



# DeFi framework

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**This framework consists of three main components: risk categories, risk types, and risk scores.**

- The first element assesses risk categories, delineating the comprehensive areas of risk under consideration in the DeFi space. These categories contain protocol risk, asset risk, pool risk and chain risk, each representing distinct dimensions that can impact DeFi investments.
- The second element points specific facets of risk subject to measurement and analysis within each category. A predefined set of risk types, include unique features or characteristics influencing the risk level of DeFi protocols. Each risk type incorporates individual risk items, such as TVL and maturity, contributing to the scoring of that particular risk type (e.g., Chain Maturity).
- The third component aims to risk scores, numerical values assigned to each risk type based on estimations of its probability of failure. Estimation methods incorporate both qualitative and quantitative approaches, drawing from historical data and simulations. Periodic updates are implemented to align with the latest developments and alterations in the DeFi landscape.

It can be resume with the following table:

Risk Categories	Risk types	Risk items
Protocol	Protocol Code quality	# of audits, team anonymity, # of experienced auditors, # of hacks
	Protocol Maturity	Maturity of last version, maturity of first version, TVL, governance issues, governance concentration, access controls
	Protocol Design	Oracle type, reflexivity, job types
Asset	Asset Strength	Intrinsic value or collateralization, market capitalization, centralization, stablecoin volatility
	Tokenomics	Inflation, reflexivity
Pool	Pool Design	Fee sharing, staking, yield, lending, collateral type, market making, options, insurance
Blockchain	Chain Maturity	TVL, maturity
	Chain Design	# of validators, concentration of top validators, validator economics, warm-up/cool-down period
	Roll-up Design	Rollup type, upgradeability, validator failure, sequencer failure
	Chain reliability	Blockchain halts

Let's go through each category:

**overall score: min: 46/max: 196**

### Protocol risk:

#### Protocol Code Quality (min:4 /max:13)

##### How many hacks since launch?

This risk score measures the frequency of hacks a protocol endures across versions. A hack exploits vulnerabilities, resulting in fund loss. If a protocol faces two or more hacks, it's deemed highly risky, indicating potential security issues. Conversely, zero hacks suggest a less risky protocol, showcasing resilience and secure code.

Risk Score	Number of Hacks	Description
5 (most risky)	2+	The protocol has been hacked many times since launch
4	1 - unaddressed	The protocol has been hacked once since launch and has not fixed the problem
3	1 - addressed	The protocol has been hacked once since launch and has fixed the problem
2	0 in current version, but 1 - addressed in last version	The protocol has not been hacked in the current version, but was hacked once in the last version and fixed the problem
1 (less risky)	0 in any versions	The protocol has not been hacked at all since launch, across versions

- **How many audits of the deployed contract?**

This risk score is a measure of the number of public audits performed on a protocol's core contracts. A public audit aims to identify and fix any bugs, vulnerabilities, or errors in the core contract that could compromise the security or functionality of the protocol.

Risk Score	Number of Audits	Description
3 (most risky)	0	The core contract has not been checked or tested by any auditor
2	1	The core contract has been checked or tested by one auditor
1 (least risky)	2+	The core contract has been checked or tested by many auditors

- **Is the team anonymous?**

This risk score is a measure of whether the team is anonymous or public. A team is anonymous if the identities and backgrounds of the team members are not disclosed or verified by any credible source. A protocol with a public team is considered less risky because it means that the users have some information and assurance about the team's qualifications and reputation

Risk Score	Team Anonymity	Description
2 (most risky)	Anonymous	No one knows or can prove who the team is or what they have done before
1 (least risky)	Public	Everyone knows or can prove who the team is and what they have done before

- **How many experienced auditors?**

This risk score is a measure of the number of experienced auditors that have reviewed the core contracts. A protocol with several qualified audits is considered less risky because it means that the core contract has been extensively examined.

Risk Score	Number of Qualified Auditors	Description
3 (most risky)	0	The core contract has not been checked by any experienced auditor
2	1	The core contract has been checked by one experienced auditor
1 (least risky)	2+	The core contract has been checked by many experienced auditors

## Protocol Maturity (min:11 /max:51)

- **What is the maturity of the latest protocol version?**

This risk score evaluates how long the latest version of a protocol has been running on the mainnet without any major issues or incidents.

