



# Cyberscope

## Audit Report

# **XBNB**

February 2022

Type        BEP20

Network    BSC

Address    0x4595585011A45eA6dFf639f0a1e98B94C1e18895

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## Contract Review

|                         |   |
|-------------------------|---|
| <b>Contract Name</b>    | XBNB  |
| <b>Compiler Version</b> | v0.8.10+commit.fc410830   |
| <b>Optimization</b>     | 500 runs  |
| <b>Licence</b>          | None  |
| <b>Explorer</b>         | <a href="https://bscscan.com/token/0x4595585011A45eA6dFf639f0a1e98B94C1e18895">https://bscscan.com/token/0x4595585011A45eA6dFf639f0a1e98B94C1e18895</a> |
| <b>Symbol</b>           | XBNB  |
| <b>Decimals</b>         | 18  |
| <b>Total Supply</b>     | 1,020,000   |
| <b>Source</b>           | contract.sol  |
| <b>Domain</b>           | xbnb.finance  |

## Audit Updates

|                      |                    |
|----------------------|--------------------|
| <b>Initial Audit</b> | 26th February 2022 |
| <b>Corrected</b>     |                    |

## Contract Analysis

The contract was created 19 of January 2022.

957,500 tokens were issued to the contract owner.

50,000 tokens were issued to *0x4b85753164b3b302633711ee720cd12ffc40c034*. These tokens are time-locked and cannot be used until 19 of January 2023.

12,500 tokens were issued to *0xdec37479041f4a15d05109e434369b9f924e290d*. These tokens are time-locked and cannot be used until 19 of January 2023.

The contract contains a reflection mechanism. The accumulated rewards are transferred to the distributor when a threshold of tokens is reached. This functionality is triggered on sale transfers.

The contract does not apply fees by default. The addresses with the “shared owners” role have the ability to set the fees for specific addresses. The maximum fee percentage that can be set is 25%.

● Critical   ● Medium   ● Minor   ● Pass

| Severity | Code | Description   |
|----------|------|---|
| ●        | ST   | Contract Owner is not able to stop or pause transactions  |
| ●        | OCTD | Contract Owner is not able to transfer tokens from specific address   |
| ●        | OTUT | Owner Transfer User's Tokens  |
| ●        | ELFM | Contract Owner is not able to increase fees more than a reasonable percent (25%)                                  |
| ●        | ULTW | Contract Owner is not able to increase the amount of liquidity taken by dev wallet more than a reasonable percent |
| ●        | MT   | Contract Owner is not able to mint new tokens   |
| ●        | BT   | Contract Owner is not able to burn tokens from specific wallet  |
| ●        | BC   | Contract Owner is not able to blacklist wallets from selling  |

# Contract Diagnostics

● Critical    ● Medium    ● Minor

| Severity | Code | Description                                |
|----------|------|--|
| ●        | L04  | Conformance to Solidity Naming Conventions |
| ●        | L09  | Dead Code Elimination                      |
| ●        | L12  | Using Variables before Declaration         |
| ●        | L14  | Uninitialized Variables in Local Scope     |
| ●        | L13  | Divide before Multiply Operation           |

## L04 - Conformance to Solidity Naming Conventions

|                    |                         |
|--------------------|-------------------------|
| <b>Criticality</b> | minor                   |
| <b>Location</b>    | contract.sol#L7,903,904 |

### Description

Solidity defines a naming convention that should be followed. Rule exceptions:

- Allow constant variable name/symbol/decimals to be lowercase.
- Allow \_ at the beginning of the mixed\_case match for private variables and unused parameters.

```
maxFee  
deadAddress  
WETH
```

### Recommendation

Follow the Solidity naming convention.

<https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions>

## L09 - Dead Code Elimination

**Criticality**

minor

**Location**

contract.sol#663

### Description

Functions that are not used in the contract, and make the code's size bigger.

```
_burn
```

### Recommendation

Remove unused functions.



