

Helio AnkrBNB to BNB Audit

Date: 07/07/2023

Table of Contents

[Overview Project Audit Status:](#)

[Open Issues:](#)

[Important Notes:](#)

[Deployment Verification:](#)

[Audit Result](#)

[Contract Name:](#)

Overview Project Audit Status:

Severity Level	Total Number of Issues
Informative	1
Discussion	0
Minor	0
Medium	0
Major	0
Critical	0

Date: 07/07/2023

Open Issues:

Pending	Resolved
0	1

Audit Request:

Topic	Comments
Repo Link	https://github.com/helio-money/helio-smart-contracts/commit/c7ff26e0e8f4eb4b6e7c2498e924f995a8935614
Commit Id	c7ff26e0e8f4eb4b6e7c2498e924f995a8935614
PRD Document	Not Provided
Last Audit	NA
Request Date	06/07/2023
Owner	Tom (Helio)

Important Notes:

Notes
<ul style="list-style-type: none">Plan to swap all ankrBNB to BNB, and finance team is going to help with this. After the swap, the underlying asset will be BNB at that time, and the liquidation asset will be BNB..

Date: 07/07/2023

Deployment Verification:

This section is kept open and updated after deployment verification of the audited code.

Verification Checks	Status
Repo code maps with Deployed code	Verified/ Not Verified
Ownership Account	EOA/Multisig/Timelock/Contract
Ownership Verified	Verified/ Not Verified
Secondary Accounts	EOA/Multisig/Timelock/Contract
Secondary Accounts Verified	Verified/ Not Verified

Audit Result

CeVault.sol:

This is the vault contract used for storing the collateral.

HAB - #001	
Add in a Reentrancy guard for the swap	
Severity:	Informative
Function:	swap
Line:	225
Description:	<p>Reentrancy Guard can be added for the function:</p> <p>https://github.com/helio-money/helio-smart-contracts/blob/c7ff26e0e8f4eb4b6e7c2498e924f995a8935614/contracts/ceros/CeVault.sol#L225</p> <pre>225 function swap() external payable { 226 require(manager == msg.sender, "invalid operation"); 227 uint256 amount = _aBNBc.balanceOf(address(this)); 228 uint256 ratio = _aBNBc.ratio(); 229 _aBNBc.transfer(msg.sender, amount); 230 uint256 realAmount = (amount * 1e18) / ratio; 231 require(msg.value >= realAmount, "insufficient value"); 232 uint256 diff = msg.value - realAmount; // return remaining BNB 233 (bool sent,) = payable(msg.sender).call{value: diff}(""); 234 require(sent, "transfer failed"); 235 }</pre>
Suggestion:	Add in a Reentrancy Guard for the swap
Status:	<p>Acknowledged</p> <p>The manager address is trusted source and only be called once.</p>

Date: 07/07/2023