Risk Score	Maturity	Description
5 (most risky)	0-3 months	The newest version of the protocol has been on the mainnet for less than 3 months
4	3-6 months	The newest version of the protocol has been on the mainnet for 3 to 6 months
3	6-9 months	The newest version of the protocol has been on the mainnet for 6 to 9 months
2	9-12 months	The newest version of the protocol has been on the mainnet for 9 to 12 months
1 (least risky)	12+ months	The newest version of the protocol has been on the mainnet for more than a year

- **What is the maturity of the first protocol version?**

This risk score evaluates how long a protocol has been in existence and operating on the mainnet since its first version.

Risk Score	Maturity	Description
5 (most risky)	0-6 months	The protocol has been on the mainnet for less than 6 months since its first version
4	6-12 months	The protocol has been on the mainnet for 6 to 12 months since its first version
3	12-18 months	The protocol has been on the mainnet for 12 to 18 months since its first version
2	18-24 months	The protocol has been on the mainnet for 18 to 24 months since its first version
1 (least risky)	24+ months	The protocol has been on the mainnet for more than two years since its first version

- **What is the total value locked for the protocol?**

This risk score evaluates how much trust and confidence a protocol has earned from users based on how much capital they have deposited into it.

Risk Score	TVL Rank	Description
5 (most risky)	Over top 10	The protocol has a low TVL and is not very popular or trusted by users
4	Top 10	The protocol has a moderate TVL and is somewhat popular or trusted by users
3	Top 5	The protocol has a high TVL and is very popular or trusted by users
2	Top 3	The protocol has a very high TVL and is extremely popular or trusted by users
1 (least risky)	Top 1	The protocol has the highest TVL and is the most popular or trusted by users

- **What is the total volume generated by the protocol?**

This risk score evaluates how much money has been exchanged on the platform over the last year. It shows the attractiveness of the protocol for monitoring trading or swapping assets by DeFi users.

Risk Score	Volume Rank	Description
5 (most risky)	Over Top 10	The protocol has a low trading volumes and is not very popular or trusted by users
4	Top 10	The protocol has a moderate trading volumes and is somewhat popular or trusted by users
3	Top 5	The protocol has a high trading volumes and is very popular or trusted by users
2	Top 3	The protocol has a very high trading volume and is extremely popular or trusted by users
1 (least risky)	Top 1	The protocol has the highest trading volume and is the most popular or trusted by users

- **What is the total revenue generated by the protocol?**

This risk score evaluates the portion of fees kept by the protocol (and its tokenholders) on the platform over the last year. It shows what percentage of the fees the protocol captures for itself.

Risk Score	Revenue Rank	Description
5 (most risky)	Over Top 10	The protocol has low revenues and is not able to kept fees from its volumes
4	Top 10	The protocol has moderate revenues and is not able to kept fees from its volumes
3	Top 5	The protocol has high revenues and is not able to kept fees from its volumes
2	Top 3	The protocol has very high revenues and is not able to kept fees from its volumes
1 (least risky)	Top 1	The protocol has the highest revenues and is not able to kept fees from its volumes

- **What is the total earnings generated by the protocol?**

This risk score evaluates the net income of a protocol (excl. off-chain expenses) on the platform over the last year. It shows how much the protocol earns after expenses, i.e. if the protocol has an economically sustainable business or not.

Risk Score	Revenue Rank	Description
5 (most risky)	Over Top 10	The protocol has low earnings and is not able to kept fees from its volumes
4	Top 10	The protocol has moderate earnings and is not able to kept fees from its volumes
3	Top 5	The protocol has high earnings and is not able to kept fees from its volumes
2	Top 3	The protocol has very high earnings and is not able to kept fees from its volumes
1 (least risky)	Top 1	The protocol has the highest earnings and is not able to kept fees from its volumes

- **Are there any governance issues?**

This risk score evaluates how well the protocol's governance system works and how it handles any issues or disputes that may arise.

Some examples of governance issues are:

- Low: Timelock contract shorter than 3 years that grants core team members tokens
- Medium: Unintended release of tokens from the staking or liquidity mining contracts
- Critical: Has the team been involved in public scandals (personally or in a professional capacity) such as self-dealing, conflict of interests or about their background?

Risk Score	Description
5 (most risky)	Multiple Critical issues
4	At least 1 issue of Critical severity
3	At least 1 issue of Medium severity but none higher
2	At least 1 issue of Low severity but none higher
1 (least risky)	No other governance issues

- **How concentrated are governance holders?**



This risk score evaluates how decentralized and diverse the protocol's governance holders are. Governance holders are the entities that own or control the governance token of a protocol, which gives them the right to vote on proposals or changes that affect the protocol.

