LEGAL AND POLICY PAPER

(Public Summary, 10/27/2026)

A Framework for Applying the Federal Securities Laws to Decentralized Lending Protocols and Non-Custodial Vaults

Public Summary

[Veda Tech Labs Inc.]
[Kamino Foundation]
[Aave Labs]

[October ___, 2026]

This paper examines how existing federal securities laws apply to decentralized lending protocols and non-custodial vaults based on the rights, obligations, economic exposure, and effective authority created by their design. It draws on confidential legal analysis submitted to the U.S. Securities and Exchange Commission on October 26, 2026, and sets forth a framework that may inform the analysis of other arrangements sharing the specified characteristics. It does not constitute legal advice, and the conclusions stated depend on the design features and other circumstances identified.

I. Executive Summary

Decentralized lending has become an important application of blockchain technology. For nearly a decade, decentralized lending protocols have allowed users to supply liquidity and borrow against collateral through smart contracts. As of October 2026, more than $50 billion in digital assets was recorded across lending protocol markets, including supplied liquidity and posted collateral.[1] More recently, non-custodial vaults have developed as another way to participate in those markets and in other on-chain strategies.

The federal securities laws regulate particular economic arrangements and allocations of rights and authority. Decentralized lending protocols and non-custodial vaults can perform familiar financial functions without necessarily creating the instruments, common enterprises, issuers, or custodial relationships those statutes regulate. This paper applies *Reves v. Ernst & Young* and *SEC v. W.J. Howey Co.*[2] to direct user participation in decentralized lending protocols and to participation through non-custodial vaults, and separately considers the application of the Investment Company Act of 1940 and the Investment Advisers Act of 1940 to vault arrangements. Each statute requires an examination of the relevant functions: what rights and obligations arise, who exercises authority and control, and whose assets and economic fortunes are at stake.

Smart contracts can unbundle functions traditionally performed by a single financial intermediary and distribute them across users, code, governance, and service providers. A decentralized protocol may allow users to supply assets that others draw against collateral, with no intermediary or borrower undertaking to repay anyone. A vault may coordinate deployment of assets without owning them; a curator may direct on-chain strategies within bounds enforced by code without being able to withdraw user assets. The legal analysis depends on the arrangement itself.

Based on the architectures and design assumptions described here, this paper reaches four conclusions.

First, neither direct participation in the decentralized lending protocols nor participation through the vaults analyzed here involves a note under *Reves*. No intermediary issues a debt instrument or undertakes an obligation to repay anyone on its own credit. Even if these arrangements were

---

[1]See Lending Protocols, DefiLlama, https://defillama.com/protocols/lending (last visited Oct. 11, 2026). Data providers commonly describe this figure as "total value locked." The assets it measures remain under the control of the protocols' smart contracts rather than in the possession of any intermediary.

[2]Reves v. Ernst & Young, 494 U.S. 56 (1990). SEC v. W.J. Howey Co., 328 U.S. 293 (1946). See also Tcherepnin v. Knight, 389 U.S. 332, 336 (1967); United Hous. Found., Inc. v. Forman, 421 U.S. 837, 848–49 (1975).

characterized as notes, the *Reves* family resemblance factors weigh against treating them as securities.

Second, neither direct participation in the decentralized lending protocols nor participation through the vaults analyzed here constitutes an investment contract under *Howey*. The arrangements lack the required common enterprise. Returns from direct protocol participation are generated by independent borrower activity under published smart contract rules, rather than the essential managerial efforts of a promoter. Governance may adjust those rules. Where material require effective notice, meaningful delay, and a practicable opportunity to exit, those safeguards limit users' reliance on continuing managerial discretion. The legal significance of governance also depends on the powers exercisable without those safeguards.. Fixed-strategy vaults likewise do not depend on continuing managerial efforts. Although active curators exercise investment discretion, that discretion does not establish the independently required common enterprise.

Third, the vaults analyzed here are not investment companies under the Investment Company Act. No identifiable issuer owns or holds the vault's assets for its own account and issues securities representing interests in them. Users retain ownership of, or an enforceable proportionate entitlement to, their assets in the vault, and the use of smart contracts to execute their transactions does not create a separate investment company.

Fourth, curators who provide compensated investment advice concerning securities may be subject to the Investment Advisers Act, but their authority under the vault arrangements analyzed here does not constitute custody. Curators can direct investments within prescribed limits, but cannot obtain possession of user assets, withdraw them for their own benefit, or redirect them to unauthorized destinations.

These conclusions are limited to the rights, obligations, and controls in the systems described in this paper. Different repayment promises, pooled ownership structures, discretionary powers, incentives, or withdrawal restrictions could change the analysis. Decentralization is not itself dispositive; what matters is whether any person promises repayment, generates users' returns, or controls user assets.

Part II describes the architecture of decentralized lending protocols and non-custodial vaults and the design assumptions on which the analysis rests. Part III applies *Howey* and *Reves* to direct participation in decentralized lending protocols. Part IV applies *Howey* and *Reves* to participation through non-custodial vaults and considers the Investment Company Act and the Investment Advisers Act. Part V sets out recommendations to the Commission. Part VI concludes.

II. Architecture and Design Assumptions

A. Scope and Terminology

This paper examines two types of arrangements. In direct user participation in a decentralized lending protocol, users supply assets to smart contract markets from which others borrow against their own collateral. In a vault, users deposit assets into smart contracts that deploy them according to a strategy, whether fixed in code or directed by a curator within limits the code enforces, into a decentralized lending protocol or other on-chain activity.

