



# Smart Contract Audit

FOR

ElonFloki

DATED : 15 June 23'

# FUNCTIONAL TESTING

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## Centralization – Trades must be enabled

Severity: **High**

function: enableTrading

Status: Not Resolved

### Overview:

The smart contract owner must enable trades for holders. If trading remain disabled, no one would be able to buy/sell/transfer tokens.

```
function enableTrading() external onlyOwner {  
    require(!tradingEnabled, "Trading already enabled.");  
    tradingEnabled = true;  
    swapEnabled = true;  
}
```

### Suggestion

To mitigate this centralization issue, we propose the following options:

1. Renounce Ownership: Consider relinquishing control of the smart contract by renouncing ownership. This would remove the ability for a single entity to manipulate the router, reducing centralization risks.
2. Multi-signature Wallet: Transfer ownership to a multi-signature wallet. This would require multiple approvals for any changes to the mainRouter, adding an additional layer of security and reducing the centralization risk.
3. Transfer ownership to a trusted and valid 3<sup>rd</sup> party in order to guarantee enabling of the trades



# AUDIT SUMMARY

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**Project name –** ElonFloki

**Date:** 15 June, 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	1	1	0	0
Acknowledged	0	0	0	0	0
Resolved	0	0	0	0	0

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# USED TOOLS

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## 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/0x94035B40df874850be42F8a8e849150CF712421F>

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# Token Information

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**Token Name :** Elon Floki CEO

**Token Symbol:** ElonFloki

**Decimals:** 18

**Token Supply:** 1,000,000,000

**Token Address:** ---

**Checksum:**

5a7c8cf5339a5b4d2ea9f1d921dfd872424e2f02

**Owner:**

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**(at time of writing the audit)**

**Deployer:**

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# TOKEN OVERVIEW

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## **Fees:**

Buy Fees: 0-0.1%

Sell Fees: 0-0.1%

Transfer Fees: 0-0.1%

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**Fees Privilege:** Owner

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**Ownership:** owned

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**Minting:** none

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**Max Tx Amount/ Max Wallet Amount:** No

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**Blacklist:** No

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**Other Privileges:** - Initial distribution of the tokens  
- enabling trades  
- updating fees

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# AUDIT METHODOLOGY

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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.
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# VULNERABILITY CHECKLIST

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- |                                    |                               |
|------------------------------------|-------------------------------|
| ✓ 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                 |
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# 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

