auditace.tech

AuditAce

FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

SBF CEO

DATED : 26 April 23'

AUDIT SUMMARY

Project name – SBF CEO

Date: 26 April, 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	2	0	0	0
Acknowledged	0	0	0	0	0
Resolved	0	0	0	0	0

USED TOOLS

Tools:

1- Manual Review:
A line by line code review has been performed by 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/0xb65e03c8ad622a5aeb6819c014065f9235b24ac0

Token Information

Token Name : SBF CEO

Token Symbol: SBFCEO

Decimals: 18

Token Supply: 100,000,000,000

Token Address:
0x924a65ae058c197ad2f3ad5c38ea50a78ae36b25

Checksum:
4d71e52bbcc17b365e19a9661658c05f4397eb29

Owner:
0x6a88aAD5547035BDE42020B18CDF4beD566a2e56
(at time of writing the audit)

Deployer:
0x4265d5b2d553b6C8F0C77E6D7A639c50Ff287965

TOKEN OVERVIEW

Fees:

Buy Fees: up to 10%

Sell Fees: up to 10%

Transfer Fees: 0

Fees Privilege: None

Ownership: Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Privileges: modifying swap threshold - toggling internal swap - excluding wallets from fee - including wallets in fee - modifying fees - changing buyback threshold

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

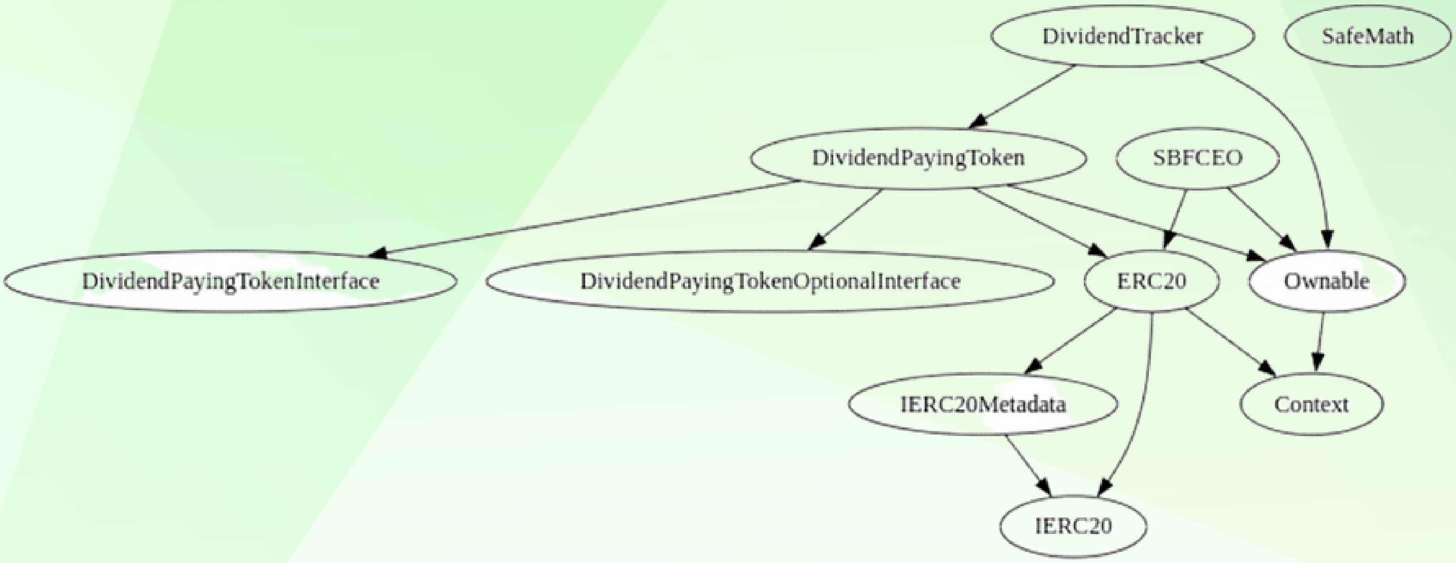
CLASSIFICATION OF RISK

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	2
Medium-Risk	0
Low-Risk	0
Gas Optimization / Suggestions	0

INHERITANCE TREE



POINTS TO NOTE

- Owner is able to change buy/sell each one up to 10%
- Owner is not ablet o set transfer taxes (0% forever)
- Owner is not able to set max buy/sell/transfer/hold amount
- Owner is not able to blacklist an arbitrary wallet
- Owner is not able to disable trades
- Owner has to enable trades manually for holders
- Owner is not able to mint new tokens
- Token has BNB rewards with auto-distribution
- Fees are used for rewards (BNB), buyback and marketing