## L12 - Using Variables before Declaration

**Criticality**

minor

**Location**

contract.sol#L1142

### Description

The contract is using a variable before the declaration. This is usually happening either if it has not been declared yet or the variable has been declared in a different scope.

```
claims  
gasUsed  
lastProcessedIndex  
iterations
```

### Recommendation

The variables should be declared before any usage of them.

## L14 - Uninitialized Variables in Local Scope

**Criticality**

minor

**Location**

contract.sol#L1142

### Description

There are variables that are defined in the local scope and are not initialized.

```
lastProcessedIndex  
claims  
iterations  
gasUsed
```

### Recommendation

All the local scoped variables should be initialized.

## L13 - Divide before Multiply Operation

**Criticality**

minor

**Location**

contract.sol#L1108,1212

### Description

Performing divisions before multiplications may cause lose of prediction.

```
number = (seed - ((seed / 100) * 100))  
feeAmount = (amount / 100) * feePercentage  
_swapAndSendReflections((_minimumTokenBalanceForSwapAndSendReflections / 100) *  
_getRandomNumber())
```

### Recommendation

The multiplications should be prior to the divisions.

# Contract Functions

| Contract                  | Type  | Bases              |            |           |
|---------------------------|---|--------------------|------------|-----------|
|                           | Function Name   | Visibility         | Mutability | Modifiers |
|                           |   |                    |            |           |
| <b>IUniswapV2Router01</b> | Interface   |                    |            |           |
|                           | factory   | External           |            | -         |
|                           | WETH  | External           |            | -         |
|                           | addLiquidity  | External           | ✓          | -         |
|                           | addLiquidityETH   | External           | Payable    | -         |
|                           | removeLiquidity   | External           | ✓          | -         |
|                           | removeLiquidityETH  | External           | ✓          | -         |
|                           | removeLiquidityWithPermit                                 | External           | ✓          | -         |
|                           | removeLiquidityETHWithPermit                              | External           | ✓          | -         |
|                           | swapExactTokensForTokens                                  | External           | ✓          | -         |
|                           | swapTokensForExactTokens                                  | External           | ✓          | -         |
|                           | swapExactETHForTokens                                     | External           | Payable    | -         |
|                           | swapTokensForExactETH                                     | External           | ✓          | -         |
|                           | swapExactTokensForETH                                     | External           | ✓          | -         |
|                           | swapETHForExactTokens                                     | External           | Payable    | -         |
|                           | quote   | External           |            | -         |
|                           | getAmountOut  | External           |            | -         |
|                           | getAmountIn   | External           |            | -         |
|                           | getAmountsOut   | External           |            | -         |
|                           | getAmountsIn  | External           |            | -         |
|                           |   |                    |            |           |
| <b>IUniswapV2Router02</b> | Interface   | IUniswapV2Router01 |            |           |
|                           | removeLiquidityETHSupportingFeeOnTransferTokens           | External           | ✓          | -         |
|                           | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External           | ✓          | -         |
|                           | swapExactTokensForTokensSupportingFeeOnTransferTokens     | External           | ✓          | -         |

|                           |  |          |         |   |
|---------------------------|--|----------|---------|---|
|                           | swapExactETHForTokensSupportingFeeOnTransferTokens | External | Payable | - |
|                           | swapExactTokensForETHSupportingFeeOnTransferTokens | External | ✓       | - |
|                           |  |          |         |   |
| <b>IUniswapV2Factory</b>  | Interface  |          |         |   |
|                           | feeTo  | External |         | - |
|                           | feeToSetter  | External |         | - |
|                           | getPair  | External |         | - |
|                           | allPairs   | External |         | - |
|                           | allPairsLength                                     | External |         | - |
|                           | createPair   | External | ✓       | - |
|                           | setFeeTo   | External | ✓       | - |
|                           | setFeeToSetter                                     | External | ✓       | - |
|                           |  |          |         |   |
| <b>IERC20</b>             | Interface  |          |         |   |
|                           | totalSupply  | External |         | - |
|                           | balanceOf  | External |         | - |
|                           | transfer   | External | ✓       | - |
|                           | allowance  | External |         | - |
|                           | approve  | External | ✓       | - |
|                           | transferFrom                                       | External | ✓       | - |
|                           |  |          |         |   |
| <b>IERC20Metadata</b>     | Interface  | IERC20   |         |   |
|                           | name   | External |         | - |
|                           | symbol   | External |         | - |
|                           | decimals   | External |         | - |
|                           |  |          |         |   |
| <b>IReflectionTracker</b> | Interface  |          |         |   |
|                           | isBoundTo  | External |         | - |
|                           | bindTo   | External | ✓       | - |
|                           | getBalanceOf                                       | External |         | - |
|                           | setBalanceOf                                       | External | ✓       | - |
|                           | refreshBalanceOf                                   | External | ✓       | - |