This paper uses ordinary words such as lend, borrow, deposit, collateral, interest, repay, withdraw, and redeem to describe user behaviors in their colloquial sense, not to suggest the existence of a legal instrument or relationship such as a loan, debt, security interest, deposit liability, custody relationship, or repayment undertaking, which typically is not present in these systems.[3] Although these transactions may resemble loans, they are conducted without the parties entering into legal agreements or assuming legal duties. Whether the actions described have legal significance depends not on descriptive terms but on the nature of the representations and promises between legal persons.

B. Decentralized Lending Protocols

The decentralized lending protocols described here are user-custodial.[4] The protocols are smart contracts operating on blockchain systems; they are not legal entities and cannot take legal title to assets. Users control their positions at all times through their own wallets. Only the user can withdraw its supplied assets or collateral; no other person can take or move them. A supplier's withdrawal depends on liquidity being available in the reserve, and a borrower with an outstanding draw may withdraw collateral only to the extent the remaining collateral continues to exceed the amount drawn by the required margin.

These protocols permit two types of transactions. Users may supply assets to a reserve, from which borrowers may draw, and earn interest at the rate the reserve's published formula

---

[3] "Supply" means transferring system control of an asset from the user to smart contract code; it is not a deposit with a custodian and creates no deposit liability, bailment, or debtor-creditor relationship. "Borrow" means providing control of collateral to a smart contract and gaining the power to draw assets controlled by the protocol. "Collateral" means assets whose value the code uses to determine how much may be drawn and which are at risk of liquidation; it is not legal collateral under a security agreement. "Interest" means fees paid by borrowers on drawn assets, part of which is credited to suppliers. "Repay" means returning drawn assets to the smart contract to reduce a position; it satisfies no legal debt. "Reserve" means the smart contract that holds supplied units of a single asset and records supplies, draws, and repayments against it; the term does not describe, and should not be read as conceding, any pooling of investor capital in the sense used in the common enterprise case law. "Liquidation" means the protocol function that permits a third party to repay drawn assets and receive collateral at a discount once a position falls below the required margin.

[4] "User-custodial" is used in contrast to custodial arrangements in which an intermediary holds client assets in its own name or under its control and the client holds a claim against the intermediary. In the protocols described, no intermediary stands between the user and the smart contract: the user retains the sole ability to initiate withdrawal of its supplied assets or collateral, and no party has the technical capacity to take or move user assets. The term is used interchangeably with "non-custodial" and "self-custodial."

produces. And users may borrow, that is, draw supplied assets in amounts determined by the value of collateral, which must at all times exceed the value drawn. These transactions differ from traditional lending: no one assesses a borrower's creditworthiness, there are no legal agreements, there is no debtor-creditor relationship, and no repayment obligation is owed by anyone to anyone. No legal relationship is created between suppliers and borrowers.

Borrow transactions. A borrower transfers control of collateral to the protocol's smart contracts, which value the collateral programmatically and determine, under code-implemented rules, how much the borrower may draw from a reserve. Drawing is overcollateralized: the value of the collateral must exceed the value drawn, within governance-approved limits for each asset. Borrowers incur interest on the drawn balance at the rate the market process produces. A borrower may return drawn assets at any time. No borrower undertakes to repay any amount to anyone; if a borrower does not return drawn assets, its collateral remains under the control of the smart contracts, interest continues to accrue, and the position is exposed to liquidation. If the value of a position falls below the required threshold, any third party may liquidate it by repaying some or all of the drawn assets and receiving a corresponding amount of collateral at a discount. The protocol takes no title to collateral and sells nothing; any sale occurs outside the protocol, by the liquidator, for its own account. The borrower's exposure is limited to its collateral.

Supply transactions. Suppliers transfer control of assets to a reserve. They typically receive a receipt token, or a system power recorded in the protocol's accounting, that enables them to withdraw at any time, subject to available liquidity.[5] The position accrues interest at the rate the protocol's published formula produces from current borrower demand and available liquidity, so suppliers earn a programmatic market rate rather than a rate set by a person. Utilization of the reserve moves continuously with market activity: it rises as assets are drawn or withdrawn and falls as assets are supplied or returned, so the rate is repriced continuously by user activity as a function of supply and demand rather than at any actor's discretion.[6] Because suppliers and borrowers can enter and leave at their discretion, the rate is also disciplined by competition among open lending markets. The result is a price for the use of an asset determined by supply

---

[5]Protocols record a supplier's position in one of three ways: a rebasing receipt token whose balance increases as interest accrues; a fixed-balance receipt token whose redemption value increases through a published exchange rate; or an entry in the protocol's own accounting without a separate transferable token. In each model the record tracks a single asset. None of the three creates a separate issuer, a promise of repayment, or a position different in substance from the others, and the analysis in this paper applies to all three.

[6]Lending protocols typically set the borrow rate as a function of utilization, the share of a reserve's supplied assets currently drawn. Governance adopts the curve in advance; market activity determines the point on it. The rate rises gently while utilization is below a target level and steeply above it, so that scarce liquidity attracts supply and discourages further draws. The rate suppliers earn is derived from the rate borrowers pay, scaled by utilization and reduced by any percentage directed to the protocol's treasury.

and demand within a rule governance publishes in advance, not a return any person decides to pay.

The protocol and its governance. The protocol provides market infrastructure and execution. Code-implemented, publicly observable rules govern collateral, liquidations, rates, and related parameters. The protocol does not take supplied assets for its own account or raise them to finance any business. Parameters may be immutable, may react to market data, or may be changed through public, on-chain governance processes. In some designs, material changes require notice and timelocks, which may permit users to withdraw before implementation, subject available liquidity. The scope of delegated risk authority, emergency exceptions, and changes that bypass such procedures must be assessed separately. Protocols may permit designated actors to take protective actions, within ranges delegated by governance, to prevent systemic damage from events such as oracle failures or exploits. These features may be relevant under *Howey*, but they do not make the protocol a debtor or any person an issuer. Each statute regulates a particular legal relationship, and the analysis follows that relationship irrespective of the technology used.[7]

C. Non-Custodial Vaults

A non-custodial vault[8] allows users to deposit assets, receive a proportional position represented by a receipt token, and withdraw their proportionate entitlement under the smart contract's rules. A vault may deploy assets into lending protocols or another defined set of on-chain strategies. The questions are whether any person other than the user acquires ownership of the assets the vault deploys, who may choose how those assets are deployed, how redemptions work, and whether administrative or investment powers can be combined to obtain control of user assets.

