



Smart Contract Audit

FOR

Pinkpepe

DATED : 02 October 23'



AUDIT SUMMARY

Project name - Pinkpepe

Date: 02 October 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	1	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/0x15af0f0fAa6Cdf470518bAE5c2F7F07Aa2401D4D>



Token Information

Token Address :

0x98bb778170DBA08FDd4c61a068b0fb901Cfd5f5e

Name: Pinkpepe

Symbol: PPEPE

Decimals: 18

Netowrk: BSC

Token Type: BEP20

Owner: 0x2c6A39FE44f19aEb94378C46893cF3F58A5e4271
(at time of writing the audit)

Deployer:

0x2c6A39FE44f19aEb94378C46893cF3F58A5e4271

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

Checksum:

42abad87538bce881eb83c4cf83893748c052f6

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/0x15af0f0fAa6Cdf470518bAE5c2F7F07Aa2401D4D>



TOKEN OVERVIEW

buy fee: 0-25%

Sell fee: 0-25%

transfer fee: 0-25%

Fee Privilege: Owner

Ownership: Owned

Minting: None

Max Tx: No

Blacklist: No

Other Privileges:

- Initial distribution of the tokens
- Modifying fees



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 Limit and 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



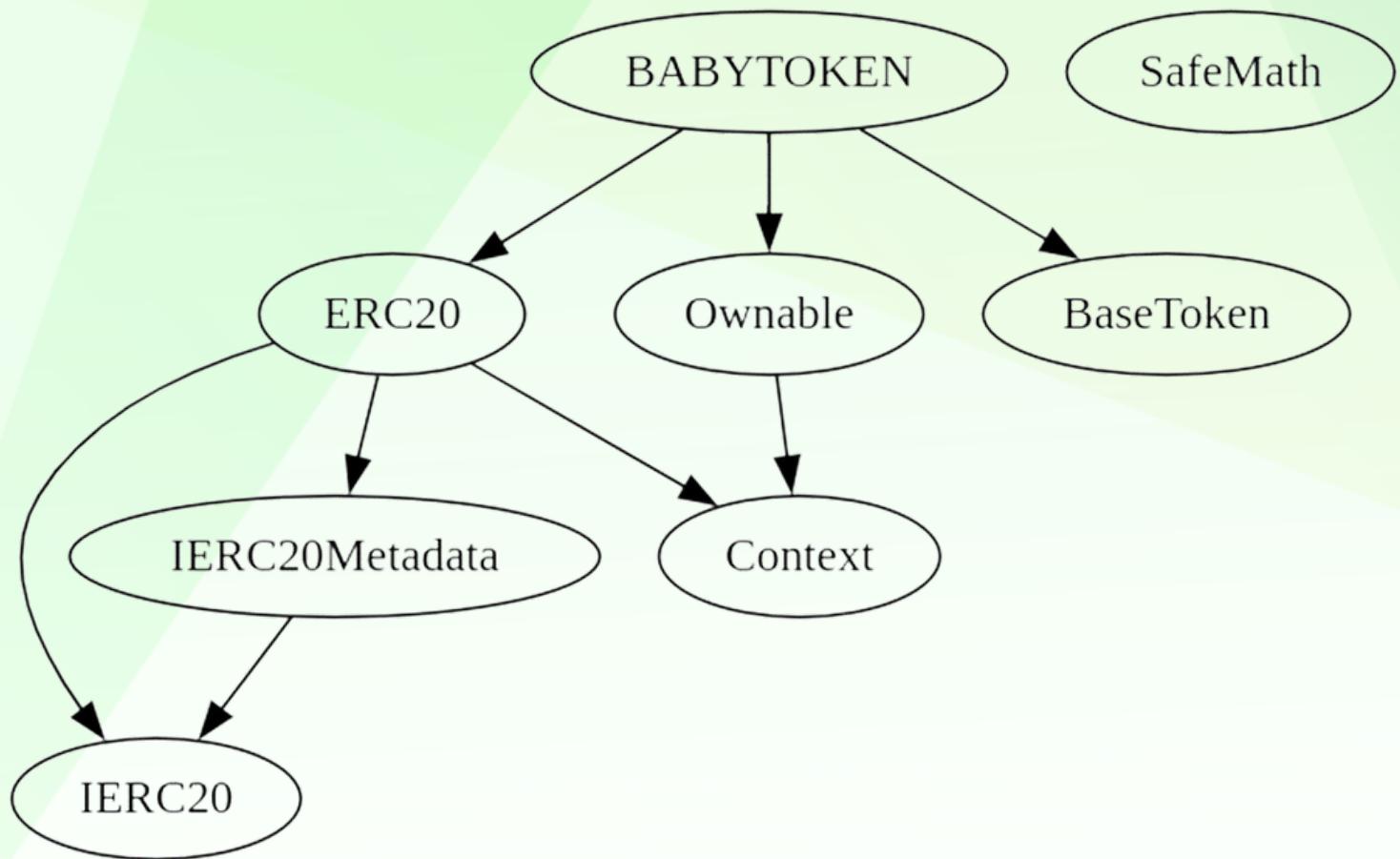
CLASSIFICATION OF RISK

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	1
◆ Low-Risk	0
◆ Gas Optimization / Suggestions	0

INHERITANCE TREE





POINTS TO NOTE

- Owner is able to change buy/sell/transfer fees within 0-25%
- 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 is not able to mint new tokens