CONTRACT ASSESMENT

```
|  Contract  |        Type        |       Bases      |                  |                 |
|:----------:|:-------------------:|:----------------:|:----------------:|:---------------:|
|     └      |  **Function Name**  |  **Visibility**  |  **Mutability**  |  **Modifiers**  |
| **Context** | Implementation |  |||
| └ | _msgSender | Internal 🔒 |   | |
| └ | _msgData | Internal 🔒 |   | |
||||||
| **Ownable** | Implementation | Context |||
| └ | <Constructor> | Public ❗️ | 🛑  |NO❗️ |
| └ | owner | Public ❗️ |   |NO❗️ |
| └ | renounceOwnership | Public ❗️ | 🛑  | onlyOwner |
| └ | transferOwnership | Public ❗️ | 🛑  | onlyOwner |
| └ | _transferOwnership | Internal 🔒 | 🛑  | |
||||||
| **SafeMath** | Library |  |||
| └ | add | Internal 🔒 |   | |
| └ | sub | Internal 🔒 |   | |
| └ | sub | Internal 🔒 |   | |
| └ | mul | Internal 🔒 |   | |
| └ | div | Internal 🔒 |   | |
| └ | div | Internal 🔒 |   | |
| └ | mod | Internal 🔒 |   | |
| └ | mod | Internal 🔒 |   | |
||||||
| **SafeMathInt** | Library |  |||
| └ | mul | Internal 🔒 |   | |
| └ | div | Internal 🔒 |   | |
| └ | sub | Internal 🔒 |   | |
| └ | add | Internal 🔒 |   | |
| └ | abs | Internal 🔒 |   | |
| └ | toUint256Safe | Internal 🔒 |   | |
||||||
| **SafeMathUint** | Library |  |||
| └ | toInt256Safe | Internal 🔒 |   | |
||||||
| **IterableMapping** | Library |  |||
| └ | get | Internal 🔒 |   | |
| └ | getIndexOfKey | Internal 🔒 |   | |
| └ | getKeyAtIndex | Internal 🔒 |   | |
| └ | size | Internal 🔒 |   | |
| └ | set | Internal 🔒 | 🛑  | |
| └ | remove | Internal 🔒 | 🛑  | |
```

CONTRACT ASSESMENT

```
||||||
| **IUniswapV2Factory** | Interface |  |||
| └ | feeTo | External ❗️ |   |NO❗️ |
| └ | feeToSetter | External ❗️ |   |NO❗️ |
| └ | getPair | External ❗️ |   |NO❗️ |
| └ | allPairs | External ❗️ |   |NO❗️ |
| └ | allPairsLength | External ❗️ |   |NO❗️ |
| └ | createPair | External ❗️ | 🛑  |NO❗️ |
| └ | setFeeTo | External ❗️ | 🛑  |NO❗️ |
| └ | setFeeToSetter | External ❗️ | 🛑  |NO❗️ |
||||||
| **IUniswapV2Pair** | Interface |  |||
| └ | name | External ❗️ |   |NO❗️ |
| └ | symbol | External ❗️ |   |NO❗️ |
| └ | decimals | External ❗️ |   |NO❗️ |
| └ | totalSupply | External ❗️ |   |NO❗️ |
| └ | balanceOf | External ❗️ |   |NO❗️ |
| └ | allowance | External ❗️ |   |NO❗️ |
| └ | approve | External ❗️ | 🛑  |NO❗️ |
| └ | transfer | External ❗️ | 🛑  |NO❗️ |
| └ | transferFrom | External ❗️ | 🛑  |NO❗️ |
| └ | DOMAIN_SEPARATOR | External ❗️ |   |NO❗️ |
| └ | PERMIT_TYPEHASH | External ❗️ |   |NO❗️ |
| └ | nonces | External ❗️ |   |NO❗️ |
| └ | permit | External ❗️ | 🛑  |NO❗️ |
| └ | MINIMUM_LIQUIDITY | External ❗️ |   |NO❗️ |
| └ | factory | External ❗️ |   |NO❗️ |
| └ | token0 | External ❗️ |   |NO❗️ |
| └ | token1 | External ❗️ |   |NO❗️ |
| └ | getReserves | External ❗️ |   |NO❗️ |
| └ | price0CumulativeLast | External ❗️ |   |NO❗️ |
| └ | price1CumulativeLast | External ❗️ |   |NO❗️ |
| └ | kLast | External ❗️ |   |NO❗️ |
| └ | mint | External ❗️ | 🛑  |NO❗️ |
| └ | burn | External ❗️ | 🛑  |NO❗️ |
| └ | swap | External ❗️ | 🛑  |NO❗️ |
| └ | skim | External ❗️ | 🛑  |NO❗️ |
| └ | sync | External ❗️ | 🛑  |NO❗️ |
| └ | initialize | External ❗️ | 🛑  |NO❗️ |
||||||
| **IUniswapV2Router01** | Interface |  |||
```

