USDX

The Private Credit Stablecoin

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Abstract

The global financial system sits on vast untapped asset equity while increasingly relying on fiat issuance, fueling inflation and instability. Value should flow from assets, not to them.

Stable proposes an asset-based financial system, using a medium of exchange backed by real-world value. Advances in AI and real-time monitoring enable increasingly precise asset valuation, making large-scale implementation more feasible each year.

Real estate is the ideal starting point—globally traded, deeply embedded in finance, yet largely untapped in equity. Stable aims to dissolve that complexity, unlocking its true value.

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Introduction

$35 Trillion of value sits in untapped US home equity, representing a significant inefficiency in asset utilization. $11 Trillion of that equity can be tapped before LTVs exceed 80%.

Hundreds of trillions in value is stored similarly in farmland, hotels, parking lots, stadiums, parks, schools, etc... Not to mention bonds, commodities, securities, or the Zombieland IP.

The value for an asset-backed monetary system already exists. Stable provides a novel approach to transmute that value by creating a CDP against an owner's assets (their equity in the asset), giving them liquid currency without them needing to forfeit their upside.

USDX is the mechanism through which Stable achieves this.

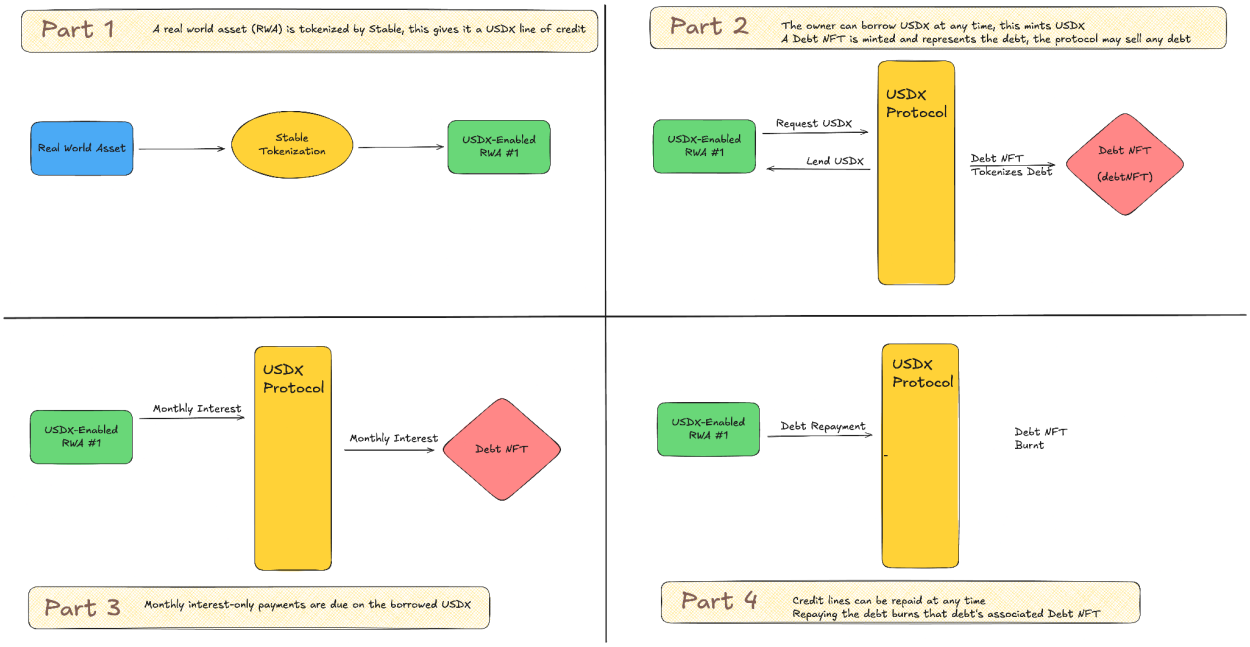
Solution

Stable is a fintech startup unlocking opportunities to deliver outcomes once considered impossible. Over the past year, it has developed[1] USDX — a private credit stablecoin designed to fund collateralized debt positions (CDPs) for real-world assets (RWAs).

- **Private credit**: Private credit is when private lenders lend money directly to companies in exchange for interest payments
    - USDX Protocol is the lender in the case of the private credit here
- **CDP *("Collateralized debt position")***: A CDP is a smart contract-based mechanism that allows users to lock up cryptocurrency as collateral and borrow other assets
    - Simply a debt where the borrower has pledged some collateral
- **RWA *("Real world assets")***: RWAs are assets like real estate, electricity, inventory, royalties, oil, gold, shoes, food, and anything not native to crypto/the blockchain.

USDX is overcollateralized by a basket of debt positions on a basket of assets. To keep things simple, this paper focuses on real estate as the asset being posted as collateral for the debt positions backing USDX.

Here's how USDX works:



1. Real Estate is Tokenized by Stable, this enables it to have a USDX line of credit
2. The line of credit[2] is drawn drawn against, and the borrower is lent USDX
3. Open lines of credit collect monthly interest-only payments
4. When the line of credit is paid off the Debt NFT is burnt

[1] USDX was invented by Winston A. Robson, founder of Stable and author of this the USDX Whitepaper
[2] Default USDX lines of credit revolve for up to 2 years, with fixed-rate, interest-only monthly payments

USDX can be borrowed against an asset by its owner, or lent to other borrowers who pay a yield for it and post their own collateral[3]. Depending on the asset type and a variety of factors a LTV is assigned, and USDX can be minted (drawn) up to that LTV.

For example, if a $42MM student housing in Texas, $30MM of homes in South Carolina, a $10MM farm in Arkansas, and $8MM land portfolio in Wyoming were deposited into Stable's treasury, up to 69MM USDX could be minted. The combined value of those real estate assets is $90MM, or ~130% of the value of the maximum number of USDX minted.

[3] Non-real estate deposit borrowers are covered in the "*Practical overview of USDX*" and other sections further into this whitepaper. That someone has opened a debt position ("borrow") whenever USDX is minted is what is important to understand right now.