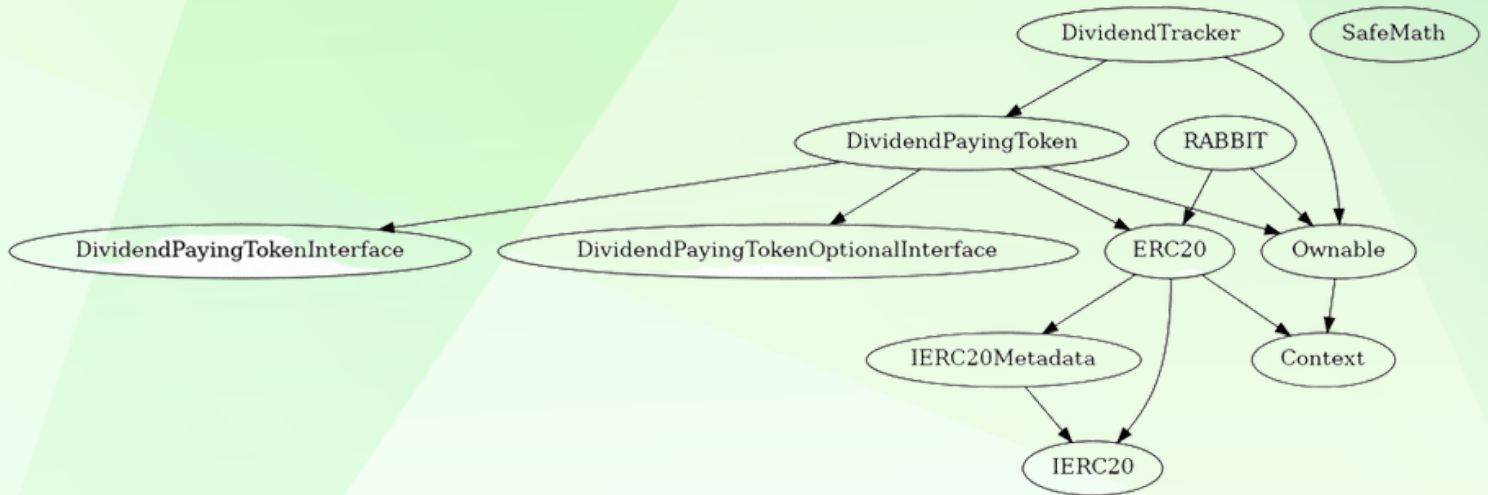
### Severity

### Found

◆ Critical	0
◆ High-Risk	1
◆ Medium-Risk	1
◆ Low-Risk	0
◆ Gas Optimization / Suggestions	0

# INHERITANCE TREE

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# POINTS TO NOTE

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- **Owner is not able to change buy/sell/transfer fees over 10% each**
  - Owner is not able to blacklist an arbitrary address.
  - Owner is not able to disable trades
  - Owner is not able to set max buy/sell/transfer/hold amount to 0
  - Owner is not able to mint new tokens
  - **Owner must enable trades manually**
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# CONTRACT ASSESMENT

Contract	Type	Bases			
:-----: :-----: :-----: :-----: :-----:					
L	**Function Name**	**Visibility**	**Mutability**	**Modifiers**	
**Context**   Implementation					
L	_msgSender	Internal	🔒		
L	_msgData	Internal	🔒		
**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 !
**IERC20Metadata**   Interface   IERC20					
L	name	External	!		NO !
L	symbol	External	!		NO !
L	decimals	External	!		NO !
**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	🔒		
**Ownable**   Implementation   Context					
L	<Constructor>	Public	!		NO !
L	owner	Public	!		NO !
L	_checkOwner	Internal	🔒		
L	renounceOwnership	Public	!		onlyOwner
L	transferOwnership	Public	!		onlyOwner
L	_transferOwnership	Internal	🔒		



# CONTRACT ASSESMENT

```
**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 🔒 | ● ||
└| _spendAllowance | Internal 🔒 | ● ||
└| _beforeTokenTransfer | Internal 🔒 | ● ||
└| _afterTokenTransfer | 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 🔒 | ● ||
|||||
**IUniswapV2Factory** | Interface | |||
└| feeTo | External ! | |NO ! |
└| feeToSetter | External ! | |NO ! |
```

# CONTRACT ASSESMENT

```

└─| 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 | |||
└─| factory | External ! | |NO ! |
└─| WETH | External ! | |NO ! |
└─| addLiquidity | External ! | ● |NO ! |
└─| addLiquidityETH | External ! | 💰 |NO ! |
└─| removeLiquidity | External ! | ● |NO ! |

```

# CONTRACT ASSESMENT

```

└─ 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 ! |
|||||
**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 |||
└─ <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 🔒 | ● | |

