



Smart Contract Audit

FOR

Bank Of Metaverse AI

DATED : 25 FEB 23'



AUDIT SUMMARY

Project name – Bank Of Metaverse AI

Date: 25 February, 2023

Scope of Audit- Audit Ace was consulted to conduct the smart contract audit of the solidity source codes.

Audit Status: **Passed**

Issues Found

Status	Critical	High	Medium	Low	Suggestion
Open	0	0	0	0	0
Acknowledged	0	0	0	0	0
Resolved	0	0	0	0	0

USED TOOLS

Tools:

1. Manual Review: The code has undergone a line-by-line review by the Audit Ace team.

2. BSC Test Network: All tests were conducted on the BSC Test network, and each test has a corresponding transaction attached to it. These tests can be found in the "Functional Tests" section of the report.

3. Slither: The code has undergone static analysis using Slither.

Testnet version:

The tests were performed using the contract deployed on the BSC Testnet, which can be found at the following address:

<https://testnet.bscscan.com/token/0x670A0bdA49fC1B1DeDce53aCABE9daD3E64cc86b>



Token Information

Token Name : META1

Token Symbol: META1

Decimals: 8

Token Supply: 60,000,000

Token Address:

0x23F4691E3C8eF24bfd4281C8Db94e749624c76a2

Checksum:

adeaf35f858118ef35b1dc566ee56096f8c938d8

Owner:

0xD82FA46364C5b9bC57F10e9c92C626A3469D0aF6



TOKEN OVERVIEW

Fees:

Buy Fees: 0%

Sell Fees: 0%

Transfer Fees: 0%

Fees Privilige: none

Ownership : Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Privileges: None



AUDIT METHODOLOGY

The auditing process will follow a routine as special considerations by Auditace:

- Review of the specifications, sources, and instructions provided to Auditace to make sure the contract logic meets the intentions of the client without exposing the user's funds to risk.
 - Manual review of the entire codebase by our experts, which is the process of reading source code line-by-line in an attempt to identify potential vulnerabilities.
 - Specification comparison is the process of checking whether the code does what the specifications, sources, and instructions provided to Auditace describe.
 - Test coverage analysis determines whether the test cases are covering the code and how much code is exercised when we run the test cases.
 - Symbolic execution is analysing a program to determine what inputs cause each part of a program to execute.
 - Reviewing the codebase to improve maintainability, security, and control based on the established industry and academic practices.
-

VULNERABILITY CHECKLIST

- | | |
|--|---|
|  Return values of low-level calls |  Gasless Send |
|  Private modifier |  Using block.timestamp |
|  Multiple Sends |  Re-entrancy |
|  Using Suicide |  Tautology or contradiction |
|  Gas Limitand Loops |  Timestamp Dependence |
|  Address hardcoded |  Revert/require functions |
|  Exception Disorder |  Use of tx.origin |
|  Using inline assembly |  Integer overflow/underflow |
|  Divide before multiply |  Dangerous strict equalities |
|  Missing Zero Address Validation |  Using SHA3 |
|  Compiler version not fixed |  Using throw |
-



CLASSIFICATION OF RISK

Severity

Description

◆ Critical	These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.
◆ High-Risk	A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.
◆ Medium-Risk	A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.
◆ Low-Risk	A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.
◆ Gas Optimization / Suggestion	A vulnerability that has an informational character but is not affecting any of the code.

