.1% in fees. Which of the five categories above does it eliminate, and which remain in some form?

Activity 2: The Collateral Puzzle

You hold \$15,000 worth of ETH and need \$10,000 in cash. A DeFi protocol requires 150% collateralisation.

- (a) If ETH drops 40%, what is your collateral worth?
- (b) At the 150% liquidation ratio, what collateral value triggers liquidation of your \$10,000 loan? What ETH price drop does that correspond to?
- (c) When liquidation occurs, what happens to your ETH? Who benefits?

Activity 3: Flash Loan in 12 Seconds

A flash loan lets you borrow \$1 M with *zero* collateral, use it, and repay it—all inside a single blockchain transaction.

- (a) Describe, step by step, how someone could borrow \$1 M, exploit a price difference between Exchange A (\$1.00) and Exchange B (\$1.02) for a certain token, and repay the loan—all in one transaction.
- (b) What happens if the price difference disappears mid-transaction? Why does the lender face zero risk?