STATIC ANALYSIS

```
Function OwnableUpgradeable._Ownable_init() (contracts/Token.sol#2087-2090) is not in mixedCase
Function OwnableUpgradeable._Ownable_init_unchained() (contracts/Token.sol#2092-2094) is not in mixedCase
Variable OwnableUpgradeable._gap (contracts/Token.sol#2140) is not in mixedCase
Function IUniswapV2Pair.DOMAIN_SEPARATOR() (contracts/Token.sol#2176) is not in mixedCase
Function IUniswapV2Pair.PERMIT_TYPEHASH() (contracts/Token.sol#2178) is not in mixedCase
Function IUniswapV2Pair.MINIMUM_LIQUIDITY() (contracts/Token.sol#2209) is not in mixedCase
Function DividendPayingToken.DividendPayingToken_init(address,string,string) (contracts/Token.sol#2507-2515) is not in mixedCase
Parameter DividendPayingToken._DividendPayingToken_init(address,string,string).rewardToken (contracts/Token.sol#2508) is not in mixedCase
Parameter DividendPayingToken._DividendPayingToken_init(address,string,string).name (contracts/Token.sol#2509) is not in mixedCase
Parameter DividendPayingToken._DividendPayingToken_init(address,string,string).symbol (contracts/Token.sol#2510) is not in mixedCase
Parameter DividendPayingToken.dividendOf(address,.owner (contracts/Token.sol#2568) is not in mixedCase
Parameter DividendPayingToken.withdrawableDividendOf(address,.owner (contracts/Token.sol#2576) is not in mixedCase
Parameter DividendPayingToken.withdrawnDividendOf(address,.owner (contracts/Token.sol#2585) is not in mixedCase
Parameter DividendPayingToken.accumulativeDividendOf(address,.owner (contracts/Token.sol#2596) is not in mixedCase
Constant DividendPayingToken.magnitude (contracts/Token.sol#2487) is not in UPPER_CASE_WITH_UNDERSCORES
Parameter BABYTOKENDividendTracker.getAccount(address,.account (contracts/Token.sol#2757) is not in mixedCase
Variable BABYTOKEN.marketingWalletAddress (contracts/Token.sol#2982) 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#1261) is too similar to IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountBDesired (contracts/Token.sol#1262)
Variable DividendPayingToken._DividendPayingToken_init(address,string,string)._rewardToken (contracts/Token.sol#2508) is too similar to BABYTOKENDividendTracker.initialize(address,uint256,.rewardToken (contracts/Token.sol#2960)
Variable DividendPayingToken.WithdrawnDividendOfUser(address,.withdrawableDividend (contracts/Token.sol#2541) is too similar to BABYTOKENDividendTracker.getAccount(address).withdrawableDividends (contracts/Token.sol#2765)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

Clones.clone(address) (contracts/Token.sol#880-895) uses literals with too many digits:
- mstore(uint256,uint256)(ptr _clone_asm_0,0x3d602d80600a3d3981f3363d3d373d3d363d73000000000000000000000000000000) (contracts/Token.sol#883-886)
Clones.clone(address) (contracts/Token.sol#880-895) uses literals with too many digits:
- mstore(uint256,uint256)(ptr _clone_asm_0 + 0x28,0x5af43d82803e903d91602b57fd5bf30000000000000000000000000000000) (contracts/Token.sol#888-891)