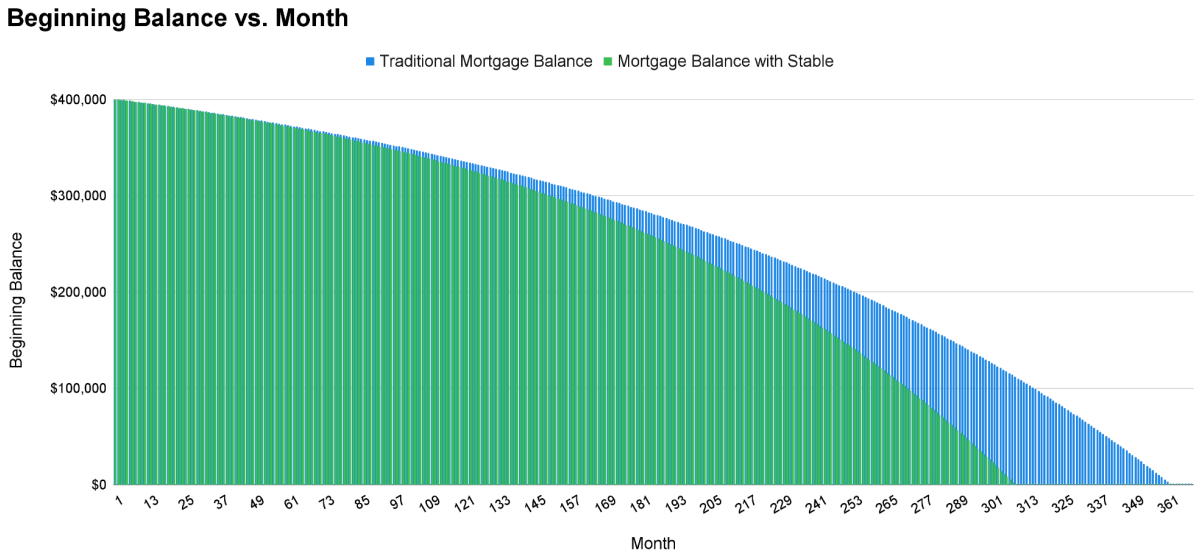
Benefits

USDX and the system around it add a number of benefits to a number of user types. New benefits and more applications of these benefits will be discovered over time.

Mortgage Repayment

Earning yield by deploying USDX enables a real estate owner to repay their mortgage significantly faster. Yahoo!Finance recently published a report on the benefits of a homeowner making one (1) extra mortgage payment per year, "*let's say you have a $300,000 mortgage with a 30-year loan term and a fixed interest rate of 6.75%. Your monthly payment is about $1,946, and you make 13 payments of $1,946 per year rather than 12.* ***That single extra annual payment will shave almost six years off your repayment term****, so your home loan will be paid off in roughly 24 years rather than 30.*"

If someone purchased a $500,000 property by putting 20% down payment ($100,000 down) and borrowing $400,000 at 6% APR for a 30-year fixed-rate mortgage, staked with Stable, and deployed all they could (80% LTV, so $0 to start) into a bond that yielded 9% (a 3% positive spread) each month for the duration of their mortgage, they would pay off their mortgage 5 years and 2 months early. 62 months and $176,680.48 would be saved. This chart shows the difference in their mortgage principal balance over time without Stable and with Stable.



Spend without Selling

One of the key advantages of this system is the ability for real estate owners to spend the yield generated from their collateral without needing to repay it. Real estate depositors grant Stable

the authority to lend USDX they are not borrowing to earn yield, so that deposited properties earn yield like bonds or a money market account. Depositors can opt out of this feature but will not earn yield on unused deposits. Stable lends that liquidity to other borrowers who pay a monthly APR and put up collateral like Bitcoin (BTC), Ethereum (ETH), or gold.

Assuming a 4% APY on unused deposits, a depositor with 4,000,000 unused USDX would earn $10,000 per month ($120,000/year). By default, yield earned on unused USDX applies to outstanding interest owed (APR) on borrowed USDX and then to the borrowed amount of USDX. This flexibility allows real estate owners to use their equity for investments, consumption, or other financial opportunities.

This real yield is paid in dollars (or fiat backed stablecoins) and can be used within DeFi or otherwise, enabling the depositor to earn $10,000 a month, or make a purchase of $100,000 that would be repaid automatically within a year.

Portfolio Optimization

Sophisticated actors in the real estate world may already borrow against their portfolio to capitalize on basis trades, arbitrage, or simply to lever up with additional acquisitions. USDX enables them to borrow at a lower rate in real time 24/7/365 and easily capitalize on DeFi or other onchain opportunities. USDX lines having the ability to revolve brings flash loans to the party. With a plethora of traditional opportunities coming onchain, there are a fantastic number of great things to capitalize on.

Looping Example

A simple use of USDX for portfolio optimization is looping. Looping is borrowing money at a lower rate and performing a basis trade multiple times (redeploying the borrowed capital into similar opportunities that yield a higher rate).

Let's say a new asset ("Asset A") has been approved as collateral for USDX, and USDX can be borrowed against the asset at 9% APR up to 80% LTV as long as the borrower pays a $10 one time fee (per share) to help fund credit default swap insurance on Asset A. Asset A is valued at $10,000 per share, 10MM shares exist, and Asset A provides a base yield of 10%.

Jao, a portfolio manager, buys 10,000 Asset A that have been tokenized by Stable, and he then borrows 80MM USDX for an effective rate of -3.5% $((0.8 * 0.9) - (1 * 0.10))$.

Only 10,000 can be deposited per entity, but another asset (“Asset B”) was also approved, is valued at $10,000 per share, offers a 10% yield, and can be borrowed against at 9% up to 80% LTV. Jao uses the 80MM USDX they have borrowed to buy 8,000 of this Asset B.

Jao notices that yet a third asset (“Asset C”) was approved as USDX collateral, and it is also $10,000 a share, offers a 10% yield, with a max USDX LTV of 80% at 9% APR.

Here is how Jao’s portfolio looks:

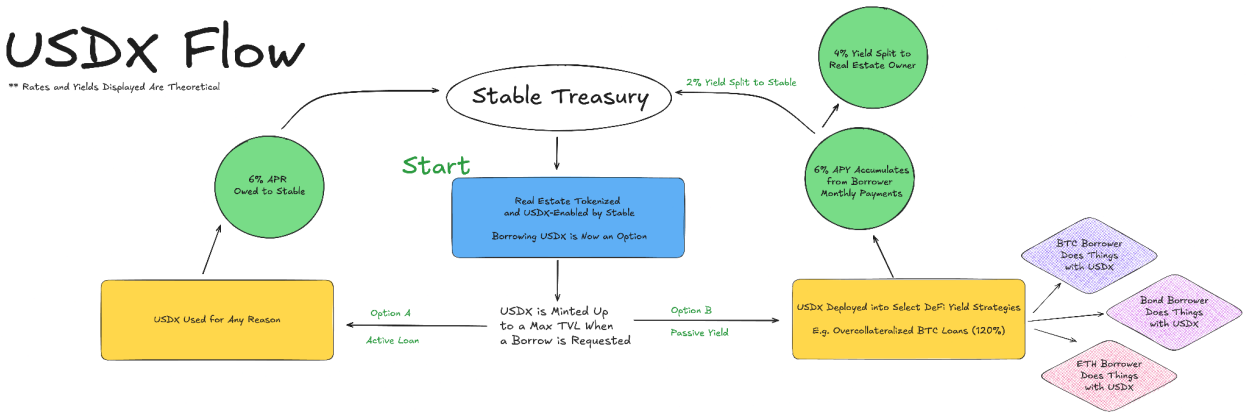
Asset Tier	Asset Value	Yield (10%)	Borrowed	Debt Cost (9%)
Asset A	$100.00M	$10.00M	$80.00M	$7.20M
Asset B	$80.00M	$8.00M	$64.00M	$5.76M
Asset C	$64.00M	$6.40M	—	—
Total	**$244.00M**	**$24.40M**	**$144.00M**	**$12.96M**

Instead of earning 10% on the initial $100MM investment, the manager is now earning a net 11.44% after paying 9% APY to borrow 80% LTV against Asset A and Asset B. Don’t forget Jao has 30,000 shares and incurred a one time cost of $300,000 to help fund credit default swaps against the shares, making the 1st year’s yield 11.14%.

