



Smart Contract Audit

FOR

BabyPsyop

DATED : 12 June 23'



HIGH RISK

Centralization – Trades must be enabled

Severity: High

function: enableTrading

Status: Open

Overview:

The smart contract owner must enable trades for holders. If trading remain disabled, no one would be able to buy/sell/transfer tokens.

```
function enableTrading() external onlyOwner {  
    tradingActive = true;  
    swapEnabled = true;  
}
```

Suggestion

To mitigate this centralization issue, we propose the following options:

1. Renounce Ownership: Consider relinquishing control of the smart contract by renouncing ownership. This would remove the ability for a single entity to manipulate the router, reducing centralization risks.
2. Multi-signature Wallet: Transfer ownership to a multi-signature wallet. This would require multiple approvals for any changes to the mainRouter, adding an additional layer of security and reducing the centralization risk.
3. Transfer ownership to a trusted and valid 3rd party in order to guarantee enabling of the trade



AUDIT SUMMARY

Project name - BabyPsyop

Date: 12 June, 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	1	0	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/0x6491a849d1bf140ee2573faac02e524ba9a62aea>



Token Information

Token Name : BabyPsyop

Token Symbol: \$BABYPSYOP

Decimals: 18

Token Supply: 550,000,000,000

Token Address: 0x41f1F963945a0691E095EE155634b0cDE24a95D8

Checksum:

942d00495b2ca9ad9f2ec46ccff6c4d7a1f552c6

Owner: 0xB5C562F175d6Df133fe49b34837784936512B617

Deployer: 0x5499878712175B16D4DfC3b79FCa99a524523D88



TOKEN OVERVIEW

Fees:

Buy Fees: 0-10%

Sell Fees: 0-10%

Transfer Fees: 0%

Fees Privilege: Owner

Ownership: owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: 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



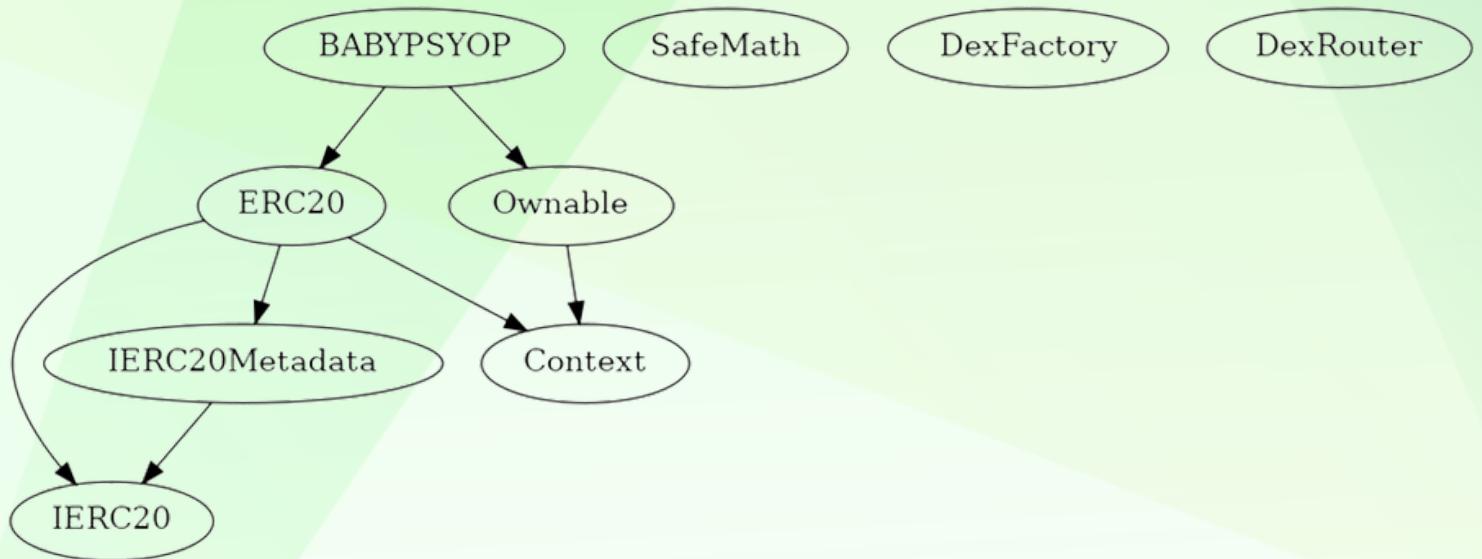
CLASSIFICATION OF RISK

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

INHERITANCE TREE





POINTS TO NOTE

- Owner is not able to change buy/sell fees more than 10%
 - Owner is not able to set fee on transfers
 - 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 mint new tokens
 - Owner is not able to disable trades
 - Owner has 100% of total supply after deployment
 - Owner must enable trades manually
-