Clones.cloneDeterministic(address,bytes32) (contracts/Token.sol#904-922) uses literals with too many digits:
- mstore(uint256,uint256)(ptr _cloneDeterministic_asm_0,0x3d602d80600a3d3981f3363d3d373d3d363d73000000000000000000000000000000) (contracts/Token.sol#910-913)
Clones.cloneDeterministic(address,bytes32) (contracts/Token.sol#904-922) uses literals with too many digits:
- mstore(uint256,uint256)(ptr _cloneDeterministic_asm_0 + 0x28,0x5af43d82803e903d91602b57fd5bf30000000000000000000000000000000) (contracts/Token.sol#915-918)
Clones.predictDeterministicAddress(address,bytes32,address) (contracts/Token.sol#927-948) uses literals with too many digits:
- mstore(uint256,uint256)(ptr _predictDeterministicAddress_asm_0,0x3d602d80600a3d3981f3363d3d363d73000000000000000000000000000000) (contracts/Token.sol#934-937)
Clones.predictDeterministicAddress(address,bytes32,address) (contracts/Token.sol#927-948) uses literals with too many digits:
- mstore(uint256,uint256)(ptr _predictDeterministicAddress_asm_0 + 0x28,0x5af43d82803e903d91602b57fd5bf3f000000000000000000000000000000) (contracts/Token.sol#939-942)
BABYTOKEN.constructor(string,string,uint256,address[4],uint256[3],uint256) (contracts/Token.sol#3020-3083) uses literals with too many digits:
- gasForProcessing = 300000 (contracts/Token.sol#3047)
BABYTOKEN.updateGasForProcessing(uint256) (contracts/Token.sol#3156-3167) uses literals with too many digits:
- require(bool,string)(newValue >= 200000 && newValue <= 500000,BABYTOKEN: gasForProcessing must be between 200,000 and 500,000) (contracts/Token.sol#3157-3160)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits

SafeMathInt.MAX_INT256 (contracts/Token.sol#2256) is never used in SafeMathInt (contracts/Token.sol#2254-2311)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#unused-state-variable

BABYTOKEN.dividendTracker (contracts/Token.sol#2971) should be immutable
BABYTOKEN.rewardToken (contracts/Token.sol#2973) should be immutable
BABYTOKEN.uniswapV2Pair (contracts/Token.sol#2967) should be immutable
BABYTOKEN.uniswapV2Router (contracts/Token.sol#2966) 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**



CONTRACT ASSESSMENT

```
|Contract|      Type    |Bases   |          |          | | |
|---|---|---|---|---|---|---|
| ⊂ | **Function Name** | **Visibility** | **Mutability** | **Modifiers** |
|||||||  
| **IERC20** | Interface | |||  
| ⊂ | totalSupply | External ! | |NO ! |  
| ⊂ | balanceOf | External ! | |NO ! |  
| ⊂ | transfer | External ! | ● |NO ! |  
| ⊂ | allowance | External ! | |NO ! |  
| ⊂ | approve | External ! | ● |NO ! |  
| ⊂ | transferFrom | External ! | ● |NO ! |  
|||||||  
| **IERC20Metadata** | Interface | IERC20 |||  
| ⊂ | name | External ! | |NO ! |  
| ⊂ | symbol | External ! | |NO ! |  
| ⊂ | decimals | External ! | |NO ! |  
|||||||  
| **Context** | Implementation | |||  
| ⊂ | _msgSender | Internal 🔒 | |||  
| ⊂ | _msgData | Internal 🔒 | |||  
|||||||  
| **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 🔒 | ● | |||
```



CONTRACT ASSESSMENT