Stable tokenization does not disable assets from participating in their traditional financial ecosystem. In fact, Stable is able to source cash lines of credit for some users. The goal is for onchain finance to win because it is better and enabling traditional assets with Stable is obvious.

Practical Overview of USDX

The diagram below, “Figure 1,” visualizes the 1st degree flow of value of USDX from the time an asset is tokenized and given a USDX line of credit (“USDX-Enabled”) through the first interest/yield payment is due. Existing TradFi solutions offer a similar flow to the left side of Figure 1, the USDX stablecoin and 24/7/365 liquidity at the retail level add new value.



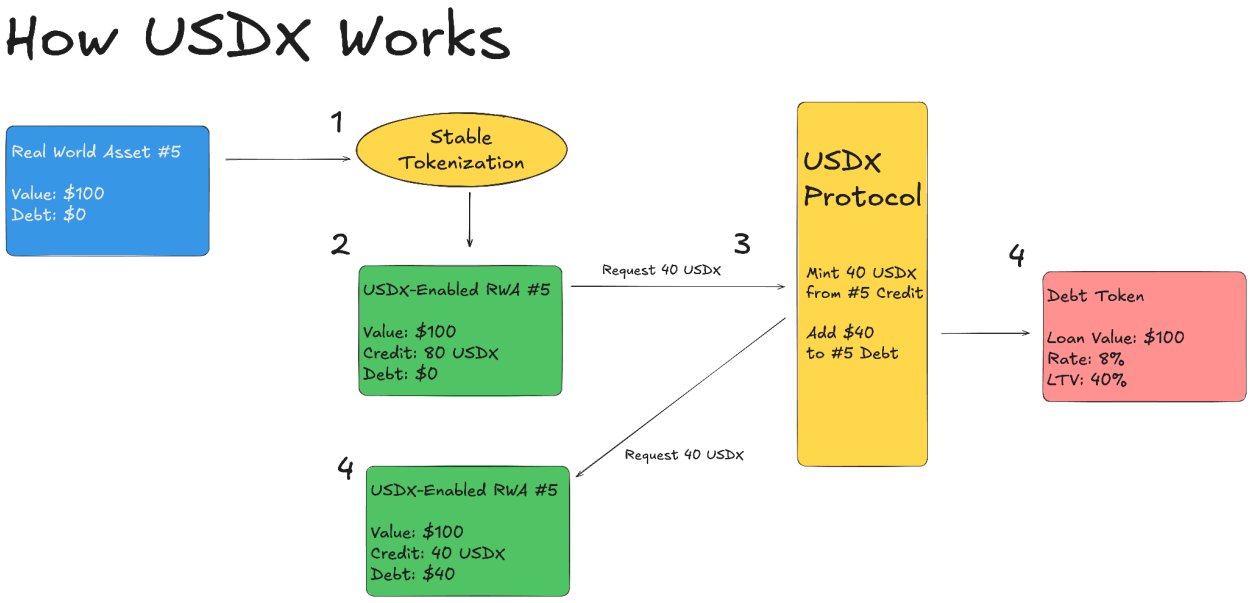
Institutions have capitalized on basis trades and arbitrage like the right side of Figure 1. They could borrow $100MM at 6% APR and deploy it to a highly-liquid fund that pays 9% APY.

USDX and opportunities set up to accept it bring this opportunity to anyone.

USDX significantly enhances the efficiency of existing frameworks, introducing broader and more accessible liquidity, and making better outcomes to both retail and institutional users.

Technical Overview of USDX

Let's walk through a step process on how USDX is created, including technical details.



1. Tokenization of Real Estate (Assets)

Properties are transferred to a legal entity by the signing of one of a few possible documents by the existing owner or new buyer, and that entity is represented on-chain as an NFT.

In Solana Virtual Machine ("SVM") environments those NFTs are currently Core NFTs, and in Ethereum Virtual Machine ("EVM") environments those NFTs are currently ERC-721 tokens.

Many tokens and standards have been proposed and experimented with in recent years; for now Stable sticks to these generalized standards because they are composable within the environments where they are deployed.

Stable is building a new standard that is necessary to holistically represent the asset onchain.

2. USDX-Enabled

"USDX-Enabled" assets are able to borrow from a USDX line of credit at any time. Their value, credit, and debt (including any offchain debt) are constantly monitored and updated.

A combination of oracles and ZK technology that are integrated with Tokenized Property NFT connect offchain data, like the new appraised value or the status of an offchain debt, that is necessary for the NFTs to function properly.

3. Borrowing USDX

Now that the USDX-Enabled Asset is setup onchain, the owner decides to borrow some USDX.

The asset has a defined line of credit that includes a maximum loan-to-value ratio (“LTV”) and a fixed or floating interest rate (APR) that is due on the 1st of each month. All values are currently defined in US dollars and the currencies that can be used to repay principal and interest are USDC, USDT, and USDX. If USDC or USDT are deemed to have depegged (e.g. fallen below $0.99 in value) then they may not be accepted by the protocol.

4. Outstanding USDX Debt

When the owner executes a loan (“borrows”), USDX is minted from the USDX Protocol to the owner’s wallet. Simultaneously a NFT representing the debt position (“Debt NFT”) that was created is minted to the protocol’s treasury. USDX is a standard ERC-20 token in EVM environments and a SPL in SVM environments. The Debt NFT is an ERC-721.

Except for opportunities that make the protocol’s collateral less liquid, Debt NFTs can be liquidated by the protocol at any time for any reason in any way as long as the liquidation ensures USDX remains overcollateralized in US dollar terms. USDX can be redeemed for these Debt NFTs in chunks of 100,000.

If Stable has minted the USDX then yield payments will be noted on the debt NFT and passed through to the asset owner’s wallet.