CONTRACT ASSESMENT

```
| └ | factory | External ❗️ |   |NO❗️ |
| └ | WETH | External ❗️ |   |NO❗️ |
| └ | addLiquidity | External ❗️ | 🛑  |NO❗️ |
| └ | addLiquidityETH | External ❗️ | 💵 |NO❗️ |
| └ | removeLiquidity | External ❗️ | 🛑  |NO❗️ |
| └ | removeLiquidityETH | External ❗️ | 🛑  |NO❗️ |
| └ | removeLiquidityWithPermit | External ❗️ | 🛑  |NO❗️ |
| └ | removeLiquidityETHWithPermit | External ❗️ | 🛑  |NO❗️ |
| └ | swapExactTokensForTokens | External ❗️ | 🛑  |NO❗️ |
| └ | swapTokensForExactTokens | External ❗️ | 🛑  |NO❗️ |
| └ | swapExactETHForTokens | External ❗️ | 💵 |NO❗️ |
| └ | swapTokensForExactETH | External ❗️ | 🛑  |NO❗️ |
| └ | swapExactTokensForETH | External ❗️ | 🛑  |NO❗️ |
| └ | swapETHForExactTokens | External ❗️ | 💵 |NO❗️ |
| └ | quote | External ❗️ |   |NO❗️ |
| └ | getAmountOut | External ❗️ |   |NO❗️ |
| └ | getAmountIn | External ❗️ |   |NO❗️ |
| └ | getAmountsOut | External ❗️ |   |NO❗️ |
| └ | getAmountsIn | External ❗️ |   |NO❗️ |
||||||
| **IUniswapV2Router02** | Interface | IUniswapV2Router01 |||
| └ | removeLiquidityETHSupportingFeeOnTransferTokens | External ❗️ | 🛑  |NO❗️ |
| └ | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External ❗️ | 🛑  |NO❗️ |
| └ | swapExactTokensForTokensSupportingFeeOnTransferTokens | External ❗️ | 🛑  |NO❗️ |
| └ | swapExactETHForTokensSupportingFeeOnTransferTokens | External ❗️ | 💵 |NO❗️ |
| └ | swapExactTokensForETHSupportingFeeOnTransferTokens | External ❗️ | 🛑  |NO❗️ |
||||||
| **IERC20** | Interface |  |||
| └ | totalSupply | External ❗️ |   |NO❗️ |
| └ | balanceOf | External ❗️ |   |NO❗️ |
| └ | allowance | External ❗️ |   |NO❗️ |
| └ | transfer | External ❗️ | 🛑  |NO❗️ |
| └ | approve | External ❗️ | 🛑  |NO❗️ |
| └ | transferFrom | External ❗️ | 🛑  |NO❗️ |
||||||
| **Address** | Library |  |||
| └ | isContract | Internal 🔒 |   | |
| └ | sendValue | Internal 🔒 | 🛑  | |
| └ | functionCall | Internal 🔒 | 🛑  | |
| └ | functionCall | Internal 🔒 | 🛑  | |
| └ | functionCallWithValue | Internal 🔒 | 🛑  | |
```