Risk Score	Governance Concentration (>51% voting power)	Description
5 (most risky)	5 or less holders	The protocol is highly centralized and vulnerable to capture by a few parties
4	6 to 20 holders	The protocol is moderately centralized and susceptible to influence by a small group of parties
3	21 to 50 holders	The protocol is somewhat decentralized and diverse, but still has room for improvement
2	50 to 100 holders	The protocol is fairly decentralized and diverse, but may face challenges in coordination or representation.
1 (least risky)	More than 100 holders or N/A	The protocol is very decentralized and diverse or does not use a governance token

- **How can the protocol be upgraded?**

Risk Score	Upgrade Process	Description
5 (most risky)	EOA (Externally Owned Account) wallet	The protocol can be upgraded by one person or account that has full control over the smart contract
4	Multisig wallet	The protocol can be upgraded by a group of people or accounts that have shared control over the smart contract
3	DAO vote	The protocol can be upgraded by the members of a decentralized organization that have voting rights over the smart contract
2	Fully immutable with on-chain voting for parameter updates	The protocol's core contracts cannot be upgraded at all, but there are certain parameters that can be updated via governance
1 (least risky)	Fully immutable	The protocol cannot be upgraded at all, and the smart contract code and settings are fixed

- **What multisig configuration does the protocol use?**

Risk Score	Multisig Configuration	Description
3 (most risky)	1 signer (or EOA)	The protocol can be controlled by just one person or account that has full access to the smart contract
2	<4 signers	The protocol can be controlled by a small group of people or accounts that have shared access to the smart contract
1 (least risky)	>4 signers	The protocol control is distributed amongst a large group of people or accounts that have shared access to the smart contract

- **What timelock configuration does the protocol use?**

This risk score evaluates how safe and transparent the protocol's timelock configuration is. A timelock is a feature that delays the execution of a transaction or function for a certain period of time after it has been approved.

Risk Score	Timelock Configuration	Description
3 (most risky)	No timelock (or no documentation)	The protocol can be changed without any delay or transparency
2	<48hrs	The protocol can be changed with a short delay and minimal transparency
1 (least risky)	>=48hrs	The protocol can be changed with a long delay and high transparency

## Protocol Design (min:3 /max:18)

- **What type of oracle is used?**

This risk score evaluates the type of oracle the protocol relies on for its core services. An oracle is a third-party service that connects smart contracts with external data sources. Oracles can use different methods to calculate the average price of an asset over a period of time, such as TWAP, VWAP, or Multiple Feeds.

Risk Score	Oracle Type	Description
6 (most risky)	No TWAP or Multiple Feeds or no documentation	The protocol uses oracles that do not have TWAP or Multiple Feeds or does not say what type of oracle it uses
5	Only TWAP	The protocol uses oracles that only have TWAP
4	Only TWAP (geometric mean)	The protocol uses oracles that only have TWAP (geometric mean), which is more accurate than regular TWAP
3	Only Multiple Feeds	The protocol uses oracles that only have Multiple Feeds
2	Both TWAP and Multiple Feeds	The protocol depends on oracles that have both TWAP and Multiple Feeds, which is more accurate and reliable than other types
1 (least risky)	No oracles needed	The protocol does not depend on any oracles

- **Does the protocol have any convex relationships?**

This risk score evaluates how reflexive or circular the protocol's tokenomics are. This can create instability, volatility, or manipulation risks for the protocol and its users. Therefore, the less reflexive or circular the tokenomics are, the lower the risk of the protocol being unsustainable.

Risk Score	Convexity	Description
4 (most risky)	High	The protocol's purpose is selling its own token and the token has no use other than speculation. The token price is highly dependent on demand and supply, which can be easily manipulated or affected by external factors.
3	Moderate	The protocol has a purpose and uses its token in a reflexive way. The token price affects the utility or reward of the token, which influences the user behavior and demand for the token.
2	Low	The protocol has a purpose and uses its token in a reflexive way but there are mechanisms to stop reflexivity. The token price affects the utility or reward of the token, but there are caps, floors, burns, locks, or other features that limit the feedback loop and stabilize the token price.
1 (least risky)	None	The protocol has non-reflexive tokenomics. The token price does not affect the utility or reward of the token, and there are no feedback loops or circular dependencies in the tokenomics.

- **What job type does the protocol fall under?**

This risk score evaluates how complex and risky the protocol's job type is. Therefore, the more complex and risky the job type is, the higher the risk of the protocol being hacked, exploited, or outperformed.