Vaults allocate these responsibilities in different ways. Some execute a strategy fixed in code; others permit a curator to select eligible markets and allocations within limits set at deployment or by governance. Limits on a curator's authority may include a fixed list of permitted destinations, exposure caps, transaction-level validation of each instruction, and accounting or valuation functions performed independently of the curator. These controls separate the discretion to allocate assets from any ability to withdraw or redirect them, but whether they do so in practice depends on the permissions actually granted and on who can change them. For the

---

[7] A representative governance process for a material change, such as listing a new asset, comprises a public proposal and comment period, an off-chain signaling vote, and a binding on-chain vote followed by a timelock before execution, enforced by the governance smart contracts so that no participant can shorten or bypass the sequence. The full submission describes the process in detail.

[8] "Non-custodial" refers to a vault arrangement in which no operator, curator, or other service provider has the unilateral ability to take possession or control of deposited assets, withdraw them for its own benefit, or redirect them to an unauthorized destination. A curator may exercise discretion over strategies within prescribed limits but cannot use that authority, alone or in combination with other powers, to obtain control of user assets.

vaults analyzed here, users retain meaningful redemption powers and no curator has a unilateral route to withdraw assets for itself, redirect proceeds, or remove the constraints on its authority. Emergency powers limited to pausing or reducing security risk do not by themselves confer custody.

The functions performed by a platform also matter. A platform that functions only as a user interface, displaying information and allowing users to connect their own wallets to the vault contracts, differs from one that establishes an investment mandate, determines eligible strategies or risk limits, participates in governance, or holds authority to replace a curator. Those functions must be attributed to the actors actually exercising them; the label "interface" does not resolve whether a platform performs advisory, managerial, or other regulated activities. The way users hold their positions also matters: directly held receipt tokens and independent redemption powers support the analysis here, while omnibus custody or an intermediary's off-chain entitlement could introduce a distinct relationship requiring separate consideration.

D. Vault Design Assumptions

The analysis assumes no intermediary repayment or guarantee; user ownership or enforceable proportionate entitlements rather than an issuer-owned portfolio; meaningful redemption powers; constrained discretionary deployments; no unilateral pathway from curator authority to custody; and no tranching or priority structure that changes users' exposure. Where securities are managed for compensation, investment adviser requirements must be assessed independently. Equivalent controls may achieve the same functions, and no particular vendor, module, multisignature threshold, or redemption period is assumed by the conclusions in this paper.

III. Legal Analysis: Decentralized Lending Protocols

A. Howey and Supply Transactions

Supply transactions on the protocols described here are not investment contracts. A supplier makes an asset available to a reserve under published code, receives no interest in any business or venture, and finances no one: supplied assets are drawn by independent borrowers against their own collateral, not used by any developer, governance body, or other person for that person's business. Suppliers share infrastructure and a price, not the fortunes of an enterprise, so no common enterprise exists under any formulation courts apply. The interest a supplier earns is set by supply and demand under a published formula rather than promised by any person. Decentralized governance of market parameters is market administration rather than the essential managerial efforts *Howey* requires, and because changes take effect only after public notice and a timelock during which suppliers may withdraw, no supplier's return depends on the continuing discretion of any person.

The *Howey* analysis applies to the supply transaction, not to any token that records it. Under the Commission's 2026 Interpretation, whether a crypto asset is the subject of an investment contract depends on the transaction in which it is acquired.[9] Where a protocol issues a receipt token when an asset is supplied, the token is evidence of the supplier's position; it is the supply transaction, not the token, that is to be classified. Some protocols issue a token and others record the same position without one, yet a supplier's powers, exposure, and source of interest are identical under either model. Guidance that turned on the presence of a token would classify the position in one case but not the other, despite nothing of substance distinguishing them.

i. Investment of Money

A supplier transfers control of an asset to the protocol's smart contracts, but that transfer is not a payment to anyone. The protocol is not a legal person, and a supplier does not transact under an agreement with any person. No other legal person takes title to a supplied asset, and the transaction funds no developer, governance body, business, scheme, or enterprise. Nor does it create a partnership or joint venture among suppliers, each of whom acts for itself, controls only its own position, bears no shared liability, and enters and leaves without the permission of any other party.

ii. Common Enterprise

The 2026 Interpretation confirms that the common enterprise element must be satisfied rather than presumed, and that it is examined at the level of the transaction.[10] Because federal circuits apply different formulations, this paper considers each.

Horizontal commonality requires "the tying of each individual investor's fortunes to the fortunes of the other investors by the pooling of assets, usually combined with the pro-rata distribution of profits."[11] Supply transactions lack it. Supplied assets are subject to common infrastructure and interest is credited at a common rate, but *Revak* requires more than common infrastructure and common accounting: it requires that suppliers' fortunes be tied together through investment in an enterprise whose success or failure determines their return. In *Revak*, condominium purchasers who shared a common manager but held separately accounted units lacked horizontal

---

[9]Application of the Federal Securities Laws to Certain Types of Crypto Assets and Certain Transactions Involving Crypto Assets, Securities Act Release No. 33-11412, Exchange Act Release No. 34-105020, 91 Fed. Reg. 13,714 (Mar. 23, 2026) [hereinafter 2026 Interpretation] (a non-security crypto asset "can be offered and sold subject to an investment contract," and that treatment "does not transform the non-security crypto asset itself into a security").