```

# CONTRACT ASSESMENT

```

└| _burn | Internal 🔒 | ● | |
└| _setBalance | Internal 🔒 | ● | |
|||||
**DividendTracker** | Implementation | Ownable, DividendPayingToken |||
└| <Constructor> | Public ! | ● | DividendPayingToken |
└| _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 |
└| <Receive Ether> | External ! | 💰 |NO ! |
|||||
**RABBIT** | Implementation | ERC20, Ownable |||
└| <Constructor> | Public ! | 💰 | ERC20 |
└| <Receive Ether> | External ! | 💰 |NO ! |
└| claimStuckTokens | External ! | ● | onlyOwner |
└| isContract | Internal 🔒 | | |
└| sendBNB | Internal 🔒 | ● | |
└| _setAutomatedMarketMakerPair | Private 🔒 | ● | |
└| excludeFromFees | External ! | ● | onlyOwner |
└| isExcludedFromFees | Public ! | |NO ! |
└| updateBuyFees | External ! | ● | onlyOwner |
└| updateSellFees | External ! | ● | onlyOwner |
└| changeMarketingWallet | External ! | ● | onlyOwner |
└| enableTrading | External ! | ● | onlyOwner |
└| _transfer | Internal 🔒 | ● | |
└| swapAndLiquify | Private 🔒 | ● | |
└| swapAndSendDividends | Private 🔒 | ● | |
└| setSwapTokensAtAmount | External ! | ● | onlyOwner |
└| setSwapEnabled | External ! | ● | onlyOwner |
└| updateGasForProcessing | Public ! | ● | onlyOwner |
└| updateMinimumBalanceForDividends | External ! | ● | onlyOwner |
└| updateClaimWait | External ! | ● | onlyOwner |

