

UNDERSTANDING WEB3**LESSON 10: STABLECOINS: USES, STRUCTURES, AND RISKS**

A Prison Professors Self-Directed Course

Estimated time: 65–100 minutes

Educational Boundary:

This lesson provides general education about technology and risk. It does not provide individualized financial, investment, legal, or tax advice. It does not recommend any stablecoin, network, company, platform, or financial product. You do not need internet access, an account, a wallet, a stablecoin, or any other digital asset to complete the lesson.

OPENING GUIDANCE

The word stable can sound reassuring. It may suggest that an asset cannot lose value or that someone has guaranteed the result. A careful learner should not accept either assumption.

A stablecoin is a digital token designed to maintain a value relative to a reference asset, commonly a national currency such as the United States dollar. The design may work well for a period of time and then fail under stress. Different stablecoins may use very different reserves, collateral, redemption rules, computer programs, and organizations even when each one claims to equal one dollar.

I encourage you to investigate the mechanism behind the label. Ask what value the token is trying to track, what supports that target, who has a duty to redeem it, who may request redemption, what evidence is available, and what could happen if many people want their money at the same time.

This lesson will not ask you to acquire, exchange, or use a stablecoin. It will help you evaluate a promise of stability without confusing that promise with proof.

PURPOSE AND ESSENTIAL QUESTION

Lesson 10 explains why stablecoins seek price stability, describes several common support mechanisms, and examines why the word stable does not mean risk-free.

Essential Question:

- » What should a careful learner investigate before trusting a stablecoin's claim of stability?

LEARNING OBJECTIVES

After completing this lesson, you should be able to:

- » Define stablecoin and explain what a reference asset does.
- » Compare reserve-backed, crypto-collateralized, and algorithmic stability mechanisms at an introductory level.
- » Distinguish direct redemption from selling a stablecoin in a secondary market.
- » Identify reserve, issuer, custodian, redemption, liquidity, technology, depeg, and regulatory risks.
- » Evaluate a stability claim by identifying the support mechanism, available evidence, and unanswered questions.

KEY TERMS

STABLECOIN

Definition: A digital token designed to maintain a value relative to a reference asset, such as one United States dollar. The name describes an objective, not a guarantee.

Sample sentence: The learner investigated how the stablecoin attempted to maintain its one-dollar target before accepting the word stable.

REFERENCE ASSET

Definition: The currency, commodity, asset, or other measure whose value a stablecoin is designed to track.

Sample sentence: The United States dollar was the stablecoin's reference asset.

RESERVE

Definition: Assets held or managed to support a stablecoin's value and meet redemption requests.

Sample sentence: The disclosure identified cash and short-term government securities as parts of the reserve.

COLLATERAL

Definition: Assets committed to support an obligation or position and available for sale or liquidation under defined conditions.



Sample sentence: The protocol required collateral worth more than the stablecoins it created because the collateral price could fall.

REDEMPTION

Definition: The process of returning a stablecoin to an issuer or system in exchange for the referenced asset or another asset under stated rules.

Sample sentence: The learner asked who could request redemption, what fees applied, and how long the process could take.

ISSUER

Definition: The organization or system responsible for creating a digital asset and carrying out duties described in its rules or agreements.

Sample sentence: The issuer published information about the reserve and its redemption policy.

DEPEG

Definition: A movement of a stablecoin's market price away from its intended reference value.

Sample sentence: A loss of confidence caused the token to depeg and trade below its one-dollar target.

MAIN LESSON

STABILITY IS A RELATIONSHIP, NOT AN ABSOLUTE CONDITION

A stablecoin does not attempt to remain stable against everything. It tries to track a specific reference. A token targeting one United States dollar may seek to remain near one dollar. A token referencing another currency or a commodity would have a different target.

This distinction matters because a stable price in dollars does not guarantee stable purchasing power. The cost of food, housing, transportation, or other goods may still change. The term stablecoin normally describes the relationship between the token and its reference asset, not protection from inflation or every type of loss.

The term also does not have one universal technical or legal meaning. Industry participants and regulators may define stablecoin differently. For this course, we will use a practical teaching definition: a blockchain-based token designed to track



a stated reference value through reserves, collateral, program rules, market incentives, or a combination of those mechanisms.

