



**TechRate**  
AUDIT COMPANY

# Smart Contract Security Audit

# Audit Details



Audited project  
**MOONGAME**



Deployer address  
**0xab21ad02d523a28099d88bfd9b6122f6b505adee**



Client contacts:  
**MOONGAME team**



Blockchain  
**Binance Smart Chain**



Project website:  
<https://moongame.io>

# 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 MOONGAME to perform an audit of smart contracts:

<https://bscscan.com/address/0x47CBd8454C986a15C16d285bD228D214F662Dcf3#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 12.10.2021

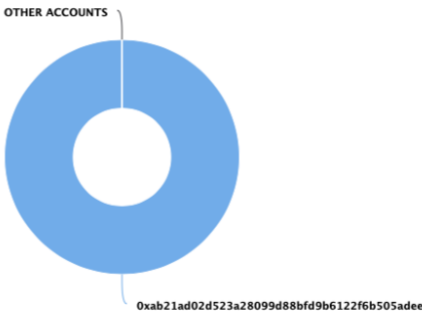
Contract name	MOONGAME
Contract address	0x47CBd8454C986a15C16d285bD228D214F662Dcf3
Total supply	1,000,000,000
Token ticker	MGT
Decimals	18
Token holders	1
Transactions count	1
Top 100 holders dominance	100.00%
Launched at	0
Auto liquidity receiver	0xab21ad02d523a28099d88bfd9b6122f6b505adee
Marketing fee receiver	0xab21ad02d523a28099d88bfd9b6122f6b505adee
Pair	0xd9ef2ca5ab4eb809c70f84c0b920b2e084c25ea3
Contract deployer address	0xab21ad02d523a28099d88bfd9b6122f6b505adee
Contract's current owner address	0xab21ad02d523a28099d88bfd9b6122f6b505adee

# MOONGAME Token Distribution

The top 100 holders collectively own 100.00% (1,000,000,000.00 Tokens) of MOONGAME

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

MOONGAME Top 100 Token Holders  
Source: BscScan.com

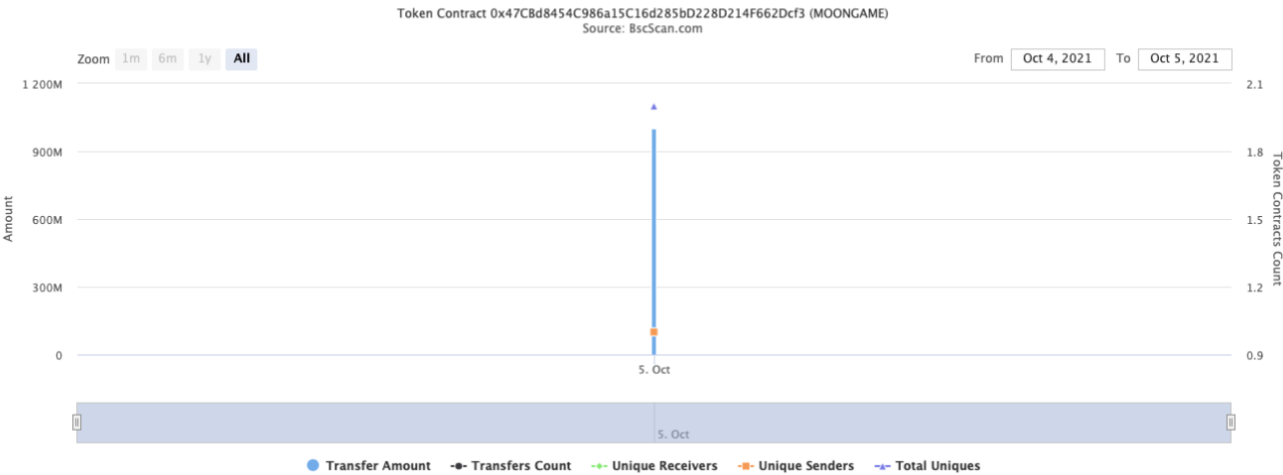


(A total of 1,000,000,000.00 tokens held by the top 100 accounts from the total supply of 1,000,000,000.00 token)

# MOONGAME Contract Interaction Details

Time Series: Token Contract Overview

Tue 5, Oct 2021 - Tue 5, Oct 2021



# MOONGAME Top 10 Token Holders

Rank	Address	Quantity (Token)	Percent
1.	0xab21ad02d523a28099d88bfd9b6122f6b505adee	1,000,000,000	100.00000%





# Contract functions details

## + [Lib] SafeMath

- [Int] tryAdd
- [Int] trySub
- [Int] tryMul
- [Int] tryDiv
- [Int] tryMod
- [Int] add
- [Int] sub
- [Int] mul
- [Int] div
- [Int] mod
- [Int] sub
- [Int] div
- [Int] mod

