

# Risk vs. Reward



Optimizing Yield While Prioritizing Safety

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May 8 2026

# World's Fastest Intro

I'm engn33r, I read/write code



yAudit



yAcademy



twyne

# Summary

1. Why Vaults Matter
2. Different Vault Designs
3. Risk Factors
4. Evaluating Risk

Slides stored at [engn33r.com](http://engn33r.com)

# 1. Why Vaults Matter

# Why Vaults Matter

- No yield on assets = capital inefficiency
- Vaults giving yield = capital efficiency

# Why Vaults Matter

- History time!
- DeFi Summer (2020):
  - Yields were crazy
  - Funds were moved manually
  - Rugpulls were frequent
  - Smart contracts were buggy
  - Prices of new tokens dumped fast
  - Users were moving funds multiple times per day (sleep disruptions)
- Can we automate this? -> how Yearn began



# Why Vaults Matter

- Before vaults:
  - Deposit assets
  - Get 2-3 different reward tokens
  - Manually sell tokens for original asset, repeat
- After vaults:
  - Deposit assets
  - Later, withdraw more assets
  - Vault handles selling of rewards automatically

# Why Vaults Matter

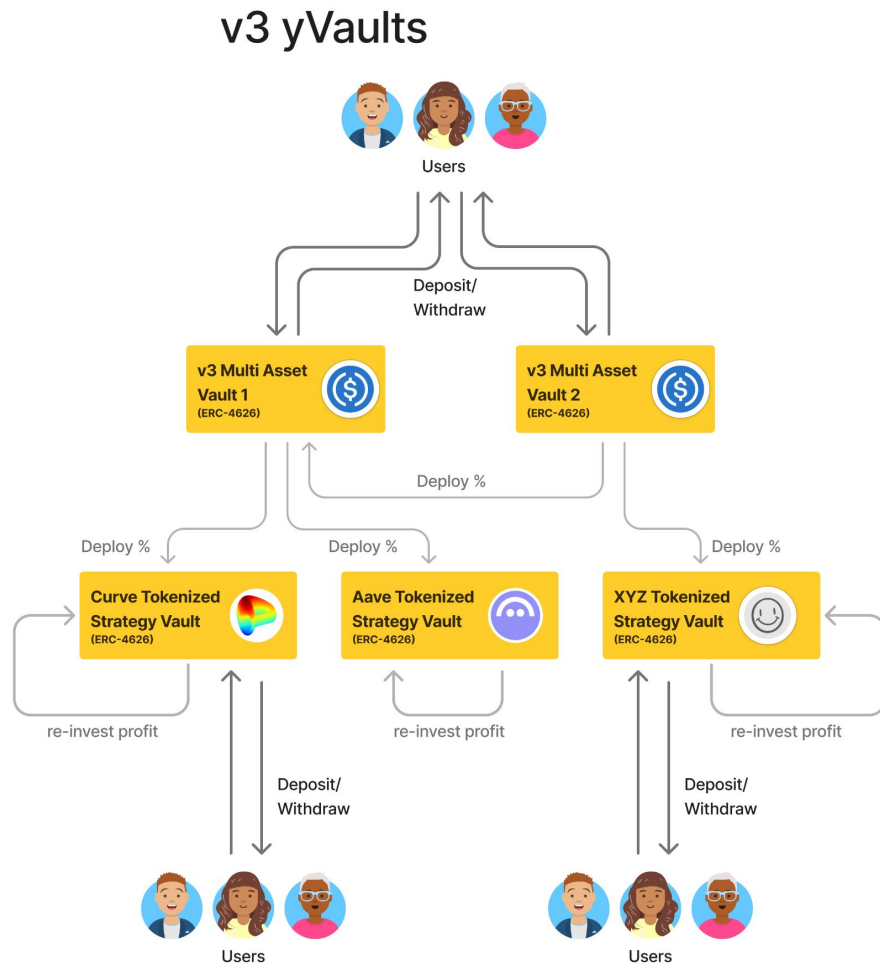
- Late 2021: enter ERC-4626
- Standardization of vaults simplifies life
- Much easier to build protocols with vaults

Yearn Vault (ERC-4626)

Yearn Strategy (ERC-4626)



# Why Vaults Matter



# Vaults in 2026



# Vaults in 2026

- Now:
  - Everyone does vaults
  - Everyone offers yield
  - Everyone makes different claims
- Projects look more polished, but the same risks remain
  - Rugpulls (2020) -> bad debt (2026)
  - Tokens dumping (2020) -> inflated/inaccurate APY numbers (2026)
  - Scam projects (2020) -> Hidden off-chain yield sources (2026)

## 2. Different Vault Designs

# Different Vault Designs



# Key Vault Parameters

- Where does the yield come from?
- Is this a safe source of yield?
- Are the smart contracts of this protocol secure?
- What dependencies does this protocol have (oracles, other protocols, etc.)
- Who is governing the vault?
- What control does governance have?
- Can all users withdraw from the vault quickly, without issues?

