



SMART CONTRACT SECURITY AUDIT

FLOKI







inspector.lovely.finance





TABLE OF CONTENTS

Table of Contents

Disclaimer

Audit Scope

Proposed Smart Contract Features

Audit Summary

Key Technical Metrics

Business Risk Analysis

Code Quality

Documentation

Use of Dependencies

Project Website Performance Audit

Level of Criticality

Audit Findings Table

Audit Findings

Centralization

Conclusion

Addendum

- Logic Diagram
- Security Assessment Report
- Solidity Static Analysis
- Compliance Analysis

Software Analysis Result

LOVELY INSPECTOR Info







inspector.lovely.finance

2

3

4

5

6

7

8 9

9

9

10 10

11

12

13

14

15

16

18

20

20

21



DISCLAIMER

This is a comprehensive report based on our automated and manual examination of cybersecurity vulnerabilities and framework flaws of the project's smart contract. Reading the full analysis report is essential to build your understanding of project's security level. It is crucial to take note, though we have done our best to perform this analysis and report, that you should not rely on the our research and cannot claim what it states or how we created it. Before making any judgments, you have to conduct your own independent research. We will discuss this in more depth in the following disclaimer - please read it fully. DISCLAIMER: You agree to the terms of this disclaimer by reading this report or any portion thereof. Please stop reading this report and remove and delete any copies of this report that you download and/or print if you do not agree to these conditions. Scan and verify report's presence in the GitHub repository by a gr-code on the title page. This report is for non-reliability information only and does not represent investment advice. No one shall be entitled to depend on the report or its contents, and Inspector Lovely and its affiliates shall not be held responsible to you or anyone else, nor shall Inspector Lovely provide any guarantee or representation to any person with regard to the accuracy or integrity of the report. Without any terms, warranties or other conditions other than as set forth in that exclusion and Inspector Lovely excludes hereby all representations, warrants, conditions and other terms (including, without limitation, guarantees implied by the law of satisfactory quality, fitness for purposes and the use of reasonable care and skills). The report is provided as "as is" and does not contain any terms and conditions. Except as legally banned, Inspector Lovely disclaims all responsibility and responsibilities and no claim against Inspector Lovely is made to any amount or type of loss or damages (without limitation, direct, indirect, special, punitive, consequential or pure economic loses or losses) that may be caused by you or any other person, or any damages or damages, including without limitations (whether innocent or negligent). Security analysis is based only on the smart contracts. No applications or operations were reviewed for security. No product code has been reviewed.





AUDIT SCOPE

Name	Code Review and Security Analysis Report for Floki Token Coin Smart Contract
Platform	Ethereum
Language	Solidity
File	FLOKI.sol
Ethereum Code	0xcf0c122c6b73ff809c693db761e7baebe62b6a2e
Audit Date	November 8th, 2023









PROPOSED SMART CONTRACT FEATURES

Claimed Feature Detail	Our Observation
	Validated
Tokenomics:	
Name: FLOKI	
Symbol: FLOKI	
Decimals: 9	
Total Supply: 10 Tillion	
Ownership control:	Validated
Set the tax handler address.	
Set the treasury handler address.	
Current owner can transfer the ownership.	
Owner can renounce ownership.	









AUDIT SUMMARY

According to the standard audit assessment, Customer`s solidity based smart contracts are "Secured". Also, these contracts contain owner control, which does not make them fully decentralized.



We used various tools like Slither, Solhint and Remix IDE. At the same time this finding is based on critical analysis of the manual audit.

All issues found during automated analysis were manually reviewed and applicable vulnerabilities are presented in the Audit overview section. General overview is presented in AS-IS section and all identified issues can be found in the Audit overview section.

We found 0 critical, 0 high, 0 medium and 0 low, and 0 very low level issues.

Investors Advice: Technical audit of the smart contract does not guarantee the ethical nature of the project. Any owner controlled functions should be executed by the owner with responsibility. All investors/users are advised to do their due diligence before investing in the project.