Risk Score	Job Type	Description
8 (most risky)	Insurance	The protocol provides coverage for losses or damages caused by unforeseen events or risks. The protocol faces high complexity, as well as potential fraud or undercollateralization issues. The protocol also needs to maintain sufficient reserves and liquidity to pay out claims.
7	Bridge	The protocol enables cross-chain interoperability and asset transfers between different blockchains. The protocol faces high technical challenges and security risks, as well as potential network congestion or compatibility issues. The protocol also needs to ensure trustless and decentralized bridging mechanisms.
6	Options	The protocol enables users to buy or sell the right to trade an underlying asset at a predetermined price and time. The protocol faces high volatility and competition, as well as potential liquidity or oracle issues. The protocol also needs to ensure fair and efficient pricing and settlement mechanisms.
5	Derivatives	The protocol enables users to trade contracts that derive their value from an underlying asset or index. The protocol faces high leverage and complexity, as well as potential manipulation or liquidation issues. The protocol also needs to ensure accurate and timely margin and risk management mechanisms.
4	Yield	The protocol enables users to earn passive income by staking or farming various assets or tokens. The protocol has low complexity but may have potential inflation or sustainability issues. The protocol also needs to ensure consistent and diversified yield sources and strategies.
3	CDP & Lending	The protocol enables users to create collateralized debt positions (CDPs) or lend and borrow various assets. The protocol faces high demand, as well as potential overcollateralization or liquidation issues. The protocol also needs to ensure stable and attractive interest rate mechanisms.
2	Market Making	The protocol enables users to provide liquidity and facilitate trading for various assets or pairs. The protocol faces high capital and competition, as well as potential slippage or impermanent loss risks. The protocol also needs to ensure optimal fee and reward mechanisms.
1 (least risky)	Staking	The protocol enables users to stake their native tokens to secure the network and earn rewards. The protocol faces low risk and regulation but may have potential lockup or opportunity cost issues. The protocol also needs to ensure fair and transparent staking mechanisms and policies.

## Asset risk:

Asset strength (min:5 /max:23)

- Does the asset have intrinsic value or is it fully collateralized?

Risk score	Collateralisation	Description
5 (most risky)	Under-collateralized by less than 100%	Asset does not have enough backing to cover the full value of the asset in case of redemption or liquidation.
4	Might be undercollateralized	Asset has uncertainty about the level of backing or the quality of the collateral.
3	Fully collateralized above 100%	Asset has enough backing to cover the full value of the asset in case of redemption or liquidation.
2	Intrinsic value as native protocol token	Asset derives its value from its own properties or utility, such as being used for transactions, governance, or staking.
1 (less risky)	Intrinsic value as native blockchain token	Asset derives its value from its own properties or utility, such as being used for transactions, governance, or staking on a blockchain network

- What is the asset's market capitalization?

This score evaluates how large and established the asset's market is based on its total market capitalization.

Risk Score	Market Cap	Description
3 (most risky)	Less than \$1 billion USD	Asset has a small market cap, meaning that it has a low level of adoption, recognition, and liquidity. This exposes the asset to high volatility and price manipulation.
2	Between \$1 billion and \$10 billion USD	Asset has a medium market cap, meaning that it has a moderate level of adoption, recognition, and liquidity. This exposes the asset to moderate volatility and price manipulation.
1 (least risky)	More than \$10 billion USD	Asset has a large market cap, meaning that it has a high level of adoption, recognition, and liquidity. This reduces the volatility and price manipulation of the asset.

- What is the concentration of the asset's supply?

Risk Score	Supply Concentration (>85% of total supply)	Description
5 (most risky)	5 or less holders	The protocol is highly centralized and vulnerable to capture by a few parties
4	6 to 20 holders	The protocol is moderately centralized and susceptible to influence by a small group of parties
3	21 to 50 holders	The protocol is somewhat decentralized and diverse, but still has room for improvement
2	50 to 100 holders	The protocol is fairly decentralized and diverse
1 (least risky)	More than 100 holders or N/A	The protocol is very decentralized and diverse

- **Does the asset have any centralized dependencies?**

This score evaluates how decentralized and independent the asset is from any centralized entities or intermediaries. Therefore, the fewer centralized dependencies the asset has, the lower the risk of it being affected or disrupted by external factors.