CONTRACT ASSESMENT

```
| └ | functionCallWithValue | Internal 🔒 | 🛑  | |
| └ | _functionCallWithValue | Private 🔐 | 🛑  | |
||||||
| **IERC20Metadata** | Interface | IERC20 |||
| └ | name | External ❗ |   |NO❗ |
| └ | symbol | External ❗ |   |NO❗ |
| └ | decimals | External ❗ |   |NO❗ |
||||||
| **IPinkAntiBot** | Interface |  |||
| └ | setTokenOwner | External ❗ | 🛑  |NO❗ |
| └ | onPreTransferCheck | External ❗ | 🛑  |NO❗ |
||||||
| **ERC20** | Implementation | Context, IERC20, IERC20Metadata |||
| └ | <Constructor> | Public ❗ | 🛑  |NO❗ |
| └ | name | Public ❗ |   |NO❗ |
| └ | 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 🔒 | 🛑  | |
| └ | _beforeTokenTransfer | Internal 🔒 | 🛑  | |
||||||
| **DividendPayingTokenInterface** | Interface |  |||
| └ | dividendOf | External ❗ |   |NO❗ |
| └ | withdrawDividend | External ❗ | 🛑  |NO❗ |
||||||
| **DividendPayingTokenOptionalInterface** | Interface |  |||
| └ | withdrawableDividendOf | External ❗ |   |NO❗ |
| └ | withdrawnDividendOf | External ❗ |   |NO❗ |
| └ | accumulativeDividendOf | External ❗ |   |NO❗ |
||||||
| **DividendPayingToken** | Implementation | ERC20, Ownable, DividendPayingTokenInterface,
DividendPayingTokenOptionalInterface |||
```

CONTRACT ASSESMENT

```
| └ | <Constructor> | Public ❗️ | 🛑  | ERC20 |
| └ | distributeDividends | Public ❗️ | 🛑  | onlyOwner |
| └ | withdrawDividend | Public ❗️ | 🛑  |NO❗️ |
| └ | _withdrawDividendOfUser | Internal 🔒 | 🛑  | |
| └ | dividendOf | Public ❗️ |   |NO❗️ |
| └ | withdrawableDividendOf | Public ❗️ |   |NO❗️ |
| └ | withdrawnDividendOf | Public ❗️ |   |NO❗️ |
| └ | accumulativeDividendOf | Public ❗️ |   |NO❗️ |
| └ | _transfer | Internal 🔒 | 🛑  | |
| └ | _mint | Internal 🔒 | 🛑  | |
| └ | _burn | Internal 🔒 | 🛑  | |
| └ | _setBalance | Internal 🔒 | 🛑  | |
||||||
| **DividendTracker** | Implementation | Ownable, DividendPayingToken |||
| └ | <Constructor> | Public ❗️ | 🛑  | DividendPayingToken |
| └ | <Receive Ether> | External ❗️ | 💵 |NO❗️ |
| └ | _transfer | Internal 🔒 |   | |
| └ | withdrawDividend | Public ❗️ |   |NO❗️ |
| └ | updateMinimumTokenBalanceForDividends | External ❗️ | 🛑  | onlyOwner |
| └ | excludeFromDividends | External ❗️ | 🛑  | onlyOwner |
| └ | updateClaimWait | External ❗️ | 🛑  | onlyOwner |
| └ | setLastProcessedIndex | External ❗️ | 🛑  | onlyOwner |
| └ | getLastProcessedIndex | External ❗️ |   |NO❗️ |
| └ | getNumberOfTokenHolders | External ❗️ |   |NO❗️ |
| └ | getAccount | Public ❗️ |   |NO❗️ |
| └ | getAccountAtIndex | Public ❗️ |   |NO❗️ |
| └ | canAutoClaim | Private 🔐 |   | |
| └ | setBalance | External ❗️ | 🛑  | onlyOwner |
| └ | process | Public ❗️ | 🛑  |NO❗️ |
| └ | processAccount | Public ❗️ | 🛑  | onlyOwner |
||||||
| **SBFCEO** | Implementation | ERC20, Ownable |||
| └ | <Constructor> | Public ❗️ | 🛑  | ERC20 |
| └ | <Receive Ether> | External ❗️ | 💵 |NO❗️ |
| └ | claimStuckTokens | External ❗️ | 🛑  | onlyOwner |
| └ | excludeFromFees | External ❗️ | 🛑  | onlyOwner |
| └ | isExcludedFromFees | Public ❗️ |   |NO❗️ |
| └ | updateBuyFees | External ❗️ | 🛑  | onlyOwner |
| └ | updateSellFees | External ❗️ | 🛑  | onlyOwner |
| └ | changeMarketingWallet | External ❗️ | 🛑  | onlyOwner |
| └ | enableTrading | External ❗️ | 🛑  | onlyOwner |
```