[10]2026 Interpretation, supra, slip release at 5–6 n.7.

[11]Revak v. SEC Realty Corp., 18 F.3d 81, 87 (2d Cir. 1994); see also Wals v. Fox Hills Dev. Corp., 24 F.3d 1016, 1018 (7th Cir. 1994).

commonality.[12] *Aguilar v. Baton Corp.* answers the question for a shared smart contract. Purchasers sent assets to a token-specific bonding-curve contract, and each purchase or sale changed the price every other purchaser encountered; the court held that economic interaction through a common contract did not establish horizontal commonality without an identified venture whose success or failure drove the value of purchasers' holdings as a group.[13] The analogy is relevant, though reserves and bonding-curve contracts have different economic features. A reserve presents the same structure. One supplier's supply or withdrawal, and one borrower's draw or repayment, changes utilization and therefore the rate every supplier earns under disclosed rules; one user's activity affects the terms available to another. That does not identify an enterprise in which suppliers have invested. *Aguilar* also identified what the alleged pool lacked: a venture financed by participants. Suppliers here finance no one. Their assets are drawn by independent borrowers, against those borrowers' own collateral, for those borrowers' own purposes. No person orchestrates, selects, or manages borrowers, and borrowers do not act together. Interest is credited at the same published rate per unit for the period supplied, so no supplier's return depends on the amount, duration, or outcome of any other supplier's participation. Under the designs analyzed here, a shortfall in a borrower's position is recorded against the reserve rather than written down across supplier balances. Suppliers share infrastructure and a price; they do not share the fortunes of an enterprise.

Broad vertical commonality asks whether suppliers' fortunes depend on the expertise or efforts of a promoter. A supplier's return is produced by unrelated borrowers acting for themselves, paying fees calculated from a published formula. No person selects the supplier's exposure, sets its rate, or deploys its assets. If any person could be characterized as a promoter, it is the governance body, which may list assets, adopt rate models, and set risk parameters. Those are the rules of the market. They are published and implemented by code before a supplier transacts, and they cannot change without notice and an opportunity to withdraw. A supplier's return therefore depends on the market rate under those rules, not on the continuing judgment of any person in the way an investor's return depends on a manager's. The Second Circuit has rejected the broad formulation precisely because it collapses common enterprise into the efforts element.[14] Borrowers are participants in the market, not promoters of it: they transact anonymously, deal with no supplier, exercise no judgment on any supplier's behalf, and influence rates only as any participant influences a market price.

---

[12]Revak, 18 F.3d at 87–88; see also In re Celsius Network LLC, 668 B.R. 722, 749 (Bankr. S.D.N.Y. 2025).

[13]Aguilar v. Baton Corp. Ltd., No. 25-CV-880 (CM), 2026 WL 2568764, at *12–13 (S.D.N.Y. Aug. 31, 2026).

[14]Revak, 18 F.3d at 88.

Strict vertical commonality requires that the fortunes of the promoter and the investor rise and fall together. In *Brodt v. Bache & Co.* and *Mordaunt v. Incomco*, the Ninth Circuit found no common enterprise where a broker earned commissions whether or not its customers profited.[15] In the protocols analyzed here there is no promoter whose fortunes rise and fall with suppliers'. Where a protocol retains a portion of borrower interest, it is typically a fixed percentage directed to the protocol's treasury that accrues on market activity whether suppliers gain or lose, carries no obligation to absorb supplier losses, and gives the governance body no stake in any supplier's position. *Aguilar* rejected strict vertical commonality on the same reasoning, where the platform's transaction fees were earned when trades occurred and did not move with purchasers' gains and losses.[16] Shared exposure to activity is not shared exposure to the outcomes of that activity.

iii. Reasonable Expectation of Profits

Suppliers expect to earn interest, which can be profit in the *Howey* sense.[17] What matters is the character of that return. Suppliers receive no share of any business's earnings, and no person promises any return. The return is the output of a published formula applied to changing borrower demand and available supply, and it may be zero if no borrowing occurs. Under the 2026 Interpretation, the inquiry turns on representations or promises made or authorized by an issuer or promoter about managerial efforts that will generate the return.[18] In the protocols described, no promoter promises a rate; the only public information is the formula, the current rate it produces, and the mechanics by which that rate moves with the market.

iv. Derived from the Efforts of Others

The fourth element asks whether profits derive from the entrepreneurial or managerial efforts of others, which the 2026 Interpretation refines to "essential managerial efforts," excluding administrative, technical, or ministerial activity.[19] The interest paid to suppliers comes from an unknown, uncoordinated, changing set of borrowers who interact with smart contracts for their own purposes. No party uses supplied assets to employ, manage, or invest them for suppliers'

---

[15]Brodt v. Bache & Co., 595 F.2d 459, 460–61 (9th Cir. 1978); Mordaunt v. Incomco, 686 F.2d 815, 817 (9th Cir. 1982); cf. SEC v. R.G. Reynolds Enters., Inc., 952 F.2d 1125, 1130–31 (9th Cir. 1991).

[16]Aguilar, 2026 WL 2568764, at *14.

[17]United Hous. Found., Inc. v. Forman, 421 U.S. 837, 852 (1975); SEC v. Edwards, 540 U.S. 389, 394–97 (2004).

[18]2026 Interpretation, supra, slip release at 25–27.

