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AUDIT COMPANY

Smart Contract Security Audit

TechRate

August, 2021

Audit Details

Audited project

FlappyCake

Deployer address

0x1815aab0ad88bd26616833d9213c88374edb38c7

Client contacts:

FlappyCake team

Blockchain

Binance Smart Chain

Project website:

www.flappycake.com

Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

Background

TechRate was commissioned by FlappyCake to perform an audit of smart contracts:

https://bscscan.com/address/0x3262dfe9dae289b5f8cfe1a984e683f965e0331c#code

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be used to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

Contracts Details

Token contract details for 18.08.2021

Contract name	FlappyCake
Contract address	0x3262dfe9DaE289B5F8cFE1A984e683f965E0331c
Total supply	100,000,000,000
Token ticker	FLAPPY
Decimals	18
Token holders	1,275
Transactions count	13,317
Top 100 holders dominance	80.58%
CAKE address	0x0e09fabb73bd3ade0a17ecc321fd13a19e81ce82
Total fees	14
Dividend rewards fee	7
Uniswap V2 pair	0x79042f902ab06c7b12a09f5fc154bd83fcd1c704
Contract deployer address	0x1815aab0ad88bd26616833d9213c88374edb38c7
Contract's current owner address	0x1815aab0ad88bd26616833d9213c88374edb38c7

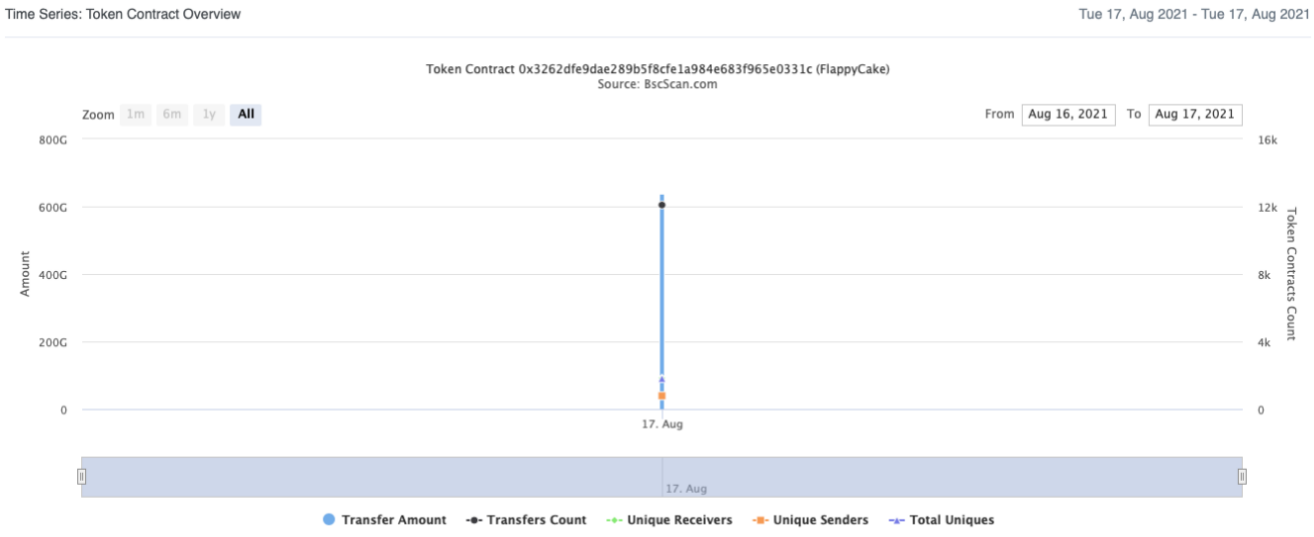
FlappyCake Token Distribution

The top 100 holders collectively own 80.58% (80,583,012,045.20 Tokens) of FlappyCake

Token Total Supply: 100,000,000,000.00 Token | Total Token Holders: 1,275

(A total of 80,583,012,045.20 tokens held by the top 100 accounts from the total supply of 100,000,000,000.00 token)