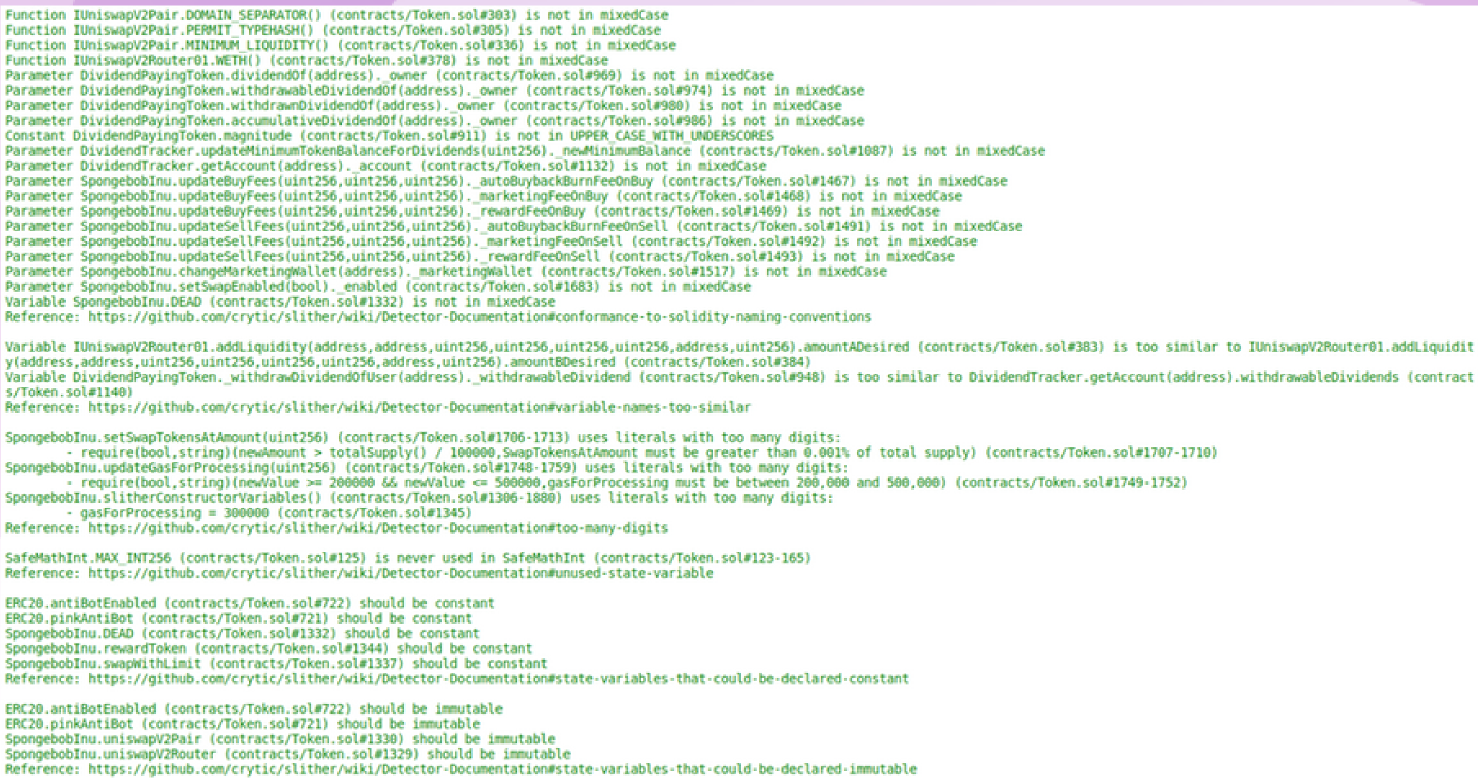
CONTRACT ASSESMENT

```
| └ | _transfer | Internal 🔒 | 🛑  | |
| └ | swapAndSendDividends | Private 🔐 | 🛑  | |
| └ | setSwapEnabled | External ❗ | 🛑  | onlyOwner |
| └ | setBNBValueForBuyBurn | Public ❗ | 🛑  | onlyOwner |
| └ | buyBack | Internal 🔒 | 🛑  | |
| └ | setSwapTokensAtAmount | External ❗ | 🛑  | onlyOwner |
| └ | updateDividendTracker | Public ❗ | 🛑  | onlyOwner |
| └ | updateGasForProcessing | Public ❗ | 🛑  | onlyOwner |
| └ | updateMinimumBalanceForDividends | External ❗ | 🛑  | onlyOwner |
| └ | updateClaimWait | External ❗ | 🛑  | onlyOwner |
| └ | getClaimWait | External ❗ |   |NO❗ |
| └ | getTotalDividendsDistributed | External ❗ |   |NO❗ |
| └ | withdrawableDividendOf | Public ❗ |   |NO❗ |
| └ | dividendTokenBalanceOf | Public ❗ |   |NO❗ |
| └ | totalRewardsEarned | Public ❗ |   |NO❗ |
| └ | excludeFromDividends | External ❗ | 🛑  | onlyOwner |
| └ | isExcludedFromDividends | Public ❗ |   |NO❗ |
| └ | getAccountDividendsInfo | External ❗ |   |NO❗ |
| └ | getAccountDividendsInfoAtIndex | External ❗ |   |NO❗ |
| └ | processDividendTracker | External ❗ | 🛑  |NO❗ |
| └ | claim | External ❗ | 🛑  |NO❗ |
| └ | claimAddress | External ❗ | 🛑  | onlyOwner |
| └ | getLastProcessedIndex | External ❗ |   |NO❗ |
| └ | setLastProcessedIndex | External ❗ | 🛑  | onlyOwner |
| └ | getNumberOfDividendTokenHolders | External ❗ |   |NO❗ |
```