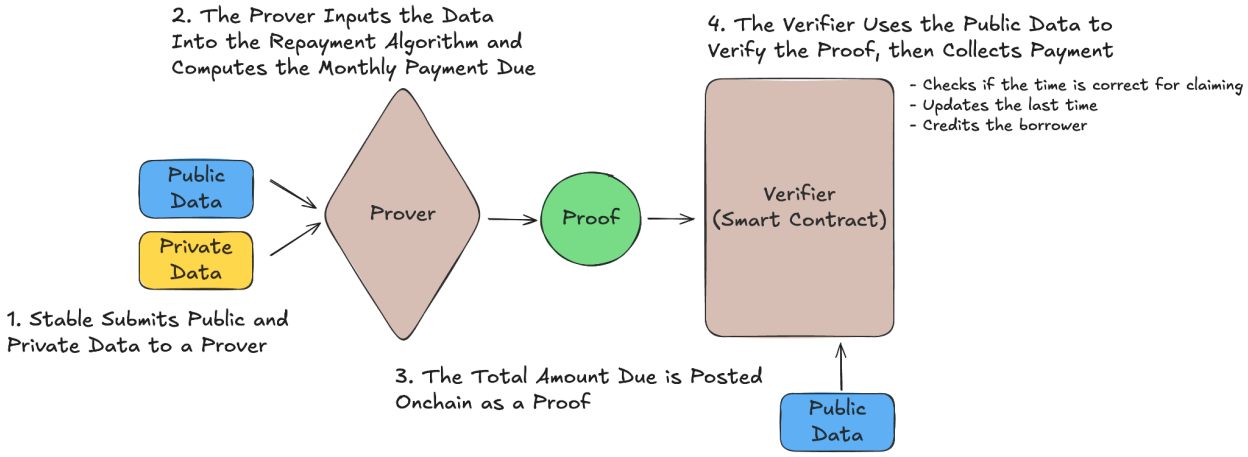
Privacy and Unlocks

1. **Privacy and Risk Evaluation**
    - Risk Scores and Account Health for each NFT and the owner are provided by a growing number of community participants.
2. **Unlock Period**
    - Stable tokenizes assets in a way that those assets do not lose their offchain functionality. Stable is the first to do this because it is not easy, but it is important.
    - Tokenized assets are therefore able to have a cooldown period before the asset is no longer tokenized. This cooldown period can be assumed to be 1 to 30 days.
    - Cooldown periods are used to ensure outstanding debts and claims related to onchain activities are settled before the asset is no longer available onchain. All known, valid disputes must be resolved before this cooldown period begins.

Zero Knowledge Proofs

Zero knowledge proofs (ZK) are used by the USDX Protocol to maintain an onchain system while preserving users’ personally identifiable and sensitive information. ZK enables onchain

verification of if the loan is interest only or not, the total amount (principal + interest) a given borrower owes for a given month, if that borrower has missed payments, and more.



New Deposit Process

Stable processes asset deposits in a standard, streamlined process. The process may not be fast, easy, or fun, but it helps ensure the health of USDX. Here is how it works for real estate.

Real Estate Evaluation

Each property must go through a series of checks.

1. **Property Valuation**
    - Multiple appraisals are obtained:
        - A third-party appraisal with a confidence score
        - A local appraiser's valuation
        - Stable's internal model assessment
    - The lowest valuation is used as Stable is incentivized for USDX to be as over-collateralized as possible. If significant discrepancies arise in the valuations, the property is not approved.
2. **Title Verification**
    - A title check is run to ensure ownership legitimacy and identify liens or legal encumbrances on each property.
3. **Document Submission**
    - Owners provide records of existing mortgages, liens, inspections, and sales documents.
4. **Commercial Use Declaration**
    - If the property has commercial use, relevant lease agreements, tenant quality assessments, market analyses, and financial statements are required.
5. **Rural or Agricultural Declaration**
    - If the property is classified as rural the depositor must note that. If the property is designated for agriculture then further information about the use of the property and the business that operates on it are required.

Owner Evaluation

The owner of that real estate is also evaluated.

1. **Identity and Financial Assessment**
    - KYC, credit checks, income verification, asset balances, and debt analysis are run on each real estate owner depositing with Stable.
    - For institutional depositors, a full KYB and business evaluation is conducted.
2. **Risk Scoring**
    - Real estate and owner risk scores determine:
        - Maximum loan-to-value (LTV) ratio.
        - Yield cut and borrowing rates.

Property Accepted

If a property is accepted then next steps can be taken to add it to the ecosystem.

1. **Notice**
    - The real estate owner is notified that their property has been approved for deposit. They have 30 days to execute before reapproval would be required.
2. **Tokenization and Deposit**
    - Properties are transferred to an LLC and tokenized if not already on-chain.
    - Owners deposit their tokenized real estate into the Stable protocol.

Maintaining USDX Peg Stability

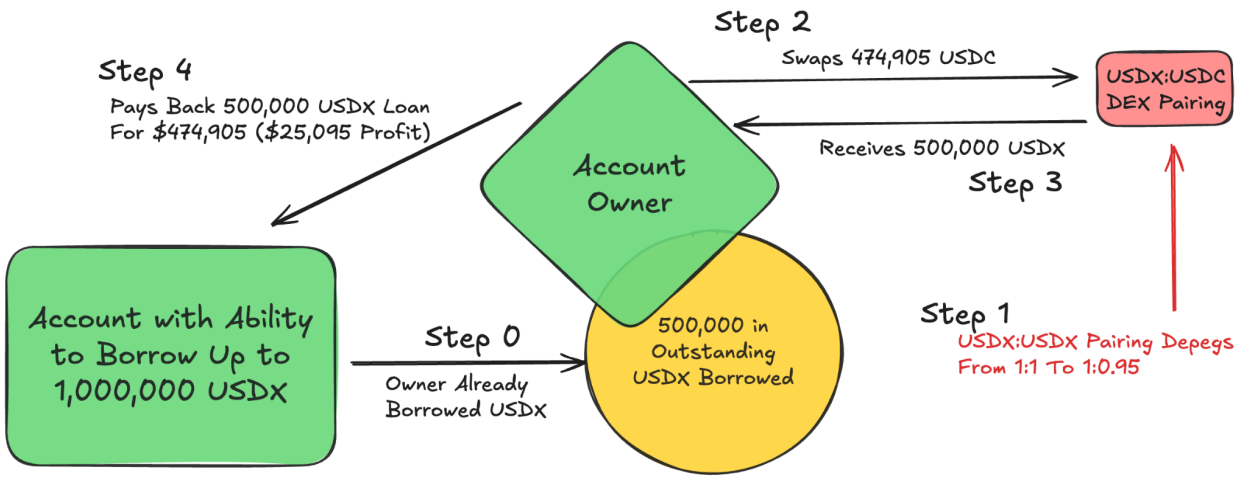
USDX maintains its $1 peg through several mechanisms.

Overcollateralized Treasury

The value of USDX is backed by a reserve of debts and liquid assets.

Debt Repayment Incentives

Borrowers of USDX can always repay their positions in-kind, and are therefore incentivized to purchase USDX at any price below $1 and repay their debts.



For example, if a real estate depositor borrowed 10 Million USDX against $30 Million in real estate deposits and USDX depegged to $0.97 that depositor could purchase 10 Million USDX for about $9.7 Million, repay their loan, and profit about $300,000.