# Different Vault Designs



Useful multisig security tool: <https://safe.yaudit.dev/>

# Example 1: Ethena's USDe (manual management)

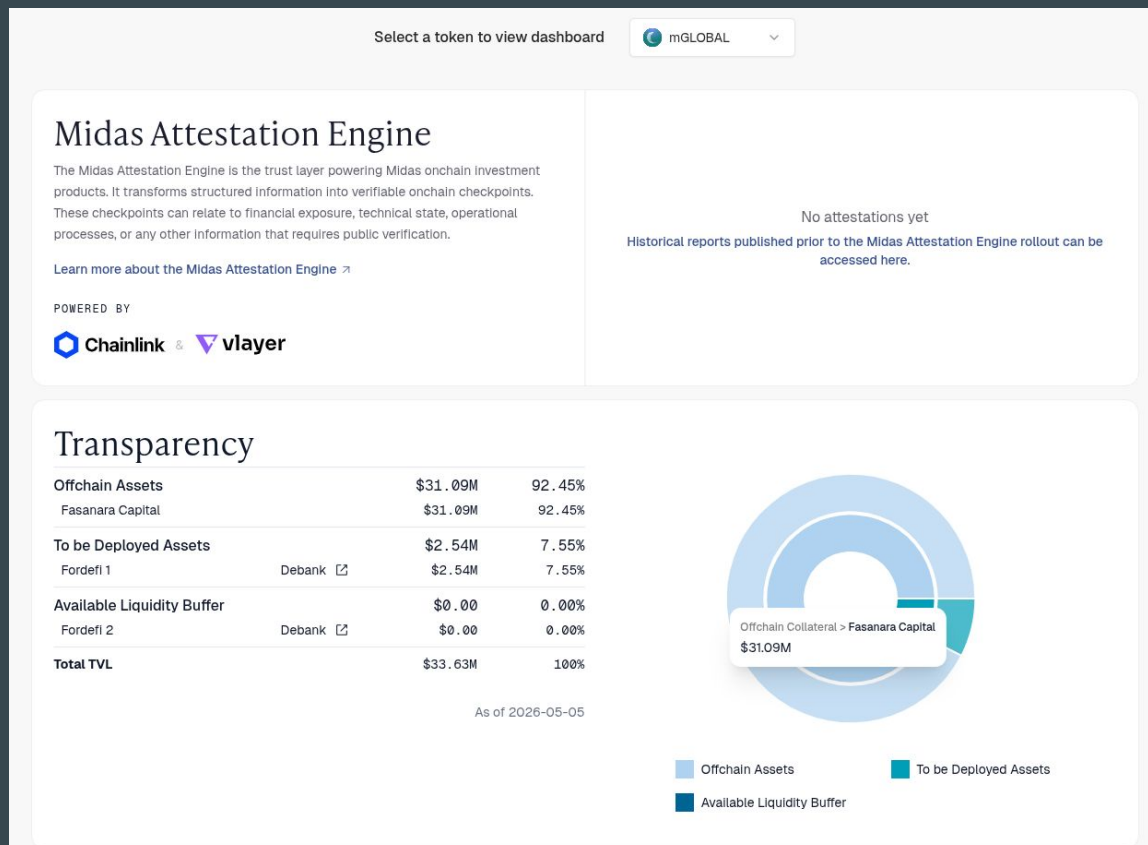
- Where does the yield come from?
  - Historically, delta neutral perps positions (funding rate)
  - Now, this is only 11% of Ethena backing
  - New approach: 43% DeFi lending and 47% liquid stables

Sources:

<https://ethena.fi/blog/usde-backing-diversification-building-resilience-across-market-cycles>