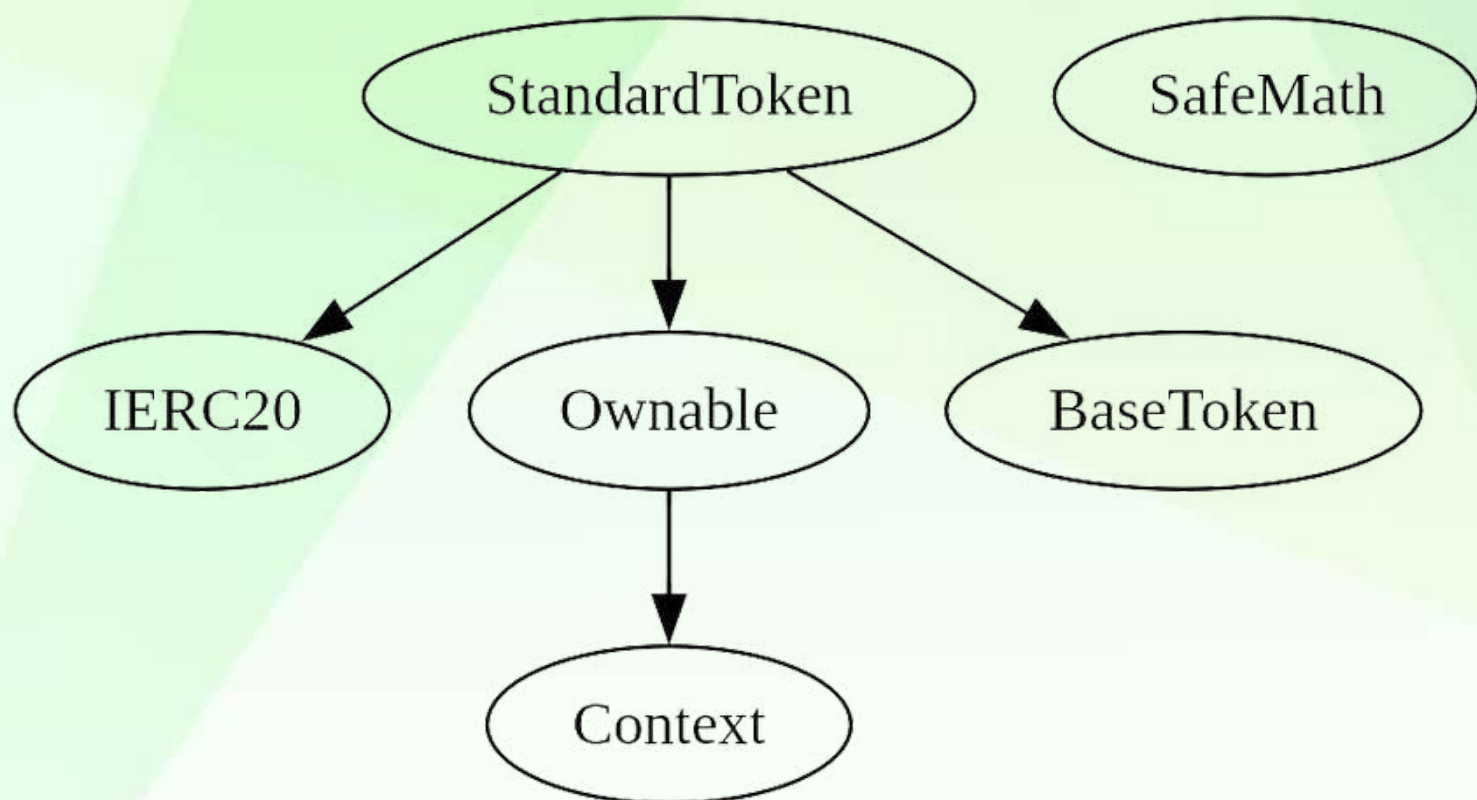
Findings

Severity

Found

◆ Critical	0
◆ High-Risk	0
◆ Medium-Risk	0
◆ Low-Risk	0
◆ Gas Optimization / Suggestions	0

INHERITANCE TREE





POINTS TO NOTE

- Owner is not able to set buy/sell/transfer taxes (0% static)
 - Owner is not able to blacklist an arbitrary wallet
 - Owner is not able to set max buy/sell/transfer amounts
 - Owner is not able to disable trades
 - Owner is not able to mint new tokens
-



CONTRACT ASSESMENT

Contract	Type	Bases			
:-----: :-----: :-----: :-----: :-----:					
L	**Function Name**	**Visibility**	**Mutability**	**Modifiers**	
IERC20 Interface					
L	totalSupply	External	!	NO	!
L	balanceOf	External	!	NO	!
L	transfer	External	!	●	NO
L	allowance	External	!	NO	!
L	approve	External	!	●	NO
L	transferFrom	External	!	●	NO
Context Implementation					
L	_msgSender	Internal	🔒		
L	_msgData	Internal	🔒		
Ownable Implementation Context					
L	<Constructor>	Public	!	●	NO
L	owner	Public	!	NO	!
L	renounceOwnership	Public	!	●	onlyOwner
L	transferOwnership	Public	!	●	onlyOwner
L	_setOwner	Private	🔒	●	
SafeMath Library					
L	tryAdd	Internal	🔒		
L	trySub	Internal	🔒		
L	tryMul	Internal	🔒		
L	tryDiv	Internal	🔒		
L	tryMod	Internal	🔒		
L	add	Internal	🔒		
L	sub	Internal	🔒		
L	mul	Internal	🔒		
L	div	Internal	🔒		
L	mod	Internal	🔒		
L	sub	Internal	🔒		
L	div	Internal	🔒		
L	mod	Internal	🔒		
BaseToken Implementation					
StandardToken Implementation IERC20, Ownable, BaseToken					
L	<Constructor>	Public	!	🟢	NO
L	name	Public	!	NO	!