Similarly, if USDX depegged upwards to $1.023, any holder is incentivized to repay their debts and make a profit of about 2.3% (depending on costs to facilitate e.g. swaps, bridges).

Stable's Market Operations

Stable buys below-peg USDX and repays any credit it has borrowed. For example, if Stable has issued 1 Billion USDX against 2 Billion in real estate deposits, and USDX depegged to $0.98, Stable will purchase as many USDX as it can until USDX is repegged, then it will repay however

much it was able to buy below-peg. Stable earns the upside of tokens purchased for less than $1 by repaying any borrows and using the rest after things have returned to normal.

Maintenance Pool and Staked USDX

Stable sponsors an autonomous vault where USDC, USDT, and USDX holders can deposit their stablecoins and earn yield. The stablecoins are used to maintain the peg between USDX and other stablecoins on strategic exchanges.

Other vaults deploy USDX into delta-neutral strategies or AI-managed arbitrage opportunities. No cap exists on any of these pools and yield can be claimed at any time without withdrawing.

Dollar Value Interest

Interest payments on borrowed USDX must be paid in USDC, USDT, or USDX. This creates implicit demand for more USDX than exists.

For example;

- 100MM USDX is borrowed at 6% APR for 2 years
- No other USDX is borrowed during that time
- The total repayment requires $112MM of value (112MM USDX)
- At least $12MM of that must come from somewhere else (USDC or USDT)

If all interest and principal repayments were made in USDC or USDT, so that no debt exists and 100MM USDX are still in the market, the USDX protocol must do one of the following:

1) repurchase that outstanding USDX and burn it,

2) purchase approved debt (e.g. mortgages),

or 3) purchase approved assets and issue debt against them (e.g. bonds at 10%, debt at 9%).

Peg-Only Repayment for Other Stablecoins

In the event that USDC or USDT has depegged recently (past 72 hours) they cannot not be accepted by the protocol until stability has returned for a sustained period of time (144 hours).

Debts and interests due on the USDX Protocol can be paid by anyone. This enables Stable and other businesses to accept USD transfers which can be ZK proven to the blockchain as payment. This could provide awesome value in the event that all major stablecoins have depegged, leaving only USDX (on the market or newly minted) for debtors to facilitate their monthly interest payment or principal repayment.

Liquidation Protocols

The USDX Protocol follows set and rigorous liquidation protocols to, if necessary, liquidate the position of any depositor and any collateral that was used in the CDP. Those protocols are different for different assets.

Liquidation Policy for Real Estate Deposits

When real estate is used as collateral in a CDP (Collateralized Debt Position), the protocol continuously monitors its value through Stable's internal assessment tools and trusted third-party appraisers. If the value of the property falls below a defined threshold, the account is frozen until the borrower either repays a portion of their loan or the asset is partially or fully liquidated.

Example Scenario

Suppose a borrower deposits a property valued at $1,000,000 and borrows $800,000 USDX—an 80% LTV. If the property's assessed value drops below $950,000, Stable issues an early warning to the borrower, providing time to adjust their position or repay part of their loan.

If the property's value continues to fall and reaches $875,000, the CDP is deemed undercollateralized, and the liquidation process is triggered.

Step-by-Step Liquidation Process

1. Soft Liquidation

Stable initiates a "soft liquidation" by auctioning an option to purchase 10–20% of the property's value to a pool of qualified participants. This is not a sale of the property itself, but a strategic action to reduce exposure.

- The borrower has the right to reclaim this option at the original deposit value within a defined timeframe.
- For instance, if $175,000 worth of value is recovered through the option sale, and the property's post-auction value is now assessed at $700,000, the outstanding loan of $800,000 is now backed by $700,000—effectively making the position ~112% overcollateralized.

2. Ongoing Decline and Further Liquidation

If the property's value continues to decline, Stable may conduct another soft liquidation round. If that still does not restore collateral health, full liquidation of the property may be initiated.

3. Owner Redemption Window

Throughout this process, borrowers have a window to repay their USDX debt and reclaim their full property rights, with no additional penalties. This ensures fairness and gives real estate holders the opportunity to recover from temporary market fluctuations.

Risk Management

It's important to note that unleveraged real estate deposits (i.e., those not used to mint USDX) carry no risk of liquidation. Borrowers who choose to leverage their deposits

conservatively—below the maximum allowable LTV—substantially reduce their exposure to forced liquidation events.

Liquidation Policy for Non-Real Estate Deposits

USDX supports a variety of asset classes as collateral, including non-real estate assets such as tokenized commodities. Among these, gold represents a key example of a highly liquid and reliable form of collateral.

Loan-to-Value (LTV) Parameters

For gold, USDX allows users to borrow up to 90% LTV, reflecting the high liquidity and relative price stability of the asset. This means that for every $100 worth of gold deposited, users may borrow up to 90 USDX stablecoins.

Liquidation Threshold

To maintain the protocol's solvency and protect against market volatility, liquidation is triggered when the LTV of a collateralized loan on gold reaches 93%. At this point, the borrower's position is considered undercollateralized and subject to partial liquidation.

Liquidation Mechanism

Upon reaching the liquidation threshold:

- A portion of the collateral is liquidated automatically.
- The system continues liquidating collateral until the LTV returns to 90% or lower.
- Liquidated collateral is sold through an open auction or routed to designated liquidators to recover the borrowed USDX.

This dynamic mechanism ensures minimal disruption to users while maintaining the protocol's solvency. By capping LTV recovery at 90%, USDX avoids over-liquidation, preserving user collateral and stabilizing protocol health.

Example Scenario

- A user deposits $10,000 worth of tokenized gold.
- The user borrows $9,000 in USDX (90% LTV).
- If the gold value drops to ~$9,677, the LTV becomes 93%, triggering liquidation.
- Collateral is sold in tranches until the LTV returns to 90%, meaning approximately $290 of USDX debt is repaid through liquidation.

This policy balances capital efficiency with risk mitigation, ensuring users can access high LTV borrowing while protecting the protocol from rapid devaluation events.

Credit Default Swaps

Stable hedges risk for USDX by acquiring credit default swaps on deposited real estate. This helps ensure USDX and Stable will survive a catastrophic real estate market crash. Such a crash would need to cause real estate values to fall more than 20% before USDX is at risk of being undercollateralized; though an event like that is unlikely in the foreseeable future Stable takes additional measures to increase that buffer even further.

Insurance Fund

Stable utilizes profits to build an Insurance Fund and may open pools for the community to provide liquidity to the Insurance Fund. Liquidity in that pool earns yield in ways that are risk free regarding contagion from USDX, and may be used to purchase further insurance.

Debt Redemption and Liquidation

Stable allows holders of 1,000,000+ USDX to redeem USDX for the debt positions backing USDX in denominations of 100,000 (e.g. 1,000,000, 1,100,000, 10,200,000, …). Each redemption is atomically swapped for Debt NFTs that represent 100,000 USDX of debt from 10 or more properties. The properties are chosen randomly from different risk tranches.

