L32: Lab - Tokenomics Analysis

Module D: Tokenomics

Blockchain & Cryptocurrency

December 2025

Lab Objectives

In this lab, you will:

- Select a real cryptocurrency project to analyze
- Research and document its tokenomics
- Calculate key valuation metrics (NVT, market cap, FDV)
- Evaluate distribution and vesting schedules
- Assess token classification (utility vs. security)
- Develop an investment thesis or critique

Deliverable: Tokenomics analysis report (2-3 pages).

Time: 90 minutes (in-class work + homework completion).

Step 1: Choose a Project

Suggested Projects (pick one):

- **DeFi:** Uniswap (UNI), Aave (AAVE), Curve (CRV)
- **Layer 1:** Solana (SOL), Avalanche (AVAX), Polkadot (DOT)
- **Infrastructure:** Chainlink (LINK), The Graph (GRT), Filecoin (FIL)
- **Stablecoins:** MakerDAO (MKR), Frax (FXS)
- **Other:** Any top 100 token by market cap

Criteria:

- Must have publicly available tokenomics documentation
- Active trading on major exchanges
- Sufficient on-chain data available

Action: Write down your chosen project.

Step 2: Gather Basic Information

Find and record:

1. **Project Overview**
   - What problem does it solve?
   - Core technology/product
   - Launch date
2. **Token Details**
   - Token ticker symbol
   - Blockchain/network
   - Token standard (ERC-20, SPL, etc.)
3. **Current Market Data**
   - Current price
   - Market cap
   - Circulating supply
   - Total/max supply

Sources: CoinGecko, CoinMarketCap, project website.

Step 3: Analyze Token Distribution

Research and document allocation:

Category	Percentage	Vesting Period
Team & Founders		
Investors (VCs)		
Community Sale		
Ecosystem Fund		
Foundation/Treasury		
Liquidity/Market Making		
Airdrops		

Questions to answer:

- What percentage do insiders (team + VCs) hold?
- Are vesting schedules transparent?
- Are there upcoming unlock events?

Sources: Messari, project docs, Token Unlocks.

Step 4: Calculate Key Metrics

Metric 1: Fully Diluted Valuation (FDV)

$$\text{FDV} = \text{Current Price} \times \text{Max Total Supply}$$

Metric 2: FDV/Market Cap Ratio

$$\text{Dilution Risk} = \frac{\text{FDV}}{\text{Market Cap}}$$

- Ratio ¿ 2: High dilution risk
- Ratio 1-2: Moderate dilution
- Ratio close to 1: Low dilution (most supply circulating)

Metric 3: Network Value to Transactions (NVT)

$$\text{NVT} = \frac{\text{Market Cap}}{\text{Daily Transaction Volume (USD)}}$$

Action: Calculate these metrics for your chosen token.

Step 5: Evaluate Token Classification

Apply the Howey Test:

1. **Investment of Money?**
   - Did investors pay for tokens? (Yes/No)
2. **Common Enterprise?**
   - Are returns pooled/shared? (Yes/No)
3. **Expectation of Profits?**
   - Is it marketed as an investment? (Yes/No)
4. **Efforts of Others?**
   - Do profits depend on team/foundation work? (Yes/No)

Conclusion:

- All four = Security
- Fails "efforts of others" = Likely Utility Token

Action: Write 1-2 paragraphs on whether your token is likely a security.

Step 6: Assess Value Accrual Mechanisms

How does the token capture value?

Check for:

- **Fee Sharing:** Do holders receive protocol fees?
- **Staking Rewards:** Can tokens be staked for yield?
- **Governance:** Voting rights on important decisions?
- **Token Burns:** Are tokens permanently removed from supply?
- **Utility:** Required to access services?
- **Buybacks:** Protocol buying tokens from market?

Example (Uniswap):

- Governance: Yes (vote on protocol changes)
- Fee sharing: Not yet implemented (controversial)
- Utility: No fees required to trade
- Value accrual: Governance power over $5B+ treasury

Action: Identify which mechanisms apply to your token.

Step 7: Analyze Supply Dynamics

Determine supply model:

1. **Fixed Supply**
   - Max cap exists
   - Example: Bitcoin (21M), BNB (100M target)
2. **Inflationary**
   - New tokens issued continuously
   - Annual inflation rate: ___%
3. **Deflationary**
   - Supply decreases over time
   - Burn mechanism: (describe)
4. **Elastic/Algorithmic**
   - Supply adjusts based on conditions
   - Example: Stablecoins, rebase tokens

Action: Classify your token's supply model and justify.