A STABILITY CLAIM HAS SEVERAL WORKING PARTS

A careful learner can separate a stablecoin arrangement into five parts:

1. Reference: What value is the token trying to track?
2. Support mechanism: What assets, rules, or incentives are intended to keep the token near that value?
3. Issuance and redemption: How are tokens created and removed, and who may exchange them for the referenced asset?
4. Market activity: Where do other users buy or sell the token, and how does market trading affect its price?
5. People and systems: Which issuer, custodian, bank, smart contract, network, price feed, exchange, or governing group must perform correctly?

The blockchain may show token issuance, transfers, or balances. It may not show the complete reserve held in bank accounts or securities outside the blockchain. It also may not prove that a holder has an enforceable claim, that a custodian has protected the reserve, or that redemption will remain available during stress. Evidence must come from more than one place.

RESERVE-BACKED STABLECOINS DEPEND ON AN ISSUER AND OFF-CHAIN ASSETS

A reserve-backed stablecoin generally has an identifiable issuer. The issuer creates tokens and represents that assets held outside the blockchain support the tokens in circulation. Those assets may include cash, bank deposits, short-term government securities, or other financial instruments permitted by the arrangement and applicable law.

In a simplified model, an eligible customer provides one dollar to the issuer, and the issuer creates one token. When an eligible customer returns one token for redemption, the issuer removes or burns the token and returns one dollar under the issuer's rules. If users believe the issuer can perform that exchange reliably, market trading may remain close to the target.

The word backed does not answer every question. A learner should investigate:

- » What assets make up the reserve?
- » Are those assets valued frequently and held in sufficient amounts?
- » Who holds the reserve, and what happens if that custodian or bank fails?
- » Are reserve assets separated from the issuer's other assets?

- » What independent examination, attestation, or audit exists, and what exactly does it cover?
- » Does every holder have a legal right to redeem, or only certain approved customers?
- » What fees, minimum amounts, delays, freezes, or other restrictions may apply?

A reserve may appear sufficient during ordinary conditions yet become difficult to sell quickly during stress. An issuer may also face operational failure, fraud, legal restrictions, cyber incidents, or a sudden loss of confidence.

CRYPTO-COLLATERALIZED STABLECOINS DEPEND ON VOLATILE COLLATERAL AND PROGRAM RULES

Some stablecoins use crypto assets as collateral. Because crypto collateral can change value rapidly, these systems commonly require collateral worth more than the stablecoins created. This practice is called overcollateralization.

For example, a simplified system might require a user to lock collateral with a market value of \$160 before creating \$100 in stablecoins. A smart contract monitors the collateral value through a price feed. If the collateral falls below a required level, the system may sell or liquidate it to protect the stablecoin arrangement.

This design replaces some issuer functions with code and market incentives, but it does not remove dependency. The system may depend on accurate price data, smart-contract security, sufficient buyers for liquidated collateral, responsible governance, and continued demand. A rapid market decline can cause many liquidations at once. Congestion, inaccurate data, insufficient liquidity, or flawed code can make the problem worse.

ALGORITHMIC AND HYBRID DESIGNS DEPEND HEAVILY ON CONFIDENCE

An algorithmic stablecoin attempts to maintain its target through program rules and economic incentives, often by changing token supply or exchanging the stablecoin with another related token. Some versions hold little or no independent reserve. Hybrid systems combine collateral with algorithmic features.

The basic idea may sound orderly: create more tokens when the price rises above the target and reduce supply when the price falls below the target. The difficult question is whether people will continue accepting the related token, incentive, or future promise when confidence weakens.

If holders begin selling because they doubt the system, the mechanism may require still more selling, token creation, or promised future rewards. A negative cycle can accelerate rather than restore stability. Computer code can execute the rules exactly as written and the economic design can still fail.



The category algorithmic covers different designs, so a learner should not assume that every project has identical risks. The important practice is to identify the reserve, collateral, related tokens, incentives, decision makers, and failure conditions rather than relying on the category name.

REDEMPTION AND MARKET SALE ARE NOT THE SAME PROCESS

Direct redemption occurs through the issuer or protocol under stated rules. A secondary-market sale occurs when one market participant sells the token to another through an exchange or other trading venue.

Some reserve-backed issuers provide direct redemption only to approved institutions or customers who meet account, location, identity, or minimum-amount requirements. Other holders may have to sell in a secondary market. In ordinary conditions, professional traders may buy a token below the target and redeem it at the target, or create tokens at the target and sell them above it. This activity, called arbitrage, can help move the market price back toward the reference value.