Legend

```
|  Symbol  |  Meaning  |
|:--------:|-----------|
|    🛑    | Function can modify state |
|    💵    | Function is payable |
```

STATIC ANALYSIS



```
Function IUniswapV2Pair.DOMAIN_SEPARATOR() (contracts/Token.sol#303) is not in mixedCase
Function IUniswapV2Pair.PERMIT_TYPEHASH() (contracts/Token.sol#305) is not in mixedCase
Function IUniswapV2Pair.MINIMUM_LIQUIDITY() (contracts/Token.sol#336) is not in mixedCase
Function IUniswapV2Router01.WETH() (contracts/Token.sol#378) is not in mixedCase
Parameter DividendPayingToken.dividendOf(address)._owner (contracts/Token.sol#969) is not in mixedCase
Parameter DividendPayingToken.withdrawableDividendOf(address)._owner (contracts/Token.sol#974) is not in mixedCase
Parameter DividendPayingToken.withdrawnDividendOf(address)._owner (contracts/Token.sol#980) is not in mixedCase
Parameter DividendPayingToken.accumulativeDividendOf(address)._owner (contracts/Token.sol#986) is not in mixedCase
Constant DividendPayingToken.magnitude (contracts/Token.sol#911) is not in UPPER_CASE_WITH_UNDERSCORES
Parameter DividendTracker.updateMinimumTokenBalanceForDividends(uint256)._newMinimumBalance (contracts/Token.sol#1087) is not in mixedCase
Parameter DividendTracker.getAccount(address)._account (contracts/Token.sol#1132) is not in mixedCase
Parameter SpongebobInu.updateBuyFees(uint256,uint256,uint256)._autoBuybackBurnFeeOnBuy (contracts/Token.sol#1467) is not in mixedCase
Parameter SpongebobInu.updateBuyFees(uint256,uint256,uint256)._marketingFeeOnBuy (contracts/Token.sol#1468) is not in mixedCase
Parameter SpongebobInu.updateBuyFees(uint256,uint256,uint256)._rewardFeeOnBuy (contracts/Token.sol#1469) is not in mixedCase
Parameter SpongebobInu.updateSellFees(uint256,uint256,uint256)._autoBuybackBurnFeeOnSell (contracts/Token.sol#1491) is not in mixedCase
Parameter SpongebobInu.updateSellFees(uint256,uint256,uint256)._marketingFeeOnSell (contracts/Token.sol#1492) is not in mixedCase
Parameter SpongebobInu.updateSellFees(uint256,uint256,uint256)._rewardFeeOnSell (contracts/Token.sol#1493) is not in mixedCase
Parameter SpongebobInu.changeMarketingWallet(address)._marketingWallet (contracts/Token.sol#1517) is not in mixedCase
Parameter SpongebobInu.setSwapEnabled(bool)._enabled (contracts/Token.sol#1683) is not in mixedCase
Variable SpongebobInu.DEAD (contracts/Token.sol#1332) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

Variable IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountADesired (contracts/Token.sol#383) is too similar to IUniswapV2Router01.addLiquidit
y(address,address,uint256,uint256,uint256,uint256,address,uint256).amountBDesired (contracts/Token.sol#384)
Variable DividendPayingToken._withdrawDividendOfUser(address)._withdrawableDividend (contracts/Token.sol#948) is too similar to DividendTracker.getAccount(address).withdrawableDividends (contract
s/Token.sol#1140)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

SpongebobInu.setSwapTokensAtAmount(uint256) (contracts/Token.sol#1706-1713) uses literals with too many digits:
        - require(bool,string)(newAmount > totalSupply() / 100000,SwapTokensAtAmount must be greater than 0.001% of total supply) (contracts/Token.sol#1707-1710)
SpongebobInu.updateGasForProcessing(uint256) (contracts/Token.sol#1748-1759) uses literals with too many digits:
        - require(bool,string)(newValue >= 200000 && newValue <= 500000,gasForProcessing must be between 200,000 and 500,000) (contracts/Token.sol#1749-1752)
SpongebobInu.slitherConstructorVariables() (contracts/Token.sol#1306-1880) uses literals with too many digits:
        - gasForProcessing = 300000 (contracts/Token.sol#1345)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits

SafeMathInt.MAX_INT256 (contracts/Token.sol#125) is never used in SafeMathInt (contracts/Token.sol#123-165)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#unused-state-variable

ERC20.antiBotEnabled (contracts/Token.sol#722) should be constant
ERC20.pinkAntiBot (contracts/Token.sol#721) should be constant
SpongebobInu.DEAD (contracts/Token.sol#1332) should be constant
SpongebobInu.rewardToken (contracts/Token.sol#1344) should be constant
SpongebobInu.swapWithLimit (contracts/Token.sol#1337) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant

ERC20.antiBotEnabled (contracts/Token.sol#722) should be immutable
ERC20.pinkAntiBot (contracts/Token.sol#721) should be immutable
SpongebobInu.uniswapV2Pair (contracts/Token.sol#1330) should be immutable
SpongebobInu.uniswapV2Router (contracts/Token.sol#1329) 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

All the functionalities have been tested, no issues were found

1- Adding liquidity (passed):

https://testnet.bscscan.com/tx/0x8f5472a6b782e67699df95613f0bbc048a6cb1b5b6ffd6e383b9a3c6f5a3627d

2- Buying when excluded (0% tax) (passed):

https://testnet.bscscan.com/tx/0x82c5d482456553c7385dfbf7b814a7b918e6e593cb67789bcf088347d59ab530

3- Selling when excluded (0% tax) (passed):

https://testnet.bscscan.com/tx/0xd46d18cc31855c14664fddfca2448ae53a304ea47797e19748838da59708738c

4- Transferring when excluded from fees (0% tax) (passed):

https://testnet.bscscan.com/tx/0xfbe5f7309cc59e8fb605aac4bd70af8db89d09436ba0b12287d68936ffcfe1a8

5- Buying when not excluded from fees (up to 10% tax) (passed):

https://testnet.bscscan.com/tx/0xfe379fdf0878a4ee64affe79b51b28ab71c635eca992f07b9c86cf3fe5547893

6- Selling when not excluded from fees (up to 10% tax) (passed):

https://testnet.bscscan.com/tx/0x3ccdfd89f470c8c43e2a71ea3b24fbbeb31b612e2898635c24d6d126c27591f0

FUNCTIONAL TESTING

7- Transferring when not excluded from fees (0% tax) **(passed):**

https://testnet.bscscan.com/tx/0x0206c6d1e07ee415ebd05afb68957872349a2234dd5733382567a9a16778d73a

8- Internal swap **(passed):**

marketing wallet received BNB

https://testnet.bscscan.com/address/0xf21d472cf93acc209087a7d260404246742dcda0#internaltx

9- Buyback **(passed):**

Buyback happened after reaching the threshold, and tokens were sent to dead wallet

https://testnet.bscscan.com/token/0xb65e03c8ad622a5aeb6819c014065f9235b24ac0?a=0x000000000000000000000000000000000000dead

MANUAL TESTING

Logical – Upgradeable dividend tracker

Severity: High

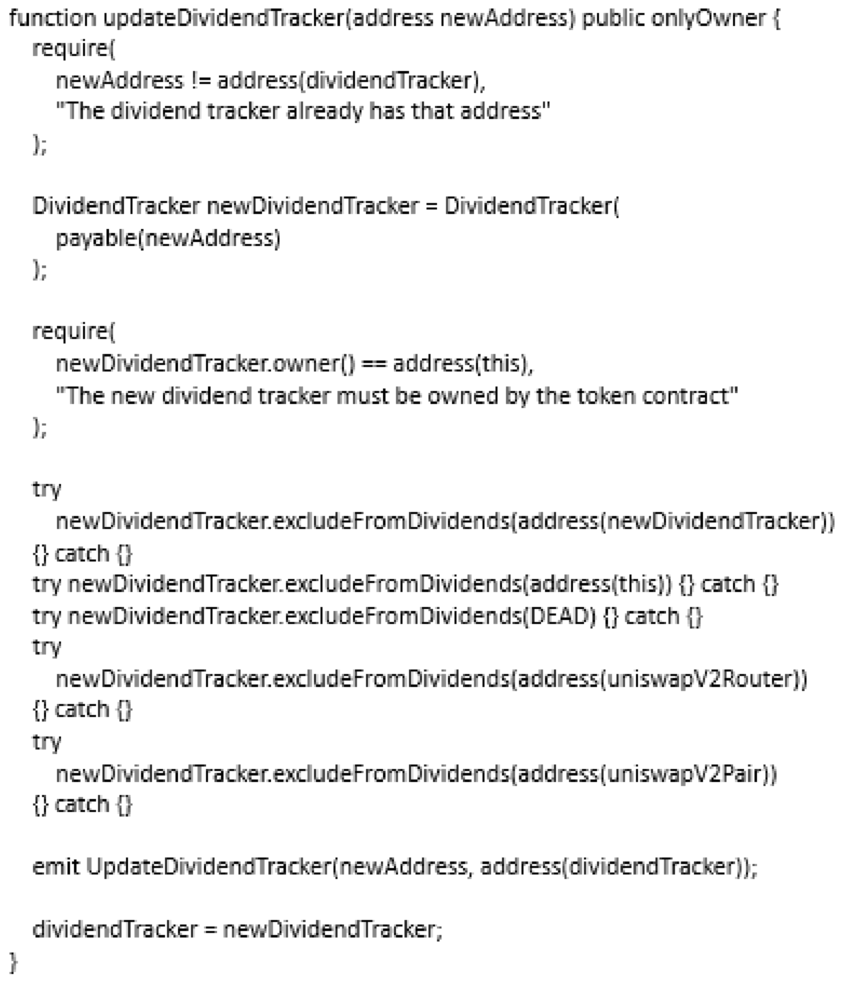
Function: enableTrading

Lines: 1531

Status: Not Resolved

Overview:

Owner of the contract is able to change dividend tracker to another address. If new dividend tracker has issues (spending lots of gas, not compatible with current token implementation etc), buy/sell/transfers would be disabled.