KEY TECHNICAL METRICS

MAIN CATEGORY	SUBCATEGORY	RESULT	
	Solidity version is not specified	Passed	
	Solidity version is too old	Passed	
	Integer overflow/underflow	Passed	
	Function input parameters lack check	Passed	
	Function input parameters check bypass	Passed	
Contract	Function access control lacks management	Passed	
Programming	Critical operation lacks event log	Passed	
	Human/contract checks bypass	Passed	
	Random number generation/use vulnerability	N/A	
	Fallback function misuse	Passed	
	Race condition	Passed	
	Logical vulnerability	Passed	
	Features claimed	Passed	
	Other programming issues	Passed	
	Function visibility not explicitly declared	Passed	
Code	Var. storage location not explicitly declared	Passed	
Specification	Use keywords/functions to be deprecated	Passed	
	Unused code	Passed	
	"Out of Gas" Issue	Passed	
Gas Optimization	High consumption 'for/while' loop	Passed	
dus Optimization	High consumption 'storage' storage	Passed	
	Assert() misuse	Passed	
	The maximum limit for mintage is not set	Passed	
Business Risk	"Short Address" Attack	Passed	
	"Double Spend" Attack	Passed	

Overall Audit Result: PASSED



BUSINESS RISK ANALYSIS

CAT	EGORY	RESULT
•	Buy Tax	0%
•	Sell Tax	0%
•	Cannot Buy	Not Detected
•	Cannot Sell	Not Detected
•	Max Tax	0%
•	Modify Tax	Not Detected
•	Fee Check	No
•	Is Honeypot	Not Detected
•	Trading Cooldown	Not Detected
•	Can Pause Trade?	No
•	Pause Transfer?	No
•	Max Tax?	No
•	Is it Anti-whale?	No
•	Is Anti-bot?	Not Detected
•	Is it a Blacklist?	Not Detected
•	Blacklist Check	No
•	Can Mint?	No
•	Is it Proxy?	No
•	Can Take Ownership?	Yes
•	Hidden Owner?	Not Detected
•	Self Destruction?	Not Detected
•	Auditor Confidence	High

Overall Audit Result: PASSED









CODE QUALITY

This audit scope has 1 smart contract. Smart contract contains Libraries, Smart contracts, inherits and Interfaces. This is a compact and well written smart contract.

The libraries in Floki Token are part of its logical algorithm. A library is a different type of smart contract that contains reusable code. Once deployed on the blockchain (only once), it is assigned a specific address and its properties / methods can be reused many times by other contracts in the Floki Token.

The EtherAuthority team has not provided scenario and unit test scripts, which would have helped to determine the integrity of the code in an automated way.

Code parts are well commented on in the smart contracts. Ethereum's NatSpec commenting style is recommended.

DOCUMENTATION

We were given a Floki Token smart contract code in the form of an Etherscan web link.

As mentioned above, code parts are well commented on. and the logic is straightforward. So it is easy to quickly understand the programming flow as well as complex code logic. Comments are very helpful in understanding the overall architecture of the protocol.

Another source of information was its official website: https://floki.com which provided rich information about the project architecture and tokenomics.

USE OF DEPENDENCIES

As per our observation, the libraries are used in this smart contract infrastructure that are based on well known industry standard open source projects.

Apart from libraries, its functions are not used in external smart contract calls.

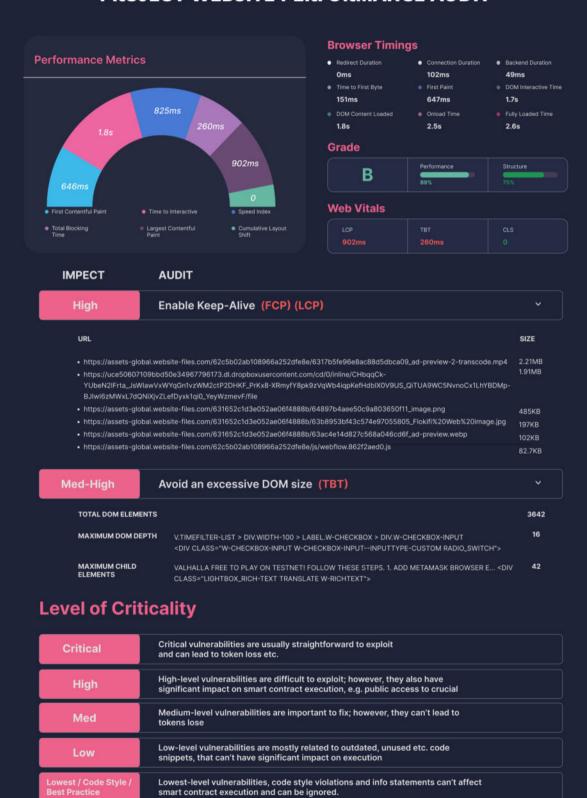








PROJECT WEBSITE PERFORMANCE AUDIT





AUDIT FINDINGS TABLE

	Total	Resolved	UnResolved	Acknowledged
High Severity Issues Found	o	0	•	0
Moderate Severity Issues Found	0	0	0	0
Medium Severity Issues	0	0	0	0
Low Severity Issues	0	•	0	0
Informational Observations	0	0	•	0

The Maveric Token - Audit report identifies 0 issues with varying severity levels, discovered through manual review and static analysis techniques, alongside rigorous code reviews, highlighting the need for further investigation and vulnerability identification.