That process depends on access, confidence, time, fees, and liquidity. If direct redemption is delayed or restricted, or if people doubt the reserve, sellers may accept less than the target value. A market price of \$0.98 for a token intended to equal \$1.00 is a depeg even if the issuer continues stating that direct redemption is available at one dollar.

Before trusting a redemption promise, ask who qualifies, what the holder receives, how long the process takes, what costs apply, and what conditions permit delay, suspension, or refusal.

THE WORD STABLE DOES NOT MEAN RISK-FREE

Stablecoin risk can arise from several connected parts:

- » Reserve risk: The reserve may be insufficient, difficult to value, exposed to loss, or unable to meet rapid redemptions.
- » Issuer risk: The organization may make poor decisions, fail operationally, misstate information, become insolvent, or face legal restrictions.
- » Custodian and bank risk: An institution holding reserve assets may fail, freeze access, or create delays.
- » Redemption risk: A holder may not qualify for direct redemption or may face fees, limits, delay, or suspension.
- » Liquidity and run risk: Many holders may try to exit at once, forcing reserve sales or causing the market price to fall further.



- » Collateral and liquidation risk: Volatile collateral may lose value faster than a system can sell it.
- » Technology risk: Smart contracts, price feeds, bridges, wallets, networks, or connected applications may fail or be attacked.
- » Governance risk: A small group may change parameters, approve reserve practices, pause activity, or control upgrades.
- » Regulatory and legal risk: Rules, rights, and permitted uses may vary by jurisdiction and change over time.
- » Fraud and impersonation risk: A fake token may copy the name or symbol of a legitimate project, and dishonest promoters may invent reserve claims.

A stablecoin can remain near its target and still expose a user to theft, frozen access, platform failure, privacy concerns, or legal restrictions. Price stability addresses only one part of risk.

A STABLECOIN IS NOT AUTOMATICALLY AN INSURED BANK DEPOSIT

The fact that a token references the United States dollar does not make the token a bank account. In the United States, the Federal Deposit Insurance Corporation states that crypto assets are not FDIC-insured deposits. A bank deposit used somewhere in an issuer's reserve does not automatically give each token holder deposit-insurance protection.

As of July 21, 2026, United States agencies were implementing a new federal framework for payment stablecoins. An April 2026 FDIC proposal stated that deposits held as reserves for a permitted payment stablecoin issuer would not receive pass-through deposit insurance for stablecoin holders. The rules remain time-sensitive and do not settle the treatment of every stablecoin, holder, transaction, or jurisdiction.

This lesson does not provide a legal conclusion. It teaches a durable question: what exact legal claim and protection does the holder have, and which official source supports that answer?

STABLECOINS MAY SUPPORT USEFUL ACTIVITY WITHOUT ELIMINATING TRADEOFFS

Stablecoins may be used as a settlement asset within digital-asset markets, a unit for quoting prices, a component in decentralized applications, or a way to transfer value across networks and borders. A person or business may value faster availability, programmability, or the ability to use a blockchain-based application.

Those possible benefits depend on the complete system. A transfer may still involve network fees, wallet security, platform access, identity requirements, exchange rates,



taxes, sanctions rules, scams, and the risk of sending to a wrong address or network. A conventional bank transfer, money order, or other payment method may provide stronger protections or be more appropriate for a particular situation.

This course does not ask participants to choose a payment method. It asks them to compare function, cost, access, protection, responsibility, and risk.

RETURNING BRIEFLY TO THE PRISON PROFESSORS CASE: WBNB IS NOT A STABLECOIN

Lesson 9 introduced WBNB, or Wrapped BNB, when discussing the public treasury associated with the independent Prison Professors Token community. WBNB is a token representation of BNB that can interact with applications using a token standard.

Wrapping changes the technical form; its primary purpose is compatibility, not reducing price volatility or keeping the asset worth one United States dollar. WBNB generally follows the value of BNB. If BNB's dollar price changes, WBNB's dollar price generally changes with it. The case helps us separate two ideas that may sound similar: a wrapped token is designed to represent another crypto asset, while a stablecoin is designed to maintain a relatively stable value against its stated reference.