FlappyCake Contract Interaction Details



FlappyCake Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	PancakeSwap V2: FLAPPY 14	19,444,728,338.318742939332851238	19.4447%
2	0xb2c5bf56e9d7b974356ba6a10dfa9e0a23c661c3	5,000,000,000	5.0000%
3	0x903c95535f086f5f4c7462d32eb4e210d77d660b	2,521,179,557.174598288420283997	2.5212%
4	0x036727fa9fd9bc5d4da17ac05492725db33bc23c	2,000,000,000	2.0000%
5	0xa46991f191d4b21068c38a085faa47dfb79e723a	2,000,000,000	2.0000%
6	0xcbc3bac6f77d4fbce7514dda15dc8e3eef9ad8b5	2,000,000,000	2.0000%
7	0xf68d40840bba5a2622cad2680810b1834ec14016	2,000,000,000	2.0000%
8	0xd43f066f3a06097dfcdd03d5e6f63bfcc19dfb07	2,000,000,000	2.0000%
9	0xeb2cc81c3289b074085da6ac9ac82f81f0c6402c	2,000,000,000	2.0000%
10	0xd3e4d6c0b00baa817fee0183f271d7f714aa6a4e	1,868,852,553.599260703887782578	1.8689%

FlappyCake LP Token Holders

Rank	Address	Quantity	Percentage
1	0xae7e6cabad8d80f0b4e1c4dde2a5db7201ef1252	911,043.357914429888193562	52.8944%
2	0x0000000000000000000000000000000000000000	802,042.048018869246823599	46.5659%
3	0x8cc7bc33f5188b1fb683bedc4dbffa77b136833b	9,296.669010763588119786	0.5398%

Contract functions details

+ Context
  - [Int] _msgSender
  - [Int] _msgData

+ [Int] IERC20Metadata (IERC20)
  - [Ext] name
  - [Ext] symbol
  - [Ext] decimals

+ [Int] IERC20
  - [Ext] totalSupply
  - [Ext] balanceOf
  - [Ext] transfer #
  - [Ext] allowance
  - [Ext] approve #
  - [Ext] transferFrom #

+ [Int] DividendPayingTokenOptionalInterface
  - [Ext] withdrawableDividendOf
  - [Ext] withdrawnDividendOf
  - [Ext] accumulativeDividendOf

+ [Int] DividendPayingTokenInterface
  - [Ext] dividendOf
  - [Ext] withdrawDividend #

+ [Lib] SafeMathInt
  - [Int] mul
  - [Int] div
  - [Int] sub
  - [Int] add
  - [Int] abs
  - [Int] toUint256Safe

+ [Lib] SafeMathUint
  - [Int] toInt256Safe

+ ERC20 (Context, IERC20, IERC20Metadata)
  - [Pub] <Constructor> #
  - [Pub] name
  - [Pub] symbol
  - [Pub] decimals
  - [Pub] totalSupply
  - [Pub] balanceOf
  - [Pub] transfer #
  - [Pub] allowance
  - [Pub] approve #
  - [Pub] transferFrom #
  - [Pub] increaseAllowance #
  - [Pub] decreaseAllowance #
  - [Int] _transfer #

  - [Int] _mint #
  - [Int] _burn #
  - [Int] _approve #
  - [Int] _beforeTokenTransfer #

+ FlappyCakeTransferHelper (Ownable)
  - [Pub] <Constructor> #
  - [Pub] buy ($)
    - modifiers: onlyOwner

+ [Int] IUniswapV2Router01
  - [Ext] factory
  - [Ext] WETH
  - [Ext] addLiquidity #
  - [Ext] addLiquidityETH ($)
  - [Ext] removeLiquidity #
  - [Ext] removeLiquidityETH #
  - [Ext] removeLiquidityWithPermit #
  - [Ext] removeLiquidityETHWithPermit #
  - [Ext] swapExactTokensForTokens #
  - [Ext] swapTokensForExactTokens #
  - [Ext] swapExactETHForTokens ($)
  - [Ext] swapTokensForExactETH #
  - [Ext] swapExactTokensForETH #
  - [Ext] swapETHForExactTokens ($)
  - [Ext] quote
  - [Ext] getAmountOut
  - [Ext] getAmountIn
  - [Ext] getAmountsOut
  - [Ext] getAmountsIn