Step 8: Check Upcoming Unlock Events

Use Token Unlocks website (tokenunlocks.app):

1. Search for your token
2. Note upcoming unlock dates
3. Record amount unlocking and

Example Entry:

- **Date:** January 15, 2025
- **Amount:** 10M tokens
- **Percentage:** 5% of circulating supply
- **Category:** Investor vesting cliff
- **Potential Impact:** Moderate selling pressure expected

Questions:

- Are there large unlocks in the next 6 months?
- How might this affect price?

Step 9: Comparative Analysis

Find 2-3 comparable tokens in the same category.

Compare:

Metric	Your Token	Comp 1	Comp 2
Market Cap			
NVT Ratio			
FDV/MC Ratio			
Inflation Rate			
Insider Allocation			

Analysis Questions:

- Is your token overvalued or undervalued relative to peers?
- Which tokenomics features are better/worse than competitors?
- What explains valuation differences?

Step 10: Develop Investment Thesis

Synthesize your findings into a recommendation.

Structure:

1. **Summary** (2-3 sentences)
   - Overview of token and its purpose
2. **Strengths** (bullish factors)
   - What makes tokenomics attractive?
3. **Weaknesses** (bearish factors)
   - What are the red flags or risks?
4. **Verdict**
   - Buy, Hold, Avoid - with justification

Note: This is educational analysis, not financial advice.

Example Analysis: Uniswap (UNI)

Summary: UNI is the governance token of Uniswap, the largest decentralized exchange. Holders vote on protocol upgrades and treasury allocation.

Strengths:

- Strong product-market fit (billions in daily volume)
- Decentralized distribution (60% to community)
- Governance over massive treasury ($5B+)
- Network effects and brand recognition

Weaknesses:

- No direct fee sharing yet (governance only)
- High FDV/MC ratio (1.8x dilution)
- Regulatory uncertainty (SEC scrutiny)
- Competition from other DEXs

Verdict: Hold. Strong fundamentals, but value accrual uncertain until fee switch activated.

Common Pitfalls to Avoid

In your analysis, watch out for:

1. **Relying on old data**
   - Use current market data (not outdated reports)
2. **Ignoring unlock events**
   - Upcoming dilution is critical
3. **Comparing apples to oranges**
   - Only compare similar token types (DeFi to DeFi, L1 to L1)
4. **Focusing only on price**
   - Tokenomics matter more than short-term charts
5. **Ignoring qualitative factors**
   - Team, tech, community are important too

Submission Requirements

Your report should include:

1. **Cover Page**
   - Token name, your name, date
2. **Basic Information** (1/2 page)
   - Project overview, token details, market data
3. **Distribution Analysis** (1/2 page)
   - Allocation table, vesting analysis, unlock events
4. **Valuation Metrics** (1/2 page)
   - FDV, NVT, comparative analysis
5. **Investment Thesis** (1/2 page)
   - Strengths, weaknesses, verdict

Format: PDF, 2-3 pages, 11pt font minimum.
Deadline: [Instructor to specify]

Useful Resources

Market Data:

- CoinGecko: `https://www.coingecko.com`
- CoinMarketCap: `https://coinmarketcap.com`

Tokenomics Research:

- Messari: `https://messari.io`
- Token Unlocks: `https://tokenunlocks.app`

On-Chain Data:

- Glassnode: `https://glassnode.com`
- Dune Analytics: `https://dune.com`

Project Documentation:

- Official websites, whitepapers, governance forums

Lab Checklist

Before submitting, verify you have:

- ☐ Chosen a project and documented basic info
- ☐ Researched token distribution and vesting
- ☐ Calculated FDV, FDV/MC ratio, NVT
- ☐ Applied Howey Test for classification
- ☐ Identified value accrual mechanisms
- ☐ Determined supply model (fixed/inflationary/deflationary)
- ☐ Checked for upcoming unlock events
- ☐ Compared to 2-3 similar tokens
- ☐ Written clear investment thesis with justification
- ☐ Cited all data sources

Summary

Key Takeaways:

- Tokenomics analysis requires both quantitative and qualitative assessment
- Distribution and vesting reveal alignment and dilution risks
- Valuation metrics (NVT, FDV/MC) provide relative value insights
- Upcoming unlocks can significantly impact price
- Always compare to peers for context
- Investment thesis must balance strengths and weaknesses

Next Module: DeFi Ecosystem - Introduction to Decentralized Finance.