USDX Debt NFTs offer direct exposure to the debts, and are therefore not securities. Where most debt is sold at a significant premium (e.g. a $500,000 6% mortgage may be sold for $530,000), USDX Debt NFTs can be claimed for a 0.25%-1.25% redemption fee, depending on demand for the given tranche and maturity of the debt, or swapped back to USDX for a 0.5%-1.5% fee. Stable may offer insurance for a fee. Additionally, Stable liquidates USDX Debt through onchain and offchain pipelines with select partners and the open market.

Rate Determination

Because USDX is not backed by fiat cash, the federal funds rate is not an implicit liability when determining borrow rates for the OCDP positions as the yield was not being earned before the USDX was minted. Many other variables persist, however:

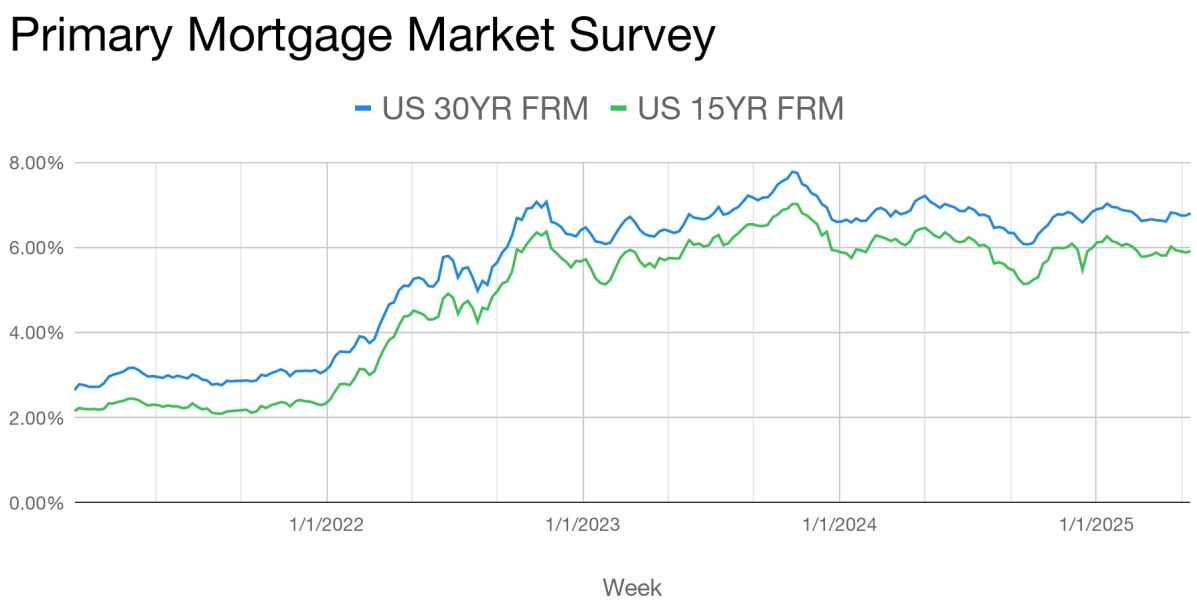
- Macroeconomic Factors such as inflation, mortgage-backed-security (MBS) demand, and the overall economy.
- Loan Type & Term can range from 1st lien to 2nd lien with fixed or variable rates holding durations of up to 30 years.
- Borrower Qualifications including credit score, loan-to-value ratio (LTV), debt-to-income ratio (DTI), loan amount, occupancy & property type.
- Property Qualifications like habitability, disaster zoning, surroundings, and other factors are taken into consideration.

These factors are further influenced by the demand and usage of stablecoins, the crypto markets, and real estate trends at both a local and macro level.

However, real estate borrow rates are consistently lower than crypto borrowing rates.

Real Estate Provides Cheaper Capital

According to Aave in March 2025, the average stablecoin borrowing APR from their protocol on the Ethereum network was 9.66% over the past year. Both the 30-year fixed and 15-year fixed US mortgage rates were more than 150 basis points (1.5%) below that every week of the same time period. More than that, the HELOC, 15-year Home Equity Loan, and 10-year Home Equity Loan rates were lower than that stablecoin borrow rate for the same time period except for a single day in September 2024 where the HELOC rate was higher.



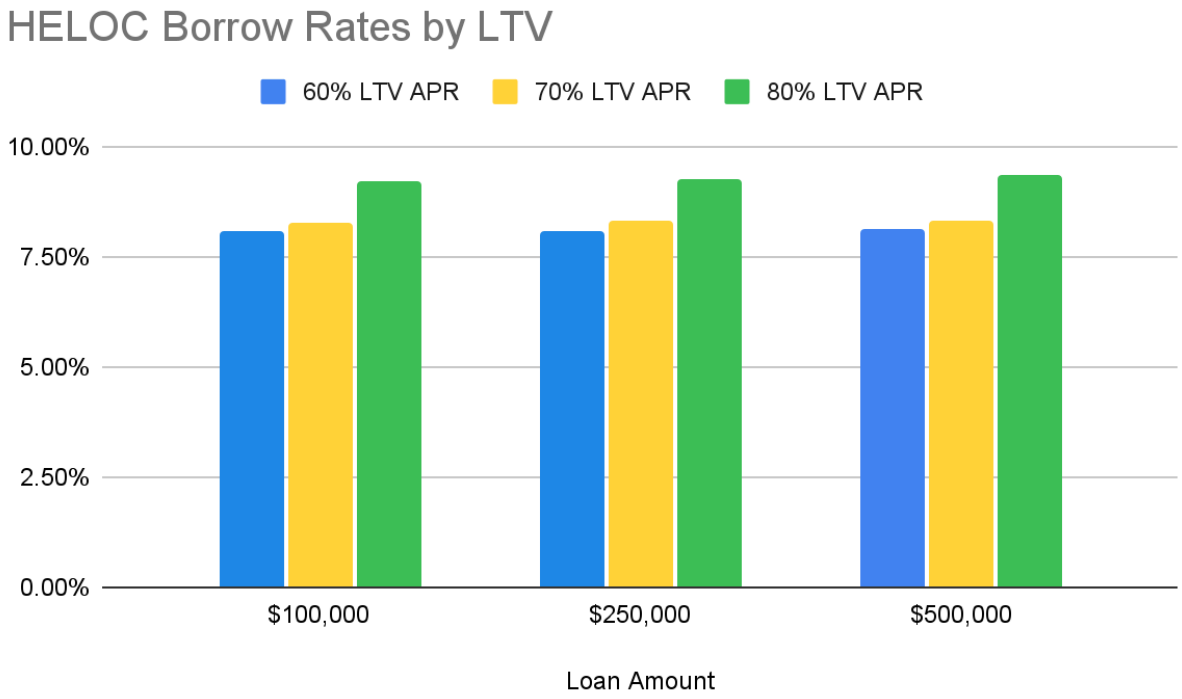
LTV Matters

The loan-to-value ratio (LTV) of deposits matters when determining the borrow rate. LTV and risk increase are positively correlated. Stable does not consider the LTV of the USDX borrowed from Stable, but the LTV of all outstanding debts and liens on any given property when determining the rate paid by the borrower.