```
| _beforeTokenTransfer | Internal 🔒 | ● |||  
| _afterTokenTransfer | Internal 🔒 | ● |||  
||||||  
| **Ownable** | Implementation | Context |||  
| <Constructor> | Public ! | ● | NO ! |  
| owner | Public ! | | NO ! |  
| renounceOwnership | Public ! | ● | onlyOwner |  
| transferOwnership | Public ! | ● | onlyOwner |  
| _setOwner | Private 🔑 | ● |||  
||||||  
| **SafeMath** | Library | |||  
| tryAdd | Internal 🔒 | |||  
| trySub | Internal 🔒 | |||  
| tryMul | Internal 🔒 | |||  
| tryDiv | Internal 🔒 | |||  
| tryMod | Internal 🔒 | |||  
| add | Internal 🔒 | |||  
| sub | Internal 🔒 | |||  
| mul | Internal 🔒 | |||  
| div | Internal 🔒 | |||  
| mod | Internal 🔒 | |||  
| sub | Internal 🔒 | |||  
| div | Internal 🔒 | |||  
| mod | Internal 🔒 | |||  
||||||  
| **Clones** | Library | |||  
| clone | Internal 🔒 | ● |||  
| cloneDeterministic | Internal 🔒 | ● |||  
| predictDeterministicAddress | Internal 🔒 | |||  
| predictDeterministicAddress | Internal 🔒 | |||  
||||||  
| **Address** | Library | |||  
| isContract | Internal 🔒 | |||  
| sendValue | Internal 🔒 | ● |||  
| functionCall | Internal 🔒 | ● |||  
| functionCall | Internal 🔒 | ● |||  
| functionCallWithValue | Internal 🔒 | ● |||  
| functionCallWithValue | Internal 🔒 | ● |||  
| functionStaticCall | Internal 🔒 | |||
```



CONTRACT ASSESSMENT

```
| └| functionStaticCall | Internal 🔒 |||||  
| └| functionDelegateCall | Internal 🔒 | ● |||  
| └| functionDelegateCall | Internal 🔒 | ● |||  
| └| verifyCallResult | Internal 🔒 |||||  
|||||||  
| **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 ! |  
|||||||  
| **IUniswapV2Router01** | Interface |||||  
| └| 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 ! |
```



CONTRACT ASSESSMENT

|||||

```
| **IERC20Upgradeable** | Interface | |||
| └| totalSupply | External ! | |NO ! |
| └| balanceOf | External ! | |NO ! |
| └| transfer | External ! | ● |NO ! |
| └| allowance | External ! | |NO ! |
| └| approve | External ! | ● |NO ! |
| └| transferFrom | External ! | ● |NO ! |
|||||
```

```
| **IERC20MetadataUpgradeable** | Interface | IERC20Upgradeable |||
| └| name | External ! | |NO ! |
| └| symbol | External ! | |NO ! |
| └| decimals | External ! | |NO ! |
|||||
```

```
| **Initializable** | Implementation | |||
|||||
```

```
| **ContextUpgradeable** | Implementation | Initializable ||| |
| └| __Context_init | Internal 🔒 | ● | initializer |
| └| __Context_init_unchained | Internal 🔒 | ● | initializer |
| └| _msgSender | Internal 🔒 | |||
| └| _msgData | Internal 🔒 | |||
|||||
```

```
| **ERC20Upgradeable** | Implementation | Initializable, ContextUpgradeable, IERC20Upgradeable,
IERC20MetadataUpgradeable |||
| └| __ERC20_init | Internal 🔒 | ● | initializer |
| └| __ERC20_init_unchained | Internal 🔒 | ● | initializer |
| └| 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 🔒 | ● | |
|||||
```



CONTRACT ASSESSMENT

```
| _afterTokenTransfer | Internal 🔒 | ● ||| |
|||||||  
| **OwnableUpgradeable** | Implementation | Initializable, ContextUpgradeable |||
| _Ownable_init | Internal 🔒 | ● | initializer |
| _Ownable_init_unchained | Internal 🔒 | ● | initializer |
| owner | Public ! | |NO ! |
| renounceOwnership | Public ! | ● | onlyOwner |
| transferOwnership | Public ! | ● | onlyOwner |
| _setOwner | Private 🔒 | ● |||
|||||||  
| **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 ! |
|||||||  
| **SafeMathInt** | Library |||
| mul | Internal 🔒 | ||
| div | Internal 🔒 | ||
| sub | Internal 🔒 | ||
| add | Internal 🔒 | ||
| abs | Internal 🔒 | ||
| toUint256Safe | Internal 🔒 | ||
```



CONTRACT ASSESSMENT