<https://app.ethena.fi/dashboards/transparency>

# Example 2: Midas (cross-chain and offchain)

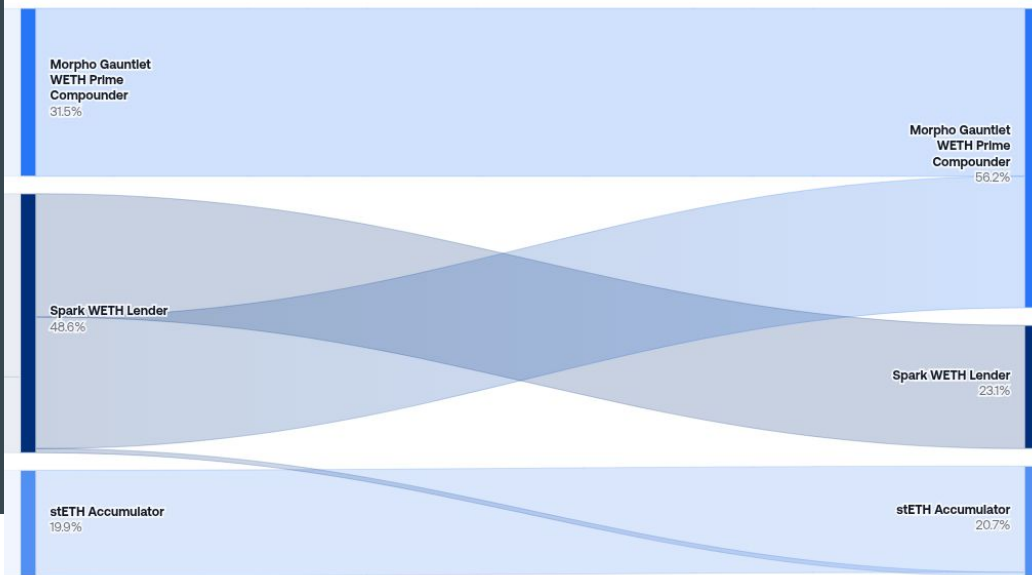


# Example 3: Yearn's WETH-1 Vault (automated)

Yearn data: <https://powerglove.yearn.fi/>

Last Seen  
May 7, 9:14 AM UTC  
Vault APR/APY 2.15%

Current  
May 7, 9:12 PM UTC  
Vault APR/APY 3.29% (+1.14%)

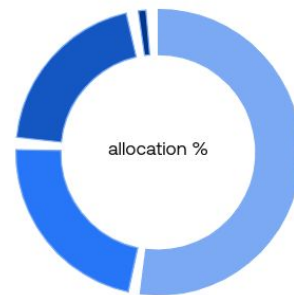


Current Strategies

Current Reallocation

Vault	Allocation %	amount	APY
>  Morpho Gauntlet WETH Prime Compounder	56.2%	\$7.45M	2.13% APY
>  Spark WETH Lender	23.1%	\$3.07M	2.00% APY
>  stETH Accumulator	20.7%	\$2.75M	2.96% APY

ALLOCATION OVERVIEW

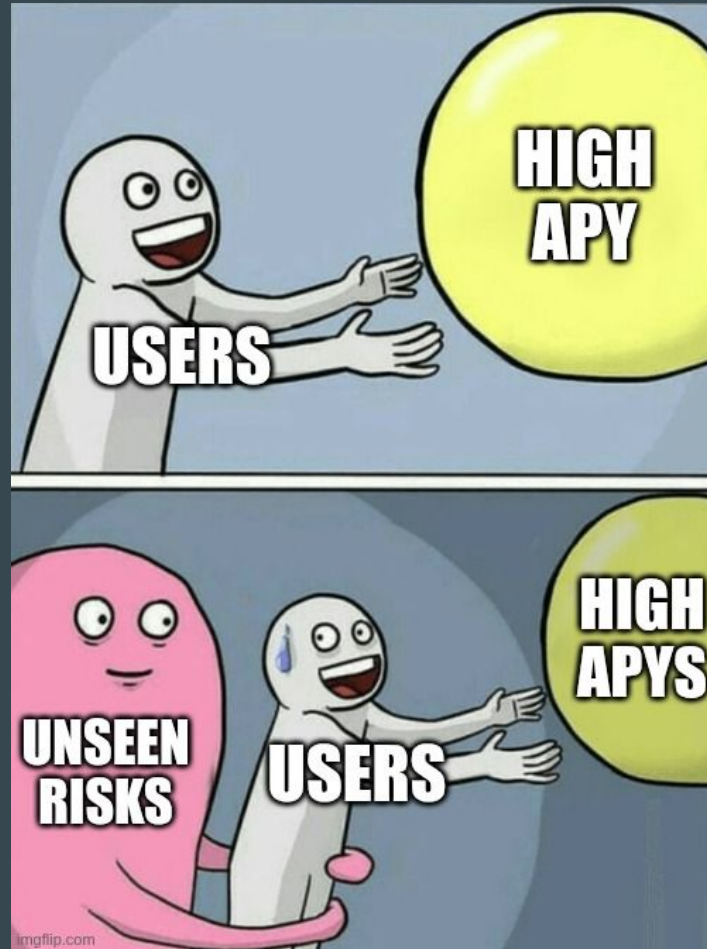


# Summary of Different Vault Designs

- Manual vs. automated asset reallocation
- Frequency of reallocation
- Different approaches to risk analysis
- Different governance models
- Different protocol integrations
- Different limitations for withdrawing assets (cooldown, atomic, etc.)

