In-Class Exercise: DeFi Business Models — Tokenomics-as-BM

Exercise 1: Structured Debate — "Is MakerDAO a Decentralised Lender or a Synthetic Central Bank?"

Format: Split into two teams. Each team prepares arguments for its assigned position, then presents. After both sides speak, the class votes — but first, read the debrief questions.

Team A — "MakerDAO Is a Decentralised Lender"

Anchoring evidence: MakerDAO's core mechanism is collateralised lending: a user locks crypto into a vault and receives a synthetic dollar in return. Every position is over-collateralised, every liquidation is automatic, and the protocol charges a stability fee analogous to a loan-interest rate.

Team A: MakerDAO Is a Decentralised Lender	
Argument I	
Argument II	
Argument III	
Concession	*Strongest argument AGAINST your position:*
Closing	*How you address the concession:*

Team B — "MakerDAO Is a Synthetic Central Bank"

Anchoring evidence: MakerDAO sets a target peg, runs a savings rate that influences holding behaviour, manages collateral composition through governance, and aspires to maintain monetary stability for an asset that circulates as money inside DeFi. The governance token effectively votes on monetary policy.

Team B: MakerDAO Is a Synthetic Central Bank	
Argument I	
Argument II	
Argument III	
Concession	*Strongest argument AGAINST your position:*
Closing	*How you address the concession:*

Debrief Questions

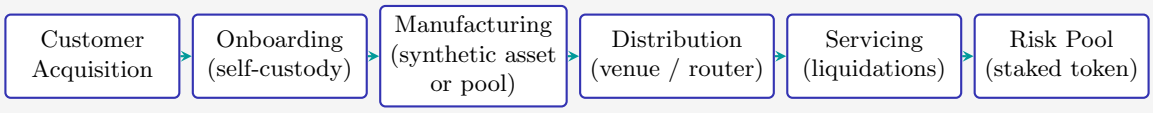
Q1: Does the answer — decentralised lender or synthetic central bank — matter for how regulators should approach MakerDAO? Why or why not?

Q2: Could the answer genuinely be "both"? If so, what does that imply about how the four canvas roles of the governance token are likely to evolve?

Q3: Name another organisation (in any sector) that combines a credit-extension function with a monetary-policy function. What tensions does that combination create?

Exercise 2: Value-Chain Mapping for a DeFi Protocol Without Branches

Scenario: The traditional banking value chain has six links. In DeFi each link is contracted code or external infrastructure rather than a department. Your task: for each link, identify a DeFi actor or contract that performs it, describe the friction the actor removes, and state whether the value captured at that link routes to a token cap table or to an outside party.



Value Chain Link	DeFi Actor / Contract	Friction Removed	Value Captures To?	Token Holder Gain or Leak?
Customer Acquisition				
Onboarding (self-custody)				
Manufacturing				
Distribution				
Servicing				
Risk Pool				

Synthesis Question

Q1: Which link in the DeFi value chain captures the most value INTO the protocol's own token, and which link is the largest LEAK to outside parties (host-chain validators, oracle providers, front-end aggregators)? Defend your reasoning with reference to who controls the smart contracts that mediate each link, and whether the protocol owns or rents the rails at that point.

Facilitator Solutions

Sample answers for instructor reference. These are illustrative; student reasoning may diverge and still be valid.

Exercise 1: Debate Sample Answers

Team A (MakerDAO Is a Decentralised Lender) — sample arguments

Argument I. Every action in MakerDAO begins with collateralised lending: a user locks crypto into a vault, mints a synthetic dollar, and incurs a stability fee that resembles a loan-interest rate. The economic substance is identical to over-collateralised lending against a deposit, which is the textbook function of a lender.

Argument II. The protocol does not create money out of nothing the way a chartered central bank can. Every synthetic dollar in existence is backed by a vault containing more than its face value in collateral; if the collateral falls, the synthetic dollar is liquidated. This collateralised-loan structure rules out the central-bank classification because central banks issue unsecured liabilities.

Argument III. The governance token holders set lending parameters — collateral types, debt ceilings, stability fees — which is governance over a lending book, not over a national money supply. The economic logic is that of a credit committee with full collateralisation, not that of a central monetary authority.

Concession. The strongest argument against Team A is that the synthetic dollar circulates as money inside DeFi, with savings rates and peg-stability modules that look operationally like monetary-policy tools.

Closing. Operational tools that resemble monetary policy do not reclassify the entity; they reflect the fact that any lender whose liability circulates widely will need to manage that liability's price. The underlying mechanism is still collateralised lending.