```





# CONTRACT ASSESMENT

	└		getClaimWait		External	!			NO	!		
	└		getTotalDividendsDistributed		External	!			NO	!		
	└		withdrawableDividendOf		Public	!			NO	!		
	└		dividendTokenBalanceOf		Public	!			NO	!		
	└		totalRewardsEarned		Public	!			NO	!		
	└		excludeFromDividends		External	!		●		onlyOwner		
	└		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

```
Pragma version^0.8.17 (contracts/Token.sol#8) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.20 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity

Low level call in DividendPayingToken.withdrawDividendOfUser(address) (contracts/Token.sol#1211-1227):
- (success) = user.call{gas: 50000,value: withdrawableDividend}() (contracts/Token.sol#1217)
Low level call in RABBIT.sendBNB(address,uint256) (contracts/Token.sol#1612-1617):
- (success) = recipient.call{value: amount}() (contracts/Token.sol#1615)
Low level call in RABBIT.swapAndSendDividends(uint256) (contracts/Token.sol#1845-1851):
- (success) = address(address(dividendTracker)).call{value: amount}() (contracts/Token.sol#1846)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls

Function IUniswapV2Pair.DOMAIN_SEPARATOR() (contracts/Token.sol#963) is not in mixedCase
Function IUniswapV2Pair.PERMIT_TYPEHASH() (contracts/Token.sol#964) is not in mixedCase
Function IUniswapV2Pair.MINIMUM_LIQUIDITY() (contracts/Token.sol#982) is not in mixedCase
Function IUniswapV2Router01.WETH() (contracts/Token.sol#1002) is not in mixedCase
Parameter DividendPayingToken.dividendOf(address).owner (contracts/Token.sol#1229) is not in mixedCase
Parameter DividendPayingToken.withdrawableDividendOf(address).owner (contracts/Token.sol#1233) is not in mixedCase
Parameter DividendPayingToken.withdrawnDividendOf(address).owner (contracts/Token.sol#1237) is not in mixedCase
Parameter DividendPayingToken.accumulativeDividendOf(address).owner (contracts/Token.sol#1241) is not in mixedCase
Constant DividendPayingToken.magnitude (contracts/Token.sol#1183) is not in UPPER_CASE_WITH_UNDERSCORES
Parameter DividendTracker.updateMinimumTokenBalanceForDividends(uint256).newMinimumBalance (contracts/Token.sol#1315) is not in mixedCase
Parameter DividendTracker.getAccount(address).account (contracts/Token.sol#1352) is not in mixedCase
Parameter RABBIT.updateBuyFees(uint256,uint256,uint256,uint256).liquidityFeeOnBuy (contracts/Token.sol#1642) is not in mixedCase
Parameter RABBIT.updateBuyFees(uint256,uint256,uint256,uint256).marketingFeeOnBuy (contracts/Token.sol#1643) is not in mixedCase
Parameter RABBIT.updateBuyFees(uint256,uint256,uint256,uint256).rewardsFeeOnBuy (contracts/Token.sol#1644) is not in mixedCase
Parameter RABBIT.updateBuyFees(uint256,uint256,uint256,uint256).trueBurnFeeOnBuy (contracts/Token.sol#1645) is not in mixedCase
Parameter RABBIT.updateSellFees(uint256,uint256,uint256,uint256).liquidityFeeOnSell (contracts/Token.sol#1660) is not in mixedCase
Parameter RABBIT.updateSellFees(uint256,uint256,uint256,uint256).marketingFeeOnSell (contracts/Token.sol#1661) is not in mixedCase
Parameter RABBIT.updateSellFees(uint256,uint256,uint256,uint256).rewardsFeeOnSell (contracts/Token.sol#1662) is not in mixedCase
Parameter RABBIT.updateSellFees(uint256,uint256,uint256,uint256).trueBurnFeeOnSell (contracts/Token.sol#1663) is not in mixedCase
Parameter RABBIT.changeMarketingWallet(address).marketingWallet (contracts/Token.sol#1677) is not in mixedCase
Parameter RABBIT.setSwapEnabled(bool).enabled (contracts/Token.sol#1858) 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#1007) is too similar to IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountBDesired (contracts/Token.sol#1008)
Variable DividendPayingToken.withdrawDividendOfUser(address).withdrawableDividend (contracts/Token.sol#1212) is too similar to DividendTracker.getAccount(address).withdrawableDividends (contracts/Token.sol#1359)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

SafeMathInt.MAX_INT256 (contracts/Token.sol#827) is never used in SafeMathInt (contracts/Token.sol#825-867)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#unused-state-variable

RABBIT.dividendTracker (contracts/Token.sol#1522) should be immutable
RABBIT.uniswapV2Pair (contracts/Token.sol#1512) should be immutable
RABBIT.uniswapV2Router (contracts/Token.sol#1511) 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

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**Router (PCS V2):**

**0xD99D1c33F9fC3444f8101754aBC46c52416550D1**

**1- Adding liquidity by owner (trades disabled) (passed):**

<https://testnet.bscscan.com/tx/0xc5acaa8b5f784e021d617328f50ca3d32702410d66fd6f79f9d9fe73bdbcb1b18>

**2- Buying when excluded from fees before enabling trades (0% tax) (passed):**

<https://testnet.bscscan.com/tx/0x38379979b4dd6c5a26ee4b39ebe20229c8e5ce1b32d0e2f020a6d9830e4be4f4>

**3- Selling when excluded from fees before enabling trades (0% tax) (passed):**

<https://testnet.bscscan.com/tx/0x4f7f91dd91ae7862c17f59c39a60496feb2c9bb21bc2335fcc40c9d3cacfb4ab>

**4- Transferring when excluded from fees before enabling trades (0% tax) (passed):**

<https://testnet.bscscan.com/tx/0x0e60afc94910a60aac4a9ccc17fe1eb673d887f200733397c5f1629e5aa8f871>

**5- Buying when not excluded from fees (0-10% tax) (passed):**

<https://testnet.bscscan.com/tx/0x4328ba6cb01e5246aa0e4534579784e237fc09c957ac1c005b0828682b3c9f9b>

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# FUNCTIONAL TESTING

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## **6- Selling when not excluded from fees (0-10% tax) (passed):**

<https://testnet.bscscan.com/tx/0x0a49b8a2b187587d501809f1bcefefeeecf7e19d454fd248229016ac8eb9cb2c3b>

## **7- Transferring when not excluded from fees (0-10% tax) (passed):**

<https://testnet.bscscan.com/tx/0xd6509980b5cf5e1ffb6ea9d8532cecd6e6a7a4adcc7e66efed85aa9e038f6e49>

## **8- Internal swap & rewards distribution (passed):**

- ETH sent to marketing wallet
- A portion of tokens burnt
- A portion of tokens were added to liquidity
- A portion of tokens swapped to ETH and sent to dividend tracker
- Dividend tracker distributed reward tokens (ETH)

<https://testnet.bscscan.com/tx/0x0a49b8a2b187587d501809f1bcefefeeecf7e19d454fd248229016ac8eb9cb2c3b>

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# FUNCTIONAL TESTING

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## Centralization – Trades must be enabled

Severity: **High**

function: enableTrading

Status: Not Resolved

### Overview:

The smart contract owner must enable trades for holders. If trading remain disabled, no one would be able to buy/sell/transfer tokens.