# 3. Risk Factors

# Risk Factors



# Risk Factors

- Almost no risk in normal market conditions
- Problems always arise in edge cases
  - Depegs
  - Oracle problems
  - Unwinding looped positions
  - What is happening to offchain assets?

# Risk Factors: Stablecoin 2 question test

1. Can the protocol “wind down”?
2. How does the stablecoin maintain its peg?

Heavily paraphrased from

<https://vitalik.eth.limo/general/2022/05/25/stable.html>

# Risk Factors: Vault questions

- How centralized is the vault?
- Can all asset movements be tracked onchain?
- How are the vault assets managed?
- How liquid are the assets in the vault?

# Risk Factors

- No simple way to compare vaults
  - VaultBeat anyone??
- <https://vaults.fyi/> compares yields in a uniform way

Token	Protocol	Name	Category	Score ?	Holdings	TVL ?	APY (7D) ?
USDS Ethereum		Savings USDS	CDP RWA	●●●	6,289	\$5.81B	3.65%
USDT Ethereum		Aave v3 USDT	Lending	●●●	19,978	\$1.97B	3.99%
USDe Ethereum		Ethena Staked USDe	Synthetic Basis Trading	●●●	11,924	\$1.96B	3.46%
USDC Ethereum		Aave v3 USDC	Lending	●●●	23,444	\$1.92B	3.88%
USDC Ethereum		Syrup USDC	Lending Credit	●●●	3,012	\$1.23B	5.13%
USDT Ethereum		Spark Savings USDT	Lending	●●●	765	\$1.17B	2.68%
USDS Ethereum		Sky USDS Farm	CDP	●●●	--	\$1.11B	3.61%

# Risk Factors: Moonwell Example



**Moonwell** 🟡

@MoonwellDeFi



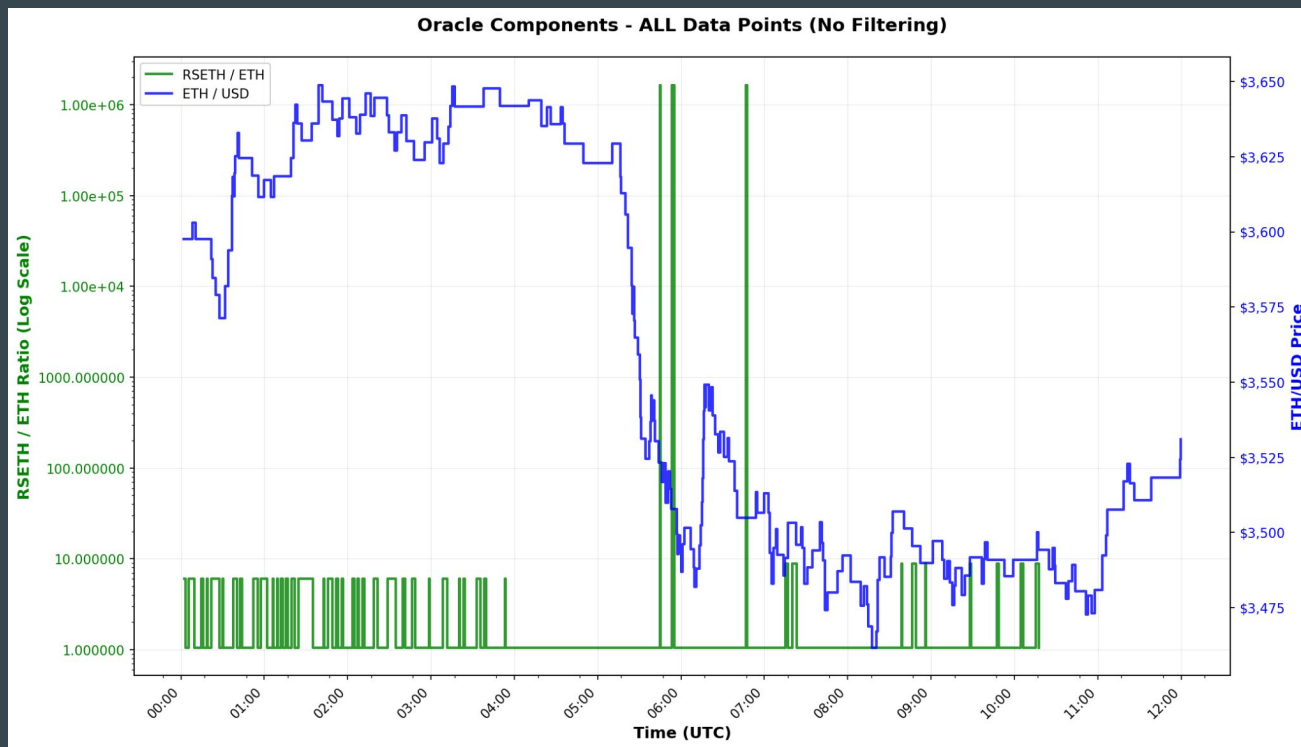
We are currently investigating a misreported price for wrsETH.