+ [Int] IUniswapV2Router02 (IUniswapV2Router01)
  - [Ext] removeLiquidityETHSupportingFeeOnTransferTokens #
  - [Ext] removeLiquidityETHWithPermitSupportingFeeOnTransferTokens #
  - [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
  - [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens ($)
  - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #

+ [Int] IUniswapV2Factory
  - [Ext] feeTo
  - [Ext] feeToSetter
  - [Ext] getPair
  - [Ext] allPairs
  - [Ext] allPairsLength
  - [Ext] createPair #
  - [Ext] setFeeTo #
  - [Ext] setFeeToSetter #

+ [Int] IUniswapV2Pair
  - [Ext] name
  - [Ext] symbol
  - [Ext] decimals
  - [Ext] totalSupply
  - [Ext] balanceOf
  - [Ext] allowance

- [Ext] approve #
- [Ext] transfer #
- [Ext] transferFrom #
- [Ext] DOMAIN_SEPARATOR
- [Ext] PERMIT_TYPEHASH
- [Ext] nonces
- [Ext] permit #
- [Ext] MINIMUM_LIQUIDITY
- [Ext] factory
- [Ext] token0
- [Ext] token1
- [Ext] getReserves
- [Ext] price0CumulativeLast
- [Ext] price1CumulativeLast
- [Ext] kLast
- [Ext] mint #
- [Ext] burn #
- [Ext] swap #
- [Ext] skim #
- [Ext] sync #
- [Ext] initialize #

+ Ownable (Context)
- [Pub] <Constructor> #
- [Pub] owner
- [Pub] renounceOwnership #
  - modifiers: onlyOwner
- [Pub] transferOwnership #
  - modifiers: onlyOwner

+ [Lib] IterableMapping
- [Pub] get
- [Pub] getIndexOfKey
- [Pub] getKeyAtIndex
- [Pub] size
- [Pub] set #
- [Pub] remove #

+ [Lib] SafeMath
- [Int] add
- [Int] sub
- [Int] sub
- [Int] mul
- [Int] div
- [Int] div
- [Int] mod
- [Int] mod

+ DividendPayingToken (ERC20, Ownable, DividendPayingTokenInterface, DividendPayingTokenOptionalInterface)
- [Pub] <Constructor> #
  - modifiers: ERC20
- [Pub] distributeCAKEDividends #
  - modifiers: onlyOwner
- [Pub] withdrawDividend #

```
  - [Int] _withdrawDividendOfUser #
  - [Pub] dividendOf
  - [Pub] withdrawableDividendOf
  - [Pub] withdrawnDividendOf
  - [Pub] accumulativeDividendOf
  - [Int] _transfer #
  - [Int] _mint #
  - [Int] _burn #
  - [Int] _setBalance #

+ FlappyCake (ERC20, Ownable)
  - [Pub] <Constructor> #
    - modifiers: ERC20
  - [Ext] <Fallback> ($)
  - [Pub] updateDividendTracker #
    - modifiers: onlyOwner
  - [Ext] setSwapTokensAtAmount #
    - modifiers: onlyOwner
  - [Pub] excludeFromFees #
    - modifiers: onlyOwner
  - [Pub] setMarketingWallet #
    - modifiers: onlyOwner
  - [Pub] setTeamWallet #
    - modifiers: onlyOwner
  - [Pub] setGameWallet #
    - modifiers: onlyOwner
  - [Pub] setBuyFees #
    - modifiers: onlyOwner
  - [Pub] setSellFees #
    - modifiers: onlyOwner
  - [Prv] getSumOfFeeSet
  - [Pub] getSumOfBuyFees
  - [Pub] getSumOfSellFees
  - [Pub] setMaxWalletMode #
    - modifiers: onlyOwner
  - [Pub] setAutomatedMarketMakerPair #
    - modifiers: onlyOwner
  - [Ext] blacklistAddress #
    - modifiers: onlyOwner
  - [Pub] excludeFromMaxWallet #
    - modifiers: onlyOwner
  - [Pub] setMaxWalletAmount #
    - modifiers: onlyOwner
  - [Pub] getMaxWalletAmount
  - [Prv] _setAutomatedMarketMakerPair #
  - [Pub] updateGasForProcessing #
    - modifiers: onlyOwner
  - [Ext] updateClaimWait #
    - modifiers: onlyOwner
  - [Ext] getClaimWait
  - [Ext] getTotalDividendsDistributed
  - [Pub] isExcludedFromFees
  - [Pub] withdrawableDividendOf
  - [Pub] dividendTokenBalanceOf
  - [Ext] excludeFromDividends #
```

