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AUDIT COMPANY

Smart Contract Security Audit

TechRate

July, 2021

Audit Details

Audited project

BabyPooCoin

Deployer address

0x4927B242A1DB641210ef770d68d2071E62b060cc

Client contacts:

BabyPooCoin team

Blockchain

Binance Smart Chain

Project website:

https://www.babypoo.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 BabyPooCoin to perform an audit of smart contracts:

https://bscscan.com/address/0x38895e0b3e7cd13c45bd4e93af5a402604b762e3#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

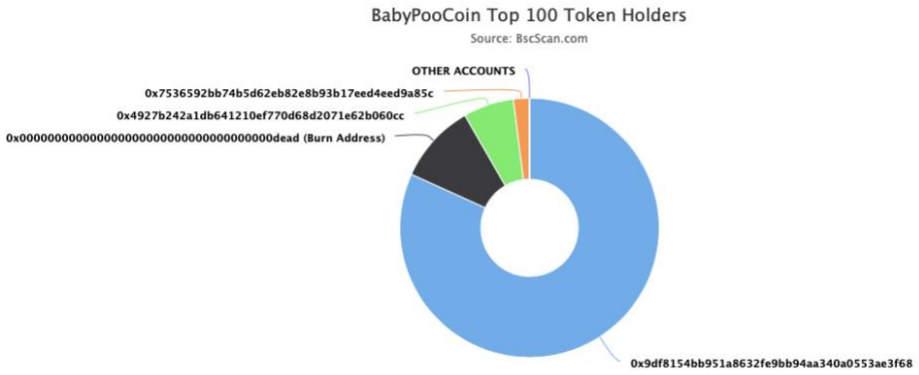
Token contract details for 24.07.2021

Contract name	BabyPooCoin
Contract address	0x38895e0b3E7cD13C45BD4E93aF5a402604B762E3
Total supply	1,000,000,000
Token ticker	BabyPoo
Decimals	9
Token holders	4
Transactions count	10
Top 100 holders dominance	100.00%
Cooldown interval	45
Autoliquidity fee receiver	0x000000000000000000000000000000000000dead
Marketing fee receiver	0x4927b242a1db641210ef770d68d2071e62b060cc
Pair	0xab5438321b2fa10dda8703bf19839593217eee4b
Contract deployer address	0x4927B242A1DB641210ef770d68d2071E62b060cc
Contract's current owner address	0x4927b242a1db641210ef770d68d2071e62b060cc

BabyPooCoin Token Distribution

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

Token Total Supply: 1,000,000,000.00 Token | Total Token Holders: 4

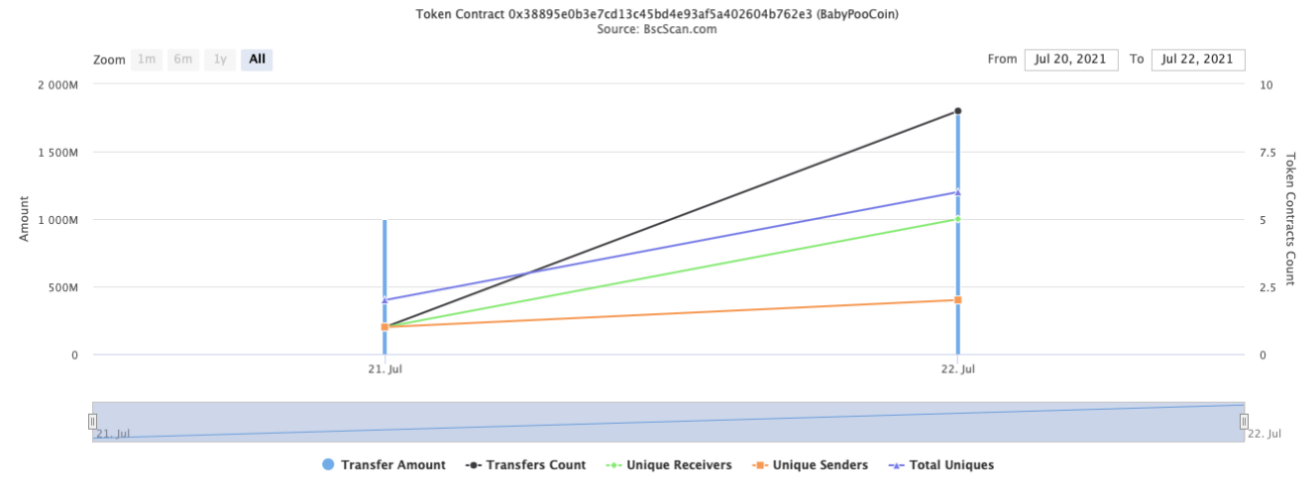


(A total of 1,000,000,000.00 tokens held by the top 100 accounts from the total supply of 1,000,000,000.00 token)