[19]Forman, 421 U.S. at 852; SEC v. Glenn W. Turner Enters., Inc., 474 F.2d 476, 482 (9th Cir. 1973); 2026 Interpretation, supra, slip release at 13 & n.42; see also SEC Div. of Corp. Fin., Statement on Certain Protocol Staking Activities (May 29, 2025) (activities to secure and maintain a network are "administrative or ministerial in nature, not entrepreneurial or managerial").

benefit, and no party has promised technology development or marketed features not already available.

Governance powers, including listing assets, adopting rate models, and setting risk parameters, could be argued to affect suppliers' returns. While those parameters are essential to the market's operation, governance over them is not the essential managerial effort *Howey* contemplates. Governance sets the terms on which independent suppliers and borrowers transact; it selects nothing on a supplier's behalf, directs no one's assets, and operates no business whose profits are distributed to suppliers. The point can be tested by asking what would happen if those exercising governance powers ceased to act. The markets would continue to operate under the parameters last set: suppliers could continue to supply and withdraw, borrowers to draw and return assets, and third parties to liquidate undercollateralized positions, and interest would continue to be set by the published formula. Continued oracle services, security maintenance, and risk administration may be important to the market's operation. The pertinent question is whether identifiable persons undertake essential entrepreneurial or managerial activity on which suppliers reasonably rely for their investment returns. The contrast with *Prosper Marketplace* is instructive: there, lenders depended on the platform operator to underwrite, administer, service, and collect the loans that produced their return; here no person performs any of those functions.[20]

B. Howey and Borrow Transactions

Borrow transactions are not investment contracts. A borrower provides collateral to the protocol's smart contracts to obtain the power to draw supplied assets. It invests nothing in any enterprise: collateral is not a payment to any business, and it is intended either to be returned to the borrower or to be acquired by a third-party liquidator. It pools nothing with anyone, and each step, from providing collateral and drawing from a reserve to returning assets and any liquidation, is specific to the borrower's own position. It expects no return: a borrower pays interest for the use of an asset and bears the risk of liquidation of its own collateral, and no person promises it any benefit beyond the programmatic execution of the code. And it relies on no one's managerial efforts; if those exercising governance powers ceased to act, borrowers could continue to provide collateral, draw assets, and return them. No element of *Howey* is satisfied.

C. Reves and Supply Transactions

Supply transactions do not create notes. A note is an instrument containing a promise by a maker to pay a sum to a specified person or bearer.[21] No person issues an instrument, undertakes any

---

[20]In re Prosper Marketplace, Inc., Securities Act Release No. 8984 (Nov. 24, 2008).

[21]Black's Law Dictionary (11th ed. 2019).

duty to repay any supplier, or stands as debtor to anyone. A supplier holds a power to withdraw, exercisable against the smart contract, not a claim against a person. Nor does a receipt token, where a protocol issues one, constitute the instrument a note requires: it is created by the protocol's code as the record by which the supplier causes the contract to return the supplied asset, documents no promise by any person, and confers no right against anyone. With no legal agreement, no debtor-creditor relationship, and no instrument, there is no note, and the *Reves* analysis is complete.

Even if a supply position were characterized as a note, the *Reves* family resemblance factors weigh against treating it as a security.[22] First, no business raises money through supply transactions. Suppliers do not provide assets with the expectation that a central business will use them for its operations; they make assets available with the understanding that borrowers may or may not draw them for any purpose. Second, there is no common trading for speculation or investment. A supplier's position is not an instrument issued by any person; receipt tokens, where issued, track the supplied asset one-for-one or by a published exchange rate, so there is nothing to speculate on, and they are held to be redeemed. Third, reasonable expectations require attention to the terms and marketing of the particular transaction. Suppliers may expect to earn yield; the relevant inquiry includes whether they acquire rights against an issuer or a repayment undertaking, and what representations accompany the transaction. Public information shows the current rate, that the rate is variable, and that withdrawal depends on available liquidity; no person promises a return, principal protection, or repayment. Representations made by a particular platform must be assessed on their own terms and may bear on that platform's position; they do not change the character of the protocol transaction. Fourth, risk-reducing features are present. The Second Circuit has recognized collateral as such a feature.[23] Every draw must be supported by collateral valued above the amount drawn, collateral is valued continuously, positions that fall below their threshold are liquidated by third parties, and parameter changes are subject to notice and timelocks. Collateral provided to a protocol is not collateral in the legal sense: no creditor holds a security interest in it, and no supplier has any claim against any borrower's collateral; the mechanism preserves the solvency of the reserve as a whole rather than securing an obligation owed to an identified creditor. But the assets serve the same risk-reducing function as collateral in a conventional secured transaction, through the design of the market itself rather than reliance on any person's solvency or promises.

D. Reves and Borrow Transactions

---

[22]Reves, 494 U.S. at 66–67.

[23]Kirschner v. JP Morgan Chase Bank, N.A., 79 F.4th 290, 309 (2d Cir. 2023).

Borrow transactions do not create notes. The borrower executes no instrument, makes no promise to repay, and owes nothing to anyone; the consequence of not returning drawn assets is liquidation of its own collateral under published rules, not any person's legal right against the borrower. Even if the drawn balance were characterized as a note, it raises money for no business, is specific to the borrower's own collateral and cannot be traded, would not be regarded by anyone as an investment, and is supported at all times by collateral exceeding the amount drawn. Each factor weighs against security status.

IV. Legal Analysis: Non-Custodial Vaults

A. Reves and Vaults

Participation in a lending protocol through a vault does not involve a note. No party in the vault arrangements described here undertakes a legally enforceable repayment promise on its own credit, and neither an accounting entry nor a receipt token supplies that missing undertaking. The vault does not issue debt or promise repayment, and the collateral and liquidation rules of the protocols into which it deploys reduce the risks associated with the underlying positions. The absence of personal liability is not itself the absence of a note, since nonrecourse and secured obligations can be securities; the threshold point is that the transactions create no enforceable promise by any party to pay any other party. The legal effect of a vault's user terms, the entitlements its smart contract confers, and any representations made by a platform must nevertheless be examined rather than assumed away because users transact through code.