The smart contract is considered to **pass the audit**, as of the audit date, if no high-severity or moderate-severity issues are found.



Very Low / Informational /

AUDIT FINDINGS

Critical Severity

No Critical severity vulnerabilities were found.

High Severity

No High severity vulnerabilities were found.

Medium

No Medium severity vulnerabilities were found.

No Low severity vulnerabilities were found.

No Very Low severity vulnerabilities were found.



CENTRALIZATION

This smart contract has some functions which can be executed by the Admin (Owner) only. If the admin wallet private key would be compromised, then it would create trouble. Following are Admin functions:

Floki.sol

- setTaxHandler: Tax Handler address can be set by the owner.
- setTreasuryHandler: Treasury Handler address can be set by the owner.

Ownable.sol

- renounce Ownership: Deleting ownership will leave the contract without an owner, removing any owner-only functionality.
- transferOwnership: The current owner can transfer ownership of the contract to a new account.

To make the smart contract 100% decentralized, we suggest renouncing ownership of the smart contract once its function is completed.



CONCLUSION

We were given a contract code in the form of <u>Etherscan</u> web links. And we have used all possible tests based on given objects as files. We had not observed any issues in the smart contracts. So, **it's good to go for the production.**

Since possible test cases can be unlimited for such smart contracts protocol, we provide no such guarantee of future outcomes. We have used all the latest static tools and manual observations to cover maximum possible test cases to scan everything.

Smart contracts within the scope were manually reviewed and analyzed with static analysis tools. Smart Contract's high-level description of functionality was presented in the As-is overview section of the report.

Audit report contains all found security vulnerabilities and other issues in the reviewed code.

Security state of the reviewed smart contract, based on standard audit procedure scope, is "Secured".





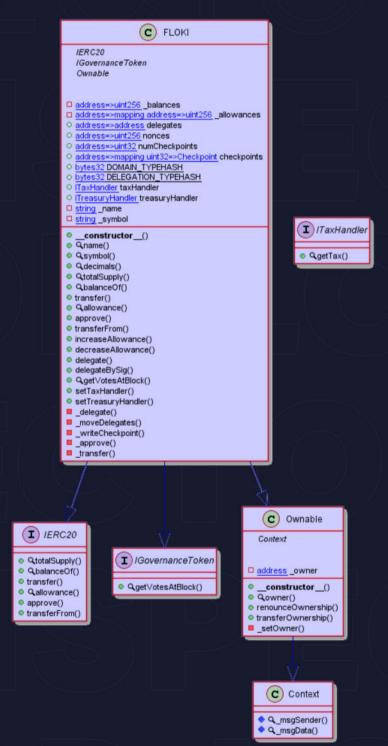




ADDENDUM

Code Flow Diagram

Floki Token



inspector.lovely.finance

Audited by LOVELY INSPECTOR

I TreasuryHandler

beforeTransferHandler()

afterTransferHandler()



SECURITY ASSESSMENT REPORT

Slither is a Solidity static analysis framework that uses vulnerability detectors, displays contract details and provides an API for writing custom analyses. It helps developers identify vulnerabilities, improve code comprehension, and prototype custom analyses quickly. The analysis includes a report with warnings and errors, allowing developers to quickly prototype and fix issues.

We did the analysis of the project together. Below are the results.

Slither Log >> FLOKI.sol



Reentrancy in FLOKI, transfer(address,address,uint250) (FLOKI.sol#377-407):

External calls:
 - treasuryHandler.beforeTransferHandler(from,to,amount) (FLOKI.sol#387)

Event emitted after the call(s):
 - DelegateVotesChanged(delegates(from),delegates(address(treasuryHandler)),uint224(tax)) (FLOKI.sol#399)
 - DelegateVotesChanged(delegates(from),delegates(address(treasuryHandler)),uint224(tax)) (FLOKI.sol#399)
 - DelegateVotesChanged(delegates(from),delegates(to),uint224(taxedAmount)) (FLOKI.sol#394)
 - Transfer(from,address(treasuryHandler),tax) (FLOKI.sol#301)

Reentrancy in FLOKI, transfer(address,address,uint250) (FLOKI.sol#301)

Reentrancy in FLOKI, transfer(address,address,uint250) (FLOKI.sol#307)
 - treasuryHandler beforeTransferHandler(from,to,amount) (FLOKI.sol#307)
 - transfer(from,to,taxedaboant) (FLOKI.sol#307)
 - transfer(from,to,taxedaboant) (FLOKI.sol#301)