```
|||||||  
| **SafeMathUint** | Library | |||  
| └| toInt256Safe | Internal 🔒 | |||  
|||||||  
| **IterableMapping** | Library | |||  
| └| get | Internal 🔒 | |||  
| └| getIndexOfKey | Internal 🔒 | |||  
| └| getKeyAtIndex | Internal 🔒 | |||  
| └| size | Internal 🔒 | |||  
| └| set | Internal 🔒 | ● | |  
| └| remove | Internal 🔒 | ● | |  
|||||||  
| **DividendPayingTokenInterface** | Interface | |||  
| └| dividendOf | External ! | |NO ! |  
| └| withdrawDividend | External ! | ● |NO ! |  
|||||||  
| **DividendPayingTokenOptionalInterface** | Interface | |||  
| └| withdrawableDividendOf | External ! | |NO ! |  
| └| withdrawnDividendOf | External ! | |NO ! |  
| └| accumulativeDividendOf | External ! | |NO ! |  
|||||||  
| **DividendPayingToken** | Implementation | ERC20Upgradeable, OwnableUpgradeable, DividendPayingTokenInterface,  
DividendPayingTokenOptionalInterface |||  
| └| __DividendPayingToken_init | Internal 🔒 | ● | initializer | |
| └| distributeCAKEDividends | 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 🔒 | ● | |  
|||||||  
| **BABYTOKENDividendTracker** | Implementation | OwnableUpgradeable, DividendPayingToken |||  
| └| initialize | External ! | ● | initializer |  
| └| _transfer | Internal 🔒 | | |  
| └| withdrawDividend | Public ! | |NO ! |  
| └| excludeFromDividends | External ! | ● | onlyOwner |  
| └| isExcludedFromDividends | Public ! | |NO ! |  
| └| updateClaimWait | External ! | ● | onlyOwner |  
| └| updateMinimumTokenBalanceForDividends | External ! | ● | onlyOwner |  
| └| getLastProcessedIndex | External ! | |NO ! |  
| └| getNumberOfTokenHolders | External ! | |NO ! |
```



CONTRACT ASSESSMENT