The risk manager for the wrsETH Core Market on Base and OP Mainnet has significantly reduced the supply and borrow caps in these markets.

We will share more information as it becomes available.

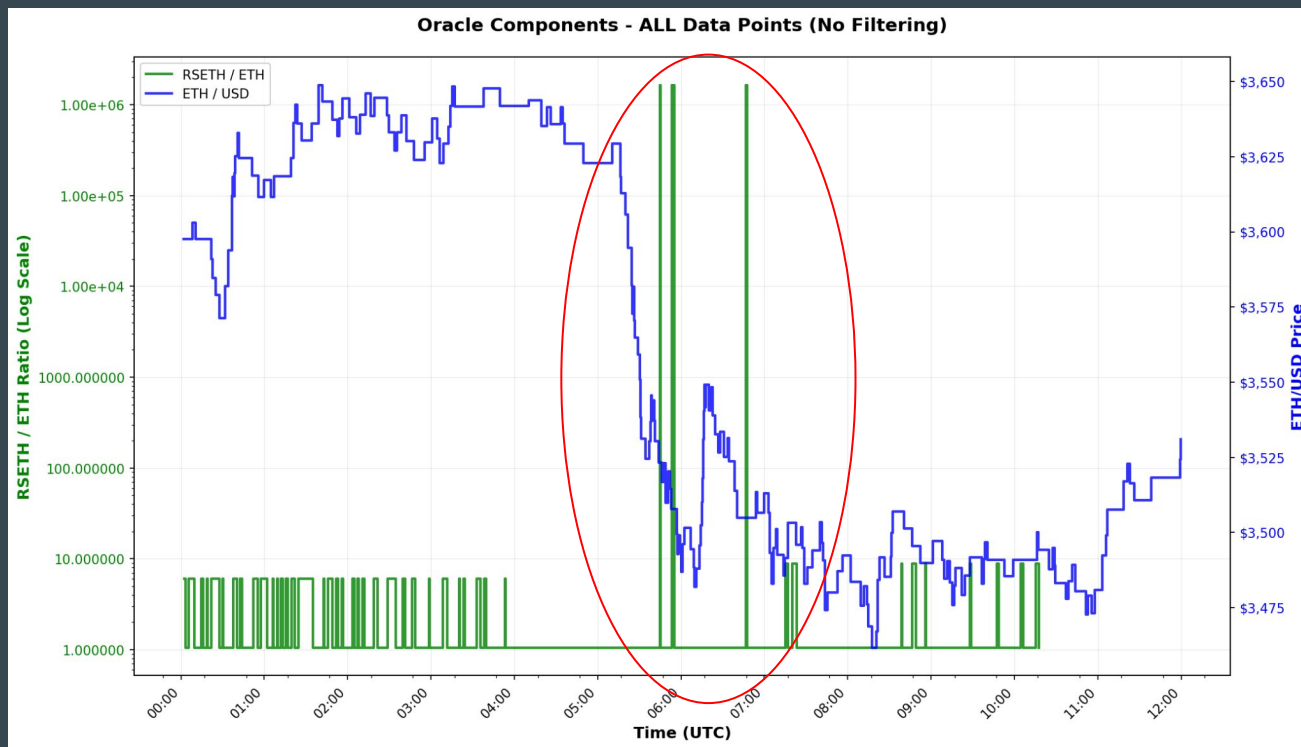
12:03 PM · Nov 4, 2025 · **53.1K** Views

# Risk Factors: Moonwell Example



Impacted oracle: <https://basescan.org/address/0x4a61db12d0cb4293d799ecdd82e5994b5746f850>

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## Risk Factors: Moonwell Example

**Chainlink oracle glitch costs Moonwell \$1M as DeFi suffers another exploit**

# Risk Factors: Moonwell Example

Data

answer : 1649934607354199816332700

transmitter : 0xc04a3C4aBF8995Da051140f552Cb4eB086185836

observations : 1054227129414975900

1054316022961676400

1054316022961676400

1055981600197286400

1056070493743986900

1649934607354199816332700

1649934607354199816332700

1649934609108670598643200

1649934609197564145343700

1649934609197564145343700

observers : 01020406070508030009

rawReportContext : 0000000000000000000000FF27F6D70FBE846768EBA2B013701A88000352B403