```
function enableTrading() external onlyOwner {  
    require(!tradingEnabled, "Trading already enabled.");  
    tradingEnabled = true;  
    swapEnabled = true;  
}
```

### Suggestion

To mitigate this centralization issue, we propose the following options:

1. Renounce Ownership: Consider relinquishing control of the smart contract by renouncing ownership. This would remove the ability for a single entity to manipulate the router, reducing centralization risks.
2. Multi-signature Wallet: Transfer ownership to a multi-signature wallet. This would require multiple approvals for any changes to the mainRouter, adding an additional layer of security and reducing the centralization risk.
3. Transfer ownership to a trusted and valid 3<sup>rd</sup> party in order to guarantee enabling of the trades

# FUNCTIONAL TESTING

## Numerics – Invlid calculation of fees

Severity: **Medium**

**function:** updateBuyFees - updateSellFees

**Status:** Not Resolved

### Overview:

updateBuyFees and updateSellFees functions are used to update buy and sell fees. The error message of "require" statement is indicating that buy or sell fee can not exceed 10% but since 10000 is used as tax denominator, 10 is 10/10000 or only 0.1%. this means owner wont be able to set fees higher than 0.1% for buy or sells

```
function updateBuyFees(
  uint256 _liquidityFeeOnBuy,
  uint256 _marketingFeeOnBuy,
  uint256 _rewardsFeeOnBuy,
  uint256 _trueBurnFeeOnBuy
) external onlyOwner {
  liquidityFeeOnBuy = _liquidityFeeOnBuy;
  marketingFeeOnBuy = _marketingFeeOnBuy;
  rewardsFeeOnBuy = _rewardsFeeOnBuy;
  trueBurnFeeOnBuy = _trueBurnFeeOnBuy;
  totalBuyFee = liquidityFeeOnBuy + marketingFeeOnBuy + rewardsFeeOnBuy +
trueBurnFeeOnBuy;
  require(totalBuyFee <= 10, "Buy fee cannot be more than 10%");
  emit BuyFeesUpdated(totalBuyFee);
}

function updateSellFees(
  uint256 _liquidityFeeOnSell,
  uint256 _marketingFeeOnSell,
  uint256 _rewardsFeeOnSell,
  uint256 _trueBurnFeeOnSell
) external onlyOwner {
  liquidityFeeOnSell = _liquidityFeeOnSell;
  marketingFeeOnSell = _marketingFeeOnSell;
  rewardsFeeOnSell = _rewardsFeeOnSell;
  trueBurnFeeOnSell = _trueBurnFeeOnSell;
  totalSellFee = liquidityFeeOnSell + marketingFeeOnSell + rewardsFeeOnSell +
trueBurnFeeOnSell;
  require(totalSellFee <= 10, "Sell fee cannot be more than 10%");
  emit SellFeesUpdated(totalSellFee);
}
```

### Suggestion

1- change "10" to "1000" in order to be abel to set buy/sell fees up to 10%

2- make sure to change "100" to "10000" in \_transfer function (internal swap section) in order to have a correct tax denominator





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We specializes in providing thorough and reliable audits for Web3 projects. With a team of experienced professionals, we use cutting-edge technology and rigorous methodologies to evaluate the security and integrity of blockchain systems. We are committed to helping our clients ensure the safety and transparency of their digital assets and transactions.



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