Risk Score	Number of Dependencies	Description
4 (most risky)	3+ centralized entities	Asset has a high level of centralization, meaning that it has a low level of autonomy, security, and resilience. This exposes the asset to a high risk of interference, disruption, or loss by third parties.
3	2 centralized entities	Asset has a moderate level of centralization, meaning that it has a moderate level of autonomy, security, and resilience. This exposes the asset to a moderate risk of interference, disruption, or loss by third parties.
2	1 centralized entity	Asset has a low level of centralization, meaning that it has a high level of autonomy, security, and resilience. However, it still has some exposure to the risk of interference, disruption, or loss by a third party.
1 (least risky)	None	Asset has a high level of decentralization, meaning that it has a high level of autonomy, security, and resilience. It does not have any exposure to the risk of interference, disruption, or loss by third parties.

- **If the asset is a stablecoin, how closely does it follow its peg?**

This score evaluates how stable and consistent the asset's price is relative to its target value. Therefore, the smaller the deviation from the peg, the lower the risk of the asset losing its stability or utility.

Risk Score	Peg Deviation	Description
5 (most risky)	>100bps	Asset has a high level of deviation from its peg, meaning that it has a low level of stability and consistency. This exposes the asset to high volatility and inefficiency.
4	≤100 bps	Asset has a moderate level of deviation from its peg, meaning that it has a moderate level of stability and consistency. This exposes the asset to moderate volatility and inefficiency.
3	≤50 bps	Asset has a low level of deviation from its peg, meaning that it has a high level of stability and consistency. This reduces the volatility and inefficiency of the asset.
2	≤20 bps	Asset has a very low level of deviation from its peg, meaning that it has a very high level of stability and consistency. This minimizes the volatility and inefficiency of the asset.
1 (least risky)	≤10 bps	Asset has a negligible level of deviation from its peg, meaning that it has an almost perfect level of stability and consistency. This eliminates the volatility and inefficiency of the asset.

## Asset Tokenomics (min:3 /max:12)

- Is the asset inflationary?

This risk score evaluates how the asset's supply affects its value over time. Therefore, the more limited or predictable the supply of an asset is, the lower the risk of it losing its value or purchasing power due to inflation.

Risk Score	Inflation	Description
3 (most risky)	Infinite supply	Asset has an infinite supply, meaning that there is no limit to how many units can be created. This exposes the asset to high inflation and dilution.
2	Infinite supply with burn mechanism	Asset has an infinite supply with a burn mechanism, meaning that some units are destroyed under certain conditions. This reduces the inflation and dilution of the asset.
1 (least risky)	Supply capped	Asset has a supply cap, meaning that there is a limit to how many units will ever exist. This protects the asset from inflation and dilution.

- Does the asset have a reflexive design?

This risk score evaluates how the asset's price affects its utility or demand and vice versa. Reflexivity is a phenomenon where the price of an asset influences the behavior of its users, which in turn influences the price of the asset.

Risk Score	Reflexivity	Description
3 (most risky)	Concerning reflexivity	Asset has a high level of interdependence between its price and its utility or demand. This exposes the asset to a high risk of instability or collapse due to feedback loops or spirals.
2	Non-concerning reflexivity	Asset has a moderate level of interdependence between its price and its utility or demand. This exposes the asset to a moderate risk of instability or collapse due to feedback loops or spirals.
1 (least risky)	Non-detected/existing reflexivity	Asset has a low or negligible level of interdependence between its price and its utility or demand. This protects the asset from instability or collapse due to feedback loops or spirals.

- **Which mechanism are available in token's tokenomics ?**

This risk score evaluates which mechanism(s) are able in token's tokenomics. All mechanisms define how the asset is working within a particular blockchain ecosystem. These mechanisms are particularly important to attract and keep new users in the platform.



Risk Score	Mechanism	Description
6 (most risky)	Holding	Asset has no value accrual meaning no interest for token holders.
5	Holding + staking (voting power)	Asset has no value accrual meaning no interest for token holders if there are not interested by participating in DAO's decisions
4	Holding + staking (voting + revenue catching)	Asset has one value accrual meaning low interest for token holders if the protocol is not able to generate volume
3	Holding + staking (voting + revenue catching) + autocompounding	Asset has two value accrual meaning moderate interest for token holders if the protocol is not able to generate volume. However, the protocol is maximising the return by compounding the rewards.
2	Holding + staking (voting + revenue catching) + autocompounding + burning	Asset has two value accrual meaning high interest for token holders if the protocol is able to generate volume. Moreover, the burning mechanism can increase buying pressure on asset's price
1 (least risky)	Holding + staking (voting + revenue catching) + autocompounding + burning + auction	Asset has two value accrual meaning very high interest for token holders if the protocol is able to generate volume. Here, burning and auction can drastically increase the buying pressure on asset's price.