Applying the family resemblance factors: no intermediary issues a debt instrument to raise funds for its own business; there is no instrument offered for speculative trading; the reasonable expectations factor turns on what users are promised, and representations promising principal protection, a fixed rate, or repayment on an intermediary's own credit could change that assessment; and collateral, continuous valuation, and liquidation rules in the underlying protocols, together with timelocks on changes to their parameters, bear on the fourth factor.[24] The marketing and contractual presentation of a vault must be examined separately from the underlying protocol. Representations made by a platform may change the classification of what the platform offers; they do not change the character of the underlying protocol positions, which is determined by the protocol's published rules.

The contrast with intermediated products confirms the point. In *BlockFi*, customers transferred crypto assets to BlockFi in exchange for its contractual promise to repay with interest; BlockFi took ownership and control of the assets, commingled them, and deployed them for its own

[24]Kirschner, 79 F.4th at 309.

account, and the Commission concluded the accounts were notes and securities.[25] In the vaults analyzed here, no intermediary takes title to or possession of user assets, and no one promises repayment on its own credit; a user's exposure is to the assets the vault has deployed under its published strategy, which the vault holds on users' behalf without taking title. *Genesis*, *DeFi Money Market*, and *BarnBridge* follow the same line: in each, a person promised a return or operated a pooled structure that issued positions to investors.[26] The vault arrangements described here contain no such promise and no such issuer.

B. Howey and Vaults

Participation in the vault arrangements described here does not constitute an investment contract. Although users may expect a return from assets deployed through a vault, the arrangements lack the required common enterprise. Users retain ownership of their proportionate interest in the assets the vault holds from time to time, or at a minimum an enforceable proportionate entitlement to those assets exercisable against the smart contract under its published rules, and no other person holds any interest in or control over them. Fixed-strategy vaults also lack the essential managerial efforts of others, and active curation, even where it involves significant investment discretion, does not establish the independently required common enterprise.

i. Horizontal Commonality

Horizontal commonality is the hardest question for an actively curated vault: users receive proportionate returns and bear proportionate losses on assets deployed together under a single strategy. Those facts call for more than an assertion that the assets are held by code rather than by a custodian, since conventional fund interests also account proportionately and permit redemption. The analysis must therefore address whether the common strategy creates a collective investment undertaking with shared gains and losses, and whether the same exposure would arise from individually held positions following identical instructions. Retained ownership and independent redemption rights are relevant facts, but are not individually dispositive.

Under the architecture described, the vault does not finance an enterprise owned by a promoter and conveys no claim against assets owned by anyone else. Users retain enforceable proportionate entitlements and individually exercisable redemption powers, and the curator cannot take assets, redirect proceeds, or remove the limits on its authority. Where the governing terms preserve each user's entitlement, the assets are unavailable to satisfy the liabilities of the software provider, curator, or platform, and none of those actors deploys them for its own

---

[25] In re BlockFi Lending LLC, Securities Act Release No. 11029 (Feb. 14, 2022).

[26] SEC v. Genesis Glob. Cap., LLC, No. 23-CV-00287 (ER), 2024 WL 1116877 (S.D.N.Y. Mar. 13, 2024); In re Blockchain Credit Partners d/b/a DeFi Money Market, Securities Act Release No. 10961 (Aug. 6, 2021); BarnBridge DAO, Securities Act Release No. 11262 (Dec. 22, 2023).

account, there is no promoter-financed undertaking to identify as the enterprise. *Aguilar* supports that reading: shared infrastructure and economic interaction did not establish a venture whose success or failure determined purchasers' fortunes, in contrast to *Kik* and *Telegram*, where purchasers' contributions financed a venture.[27] A curated vault can involve common assets, proportionate profits and losses, and coordinated discretionary activity beyond the bonding-curve facts in *Aguilar*. Its reasoning therefore informs, but does not resolve, whether participants' fortunes are linked through a common investment undertaking or through use of shared infrastructure. A curator's selection and rebalancing of exposures may matter under the efforts element, but it cannot itself establish horizontal commonality, which concerns the relationship among users rather than between users and a curator

A useful counterfactual is to apply the same parameters to separately held user positions: the same curator, the same published rules, the same allocations, the same exposure to the underlying markets. If each user would hold the same identifiable economic exposure and bear gains or losses attributable to its own assets under either implementation, shared execution supports an infrastructure characterization. That comparison is less persuasive if pooled assets create collective exposure, socialized losses, cross-subsidies, or indivisible gains and losses. The counterfactual is strongest where redemptions are independently exercisable, no user's entitlement can be subordinated to another's, and the curator has no residual interest in the assets; it is weaker where positions share indivisible gains and losses that cannot be traced to any user's own exposure. The analogy to separately managed accounts under Rule 3a-4 is instructive for the same reason, although the rule is not an exemption for vaults and does not answer *Howey*.[28] A separately organized fund, claims against an issuer that holds the assets, priority or subordinated interests, or a shared loss waterfall could change the analysis and would require independent review.

ii. Vertical Commonality

Under the strict formulation, a curator that receives a fixed fee or a percentage of the assets in the vault earns that compensation whether users gain or lose; like the commissions in *Brodt* and *Mordaunt*, such fees do not create the required correlation, and *Aguilar* reached the same result for a platform's transaction fees. Performance-based compensation presents a closer question: the Ninth Circuit has found strict vertical commonality where a promoter's compensation was a percentage of investors' profits, although a performance fee alone does not expose the curator to

---

[27] Aguilar, 2026 WL 2568764, at *12–14; Revak, 18 F.3d at 87–88.