CONTRACT ASSESMENT

	└		symbol		Public	!			NO	!	
	└		decimals		Public	!			NO	!	
	└		totalSupply		Public	!			NO	!	
	└		balanceOf		Public	!			NO	!	
	└		transfer		Public	!		●	NO	!	
	└		allowance		Public	!			NO	!	
	└		approve		Public	!		●	NO	!	
	└		transferFrom		Public	!		●	NO	!	
	└		increaseAllowance		Public	!		●	NO	!	
	└		decreaseAllowance		Public	!		●	NO	!	
	└		_transfer		Internal	🔒		●			
	└		_mint		Internal	🔒		●			
	└		_burn		Internal	🔒		●			
	└		_approve		Internal	🔒		●			
	└		_setupDecimals		Internal	🔒		●			
	└		_beforeTokenTransfer		Internal	🔒		●			

| Symbol | Meaning |

|:-----:|-----|

| ● | Function can modify state |

| 💰 | Function is payable |



STATIC ANALYSIS

```
Contract locking ether found:
  Contract StandardToken (contracts/Token.sol#477-886) has payable functions:
    - StandardToken.constructor(string,string,uint8,uint256) (contracts/Token.sol#490-502)
  But does not have a function to withdraw the ether
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#contracts-that-lock-ether

StandardToken.allowance(address,address).owner (contracts/Token.sol#572) shadows:
  - Ownable.owner() (contracts/Token.sol#161-163) (function)
StandardToken._approve(address,address,uint256).owner (contracts/Token.sol#765) shadows:
  - Ownable.owner() (contracts/Token.sol#161-163) (function)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#local-variable-shadowing

Context._msgData() (contracts/Token.sol#120-122) is never used and should be removed
SafeMath.div(uint256,uint256) (contracts/Token.sol#351-353) is never used and should be removed
SafeMath.div(uint256,uint256,string) (contracts/Token.sol#407-416) is never used and should be removed
SafeMath.mod(uint256,uint256) (contracts/Token.sol#367-369) is never used and should be removed
SafeMath.mod(uint256,uint256,string) (contracts/Token.sol#433-442) is never used and should be removed
SafeMath.mul(uint256,uint256) (contracts/Token.sol#337-339) is never used and should be removed
SafeMath.sub(uint256,uint256) (contracts/Token.sol#323-325) is never used and should be removed
SafeMath.tryAdd(uint256,uint256) (contracts/Token.sol#223-232) is never used and should be removed
SafeMath.tryDiv(uint256,uint256) (contracts/Token.sol#274-282) is never used and should be removed
SafeMath.tryMod(uint256,uint256) (contracts/Token.sol#289-297) is never used and should be removed
SafeMath.tryMul(uint256,uint256) (contracts/Token.sol#254-267) is never used and should be removed
SafeMath.trySub(uint256,uint256) (contracts/Token.sol#239-247) is never used and should be removed
StandardToken._burn(address,uint256) (contracts/Token.sol#738-749) is never used and should be removed
StandardToken._setupDecimals(uint8) (contracts/Token.sol#783-785) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code

Pragma version^0.8.17 (contracts/Token.sol#3) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.18 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity

Variable StandardToken._totalSupply (contracts/Token.sol#488) is too similar to StandardToken.constructor(string,string,uint8,uint256).totalSupply_ (contracts/Token.sol#494)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

StandardToken._name (contracts/Token.sol#485) should be immutable
StandardToken._symbol (contracts/Token.sol#486) should be immutable
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-immutable
```

**Result => A static analysis of contract's source code has been performed using slither,
No major issues were found in the output**



FUNCTIONAL TESTING

Router (PCS V2):

0xD99D1c33F9fC3444f8101754aBC46c52416550D1

1- Adding liquidity (**passed**):

<https://testnet.bscscan.com/tx/0xb4f96efdfa61010dbd3e92c96741fabb5de9563d0fd5903c2372a466fcb2ae17>

2- Buying (0% tax) (**passed**):

<https://testnet.bscscan.com/tx/0x700a20156c23c49215e195eef181c537f421572a5c802b2cbf7b04cb8ae18250>

3- Selling (0% tax) (**passed**):

<https://testnet.bscscan.com/tx/0x5cee8e84a8579549efdc5b68e3a4511479ed351652860dd2edc30a3197ed3c2d>

4- Transferring (0% tax) (**passed**):

<https://testnet.bscscan.com/tx/0x248ab0511af7b080ce6d930997ba70ee090945890e15685b82c98f3582bcc05b>



MANUAL TESTING

NO ISSUES FOUND

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