Base Considerations (Example)

LTV Range	Rate Adjustment
0-40%	+0%
40-60%	+1%
60-80%	+2%

Here are the current HELOC rates by LTV for $100,000, $250,000 and $500,000 loans. LTV is much more impactful on the rate than the amount borrowed.



Fixed and Range Rates Opportunity

Until now variable borrow rates have been the standard within crypto markets, and for good reason, the demand for capital one day may be half of the demand the day prior. Decentralized finance enables these demand-sensitive swings that have provided a huge benefit to incentivizing and capitalizing on demand. This causes unsustainable volatility that is currently not compatible with assets such as real estate or the intentions of borrowers posting real estate as collateral, however.

Real estate borrowers are familiar with fixed rates and variable window rates where if they don't know their exact rate they at least know the minimum and maximum rate their loan will fall within. Stable extends that benefit to crypto and decentralized capital markets for all types of borrowers.

Roadmap

1. **USDX Development**
    a. **Testnet**
        i. ~~**Solana Devnet**~~
        ii. ~~**EVM Testnet (Monad)**~~
        iii. **Upgrades and Business Logic**
    b. **Audits**
    c. **Mainnet Launch**

Future Improvements

- Properties from outside the US should be considered and the stablecoin minted should be pegged to the respective local currency.
- Debt Markets
    - If Stable is able to establish robust liquidation pipelines for OCDPs for real estate deposits then the maximum LTV could be increased and liquidation policies could be made more favorable for depositors.
    - Stable should expand to offer purchase mortgages and build a mortgage protocol on top of the USDX protocol.
- Yield
    - Stable should enable real estate depositors to receive their yield in a fiat-backed stablecoin, Bitcoin, or select metals like gold.
    - Stable should have a plan for earning yield on unclaimed yield.

Conclusion

Stable introduces a paradigm shift in asset-backed finance, allowing real estate owners to unlock liquidity while maintaining asset exposure. Through tokenization, zero-knowledge privacy mechanisms, and a structured risk evaluation model, Stable facilitates a seamless transition between real estate and liquid financial instruments, optimizing asset utilization in a decentralized and transparent manner.

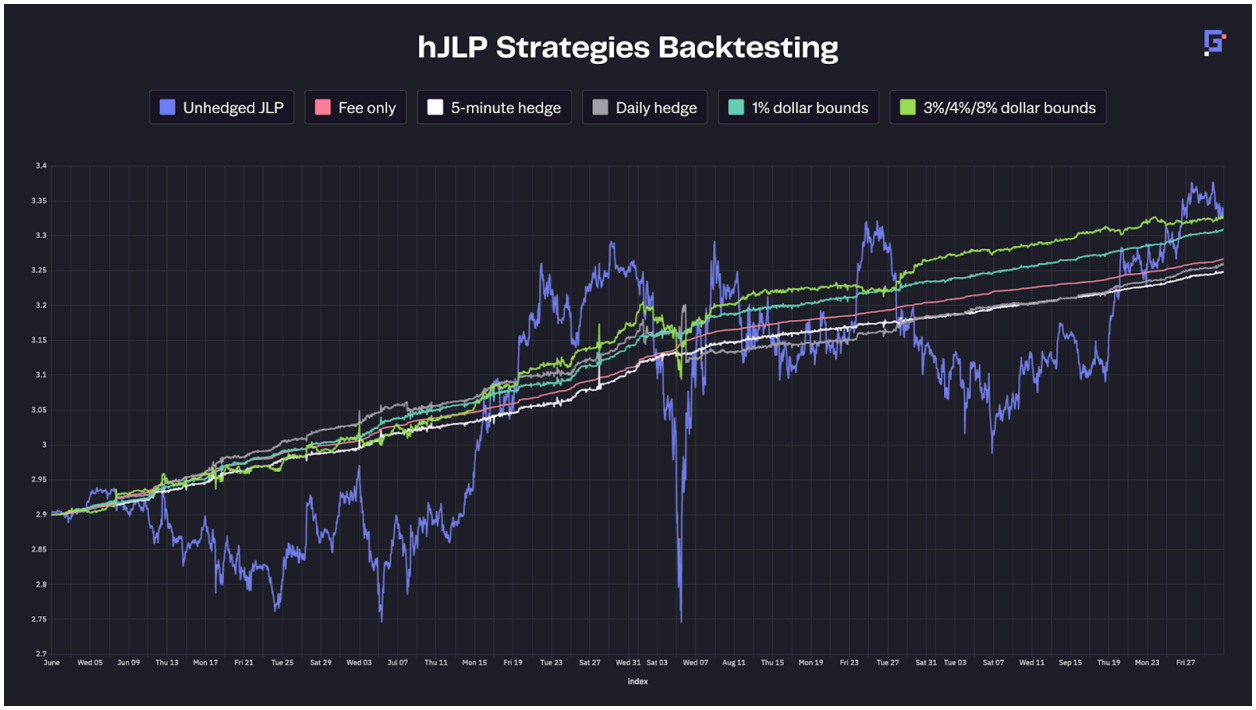
Appendix

Staked USDX (USDXS)

Staked USDX (USDXS) is a token issued to USDX holders who deposit and lock their USDX into a vault. Once in the vault, USDX is used to provide liquidity for delta-neutral strategies -- like Gauntlet's hJLP Strategy -- and to maintain the $1 peg of USDX.

The yield from running those activities accrues in a vault that USDXS holders can withdraw from as SUSD, a yield-bearing USD-pegged stablecoin released by Stable that is backed by dollars. The amount of yield a USDXS holder can withdraw is correlated to how long they have held the USDXS token and how many tokens they have held on average during that time.

1. **USDX Deposit Mechanism**
    - USDX is deposited into a vault.
    - Users receive USDXS tokens.
2. **Peg Maintenance Arbitrage**
    - USDX in the vault will be used to help maintain the $1 peg of USDX across various pairings on various exchanges. Some will be exchanged for other stablecoins to enable the buying and selling of either side of the pairing in the event of an underpriced or overpriced depeg, or differences across exchanges,
3. **Delta-Neutral Liquidity Strategies**
    - USDXS will earn yield by implementing the hJLP Strategy to start. hJLP is a popular and proven delta-neutral strategy that can be executed on Solana.
        i. USDX is swapped for JLP tokens on Solana.
            1. JLP is the liquidity provider token of Jupiter Exchange and is backed by the vault of liquidity which Jupiter uses to enable perp trading. The vault contains different amounts of SOL, BTC, ETH, and stablecoins, which means JLP has exposure to those tokens.
        ii. The JLP is deposited into Drift Exchange, and short positions are opened for SOL, BTC, and ETH to maintain a delta-neutral position.
        iii. Yield generated from JLP rewards is shared with USDX vault stakers.