|  |                                      |          |         |   |
|--|--------------------------------------|----------|---------|---|
|  | refreshBalance                       | External | ✓       | - |
|  | getUniswapV2Router02Address          | External |         | - |
|  | setUniswapV2Router02Address          | External | ✓       | - |
|  | getDefaultReflectionTokenAddress     | External |         | - |
|  | setDefaultReflectionTokenAddress     | External | ✓       | - |
|  | getClaimCooldown                     | External |         | - |
|  | setClaimCooldown                     | External | ✓       | - |
|  | getMinimumTokenBalanceForReflections | External |         | - |
|  | setMinimumTokenBalanceForReflections | External | ✓       | - |
|  | getExcludedReflectionStateOfBNB      | External |         | - |
|  | setExcludedReflectionStateOfBNB      | External | ✓       | - |
|  | getExcludedReflectionTokenStateOf    | External |         | - |
|  | setExcludedReflectionTokenStateOf    | External | ✓       | - |
|  | getExcludedFromReflectionsOf         | External |         | - |
|  | setExcludedFromReflectionsOf         | External | ✓       | - |
|  | getProcessingGas                     | External |         | - |
|  | setProcessingGas                     | External | ✓       | - |
|  | getReflectionInBNB                   | External |         | - |
|  | setReflectionInBNB                   | External | ✓       | - |
|  | getReflectionTokenAddress            | External |         | - |
|  | setReflectionTokenAddress            | External | ✓       | - |
|  | getNumberOfHolders                   | External |         | - |
|  | getLastProcessedIndex                | External |         | - |
|  | getTotalReflectionsTransferred       | External |         | - |
|  | getWithdrawnReflectionsOf            | External |         | - |
|  | getWithdrawableReflectionsOf         | External |         | - |
|  | getAccountInfoOf                     | External |         | - |
|  | getAccountInfoAtIndex                | External |         | - |
|  | transferReflections                  | External | Payable | - |
|  | transferReflections                  | External | ✓       | - |
|  | process                              | External | ✓       | - |
|  | processAll                           | External | ✓       | - |
|  | processAll                           | External | ✓       | - |
|  |                                      |          |         |   |