```
function updateDividendTracker(address newAddress) public onlyOwner {
    require(
        newAddress != address(dividendTracker),
        "The dividend tracker already has that address"
    );

    DividendTracker newDividendTracker = DividendTracker(
        payable(newAddress)
    );

    require(
        newDividendTracker.owner() == address(this),
        "The new dividend tracker must be owned by the token contract"
    );

    try
        newDividendTracker.excludeFromDividends(address(newDividendTracker))
    {} catch {}
    try newDividendTracker.excludeFromDividends(address(this)) {} catch {}
    try newDividendTracker.excludeFromDividends(DEAD) {} catch {}
    try
        newDividendTracker.excludeFromDividends(address(uniswapV2Router))
    {} catch {}
    try
        newDividendTracker.excludeFromDividends(address(uniswapV2Pair))
    {} catch {}

    emit UpdateDividendTracker(newAddress, address(dividendTracker));

    dividendTracker = newDividendTracker;
}
```

Recommendation:

There are several options to mitigate this issue

- renounce the ownership
- Ensure that dividend tracker is not upgradeable
- Add additional functions to current dividend tracker so be able to change reward token, router address etc. this means we don't need to create a new dividend tracker later in order to update current one.

MANUAL TESTING

Centralization - Owner Must Enable Trades

Severity: High / Informational

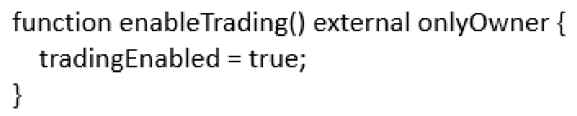
Function: enableTrading

Lines: 1531

Status: Not Resolved

Overview:

The owner is required to enable trading for investors. If trading remains disabled, token holders will not have the ability to buy, sell, or transfer their tokens.



```
function enableTrading() external onlyOwner {
    tradingEnabled = true;
}
```

Recommendation:

While the presence of this function is considered a feature rather than a flaw, it is crucial to highlight the centralization risk it inherently poses. To address this issue and ensure the enablement of trades, one possible solution would be to transfer the contract's ownership to a trusted third party, such as a Pinksale Safu developer. This would help mitigate the centralization risk associated with this function.

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