Reentrancy in FLOKI,transferFom(address,address,uint250) (FLOKI.sol#301-208):
 - transfer(sender,recipient,amount) (FLOKI.sol#301-208):
 - transfer(sender,recipient,amount) (FLOKI.sol#301-208):
 - treasuryHandler.beforeTransferHandler(from,to,amount) (FLOKI.sol#387)
 - treasuryHandler.beforeTransferHandler(from,to,amount) (FLOKI.sol#387)
 - treasuryHandler.meforeTransferHandler(from,to,amount) (FLOKI.sol#304)

Event emitted after the call(s):
 - Approval(owner,spender,amount) (FLOKI.sol#302)

Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#Trentrancy-vulnerabilities-3

FLOKI.delegateBySig(address,uint256,uint256,uint36,pytes32), (FLOKI.sol#33-253) uses timestamp for comparisons Dangerous comparisons:
 - require(book,string)(block,timestamp <= expiry,FLOKI.delegateBySig(aFXPIRED_SIGNATURE: Received signature has expired.)

(FLOKI.sol#309)

Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code

Pragma version-0.8.6 (FLOKI.sol#30) allows old versions

solc-0.8.0 is not recommended for deployment

Reference: https://github.com/crytic/slither/wiki/Detec

ESISKI NSPECT

inspector.lovely.finance

Audited by LOVELY INSPECTOR



SOLIDITY STATIC ANALYSIS

Static code analysis is used to identify many common coding problems before a program is released. It involves examining the code manually or using tools to automate the process. Static code analysis tools can automatically scan the code without executing it.

FLOKI.sol

Check-effects-interaction:

Potential violation of Checks-Effects-Interaction pattern in FLOKI._transfer(address,address,uint256): Could potentially lead to reentrancy vulnerability. Note: Modifiers are currently not considered by this static analysis.

more

Pos: 377:4:

Block timestamp:

Use of "block.timestamp": "block.timestamp" can be influenced by miners to a certain degree. That means that a miner can "choose" the block.timestamp, to a certain degree, to change the outcome of a transaction in the mined block. more

Pos: 249:16:

Gas costs:

Gas requirement of function FLOKI.delegateBySig is infinite: If the gas requirement of a function is higher than the block gas limit, it cannot be executed. Please avoid loops in your functions or actions that modify large areas of storage (this includes clearing or copying arrays in storage)
Pos: 233:4:



ERC20:

ERC20 contract's "decimals" function should have "uint8" as return type more

Pos: 165:4:

Constant/View/Pure functions:

ITreasuryHandler.afterTransferHandler(address,address,uint256): Potentially should be constant/view/pure but is not. Note: Modifiers are currently not considered by this static analysis.

more

Pos: 57:4:

Similar variable names:

FLOKI.(string,string,address,address): Variables have very similar names "_name" and "name_". Note: Modifiers are currently not considered by this static analysis.

Pos: 146:8:

Guard conditions:

Use "assert(x)" if you never ever want x to be false, not in any circumstance (apart from a bug in your code). Use "require(x)" if x can be false, due to e.g. invalid input or a failing external component.

more

Pos: 385:8:

Data truncated:

Division of integer values yields an integer value again. That means e.g. 10 / 100 = 0 instead of 0.1 since the result is an integer again. This does not hold for division of (only) literal values since those yield rational constants.

Pos: 277:41:



COMPLIANCE ANALYSIS

Linters are the utility tools that analyze the given source code and report programming errors, bugs, and stylistic errors. For the Solidity language, there are some linter tools available that a developer can use to improve the quality of their Solidity contracts.

FLOKI.sol

Compiler version ^0.8.0 does not satisfy the ^0.5.8 semver requirement

Explicitly mark visibility in function (Set ignoreConstructors to true if using solidity >=0.7.0)

Pos: 5:79

Error message for require is too long

Explicitly mark visibility in function (Set ignoreConstructors to true if using solidity >=0.7.0)

Error message for require is too long

Pos: 9:198

Avoid making time-based decisions in your business logic

Error message for require is too long

Pos: 9:249

Error message for require is too long

Error message for require is too long

Pos: 9:368

Error message for require is too long Pos: 9:369

Error message for require is too long

Pos: 9:381

Error message for require is too long

Error message for require is too long

Error message for require is too long

Pos: 9:384

SOFTWARE ANALYSIS RESULT

These software reported many false positive results and some are informational issues. So, those issues can be safely ignored.



LOVELY INSPECTOR

INFO

Website: Inspector.lovely.finance

Telegram community: t.me/inspectorlovely

Twitter: twitter.com/InspectorLovely







inspector.lovely.finance