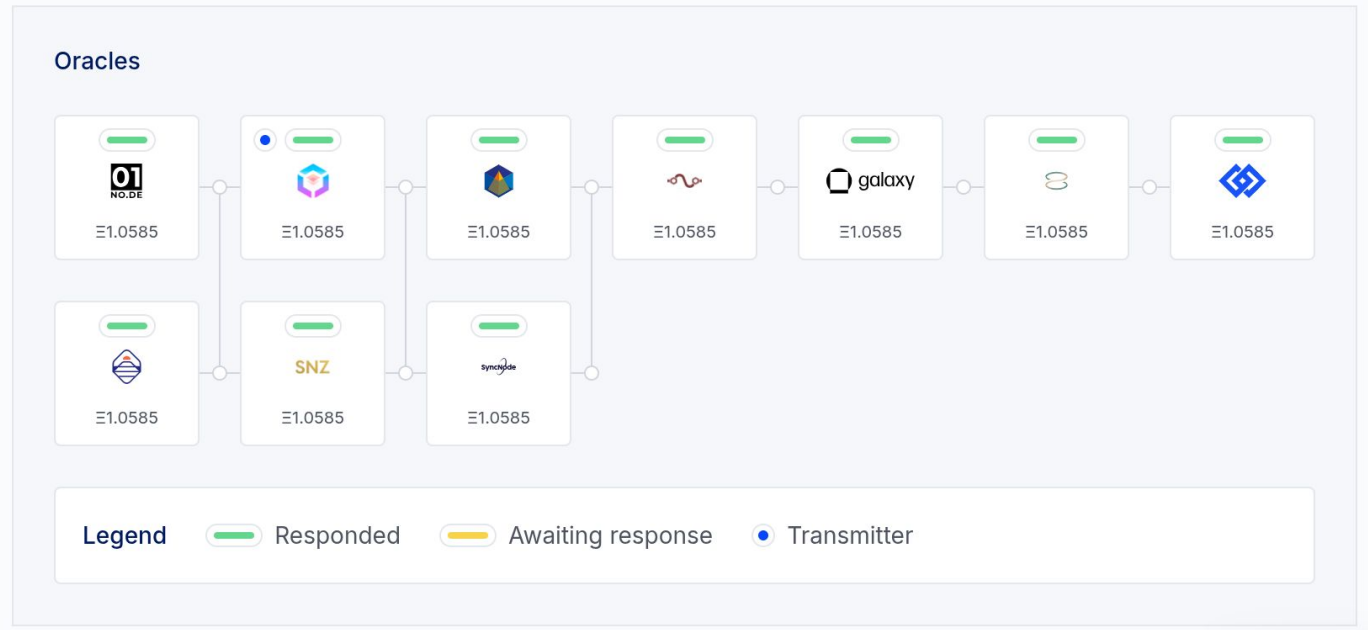
Dec

Hex

5 vs 5

# Risk Factors: Moonwell Example

## Oracles data

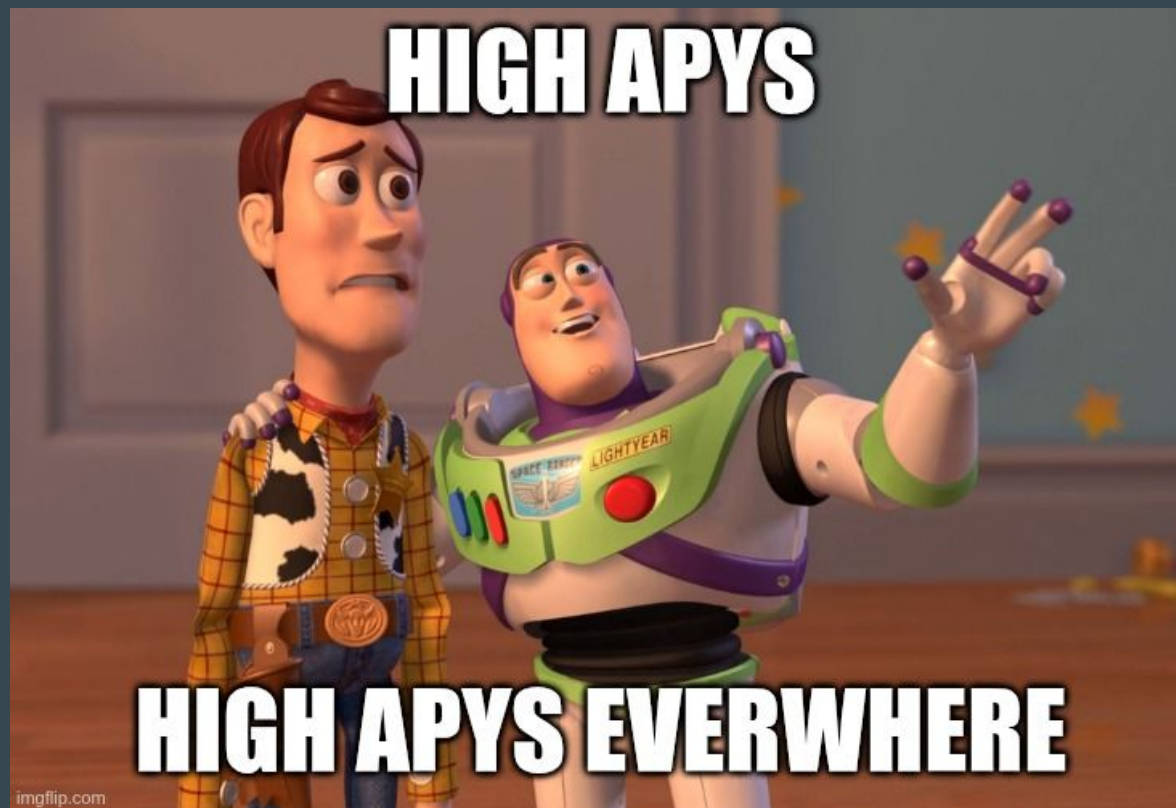


# Risk Factors: Offchain Rant

- The key idea of blockchain is transparency
- Offchain yield sources remove this transparency
- If you don't know where your money is, why use blockchain?
- Atomic withdrawals are impossible, delays add risk
- Offchain is unverifiable compared to onchain trust
- Analogy: open source code vs. closed source code

# 4. Evaluating Risk

# DeFi Expectations



# DeFi Reality



# Evaluating Risk

- Step 1: understand where issues often happen
- Step 2: Quantify the likelihood of such issues

Yearn's full risk methodology: <https://docs.yearn.fi/developers/security/risks/>

# Evaluating Risk

- Precise quantitative measurements are hard
  - Measuring onchain liquidity and asset movement is possible, but always changing
  - Measuring historic price variation doesn't properly consider black swan events
- A significant piece of DeFi risk analysis is currently qualitative

# Evaluating Risk: Hard Questions

- How do you put a number on the smart contract security of a protocol?
