

# STAYSAFU **AUDIT**

*June 11TH, 2022*

Luna Inu

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## AUDIT SUMMARY

This report was written for [Luna Inu \(\\$LINU\)](#) in order to find flaws and vulnerabilities in the [Luna Inu](#) project's source code, as well as any contract dependencies that weren't part of an officially recognized library.

A comprehensive examination has been performed, utilizing Static Analysis, Manual Review, and [Luna Inu](#) Deployment techniques. The auditing process pays special attention to the following considerations:

- ❖ Testing the smart contracts against both common and uncommon attack vectors
- ❖ Assessing the codebase to ensure compliance with current best practices and industry standards
- ❖ Ensuring contract logic meets the specifications and intentions of the client
- ❖ Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders
- ❖ Through line-by-line manual review of the entire codebase by industry expert

# AUDIT OVERVIEW

## PROJECT SUMMARY

Project name	Luna Inu
Description	The Luna Inu project, originally created to address the failures of LUNA by creating a token the community could rally around, a rebellion against the financial irresponsibility of Do Kwon and his whale cronies.
Platform	Binance Smart Chain
Language	Solidity
Codebase	<a href="https://etherscan.io/token/0x78132543d8e20d2417d8a07d9ae199d458a0d581">https://etherscan.io/token/0x78132543d8e20d2417d8a07d9ae199d458a0d581</a>

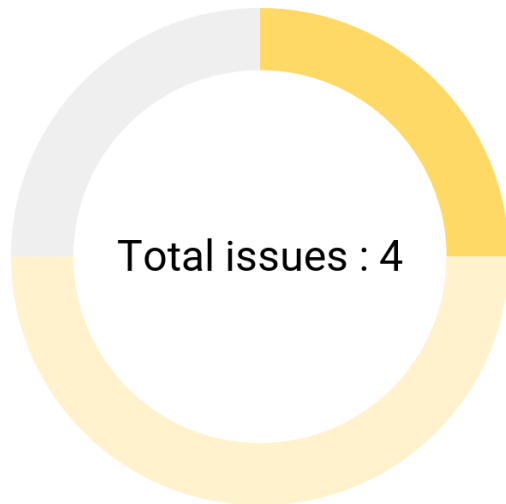
## FINDINGS SUMMARY

Vulnerability	Total
● Critical	0
● Major	0
● Medium	1
● Minor	2
● Informational	1

## EXECUTIVE SUMMARY

Luna Inu is an ERC20 that was originally created to compensate for the loss of the Terra Luna. It aims to be a fully community-driven token and project developed by an anonymous person. The liquidity is locked in for 100 years, and everything is being done to avoid a collapse like Terra Luna. No taxes are applied, and to finance itself the Luna Inu works on the basis of donations

There have been no major or critical issues related to the codebase and all findings listed here are minor or informational. The major security problem is the dependence on a decentralized exchange platform.



- Medium : 1
- Minor : 2
- Informational : 1

## AUDIT FINDINGS

Code	Title	Severity
EXT-1	External protocol dependencies	● Medium
COMP-2	Too old version of compiler	● Minor
COMP-1	Unfixed version of compiler	● Minor
MSG-3	Too long error message	● Informational

## MSG-3 | Too long error messages

### Description

The smart contract has some error messages that are too long. The industry standards specify error messages must have a maximal length of 32 bytes. We recommend having the shortest possible error messages to optimize gas costs (see [github.com/ethereum/solidity/issues/4588](https://github.com/ethereum/solidity/issues/4588)) and improve error handling. 6 issues of this type have been found in the smart contract.

### Recommendation

We recommend shortening these error messages :

```
//Edited code with shortened error messages  
//L 154  
require(c / a == b, "Multiplication overflow");  
//L 349  
require(sender != address(0), "Transfer from the 0  
address");  
//350  
require(recipient != address(0), "Transfer to the 0  
address");  
//L 386  
require(account != address(0), "ERC20: burn from the 0  
address");  
//L 407  
require(owner != address(0), "Approve from the 0  
address");
```

```
//L 408  
require(spender != address(0), "ERC20: approve to the 0  
address");
```



## COMP-1 | Unfixed version of compiler

### Description

Luna Inu token's contract does not have locked compiler versions, meaning a range of compiler versions can be used. This can lead to differing bytecodes being produced depending on the compiler version, which can create confusion when debugging as bugs may be specific to a specific compiler version(s).

To rectify this, we recommend setting the compiler to a single version, the lowest version tested to be compatible with the code, an example of this change can be seen below.

### Recommendation

We recommend fixing the compiler version to the most recent one :

```
//Edited code with fixed compiler version  
//L 9  
pragma solidity 0.5.0;
```

## COMP-2 | Too old version of compiler

### Description

The compiler version you used is quite old. It does not have any critical vulnerabilities but its use can cause problems (see <https://solidity-fr.readthedocs.io/fr/v0.5.0/bugs.html> ).

### Recommendation

We recommend you fix the compiler version to 0.8.0 or higher, since the project is fully compatible with newest versions.

## EXT-1 | Dependence to an external protocol

### Description

The contract serves as an underlying entity to interact with third party [Uniswap](#) protocols. The scope of the audit would treat this third party entity as black box and assume it is fully functional. However in the real world, third parties may be compromised and may have led to assets lost or stolen.

### Recommendation

We encourage the team to constantly monitor the security level of the entire [Uniswap](#) project, as the security of the token is highly dependent on the security of the decentralized exchange platform.

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This report in no way provides investment advice, nor should be leveraged as investment advice of any sort. This report represents an extensive assessing process intending to help our customers increase the quality of their code while reducing the high level of risk presented by cryptographic tokens and blockchain technology.

Blockchain technology and cryptographic assets present a high level of ongoing risk.

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