[28] 17 C.F.R. § 270.3a-4; Status of Investment Advisory Programs Under the Investment Company Act of 1940, Investment Company Act Release No. 22579, 62 Fed. Reg. 15,098 (Mar. 31, 1997).

users' losses.[29] For vaults with performance-based compensation, the conclusion therefore rests on the absence of horizontal commonality and, where applicable, of essential managerial efforts. The same reasoning applies to incentives offered by a sponsor: fixed rewards funded in advance do not tie the sponsor's fortunes to users' results, while continuing subsidies may present a different question.

Under the broad formulation, which the Second Circuit has rejected because it collapses common enterprise into the efforts element, actively curated vaults require closer analysis because users may rely on the curator's judgment. Timelocks limit the significance of that reliance. In the vaults described here, material changes to permitted strategies, allowlists, upgrade authority, or other controls require approval by independent parties and are subject to a timelock, so that they take effect only after advance notice, during which users may redeem under the existing rules. The curator cannot unilaterally enlarge its mandate or subject users to a new strategy after they have deposited assets. These safeguards do not eliminate the judgment involved in active curation, but they confine it to terms the user accepted in advance and can exit before they change, which is a different kind of dependence from reliance on a promoter's open-ended efforts. Active curation may satisfy the efforts element; it does not dispense with the separate requirement of commonality.

C. Investment Company Act and Vaults

The vault arrangements described here are not investment companies. Section 3(a)(1) defines an investment company by reference to the business and assets of an issuer of securities, so the threshold question under each of its tests is whether there is an issuer.[30] The Act defines "company," "person," and "issuer" broadly, and can reach an unincorporated organization, association, trust, or organized group; the absence of a legal entity does not itself preclude an issuer.[31] But those definitions do not remove the need to identify a person or legally cognizable arrangement whose own activities and assets satisfy Section 3(a)(1). Participation in, or contribution to, a software system does not make a person an issuer. An infrastructure provider that does not solicit assets for its own account, select exposures, own strategy positions, or hold a residual interest remains an infrastructure business; a curator does not become an issuer or owner of the vault's assets by selecting positions within a mandate; and common software does not, without more, turn users into an organized group.[32]

---

[29] Reynolds, 952 F.2d at 1130–31; see also SEC v. Goldfield Deep Mines Co., 758 F.2d 459, 463–64 (9th Cir. 1985).

[30] 15 U.S.C. §§ 80a-2(a)(22), (36), 80a-3(a)(1).

[31] Prudential Ins. Co. of Am. v. SEC, 326 F.2d 383 (3d Cir. 1964).

[32] Tonopah Mining Co. of Nev., 26 S.E.C. 426, 427 (1947).

BarnBridge illustrates the arrangement-level issuer the Act can reach. The Commission found that each pool was an unregistered investment company under Section 3(a)(1)(C): the pools held tokens issued by third-party lending platforms, treated as investment securities exceeding 40 percent of each pool's assets.[33] Three features supported the result, each absent here: identifiable promoters constituted, marketed, and operated the pools and offered positions in them to the public; the positions were claims against the pool, structured in senior and junior classes with fixed and variable returns; and the pools held the assets for their own account. In the vaults described here, no person constitutes or operates an issuer that holds the assets, users hold proportionate interests in the assets themselves with no priority among them, and a user's redemption power runs to the assets rather than to a claim against a vehicle.

The ownership question is whether the architecture has transferred users' assets to a separate vehicle that holds them and issues interests against them. A conventional fund does exactly that: the investor parts with its assets, the fund takes title, and the investor receives a security issued by the fund. The Act reaches arrangements beyond corporate funds, including unit investment trusts, but even there a sponsor organizes the trust, a trustee holds legal title, and the trust issues the units.[34] Proportionate interests and redemption powers therefore do not by themselves distinguish a vault from an investment company. The central inquiry is whether the governing terms, such as the user terms of service, and actual operation establish a distinct issuing arrangement with its own assets and investment business, rather than software executing transactions for users who retain enforceable interests. The absence of a conventional entity or titleholder is relevant but does not decide the question on its own. Ownership rests on state property law and the governing terms; transferring assets to the control of a vault does not by itself transfer legal title, and the vault's technical control for programmatic execution is not ownership for its own account. The bankruptcy treatment of assets in *Celsius* shows why enforceable terms, rather than technological labels, matter.[35] For vaults with independently enforced approval requirements and meaningful timelocks, a curator cannot unilaterally change ownership, redemption, or strategy permissions; users may have an opportunity to exit before changes take effect. The analysis must still account for emergency powers, available liquidity, and any coordinated route to changing these protections. The result could differ if governing terms vested ownership in a trust, fund, or other distinct arrangement, or if users' rights ran solely against such a vehicle.

---

[33]BarnBridge DAO, Securities Act Release No. 11262, Investment Company Act Release No. 35076 (Dec. 22, 2023) (settled order).

[34]15 U.S.C. § 80a-4(2).

[35]In re Celsius Network LLC, 647 B.R. 631, 650–56 (Bankr. S.D.N.Y. 2023).

D. Investment Advisers Act and Vault Arrangements

The Advisers Act may apply to persons who, for compensation, engage in the business of advising others about securities, including a curator that selects securities, determines allocations, or rebalances a securities strategy for compensation. The Act's definition of security is the Securities Act definition, narrower than the "investment securities" concept of the Investment Company Act, so the inquiry is whether anyone advises on securities so defined; if the only assets or interests on which a curator advises are outside the applicable statutory definition of a security, that activity alone does not constitute securities investment advice.[36] Other roles are assessed on their own facts: configuring parameters or publishing a general-purpose template may be software design, an allocator that merely executes another person's instructions may perform no advisory function, protocol governance concerned with market safety is not securities advice to particular users merely because a vault deploys into that protocol, and a person exercising narrowly constrained emergency powers may not be in the advisory business. Registration is not a condition for the absence of an investment contract or an issuer, and a non-custodial design does not displace otherwise applicable adviser obligations, including Section 205 and Rule 205-3 where compensation is performance-based.