## Pool:

### Pool Design (min:8 /max:29)

- Does the pool have any fee-sharing mechanisms?

This risk score assesses fee-sharing pools where users deposit collateral to receive protocol-generated fees. These pools distribute fees to liquidity providers but expose them to volatility risks. A less volatile collateral asset reduces the risk of losing value or fees through fee sharing.

Risk Score	Fee-sharing Type	Description
3 (most risky)	Fee-sharing with native token	Asset has a high level of volatility, meaning that its price can fluctuate significantly due to market forces or protocol events
2	Fee sharing with crypto assets (e.g., BTC, ETH)	Asset has a moderate level of volatility, meaning that its price can fluctuate moderately due to market forces or network events
1 (less risky)	Fee sharing with stablecoin	Asset has a low level of volatility, meaning that its price is relatively stable due to its peg or backing

- **Does the pool require staking an asset to secure a network?**

This risk score evaluates the risk of a staking pool where users deposit an asset as collateral to secure a network.

Risk Score	Staking Type	Description
2 (most risky)	Slashing	The pool has a slashing mechanism that can reduce the stake of a validator if they misbehave or underperform. This increases the risk of losing funds.
1 (least risky)	No slashing	The pool does not have a slashing mechanism that can reduce the stake of a validator. This lowers the risk of losing funds.

- **Is the pool managed by a yield optimizer?**

This risk score evaluates the risk of a pool that is managed by a yield optimizer. The more complex and numerous the strategies are, the higher the risk of errors, failures, or exploits. The need for off-chain computations also increases the risk of manipulation, delay, or interruption.

Risk Score	Yield Strategy	Description
3 (most risky)	6+ strategies or requires off-chain computations	The pool involves a high complexity yield strategy, which increases the risk of errors, failures, or exploits due to the high number of interactions. The off-chain computations also increase the risk of manipulation, delay, or interruption due to the reliance on external data sources or services.
2	3-5 strategies or requires off-chain computations	The pool involves a medium complexity yield strategy, which increases the risk of errors, failures, or exploits due to the moderate number of interactions. The off-chain computations also increase the risk of manipulation, delay, or interruption due to the reliance on external data sources or services.
1 (least risky)	1-2 dependencies or simple rebalancing	This pool involves a low complexity yield strategy, which lowers the risk of errors, failures, or exploits due to the low number of interactions. The simple rebalancing also does not require off-chain computations and reduces the risk of manipulation, delay, or interruption.

- **Does the pool have exposure to any lending strategies?**

This risk score evaluates the risk of a pool that has exposure to any lending strategies. The lower the collateralization and the higher the leverage, the higher the risk of liquidation, insolvency, or principal loss.

Risk Score	Lending Strategy	Description
4 (most risky)	Recursive leverage (>2x)	The pool involves a lending strategy that uses leverage recursively, meaning that it borrows funds to lend them again and repeats the process. This greatly increases the risk of liquidation, insolvency, or loss due to the high exposure and complexity of the strategy.
3	Leverage (>1x)	The pool involves a lending strategy that uses leverage, meaning it borrows funds to increase returns. This increases the risk of liquidation, insolvency, or loss due to the high exposure and complexity of the strategy.
2	Low collateralized positions	The pool involves a lending strategy that uses low collateralized positions, meaning that it lends funds with a low ratio of collateral to loan value. This increases the risk of liquidation, insolvency, or loss due to the low security and stability of the positions.
1 (least risky)	Overcollateralized position	The pool involves a lending strategy that uses overcollateralized positions, meaning that it lends funds with a high ratio of collateral to loan value. This lowers the risk of liquidation, insolvency, or loss due to the high security and stability of the positions.

- **Does the pool have exposure to any collateralized assets?**

This risk score evaluates the risk of a pool that has exposure to any collateralized assets. The lower the quality and liquidity and the higher the volatility of the collateral asset are, the higher the risk of loss or facing liquidations.