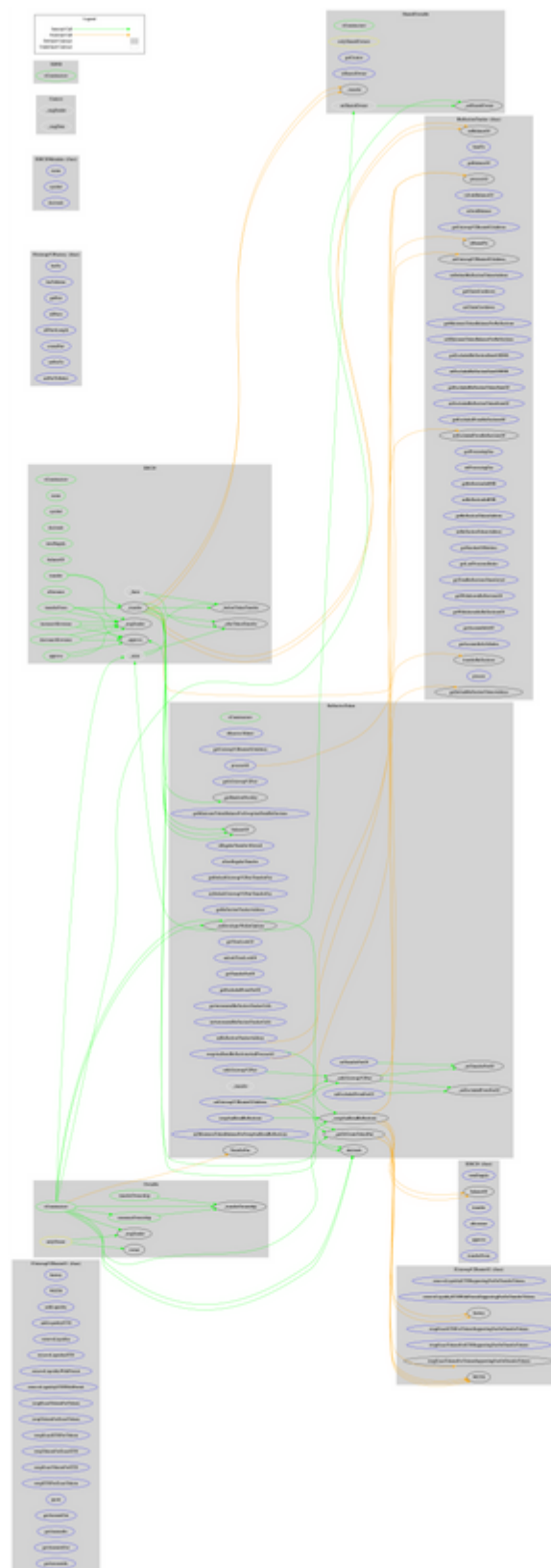
|                      |                      |   |   |           |
|----------------------|----------------------|---|---|-----------|
| <b>Context</b>       | Implementation       |   |   |           |
|                      | _msgSender           | Internal                                  |   |           |
|                      | _msgData             | Internal                                  |   |           |
|                      |                      |   |   |           |
| <b>ERC20</b>         | Implementation       | Context,<br>IERC20,<br>IERC20Met<br>adata |   |           |
|                      | <Constructor>        | Public                                    | ✓ | -         |
|                      | name                 | Public                                    |   | -         |
|                      | symbol               | Public                                    |   | -         |
|                      | decimals             | Public                                    |   | -         |
|                      | totalSupply          | Public                                    |   | -         |
|                      | balanceOf            | Public                                    |   | -         |
|                      | transfer             | Public                                    | ✓ | -         |
|                      | allowance            | Public                                    |   | -         |
|                      | approve              | Public                                    | ✓ | -         |
|                      | transferFrom         | Public                                    | ✓ | -         |
|                      | increaseAllowance    | Public                                    | ✓ | -         |
|                      | decreaseAllowance    | Public                                    | ✓ | -         |
|                      | _transfer            | Internal                                  | ✓ |           |
|                      | _mint                | Internal                                  | ✓ |           |
|                      | _burn                | Internal                                  | ✓ |           |
|                      | _approve             | Internal                                  | ✓ |           |
|                      | _beforeTokenTransfer | Internal                                  | ✓ |           |
|                      | _afterTokenTransfer  | Internal                                  | ✓ |           |
|                      |                      |   |   |           |
| <b>Ownable</b>       | Implementation       | Context                                   |   |           |
|                      | <Constructor>        | Public                                    | ✓ | -         |
|                      | owner                | Public                                    |   | -         |
|                      | renounceOwnership    | Public                                    | ✓ | onlyOwner |
|                      | transferOwnership    | Public                                    | ✓ | onlyOwner |
|                      | _transferOwnership   | Internal                                  | ✓ |           |
|                      |                      |   |   |           |
| <b>SharedOwnable</b> | Implementation       | Ownable                                   |   |           |
|                      | <Constructor>        | Public                                    | ✓ | Ownable   |