BabyPooCoin Contract Interaction Details

Time Series: Token Contract Overview

Wed 21, Jul 2021 - Thu 22, Jul 2021



BabyPooCoin Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	0x9df8154bb951a8632fe9bb94aa340a0553ae3f68	817,740,001	81.7740%
2	Burn Address	99,259,999	9.9260%
3	0x4927b242a1db641210ef770d68d2071e62b060cc	63,000,000	6.3000%
4	0x7536592bb74b5d62eb82e8b93b17eed4eed9a85c	20,000,000	2.0000%

Contract functions details

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

+ [Int] IBEP20
  - [Ext] totalSupply
  - [Ext] decimals
  - [Ext] symbol
  - [Ext] name
  - [Ext] getOwner
  - [Ext] balanceOf
  - [Ext] transfer #
  - [Ext] allowance
  - [Ext] approve #
  - [Ext] transferFrom #

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

+ [Int] IDEXFactory
  - [Ext] createPair #

+ [Int] IDEXRouter
  - [Ext] factory
  - [Ext] WETH
  - [Ext] addLiquidity #
  - [Ext] addLiquidityETH ($)
  - [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
  - [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens ($)
  - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #

+ [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 #

+ BabyPooCoin (IBEP20, Auth)
- [Pub] <Constructor> #
  - modifiers: Auth
- [Ext] <Fallback> ($)
- [Ext] totalSupply
- [Ext] decimals
- [Ext] symbol
- [Ext] name
- [Ext] getOwner
- [Pub] balanceOf
- [Ext] allowance
- [Pub] approve #
- [Ext] approveMax #
- [Ext] transfer #
- [Ext] transferFrom #
- [Int] _transferFrom #
- [Int] _basicTransfer #
- [Int] checkTxLimit
- [Int] shouldTakeFee
- [Int] takeFee #
- [Int] shouldSwapBack
- [Ext] clearStuckBalance #
  - modifiers: onlyOwner
- [Pub] tradingStatus #
  - modifiers: onlyOwner
- [Pub] cooldownEnabled #
  - modifiers: onlyOwner
- [Int] swapBack #
  - modifiers: swapping
- [Int] launched
- [Int] launch #
- [Ext] setTxLimit #
  - modifiers: authorized
- [Ext] setIsDividendExempt #
  - modifiers: authorized
- [Ext] setIsFeeExempt #
  - modifiers: authorized
- [Ext] setIsTxLimitExempt #
  - modifiers: authorized

- [Ext] setIsTimelockExempt #
  - 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] makeItRain #
  - 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.	Low issues
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

1. Out of gas

Issue:

- The function `makeItRain()` uses the loop to airdrop rewords by the list. Function will be aborted with `OUT_OF_GAS` exception if there will be a long receivers list.

```
function makeItRain(address from⬆, address[] calldata addresses⬆, uint256[] calldata tokens⬆) external onlyOwner {

    uint256 showerCapacity = 0;

    require(addresses⬆.length == tokens⬆.length,"Mismatch between Address and token count");

    for(uint i=0; i < addresses⬆.length; i++){
        showerCapacity = showerCapacity + tokens⬆[i];
    }

    require(balanceOf(from⬆) >= showerCapacity, "Not enough tokens to airdrop");

    for(uint i=0; i < addresses⬆.length; i++){
        _basicTransfer(from⬆,addresses⬆[i],tokens⬆[i]);
        if(!isDividendExempt[addresses⬆[i]]) {
            try distributor.setShare(addresses⬆[i], _balances[addresses⬆[i]]) {} catch {}
        }
    }

    // Dividend tracker
    if(!isDividendExempt[from⬆]) {
        try distributor.setShare(from⬆, _balances[from⬆]) {} catch {}
    }
}
```

Recommendation:

Check that the array length is not too big.

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

- 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 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.
- Owner can withdraw BNBs to the marketing receiver address.
- Owner can change trading status.
- Owner can change cooldown status.
- Owner can change buybackKeepItSimple value.
- Owner can change addresses' isTimelockExempt value.

Conclusion

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

Liquidity locking details NOT provided by the team.

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.