Risk Score	Collateralization	Description
6 (most risky)	Long-tail assets	The pool is collateralized by long-tail assets that have low demand, low liquidity, and high volatility. This increases the risk of losing value, facing liquidation, or experiencing delays due to the poor market conditions and price fluctuations of these assets.
5	Liquidity Provider (LP) tokens	The pool is collateralized by LP tokens that represent a share of a liquidity pool. This increases the risk of losing value, facing liquidation, or experiencing delays due to the lack of available price oracles to price the LP tokens. A price oracle is a service that provides reliable and up-to-date price information for an asset. Without a price oracle, the LP tokens may be under- or over-valued in the lending market, which makes them more vulnerable to exploitation by arbitrageurs or attackers.
4	Native protocol token OR Algo-stablecoins OR Liquid Staking Derivatives (LSDs) from Watch Out-rated protocols	<p>The pool is collateralized by one of these types of assets:</p> <ul style="list-style-type: none"> <li>- Native protocol token: a token that is issued by a specific protocol.</li> <li>- Algo-stablecoin: a token that is algorithmically pegged to a stable asset such as USD.</li> <li>- Liquid Staking Derivative (Watch Out rating): a token that represents a staked asset in a blockchain network.</li> </ul> <p>These types of assets increase the risk of losing value, facing liquidation, or experiencing delays due to their high volatility, low liquidity, and high dependency on the performance and security of their underlying protocols.</p>
3	Highly traded assets OR LSDs from Average-rated protocols	<p>The pool is collateralized by one of these types of assets:</p> <ul style="list-style-type: none"> <li>- Highly traded asset: an asset that has high demand, high liquidity, and low volatility in the market.</li> <li>- Liquid Staking Derivative (Average rating): a token that represents a staked asset in a blockchain network.</li> </ul> <p>These types of assets lower the risk of losing value, facing liquidation, or experiencing delays due to their good market conditions and price stability. However, they still have some exposure to the performance and security of their underlying protocols.</p>

2	Native chain tokens OR LSDs from Good or Best-rated protocols	<p>The pool is collateralized by one of these types of assets:</p> <ul style="list-style-type: none"> <li>- Native chain token: a token that is native to and is used for network payments on a specific blockchain.</li> <li>- Liquid Staking Derivative (Good or Best rating): a token that represents a staked asset in a blockchain network.</li> </ul> <p>These types of assets lower the risk of losing value, facing liquidation, or experiencing delays due to their high demand, high liquidity, and high security in the market. They also have less exposure to the performance and security of their underlying protocols.</p>
1 (least risky)	Highly liquid, on-chain assets OR fully redeemable stablecoins	<p>The pool is collateralized by one of these types of assets:</p> <ul style="list-style-type: none"> <li>- Highly liquid, on-chain asset: an asset that has high demand, high liquidity, and low volatility.</li> <li>- Fully redeemable stablecoin: a token that is fully backed by and redeemable for a stable asset such as USD.</li> </ul> <p>These types of assets lower the risk of losing value, facing liquidation, or experiencing delays due to their excellent market conditions and price stability. They also have minimal exposure to the performance and security of their underlying protocols.</p>

- **Does the pool have exposure to market making?**

This risk score evaluates the risk of a pool that has exposure to decentralized exchanges (DEXs). The more volatile and divergent the assets are, the higher the risk of divergence loss.

Risk Score	Market Making Type	Description
4 (most risky)	Volatile-Volatile pools	Volatile-volatile pools consist of a pair of assets where both are volatile (such as BTC-ETH). This increases the risk of divergence loss due to the high volatility and potential divergence of both assets.
3	Volatile-USD pools	Volatile-USD pools consist of a pair of assets where one is volatile (such as BTC), and the other is stable (such as USDC). This increases the risk of divergence loss due to the high volatility and potential divergence of the volatile asset.
2	Stable pools	Stable pools consist of a pair of assets where both are stable (such as two stablecoins). This lowers the risk of divergence loss due to the low volatility and minimal divergence of both assets.
1 (least risky)	Central limit order book (CLOB)	Central limit order book (CLOB) systems provide liquidity for a pair of assets where buyers and sellers can place orders at different prices. This eliminates the risk of divergence loss due to the ability to adjust the price and quantity of the orders according to market conditions.

- **Does the pool have exposure to options?**

This risk score evaluates the risk of a pool that has exposure to decentralized options. The more complex and risky the option strategy is, the higher the risk of loss.

Risk Score	Options Strategy	Description
3 (most risky)	Advanced option strategies (e.g. straddles)	Advanced option strategy, such as straddles, involves buying or selling both a call and a put option with the same strike price and expiration date. This increases the risk of losing value due to the high cost and complexity of the strategy, as well as the high volatility and uncertainty of the underlying asset.
2	Secured put vaults	Secured put vaults consist of selling put options and holding enough stable collateral to buy the underlying asset if the option is exercised. This lowers the risk of losing value due to the premium received from selling the option and the security of having enough collateral. However, there is still some risk of losing value if the underlying asset drops significantly below the strike price.
1 (least risky)	Covered call vaults	Covered call vaults consist of selling call options and holding enough of the underlying asset to sell it if the option is exercised. This lowers the risk of losing value due to the premium received from selling the option and the security of having enough of the underlying asset. However, there is still some risk of missing out on potential gains if the underlying asset rises significantly above the strike price.