Team B (MakerDAO Is a Synthetic Central Bank) — sample arguments

Argument I. The protocol sets a target peg for its synthetic dollar, runs a savings rate that influences holding behaviour, and manages a collateral composition through governance — these are the operational levers of monetary policy, not of lending. A lender does not set a peg; a central bank does.

Argument II. The synthetic dollar circulates as money inside DeFi: it is used for payments, savings and unit-of-account purposes far beyond the original collateralised-loan use case. The economic role of the asset is monetary, regardless of how the first instance of it was minted.

Argument III. The governance token explicitly votes on monetary stability questions: when to add new collateral, when to adjust the savings rate, when to enable or disable a peg-stability module that swaps an outside-issued dollar token one-for-one. This is monetary-policy governance, denominated in a token whose four canvas roles include serving as the cap table of the issuer.

Concession. The strongest argument against Team B is that MakerDAO has no monopoly issuance authority and lacks the lender-of-last-resort role that defines a sovereign central bank.

Closing. Monopoly issuance and lender-of-last-resort are features of sovereign central banks, not of central-bank-like functions in general. A synthetic central bank inside a programmable monetary system can perform the operational functions without claiming sovereign authority — and that is precisely what tokenomics-as-BM enables.

Debrief Q1 — Regulatory approach

The classification matters because the supervisory toolkit differs sharply. If MakerDAO is treated as a decentralised lender, supervisors focus on collateral quality, liquidation logic and consumer-protection rules around the lending agreement. If it is treated as a synthetic central bank, supervisors focus on monetary-stability obligations, reserve-asset transparency and the systemic implications of the synthetic dollar's wider use. The two regimes overlap but the emphasis is different, and applying lender oversight to a monetary-issuance function would leave the systemic question unaddressed — and vice versa.

Debrief Q2 — "Both" as an answer

The answer can genuinely be "both," and that duality is itself a feature of tokenomics-as-BM. Because the governance token simultaneously fills the equity, product, revenue and customer roles, the protocol does not need to choose an organisational form before performing its functions: lending and monetary-policy management run on the same instrument. The implication is that the token's four roles will continue to evolve under governance pressure — voters will gradually steer the protocol toward whichever role generates the most defensible value capture. Today's lender becomes tomorrow's currency platform without ever changing its legal form, because the legal form is the token itself.

Debrief Q3 — Cross-sector hybrid example

A bank holding company that owns a regulated commercial bank and also runs a large securities-lending desk combines credit extension with money-market liquidity management. The tensions: credit risk from the lending side can spread into the securities-lending side via shared collateral, and supervisory rules designed for one side may misfit the other. The parallel to MakerDAO is direct: the same instrument carries both the lending book and the monetary-policy function, and the governance question becomes which side the firm should optimise for when their incentives diverge.

Exercise 2: Value-Chain Mapping Sample Answers

Value Chain Link	DeFi Actor / Contract	Friction Removed	Value Captures To?	Token Holder Gain or Leak?
Customer Acquisition	Public block explorers and incentive-emission programs	Cost of paid acquisition that branch-based finance bears	Outside parties (block-explorer firms, airdrop hunters)	Leak
Onboarding (self-custody)	Wallets connecting through standard signing protocols	KYC paperwork and branch visit	Wallet vendors and standards bodies	Leak
Manufacturing	Synthetix staking pool minting synthetic exposure	Need for centralised broker-dealer to hold inventory	Token-stakers in the protocol pool	Gain (when staking pool is the token cap table)
Distribution	Decentralised exchange routers and aggregator front-ends	Manual venue search and order routing	Aggregator front-ends	Leak (front-end fee captures outside the protocol)
Servicing	On-chain liquidator bots called by the protocol	Manual margin call and collateral seizure	Liquidator operators (third-party MEV searchers)	Leak
Risk Pool	Staked governance token absorbing tail-risk losses	Need for outside insurer or capital buffer	Token holders directly	Gain (the cap table absorbs the risk)

Synthesis Question Sample Answer

The link that captures the most value into the protocol's own token is the Risk Pool, because the staked governance token absorbs tail-risk losses and is compensated for that absorption through fees that route directly to the cap table. Manufacturing also routes value back to the token when the staking pool itself is the manufacturer (as in Synthetix), because every minted synthetic represents a claim against the same staking pool that captures the fee. The largest LEAK is Distribution: aggregator front-ends and routing layers sit in front of every decentralised exchange and capture a share of every order that passes through, regardless of which protocol's pool fills the trade. The Servicing leak to liquidator bots is also significant — on-chain liquidations are open to any bot that can pay the gas fee, and the entire liquidation premium accrues to the bot rather than to the protocol whose collateral was being protected. The pattern is consistent with the infrastructure test: links the protocol owns route value to its token; links it rents leak value to outside parties.