## + [Int] IBEP20

- [Ext] totalSupply
- [Ext] decimals
- [Ext] symbol
- [Ext] name
- [Ext] getOwner
- [Ext] balanceOf
- [Ext] transfer #
- [Ext] allowance
- [Ext] approve #
- [Ext] transferFrom #

## + [Int] IDEXRouter

- [Ext] factory
- [Ext] WETH
- [Ext] addLiquidity #
- [Ext] addLiquidityETH (\$)
- [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
- [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens (\$)
- [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #

## + Auth

- [Pub] <Constructor> #
- [Pub] authorize #
  - modifiers: onlyOwner
- [Pub] unauthorize #
  - modifiers: onlyOwner
- [Pub] isOwner
- [Pub] isAuthorized
- [Pub] transferOwnership #
  - modifiers: onlyOwner

## + [Int] IDividendDistributor

- [Ext] setDistributionCriteria #
- [Ext] setShare #
- [Ext] deposit (\$)



- [Ext] process #
- + DividendDistributor (IDividendDistributor)
  - [Pub] <Constructor> #
  - [Ext] setDistributionCriteria #
    - modifiers: onlyToken
  - [Ext] setShare #
    - modifiers: onlyToken
  - [Ext] deposit (\$)
    - modifiers: onlyToken
  - [Ext] process #
    - modifiers: onlyToken
  - [Int] shouldDistribute
  - [Int] distributeDividend #
  - [Ext] claimDividend #
  - [Pub] getUnpaidEarnings
  - [Int] getCumulativeDividends
  - [Int] addShareholder #
  - [Int] removeShareholder #
- + [Int] IDEXFactory
  - [Ext] createPair #
- + MoonGame (IBEP20, Auth)
  - [Pub] <Constructor> #
    - modifiers: Auth
  - [Ext] <Fallback> (\$)
  - [Ext] totalSupply
  - [Ext] decimals
  - [Ext] symbol
  - [Ext] name
  - [Ext] getOwner
  - [Pub] balanceOf
  - [Ext] allowance
  - [Ext] setWhiteList #
    - modifiers: onlyOwner
  - [Pub] approve #
  - [Ext] approveMax #
  - [Ext] transfer #
  - [Ext] transferFrom #
  - [Int] \_transferFrom #
  - [Int] \_basicTransfer #
  - [Int] checkTxLimit
  - [Int] shouldTakeFee
  - [Pub] getTotalFee #
  - [Pub] getMultipliedFee #
  - [Int] takeFee #
  - [Int] shouldSwapBack
  - [Int] swapBack #
    - modifiers: swapping
  - [Int] shouldAutoBuyback
  - [Ext] triggerZeusBuyback #
    - modifiers: authorized
  - [Ext] clearBuybackMultiplier #
    - modifiers: authorized

- [Int] triggerAutoBuyback #
- [Int] buyTokens #
  - modifiers: swapping
- [Ext] setAutoBuybackSettings #
  - modifiers: authorized
- [Ext] setBuybackMultiplierSettings #
  - modifiers: authorized
- [Int] launched
- [Pub] launch #
  - modifiers: authorized
- [Ext] setTxLimit #
  - modifiers: authorized
- [Ext] setLsDividendExempt #
  - modifiers: authorized
- [Ext] setLsFeeExempt #
  - modifiers: authorized
- [Ext] setLsTxLimitExempt #
  - modifiers: authorized
- [Ext] setFees #
  - modifiers: authorized
- [Ext] setFeeReceivers #
  - modifiers: authorized
- [Ext] setSwapBackSettings #
  - modifiers: authorized
- [Ext] setTargetLiquidity #
  - modifiers: authorized
- [Ext] setDistributionCriteria #
  - modifiers: authorized
- [Ext] setDistributorSettings #
  - modifiers: authorized
- [Pub] getCirculatingSupply
- [Pub] getLiquidityBacking
- [Pub] isOverLiquified
- [Ext] withDrawBNB #
  - 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.

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

- Owner can call triggerZeusBuyback that's initiate buyback.
- Owner can clear buyback multiplier.
- Owner can change auto buyback settings.
- Owner can change buyback multiplier settings.
- Owner can change the maximum transaction amount.
- Owner can include in and exclude from dividends.
- Owner can include in and exclude from fee and transaction amount.
- Owner can change fees.
- Owner can whitelist addresses.
- Owner can change fee receivers.
- Owner can change swap threshold and disable/enable swap.
- Owner can change target liquidity values.
- Owner can change distribution criteria.
- Owner can change distribution GAS.

# Conclusion

Smart contracts do not contain high severity issues! Liquidity pair contract's security is not checked due to out of scope.

Liquidity locking details are NOT provided by the team.

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## *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.*