- Does the pool offer any insurance services?

This risk score evaluates the risk of a pool that insures some users at the expense of others. An insurance service is a service that provides protection against losses or damages in exchange for a fee or premium. The higher the position and reward of the insurance service are, the higher the risk of losing capital or facing liquidation.



Risk Score	Insurance Strategy	Description
4 (most risky)	Junior tranche	The junior tranche provides capital to the pool and receives a high portion of the premium as a reward. However, it also bears the highest risk of losing capital or facing liquidation if a loss or damage occurs, as it is the first to absorb the losses.
3	Mezzanine tranche	The mezzanine tranche provides capital to the pool and receives a moderate portion of the premium as a reward. However, it also bears a moderate risk of losing capital or facing liquidation if a loss or damage occurs, as it is the second to absorb the losses after the junior tranche.
2	Senior tranche	The senior tranche provides capital to the pool and receives a low portion of the premium as a reward. However, it also bears a low risk of losing capital or facing liquidation if a loss or damage occurs, as it is the last to absorb the losses after the junior and mezzanine tranches.
1 (least risky)	Insurance fund	The pool uses an insurance fund, which is a separate pool that provides protection to another pool in exchange for a fee or premium. Protocols that offer built-in insurance or users who pay for third-party insurance are protected against all cases covered under the insurance policy.

## Blockchain risk:

### Chain Maturity (min:2 /max:9)

- What is the total value locked for the blockchain?

This risk score gauges a blockchain's maturity based on its Total Value Locked (TVL), representing the USD value securely held in smart contracts or protocols. TVL indicates network demand, user trust, and functionality confidence. Higher TVL suggests lower risk, signifying a robust user base, a thriving ecosystem, and a history of innovation. Conversely, lower TVL may indicate higher risk, reflecting fewer users, a fragile ecosystem, and limited market experience.

Risk score	TVL Ranking	Description
4	Non-Top 10	The network has a low TVL and is new, unproven, or unpopular among users
3	Top 10	The network has a moderate TVL and is somewhat mature and established among users
2	Top 5	The network has a high TVL and is very mature and established among users
1	Top 1	The network has the highest TVL and is the most mature and established among users

- **How mature is the blockchain ?**

This risk score evaluates how long the blockchain has been live on mainnet without any major issues or incidents. The longer a blockchain network has been live, the more likely it has been exposed to different scenarios and stress tests and that any bugs or vulnerabilities have been fixed or mitigated. Therefore, a higher maturity score indicates a lower risk of encountering unexpected problems or failures with the network.

Risk Score	Maturity	Description
5 (most risky)	0-6 months	The blockchain has been live for less than half a year, meaning that it has a low level of reliability and resilience. This exposes the blockchain to a high risk of instability or failure due to untested scenarios or undiscovered bugs.
4	6-12 months	The blockchain has been live for 6 to 12 months, meaning that it has a moderate level of reliability and resilience. This exposes the blockchain to a moderate risk of instability or failure due to untested scenarios or undiscovered bugs.
3	12-18 months	The blockchain has been live for 12 to 18 months, meaning that it has a high level of reliability and resilience. This reduces the risk of instability or failure due to untested scenarios or undiscovered bugs.
2	18-24 months	The blockchain has been live for 18 to 24 months, meaning that it has a very high level of reliability and resilience. This minimizes the risk of instability or failure due to untested scenarios or undiscovered bugs.
1 (least risky)	24+ months	The blockchain has been live for more than two years, meaning that it has an almost perfect level of reliability and resilience. This eliminates the risk of instability or failure due to untested scenarios or undiscovered bugs.

## Chain design (min:4 /max:17)

- **How many validators secure the network ?**

This risk score is a measure of how vulnerable a blockchain network is to attacks by malicious validators. The more validators there are, the more secure and decentralized the network is because it is harder for a single entity or a small group of validators to control the network or manipulate the transactions

Risk Score	Number of Validators	Description
5 (most risky)	Less than 100	Very low security and decentralization
4	100 - 999	Low security and decentralization