A DISCIPLINED STABLECOIN EVALUATION

Before accepting a stablecoin claim, organize the investigation around these questions:

1. Reference: What value is the token designed to track?
2. Mechanism: Does it use off-chain reserves, crypto collateral, algorithms, or a combination?
3. Evidence: What current, independent information supports the reserve or collateral claim?
4. Redemption: Who may redeem directly, for what asset, at what rate, with what cost and delay?
5. Control: Who issues tokens, holds assets, changes rules, supplies price data, pauses activity, or governs upgrades?
6. Stress: What happens if collateral falls, a custodian fails, markets become illiquid, or many holders seek redemption at once?
7. Rights and protection: What legal claim does a holder have, and what laws, insurance, or remedies actually apply?
8. Alternatives: Could a bank deposit, ordinary payment service, or other system meet the need with different protections and risks?

A clear answer should identify both evidence and uncertainty. If a person cannot explain the support mechanism and redemption path, the word stable provides too little information for a reasoned conclusion.

APPLIED SCENARIO: THREE CLAIMS OF STABILITY

A program provides three hypothetical descriptions. None of the tokens is real.

RESERVEDOLLAR

ReserveDollar targets one United States dollar. A company issues the token and says the reserve contains cash and short-term government securities. It publishes a monthly total but does not identify the custodian or provide an independent examination. Direct redemption is available only to approved business customers with a \$100,000 minimum. Other holders must sell through a market.

COLLATERALDOLLAR

CollateralDollar targets one United States dollar. Users lock crypto assets worth at least 160 percent of the stablecoins they create. Smart contracts use an outside price feed and may liquidate collateral if its value falls. The description does not explain what happens if the price feed fails or many positions require liquidation at the same time.

BALANCEDOLLAR

BalanceDollar targets one United States dollar but holds no separate reserve. A program creates or destroys BalanceDollar and a related token to influence supply. Its website says community confidence will keep the system stable. It does not explain what supports the related token if demand for both assets falls.

Reasoned comparison: Each token states the same target, but the support mechanisms and risks differ. ReserveDollar depends on the issuer, reserve quality, custodian, evidence, and limited redemption path. CollateralDollar depends on volatile collateral, reliable code, accurate price data, and orderly liquidation. BalanceDollar depends heavily on continuing demand and confidence in a related token. A careful learner would not rank the tokens by name. The learner would identify the mechanism, evidence, redemption rights, control points, and stress conditions before reaching a conclusion.



BENEFITS, LIMITATIONS, RISKS, AND MISCONCEPTIONS

POSSIBLE BENEFITS

- » A stable reference may make some blockchain transactions and records easier to understand.
- » A stablecoin may support settlement, transfer, pricing, or application functions without requiring every step to use a volatile native asset.
- » Programmable tokens can interact with smart contracts and other compatible applications.
- » Public blockchain records may show issuance, transfers, and token balances.

IMPORTANT LIMITATIONS AND RISKS

- » A target price does not guarantee that the market price or redemption value will remain at the target.
- » Reserves, collateral, issuers, custodians, smart contracts, price feeds, and markets can fail.
- » Public token records do not by themselves prove the quality, location, or legal protection of off-chain reserves.
- » Direct redemption may be unavailable to many holders.
- » A stablecoin may depeg, become illiquid, be frozen, or lose all or part of its value.
- » Legal treatment and user protections vary and may change.

COMMON MISCONCEPTIONS

- » “Stablecoin means guaranteed.” Stable describes a design objective, not a promise that cannot fail.
- » “One token equals one dollar because the website says so.” A claim requires evidence about support and redemption.
- » “Backed means every holder owns part of the reserve.” Legal rights depend on the arrangement and applicable law.
- » “A reserve report proves everything.” The scope, timing, valuation, independence, and limitations of the report matter.
- » “If a token trades near one dollar today, it cannot depeg tomorrow.” Market confidence and conditions can change quickly.
- » “A stablecoin is the same as an insured bank account.” A crypto token and an insured deposit are different legal and operational arrangements.



- » “WBNB is a stablecoin because it is designed to track BNB.” WBNB represents BNB and generally changes in dollar value with BNB; it does not target one dollar.

OFFLINE EXERCISE: INVESTIGATE THE MECHANISM

Estimated time: 20–25 minutes

Materials: Separate paper and a pencil.