- How do you measure the operational risk of a protocol's rebalancing?
- How can you score the asset allocation choices made by a protocol?

# Risk Assessment Reports









25 independent assessments across DeFi protocols, vaults and assets.

Sorted by score — safest first.

[curation.yearn.fi](https://curation.yearn.fi)

Search by protocol, token, or risk tier...

All 25 • Minimal Risk 3 • Low Risk 8 • Medium Risk 6 • Elevated Risk 3 • High Risk 5

	<b>Fluid Lending Protocol</b> fTokens (fUSDC, fUSD, fWETH) · 3mo ago	1.1	Minimal Risk	— — — — —
	<b>Yearn — yvUSDC-1</b> yvUSDC-1 (USDC-1 yVault) · 1mo ago	1.2	Minimal Risk	— — — — —
	<b>Origin ARM</b> ARM-WETH-stETH · 3mo ago	1.5	Minimal Risk	— — — — —
	<b>Reserve Protocol</b> ETH+ · 4mo ago	1.9	Low Risk	— — — — —
	<b>Spectra Finance</b> PT (Principal Token) / MetaVault shares · 2mo ago	2.3	Low Risk	— — — — —
	<b>Yearn — yvUSD</b> yvUSD (USD yVault) · 1mo ago	2.3	Low Risk	— — — — —
	<b>Kinetiq kHYPE</b> kHYPE · 3mo ago	2.3	Low Risk	— — — — —
	<b>Maple Finance</b> syrupUSDC · 3mo ago	2.3	Low Risk	— — — — —