Stable Real Estate Fund I

Stable Real Estate Fund I is a closed-end 10-year real estate investment trust (REIT) focused on acquiring single-family rental properties in Arkansas, North Carolina, South Carolina, Georgia, Florida, and Texas.

- Properties will be purchased with cash
- Purchased properties will be tokenized by Stable
- Tokenized properties will remain deposited in Stable for the duration of the fund
- USDX will be borrowed against the properties by the fund managers
- That USDX will be deposited into the USDXS Vault to generate additional yield

Stable Real Estate Fund I is a case for institutional adoption of USDX. The fund aims to raise $30M–$60M with an anticipated average 25% return, distributing quarterly dividends.

Glossary

- APR
    - APR (“Annual Percentage Rate”) is the yearly interest rate charged on a loan or earned on an investment, expressed as a percentage. It includes only the nominal interest rate and does not account for compounding.
        - *APR = (Total Interest Paid or Earned per Year / Principal) * 100*
- CDP
    - A CDP (“Collateralized Debt Position”) is a smart contract-based mechanism that allows users to lock up cryptocurrency as collateral and borrow other assets (usually a stablecoin) in return.
- Decentralized
    - “Decentralized” refers to a system or network that operates without a single central authority or controlling entity. Instead, decision-making and control are distributed among multiple participants, making the system more resistant to censorship, failure, or manipulation.
- Depeg
    - "Depeg" refers to the event when a stablecoin or pegged asset loses its intended fixed value relative to another asset, usually a fiat currency like the US dollar. For example, if a stablecoin like USDX or USDT is supposed to maintain a 1:1 peg with USD but drops to $0.95 or lower, it is considered to have depegged.
- Delta Neutral
    - “Delta neutral” is a trading or investment strategy designed to minimize the impact of small price movements in an underlying asset. A portfolio or position is considered delta neutral when its overall delta—the sensitivity of the portfolio’s value to changes in the price of the underlying asset—is zero or close to zero.
- Devnet
    - A “devnet” is a blockchain environment designed for testing and development. It allows developers to experiment with smart contracts, decentralized applications (dApps), and protocol upgrades without using real funds or affecting the main blockchain (Mainnet).
- Digital Currency
    - A “digital currency” is a form of money that exists only in electronic form and is not physically tangible like cash or coins. It can be issued by a central authority (like a government, central bank, or business) or exist in a decentralized system, such as cryptocurrencies.
- Fiat
    - A “fiat” currency is a type of money that has no intrinsic value and is not backed by a physical commodity like gold or silver. Instead, its value is derived from government regulation and the trust that people place in it. Governments issue fiat currency and declare it as legal tender, meaning it must be accepted for payment of goods, services, and debts.
- Fixed Rate

    - A “fixed rate” refers to an interest rate that remains constant for a specified period, regardless of market fluctuations. It is commonly used in loans, mortgages, and investments to provide stability and predictability in payments.
- HELOC
    - A HELOC (“Home Equity Line of Credit”) is a type of revolving credit that allows homeowners to borrow against the equity in their home. The credit is typically offered as a line of credit rather than a lump sum loan, and the homeowner can draw funds as needed up to a certain limit, similar to a credit card.
- Lien
    - A “lien” is a legal claim or right against a property that gives a creditor or lender the ability to take possession or force the sale of the property if the debtor fails to fulfill a financial obligation (e.g., repaying a loan or paying taxes). Liens are often placed on real estate, but they can also apply to other types of property.
- LTV
    - LTV (“Loan-to-Value”) is a financial metric that compares the amount of a loan to the appraised value of an asset, typically used in mortgages and real estate lending. It is expressed as a percentage
        - *LTV = (Loan Amount / Property Value) * 100*
- Mortgage
    - A “mortgage” is a type of loan specifically used to purchase real estate. The borrower agrees to repay the lender over time, typically with interest, while using the purchased property as collateral. If the borrower fails to make payments, the lender can foreclose on the property and sell it to recover the outstanding loan balance.
- Oracle
    - A blockchain “oracle” is a service that provides smart contracts with external data, enabling them to interact with real-world information that isn’t natively available on the blockchain.
- Over collateralized debt position (OCDP)
    - An “OCDP” is a type of loan where the borrower provides collateral that exceeds the value of the loan they receive. This mechanism is commonly used in decentralized finance (DeFi) and stablecoin protocols to mitigate lender risk.
- Peg
    - In stablecoins, the term “peg” refers to the target value that a stablecoin is designed to maintain relative to another asset, usually a fiat currency like USD ($1.00) or a commodity like gold.
- Private Credit
    - Private credit is when investors or private lenders (such as hedge funds, private equity firms, or specialty finance companies) lend money directly to companies, typically middle-market or private businesses, in exchange for interest payments.
- Repeg
    - A “repeg" in stablecoins refers to the process of restoring a stablecoin’s price back to its intended peg (usually $1.00) after it has deviated. This is crucial for maintaining trust and stability in the ecosystem.

- RWA
    - “RWA” in crypto stands for Real-World Assets—physical or traditional financial assets that are tokenized and represented on the blockchain.
- Stablecoin
    - A “stablecoin” is a type of cryptocurrency designed to maintain a stable value, typically pegged to a fiat currency (like the U.S. dollar) or another asset (such as gold). Stablecoins aim to combine the benefits of digital currencies (e.g., fast, borderless, and secure transactions) with the stability of traditional currencies.
- Testnet
    - A “testnet” is a blockchain environment used for testing new features, smart contracts, and decentralized applications (dApps) before deploying them on Mainnet. It is more stable than a Devnet and often mimics Mainnet conditions more closely.
- Title
    - In real estate, a “title” refers to the legal right to own, use, and transfer property. It is essentially the document that proves ownership and shows that the seller has the legal authority to sell the property.
- Title Check
    - A “title check” (or title search) in real estate is the process of examining the public records related to a property to ensure that the title is clear and free of any legal issues. The goal of a title check is to confirm that the seller has legal ownership of the property and the right to transfer it, and to identify any potential problems that could affect the buyer’s ownership rights.
- Variable Rate
    - A “variable rate,” also known as an adjustable rate, is an interest rate that fluctuates over time based on market conditions. It is commonly used in loans, mortgages, and financial products, where the rate adjusts periodically according to an underlying benchmark, such as the Federal Funds Rate, LIBOR, or SOFR.
- Vault
    - In crypto, a “vault" is a smart contract or protocol that securely holds and manages digital assets, often optimizing yield or enforcing specific access and withdrawal rules.
- ZK
    - “ZK” (Zero-Knowledge) refers to Zero-Knowledge Proofs (ZKPs)—a cryptographic technique that allows one party (the prover) to prove to another party (the verifier) that a statement is true without revealing any additional information beyond the fact that the statement is true.

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