|                        |   |                      |         |                  |
|------------------------|---|----------------------|---------|------------------|
|                        | getCreator                                      | External             |         | -                |
|                        | isSharedOwner                                   | External             |         | -                |
|                        | setSharedOwner                                  | Internal             | ✓       | onlySharedOwners |
|                        | _setSharedOwner                                 | Private              | ✓       |                  |
|                        |   |                      |         |                  |
| <b>ReflectiveToken</b> | Implementation                                  | ERC20, SharedOwnable |         |                  |
|                        | <Constructor>                                   | Public               | ✓       | ERC20            |
|                        | <Receive Ether>                                 | External             | Payable | -                |
|                        | getUniswapV2Router02Address                     | External             |         | -                |
|                        | setUniswapV2Router02Address                     | External             | ✓       | onlySharedOwners |
|                        | getIsUniswapV2Pair                              | External             |         | -                |
|                        | setIsUniswapV2Pair                              | External             | ✓       | onlySharedOwners |
|                        | _setIsUniswapV2Pair                             | Private              | ✓       |                  |
|                        | getMinimumTokenBalanceForSwapAndSendReflections | External             |         | -                |
|                        | setMinimumTokenBalanceForSwapAndSendReflections | External             | ✓       | onlySharedOwners |
|                        | isRegularTransferAllowed                        | External             |         | -                |
|                        | allowRegularTransfer                            | External             | ✓       | onlySharedOwners |
|                        | getDefaultUniswapV2PairTransferFee              | External             |         | -                |
|                        | setDefaultUniswapV2PairTransferFee              | External             | ✓       | onlySharedOwners |
|                        | getReflectionTrackerAddress                     | External             |         | -                |
|                        | setReflectionTrackerAddress                     | External             | ✓       | onlySharedOwners |
|                        | getTimeLockOf                                   | External             |         | -                |
|                        | unlockTimeLockOf                                | External             | ✓       | onlySharedOwners |
|                        | getTransferFeeOf                                | External             |         | -                |
|                        | setTransferFeeOf                                | External             | ✓       | onlySharedOwners |
|                        | getExcludedFromFeeOf                            | External             |         | -                |
|                        | setExcludedFromFeeOf                            | External             | ✓       | onlySharedOwners |



|             |                                     |                 |   |                  |
|-------------|-------------------------------------|-----------------|---|------------------|
|             | getAutomatedReflectionTrackerCalls  | External        |   | -                |
|             | setAutomatedReflectionTrackerCalls  | External        | ✓ | onlySharedOwners |
|             | swapAndSendReflections              | External        | ✓ | onlySharedOwners |
|             | processAll                          | External        | ✓ | onlySharedOwners |
|             | swapAndSendReflectionsAndProcessAll | External        | ✓ | onlySharedOwners |
|             | _transfer                           | Internal        | ✓ |                  |
|             | _getOrCreateTokenPair               | Private         | ✓ |                  |
|             | _setDeveloperWalletOptions          | Private         | ✓ |                  |
|             | _setTransferFeeOf                   | Private         | ✓ |                  |
|             | _setExcludedFromFeeOf               | Private         | ✓ |                  |
|             | _swapAndSendReflections             | Private         | ✓ |                  |
|             | _getRandomNumber                    | Private         |   |                  |
|             |                                     |                 |   |                  |
| <b>XBNB</b> | Implementation                      | ReflectiveToken |   |                  |
|             | <Constructor>                       | Public          | ✓ | ReflectiveToken  |

# Contract Flow



## Summary

The Smart Contract analysis reported no compiler error or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions. There is also a limit of max 25% fees.

## Disclaimer

All the content provided in this document is for general information only and should not be used as financial advice or a reason to buy any investment.

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# About Cyberscope

Coinscope audit and K.Y.C. service has been rebranded to Cyberscope.

Coinscope is the leading early coin listing, voting and auditing authority firm. The audit process is analyzing and monitoring many aspects of the project. That way, it gives the community a good sense of security using an informative report and a generic score.

Cyberscope and Coinscope are aiming to make crypto discoverable and efficient globally. They provides all the essential tools to assist users draw their own conclusions.



The Cyberscope team

<https://www.cyberscope.io>