# Fluid Lending Protocol

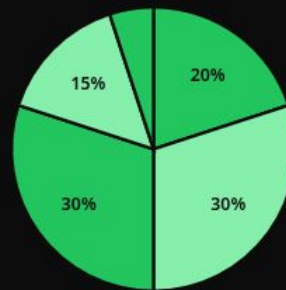
1.1

fTokens (fUSDC, fUSDT, fWETH) / Ethereum Mainnet / February 12, 2026

[View full report on GitHub](#) →

## Score Breakdown

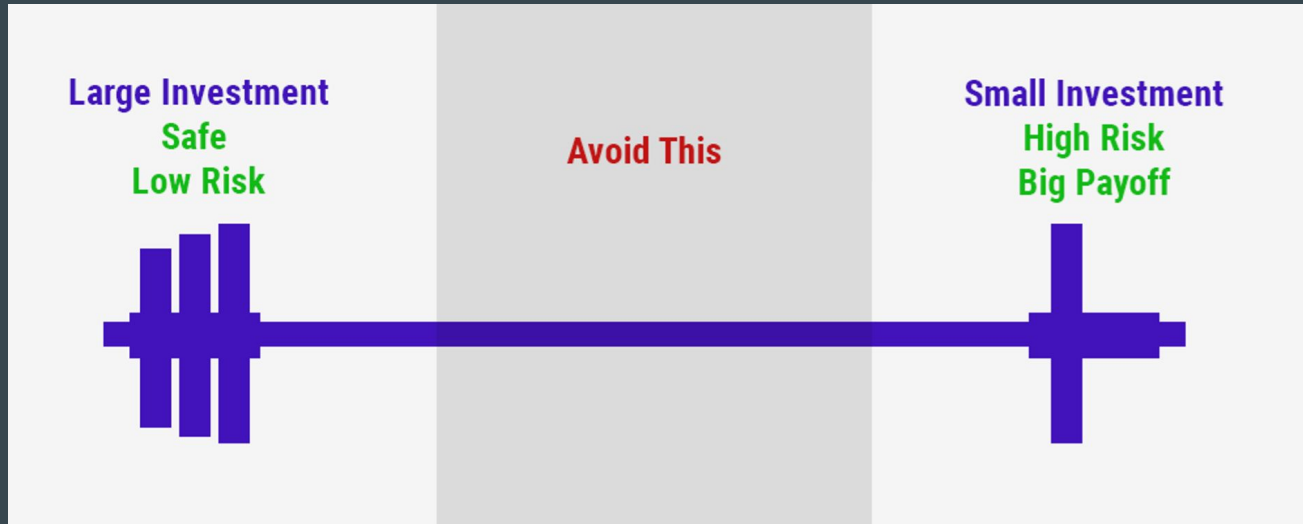
CATEGORY	WEIGHT	SCORE
● Audits & Historical	20%	1.50
● Centralization & Control	30%	1.83
● Funds Management	30%	1.25
● Liquidity Risk	15%	2.00
● Operational Risk	5%	1.50
<b>Final Score</b>		<b>1.1 / 5.0</b>



MINIMAL RISK

# Applied Advice: Portfolio Diversification

- DeFi users may like risk, but 100% exposure to high risk is bad
- Low risk yield should be where most on-chain value sits
- Some yield sources fit this low risk criteria, but not many



# Incident Response

- Not all issues can be predicted
- Incident response (IR) is also key
- Different vault providers have different IR skill

# Incident Response: rsETH example

**Aave V3 Top Exiters - WETH Bank Run**

2026-04-18 18:16:59 UTC → 2026-04-19 02:14:59 UTC · blocks 24908491-24910875 · sorted by block asc @AlphaFolio

#	TIME (UTC)	BLOCK	ENTITY	ETH OUT	USD OUT
1	2026-04-18 18:16:59 UTC	24908491	0x8844...26fA	3,549	\$8.09M
2	2026-04-18 18:26:11 UTC	24908537	0x8844...26fA	3,153	\$7.19M
3	2026-04-18 18:30:35 UTC	24908559	<b>Yearn.Finance</b>	1,064	\$2.43M
4	2026-04-18 18:51:11 UTC	24908660	0x555f...859e	1,522	\$3.47M
5	2026-04-18 18:51:11 UTC	24908660	0x555f...859e	1,522	\$3.47M
6	2026-04-18 18:51:35 UTC	24908662	<b>MEV Bot</b>	2,161	\$4.93M
7	2026-04-18 18:51:35 UTC	24908662	<b>MEV Bot</b>	2,161	\$4.93M
8	2026-04-18 19:12:35 UTC	24908766	0x8ADd...7d2c	1,002	\$2.29M
9	2026-04-18 19:21:59 UTC	24908813	<b>Abraxas Capital Mgmt (Heka Funds)</b>	84,440	\$192.51M
10	2026-04-18 19:23:35 UTC	24908821	<b>Unknow Gnosis Safe Proxy</b>	10,829	\$24.69M
11	2026-04-18 19:28:23 UTC	24908845	<b>Justin Sun</b>	53,665	\$122.35M

Source: <https://x.com/AlphaFolio/status/2047677561728340062>

# Incident Response: rsETH example



**yearn** @yearnfi · Apr 19

Yearn Vaults and Yearn-curated markets currently have no exposure to the rsETH hack that occurred earlier today.

Yearn vaults that previously had exposure to Aave WETH markets have been fully unwound.

We continue monitoring things and will provide future updates here.

10 66 3.4K



# In Conclusion

- ERC-4626 vaults are a key component for DeFi
- Different ERC-4626 designs have different tradeoffs
- Understanding and managing your risk exposure is crucial to survival
- Do you know where your money is?

# The End