Review ReserveDollar, CollateralDollar, and BalanceDollar from the applied scenario. For each description, create six headings:

1. Reference value
2. Support mechanism
3. Redemption path
4. Control and dependencies
5. Evidence provided
6. Missing information and stress risks

Under each heading, write what the description establishes and what remains unknown. Then answer these questions:

- » Which description provides the clearest redemption path, and what important restriction remains?
- » Which description depends most directly on volatile crypto collateral and liquidation?
- » Which description depends most heavily on continuing market confidence without a separate reserve?
- » What additional evidence would you request for each description?
- » Why would the shared label stablecoin be an inadequate basis for deciding that the three arrangements have equal risk?

Conclude with four or five sentences explaining which questions from the disciplined evaluation framework were most useful and why.

Important limitation of the exercise: These descriptions are simplified and hypothetical. The exercise develops reasoning; it does not recommend a stablecoin, rank a real product, or provide financial or legal advice.

KNOWLEDGE CHECK

MULTIPLE CHOICE

1. What does the word stablecoin most accurately describe in this lesson?
 - a. A token whose value cannot change
 - b. A token designed to track a stated reference value
 - c. An insured bank account recorded on a blockchain
 - d. Any wrapped version of a native asset
2. Which question is most useful when evaluating a reserve-backed stablecoin?
 - a. Does the token use the word dollar in its name?
 - b. Does a promoter say that everyone trusts it?
 - c. What assets support it, who holds them, who may redeem, and what evidence verifies the claim?
 - d. Has its symbol appeared frequently on social media?
3. Which statement best distinguishes direct redemption from a secondary-market sale?
 - a. Direct redemption follows the issuer's or protocol's rules, while a market sale depends on another buyer and market conditions.
 - b. Direct redemption and market sale always provide the same price and timing.
 - c. Only a secondary-market sale can remove tokens from circulation.
 - d. Direct redemption is available automatically to every person in every jurisdiction.

TRUE OR FALSE

- » If a stablecoin has remained close to one dollar for a long period, it has no reserve, redemption, technology, liquidity, or legal risk.

SHORT EXPLANATION

- » In three or four sentences, explain why two stablecoins with the same one-dollar target may have different risks.

SUMMARY AND PRACTICAL TAKEAWAYS

- » A stablecoin is a token designed to track a reference value; the name does not guarantee success.



- » Stability is relative to a stated reference and does not protect against every kind of loss or changing purchasing power.
- » Reserve-backed, crypto-collateralized, algorithmic, and hybrid designs rely on different mechanisms and dependencies.
- » Direct redemption differs from selling through a secondary market.
- » Reserve quality, custody, redemption rights, market liquidity, technology, governance, and legal protections all matter.
- » A public blockchain record may show token activity without proving the condition or legal protection of off-chain reserves.
- » A stablecoin may depeg when confidence, liquidity, collateral, redemption, or operations fail.
- » A stablecoin is not automatically an FDIC-insured bank deposit.
- » WBNB is a wrapped representation of BNB, not a stablecoin targeting one dollar.

The practical skill is learning to ask what supports the stability claim and what happens under stress. That reasoning can help you evaluate many systems in which a confident label hides important dependencies.

PROFILE JOURNAL ASSIGNMENT

Write one coherent journal entry of approximately 300–400 words. Do not submit a disconnected list of answers. Use the prompts below to organize a beginning, middle, and conclusion:

- » Define stablecoin in your own words and explain why stable does not mean risk-free.
- » Compare reserve-backed, crypto-collateralized, and algorithmic support mechanisms.
- » Explain the difference between direct redemption and a secondary-market sale.
- » Choose one token from the Three Claims of Stability scenario and identify its reference, support mechanism, dependencies, evidence, and missing information.
- » Describe one condition that could cause the token to depeg.
- » Explain why a stablecoin should not automatically be treated as an insured bank deposit.
- » Connect the evaluation process to the critical-thinking, research, communication, or self-directed-learning skills you are building.



Your response should demonstrate your reasoning. You are not being asked to purchase a stablecoin, open an account, create a wallet, connect to a network or application, disclose financial information, or conduct a transaction.

SUBMISSION REMINDER

Write your response on separate paper or in an approved institutional messaging system. Include your name or approved Profile identifier, Lesson 10: Stablecoins: Uses, Structures, and Risks, and the date you completed the entry.

Use one of the established Prison Professors Profile methods, subject to your facility's rules:

1. Send it by institutional email to Playbook@PrisonProfessors.org. Suggested subject: Web3 Lesson 10 — [date completed].
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