Bounded allocation authority is distinct from custody. Rule 206(4)-2 defines custody to include holding client assets or having any authority to obtain possession of them, and the Commission has not treated ordinary trading authority as custody where the adviser can direct authorized transactions but cannot withdraw client assets.[37] In the vaults described here, code enforces that separation: the curator can direct permitted deployments, while the contract rejects unapproved destinations, blocks transfers to addresses the curator controls, and leaves withdrawal initiation and destination with the user. Timelocks add a further constraint, since a change that would add a withdrawal destination, expand an allowlist, or relax redemption restrictions requires independent approval and delayed execution during which users may redeem. The review should follow every credible path to possession, including allowlist changes, adapters the curator controls, pricing sources, upgrades, redemption addresses, and coordination with administrators holding complementary keys, and should evaluate those powers in combination. The comparison with ordinary trading authority is strongest where allocation is restricted to preapproved protocols and assets, proceeds can return only to the vault, redemptions remain independently exercisable, and no actor can change those constraints unilaterally. A pause that merely stops new

---

[36] 15 U.S.C. § 80b-2(a)(18); see Meghji v. Into the Block Corp., No. 22-10964 (Bankr. S.D.N.Y. Mar. 10, 2025).

[37] 17 C.F.R. § 275.206(4)-2(d)(2); Custody of Funds or Securities of Clients by Investment Advisers, Investment Advisers Act Release No. 2968, 75 Fed. Reg. 1456, 1458 (Jan. 11, 2010). "Possession" is used here in the sense of the rule, as the Commission applies it to uncertificated securities, bank balances, and other intangibles: the ability to hold client assets or to obtain them, including by withdrawing them or directing them to oneself or a third party. It does not import the common-law concept of possession of tangible property.

transactions does not give the curator custody, and under the designs described here the curator cannot use a pause, upgrade, or other administrative power to obtain possession of user assets. Even if a curator's authority were characterized as custody, the same controls bear on safeguarding risk.

V. Implications for Regulatory Guidance

Regulatory guidance could clarify how existing statutory requirements apply to limited technical, market-administrative, and protective functions under the defined arrangements. In particular, the presence of DAO governance adjusting ordinary lending and risk parameters should not be treated as satisfying *Howey*'s essential managerial efforts requirement; the independent common enterprise requirement must also be applied. These recommendations concern the application of existing law. The Commission need not characterize all decentralized activity as outside the securities laws; it can instead confirm that status follows the issuance, advice, custody, solicitation, and control functions a person actually performs.

First, the Commission should confirm that bounded market administration, including disclosed technical risk parameters and protective governance functions, does not alone establish the essential managerial efforts required under *Howey*. That confirmation should not extend categorically to discretionary portfolio management, ongoing rate subsidies, or representations that users will rely on persons to generate returns.

Second, the Commission should confirm that investment contract status does not turn on immutability of the protocol. A lending protocol whose governance sets or revises interest-rate models, eligible collateral, loan-to-value limits, and liquidation thresholds does not, for that reason, depend on essential managerial efforts: these are rules for the operation of a lending market, not discretionary management of user positions. And even where governance conduct constitutes significant efforts, *Howey* still requires a common enterprise.

Third, any Commission interpretation of governance should distinguish routine maintenance, security incident response, and bounded risk administration from activity that actively drives returns. Public disclosure, voting, and timelocks mitigate control and reliance, but do not by themselves prove that managerial efforts are absent.

Fourth, guidance concerning receipt tokens should distinguish rights inherent in a token from any broader arrangement of which issuance is a part, and should address the transaction a token records rather than the token itself, so that a supplier's position is classified the same way whether or not a protocol issues a token to evidence it. Guidance concerning vault operators and platforms should address the powers actually exercised, including strategy selection, valuation, redemption, and administrative changes, and should focus on directly exercisable redemption

powers, enforceable proportionate entitlements, the substance of shared gain-and-loss arrangements, independent approval of changes to permissions, and testing of indirect routes to possession, without elevating any vendor-specific control design into a mandatory template.

VI. Conclusion

The federal securities laws regulate particular legal relationships and allocations of rights and authority. New technologies may perform familiar financial functions without necessarily creating the instruments, enterprises, or relationships those laws regulate. For decentralized lending protocols, the analysis turns on whether any person issues a note or takes on a duty to repay, whether suppliers participate in a common enterprise, and whether their returns depend on the essential managerial efforts of others. Under the designs examined here, supply and borrow transactions create no debt instrument or duty to repay; suppliers do not finance a common enterprise or share fortunes with one another or with a promoter; and the interest they earn is determined by supply and demand under published rules.

For non-custodial vaults, users retain independently exercisable redemption powers and proportionate interests in identifiable assets, without an issuer undertaking to repay or a promoter sharing their fortunes. Curators may exercise discretion over strategies, but their authority is subject to enforceable limits, including independent approval and timelocks before any material change, and they cannot withdraw or obtain control of user assets. Shared infrastructure, proportionate accounting, and governance arrangements do not, standing alone, establish a common enterprise, reliance on essential managerial efforts, or the existence of an investment company. Where a person exercises compensated discretion over securities, the Advisers Act may apply; where a person can obtain possession of assets, custody requirements may apply.

Regulatory clarity should follow from what users own, what rights they can exercise, and what authority others hold over their assets. Those principles inform both the legal conclusions reached here and the recommendations made to the Commission.