



METATRUST

Draft  
Security Assessment for  
**56-2021-11-yaxis  
(1New-FD)**

July 23, 2023






## Executive Summary

Overview			
Project Name	56-2021-11-yaxis (1New-FD)		
Codebase URL	https://github.com/code-423n4/2021-11-yaxis		
Scan Engine	AI Analyzer		
Scan Time	2023/07/23 22:55:25		
Commit Id	bb9fb99		






  

Total			
Critical Issues	0		
High risk Issues	1		
Medium risk Issues	0		
Low risk Issues	0		
Informational Issues	0		

Critical Issues		The issue can cause large economic losses, large-scale data disorder, loss of control of authority management, failure of key functions, or indirectly affect the correct operation of other smart contracts interacting with it.
High Risk Issues		The issue puts a large number of users' sensitive information at risk or is reasonably likely to lead to catastrophic impacts on clients' reputations or serious financial implications for clients and users.
Medium Risk Issues		The issue puts a subset of users' sensitive information at risk, would be detrimental to the client's reputation if exploited, or is reasonably likely to lead to moderate financial impact.
Low Risk Issues		The risk is relatively small and could not be exploited on a recurring basis, or is a risk that the client has indicated is low-impact in view of the client's business circumstances.
Informational Issue		The issue does not pose an immediate risk but is relevant to security best practices or Defence in Depth.



	Critical Issues	0%	0
	High risk Issues	100%	1
	Medium risk Issues	0%	0
	Low risk Issues	0%	0
	Informational Issues	0%	0

## Summary of Findings

MetaScan security assessment was performed on **July 23, 2023 22:55:25** on project **56-2021-11-yaxis (1New-FD)** with the repository **<https://github.com/code-423n4/2021-11-yaxis>** on branch **default branch**. The assessment was carried out by scanning the project's codebase using the scan engine **AI Analyzer**. There are in total **1** vulnerabilities / security risks discovered during the scanning session, among which **0** critical vulnerabilities, **1** high risk vulnerabilities, **0** medium risk vulnerabilities, **0** low risk vulnerabilities, **0** informational issues.

ID	Description	Severity
MSA-001	MWE-204: Unsafe First Deposit	High risk

## Findings


### Critical (0)

No Critical vulnerabilities found here

### High risk (1)

#### 1. MWE-204: Unsafe First Deposit

 High risk

 Security Analyzer

First depositor can break minting of shares or drain the liquidity of all users.

##### File(s) Affected

contracts/v3/alchemix/mocks/YearnVaultMock.sol #51-64

```
51     function deposit(uint256 _amount) external returns (uint256) {
52         uint256 _pool = balance();
53         uint256 _before = token.balanceOf(address(this));
54         token.safeTransferFrom(msg.sender, address(this), _amount);
55         uint256 _after = token.balanceOf(address(this));
56         _amount = _after.sub(_before); // Additional check for deflationary tokens
57         uint256 _shares = 0;
58         if (totalSupply() == 0) {
59             _shares = _amount;
60         } else {
61             _shares = (_amount.mul(totalSupply())).div(_pool);
62         }
63         _mint(msg.sender, _shares);
64     }
```

##### Recommendation

When totalSupply() == 0, send the first min liquidity LP tokens to the zero address to enable share dilution.

### Medium risk (0)

No Medium risk vulnerabilities found here

### Low risk (0)

No Low risk vulnerabilities found here

### Informational (0)

No Informational vulnerabilities found here

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