    - modifiers: onlyOwner
  - [Ext] getAccountDividendsInfo
  - [Ext] getAccountDividendsInfoAtIndex
  - [Ext] processDividendTracker #
  - [Ext] claim #
  - [Ext] getLastProcessedIndex
  - [Ext] getNumberOfDividendTokenHolders
  - [Int] _transfer #
  - [Prv] processFees #
  - [Prv] swapAndSendDividends #
  - [Prv] swapAndLiquify #
  - [Prv] swapExactTokensForETH #
  - [Prv] swapExactETHForTokens #
  - [Ext] recover #
    - modifiers: onlyOwner

+ FlappyCakeDividendTracker (Ownable, DividendPayingToken)
  - [Pub] <Constructor> #
    - modifiers: DividendPayingToken
  - [Int] _transfer #
  - [Pub] withdrawDividend #
  - [Ext] excludeFromDividends #
    - modifiers: onlyOwner
  - [Ext] updateClaimWait #
    - modifiers: onlyOwner
  - [Ext] getLastProcessedIndex
  - [Ext] getNumberOfTokenHolders
  - [Pub] getAccount
  - [Pub] getAccountAtIndex
  - [Prv] canAutoClaim
  - [Ext] setBalance #
    - modifiers: onlyOwner
  - [Pub] process #
  - [Pub] processAccount #
    - modifiers: onlyOwner

($) = payable function
= non-constant function

Issues Checking Status

	Issue description	Checking status
1.	Compiler errors.	Passed
2.	Race conditions and Reentrancy. Cross-function race conditions.	Passed
3.	Possible delays in data delivery.	Passed
4.	Oracle calls.	Passed
5.	Front running.	Passed
6.	Timestamp dependence.	Passed
7.	Integer Overflow and Underflow.	Passed
8.	DoS with Revert.	Passed
9.	DoS with block gas limit.	Passed
10.	Methods execution permissions.	Passed
11.	Economy model of the contract.	Passed
12.	The impact of the exchange rate on the logic.	Passed
13.	Private user data leaks.	Passed
14.	Malicious Event log.	Passed
15.	Scoping and Declarations.	Passed
16.	Uninitialized storage pointers.	Passed
17.	Arithmetic accuracy.	Passed
18.	Design Logic.	Passed
19.	Cross-function race conditions.	Passed
20.	Safe Open Zeppelin contracts implementation and usage.	Passed
21.	Fallback function security.	Passed

Security Issues

High Severity Issues

No high severity issues found.

Medium Severity Issues

No medium severity issues found.

Low Severity Issues

No low severity issues found.

Notes:

- Owner can change dividend tracker that could be not audited and some functions may work in different ways.

Owner privileges (In the period when the owner is not renounced)

- Owner can change dividendTracker.
- Owner can change swapTokensAtAmount.
- Owner can exclude from the fee.
- Owner can change marketing, team and game wallets.
- Owner can change buy and sell fees.
- Owner can change max wallet mode and amount.
- Owner can exclude and include addresses in automatedMarketMakerPairs array.
- Owner can blacklist addresses.
- Owner can exclude from max wallet restrictions.
- Owner can change gas for processing.
- Owner can update claimWait value.
- Owner can exclude from dividends.
- Owner can withdraw contract BNBs.

Conclusion

Smart contracts do not contain high severity issues! Liquidity pair contract's security is not checked due to out of scope. The further transfers and operations with the funds raise are not related to this particular contract.

Liquidity locking details provided by the team:
https://mudra.website/?certificate=yes&type=0&lp=0x79042f902ab06c7b12a09f5fc154bd83fcd1c704

TechRate note:

Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.