```
| └| getAccount | Public ! | |NO ! | |
| └| getAccountAtIndex | Public ! | |NO ! |
| └| canAutoClaim | Private 🔒 | ||
| └| setBalance | External ! | ● | onlyOwner |
| └| process | Public ! | ● | NO ! |
| └| processAccount | Public ! | ● | onlyOwner |
|||||||
| **BaseToken** | Implementation | ||
|||||||
| **BABYTOKEN** | Implementation | ERC20, Ownable, BaseToken ||
| └| <Constructor> | Public ! | 🚀 | ERC20 |
| └| <Receive Ether> | External ! | 💸 | NO ! |
| └| setSwapTokensAtAmount | External ! | ● | onlyOwner |
| └| excludeFromFees | External ! | ● | onlyOwner |
| └| excludeMultipleAccountsFromFees | External ! | ● | onlyOwner |
| └| setMarketingWallet | External ! | ● | onlyOwner |
| └| setTokenRewardsFee | External ! | ● | onlyOwner |
| └| setLiquiditFee | External ! | ● | onlyOwner |
| └| setMarketingFee | External ! | ● | onlyOwner |
| └| _setAutomatedMarketMakerPair | Private 🔒 | ● |||
| └| updateGasForProcessing | Public ! | ● | onlyOwner |
| └| updateClaimWait | External ! | ● | onlyOwner |
| └| getClaimWait | External ! | |NO ! |
| └| updateMinimumTokenBalanceForDividends | External ! | ● | onlyOwner |
| └| getMinimumTokenBalanceForDividends | External ! | |NO ! |
| └| getTotalDividendsDistributed | External ! | |NO ! |
| └| isExcludedFromFees | Public ! | |NO ! |
| └| withdrawableDividendOf | Public ! | |NO ! |
| └| dividendTokenBalanceOf | Public ! | |NO ! |
| └| excludeFromDividends | External ! | ● | onlyOwner |
| └| isExcludedFromDividends | Public ! | |NO ! |
| └| getAccountDividendsInfo | External ! | |NO ! |
| └| getAccountDividendsInfoAtIndex | External ! | |NO ! |
| └| processDividendTracker | External ! | ● | NO ! |
| └| claim | External ! | ● | NO ! |
| └| getLastProcessedIndex | External ! | |NO ! |
| └| getNumberOfDividendTokenHolders | External ! | |NO ! |
| └| _transfer | Internal 🔒 | ● |||
| └| swapAndSendToFee | Private 🔒 | ● |||
| └| swapAndLiquify | Private 🔒 | ● |||
| └| swapTokensForEth | Private 🔒 | ● |||
| └| swapTokensForCake | Private 🔒 | ● |||
| └| addLiquidity | Private 🔒 | ● |||
| └| swapAndSendDividends | Private 🔒 | ● |||
```

CONTRACT ASSESSMENT

Legend

|Symbol | Meaning|

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

| ● | Function can modify state |

| ☰ | Function is payable |



FUNCTIONAL TESTING

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

<https://testnet.bscscan.com/tx/0xbbe09738d4fed32c653a6685962b809ea1381b3701fef1c1c4e9ace24dc105c9>

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

<https://testnet.bscscan.com/tx/0xb1870b6edc5419413e173b5f712b73872c9e8af03907dd6b2f55d78d07c92062>

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

<https://testnet.bscscan.com/tx/0xc48f76db3d3313bea3949c2676b5594896584527caff18c17b97fca744edd239>

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

<https://testnet.bscscan.com/tx/0x2cc47acecf7587aee4d7034c0b2c53b4ca531d94f79c1b0a3e7325c123b8a535>

5- Buying when not excluded from fees (0-25% tax) (**passed**):

<https://testnet.bscscan.com/tx/0x5fbef9f1178dd578c9eed527fcb99dd7f85a38bb04c236a710db3610a44deb5f>

6- Selling when not excluded from fees (0-25% tax) (**passed**):

<https://testnet.bscscan.com/tx/0x0af162e8126039384fde3db0405092abab91acde55f14f846b3ba42d774361d2>

7- Transferring when not excluded from fees (0-25% tax) (**passed**):

<https://testnet.bscscan.com/tx/0x01b9a3e4124bba79902f979cd933898b8325bb0f33f62fbb58cd387df0809622>

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

- Marketing wallet received BUSD (BUSD used for testing)
- Auto-liquidity
- Reward distribution

<https://testnet.bscscan.com/tx/0x0af162e8126039384fde3db0405092abab91acde55f14f846b3ba42d774361d2>



MANUAL TESTING

Centralization – Excessive fees

Status: Not Resolved

Severity: Medium

Function(s): setTokenRewardsFee – setLiquiditFee - setMarketingFee

Overview:

Contract owner is able to change total buy/sell/transfer fees in range 0-25% which is considered a high amount of tax (if all set to maximum):

```
function setTokenRewardsFee(uint256 value) external onlyOwner {  
    tokenRewardsFee = value;  
    totalFees = tokenRewardsFee.add(liquidityFee).add(marketingFee);  
    require(totalFees <= 25, "Total fee is over 25%");  
}  
  
function setLiquiditFee(uint256 value) external onlyOwner {  
    liquidityFee = value;  
    totalFees = tokenRewardsFee.add(liquidityFee).add(marketingFee);  
    require(totalFees <= 25, "Total fee is over 25%");  
}  
  
function setMarketingFee(uint256 value) external onlyOwner {  
    marketingFee = value;  
    totalFees = tokenRewardsFee.add(liquidityFee).add(marketingFee);  
    require(totalFees <= 25, "Total fee is over 25%");  
}
```

Suggestion:

Make sure that fees are adjusatable within a safe and reasonable range:
0 <= total fees (buy/sell/transfer) <= 10



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