STATIC ANALYSIS

```
Context._msgData() (contracts/Token.sol#106-108) is never used and should be removed
ERC20._burn(address,uint256) (contracts/Token.sol#421-437) is never used and should be removed
SafeMath.add(uint256,uint256) (contracts/Token.sol#605-607) is never used and should be removed
SafeMath.div(uint256,uint256) (contracts/Token.sol#647-649) is never used and should be removed
SafeMath.div(uint256,uint256,string) (contracts/Token.sol#699-704) is never used and should be removed
SafeMath.mod(uint256,uint256) (contracts/Token.sol#663-665) is never used and should be removed
SafeMath.mod(uint256,uint256,string) (contracts/Token.sol#721-726) is never used and should be removed
SafeMath.mul(uint256,uint256) (contracts/Token.sol#633-635) is never used and should be removed
SafeMath.sub(uint256,uint256) (contracts/Token.sol#619-621) is never used and should be removed
SafeMath.sub(uint256,uint256,string) (contracts/Token.sol#680-685) is never used and should be removed
SafeMath.tryAdd(uint256,uint256) (contracts/Token.sol#534-540) is never used and should be removed
SafeMath.tryDiv(uint256,uint256) (contracts/Token.sol#576-581) is never used and should be removed
SafeMath.tryMod(uint256,uint256) (contracts/Token.sol#588-593) is never used and should be removed
SafeMath.tryMul(uint256,uint256) (contracts/Token.sol#559-569) is never used and should be removed
SafeMath.trySub(uint256,uint256) (contracts/Token.sol#547-552) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code

Pragma version^0.8.17 (contracts/Token.sol#8) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.20 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity

Low level call in BABYPSYOP.internalSwap() (contracts/Token.sol#984-991):
  - (success) = marketingWallet.call{value: address(this).balance}() (contracts/Token.sol#990)
Low level call in BABYPSYOP.withdrawStuckETH() (contracts/Token.sol#1003-1006):
  - (success) = address(msg.sender).call{value: address(this).balance}() (contracts/Token.sol#1004)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls

Function DexRouter.WETH() (contracts/Token.sol#833) is not in mixedCase
Event BABYPSYOPmarketingWalletChanged(address) (contracts/Token.sol#881) is not in CapWords
Parameter BABYPSYOP.setmarketingWallet(address)._newmarketing (contracts/Token.sol#901) is not in mixedCase
Parameter BABYPSYOP.setSwapTokensAtAmount(uint256)._newAmount (contracts/Token.sol#907) is not in mixedCase
Parameter BABYPSYOP.setWhitelistStatus(address,bool)._wallet (contracts/Token.sol#920) is not in mixedCase
Parameter BABYPSYOP.setWhitelistStatus(address,bool)._status (contracts/Token.sol#920) is not in mixedCase
Parameter BABYPSYOP.checkWhitelist(address)._wallet (contracts/Token.sol#925) is not in mixedCase
Parameter BABYPSYOP.swapToETH(uint256)._amount (contracts/Token.sol#993) is not in mixedCase
Parameter BABYPSYOP.withdrawStuckTokens(address).BEP20_token (contracts/Token.sol#1008) is not in mixedCase
Constant BABYPSYOP._totalSupply (contracts/Token.sol#858) is not in UPPER_CASE_WITH_UNDERSCORES
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

BABYPSYOP.slitherConstructorVariables() (contracts/Token.sol#853-1014) uses literals with too many digits:
  - swapTokensAtAmount = _totalSupply / 1000000 (contracts/Token.sol#873)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits

BABYPSYOP.pairAddress (contracts/Token.sol#862) should be immutable
BABYPSYOP.uniswapRouter (contracts/Token.sol#861) 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 !					
Context Implementation					
└ _msgSender Internal 🔒					
└ _msgData Internal 🔒					
IERC20Metadata Interface IERC20					
└ name External ! NO !					
└ symbol External ! NO !					
└ decimals External ! NO !					
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 🔒 ●					
└ _spendAllowance Internal 🔒 ●					
└ _beforeTokenTransfer Internal 🔒 ●					
└ _afterTokenTransfer Internal 🔒 ●					

CONTRACT ASSESSMENT

	SafeMath Library				
	L tryAdd Internal 🔒				
	L trySub Internal 🔒				
	L tryMul Internal 🔒				
	L tryDiv Internal 🔒				
	L tryMod Internal 🔒				
	L add Internal 🔒				
	L sub Internal 🔒				
	L mul Internal 🔒				
	L div Internal 🔒				
	L mod Internal 🔒				
	L sub Internal 🔒				
	L div Internal 🔒				
	L mod Internal 🔒				
	Ownable Implementation Context				
	L <Constructor> Public ! ● NO !				
	L owner Public ! NO !				
	L _checkOwner Internal 🔒				
	L renounceOwnership Public ! ● onlyOwner				
	L transferOwnership Public ! ● onlyOwner				
	L _transferOwnership Internal 🔒 ●				
	DexFactory Interface				
	L createPair External ! ● NO !				
	DexRouter Interface				
	L factory External ! NO !				
	L WETH External ! NO !				
	L addLiquidityETH External ! 💸 NO !				
	L swapExactTokensForETHSupportingFeeOnTransferTokens External ! ● NO !				
	BABYPSYOP Implementation ERC20, Ownable				
	L <Constructor> Public ! ● ERC20				
	L setmarketingWallet External ! ● onlyOwner				
	L setSwapTokensAtAmount External ! ● onlyOwner				
	L toggleSwapping External ! ● onlyOwner				
	L setWhitelistStatus External ! ● onlyOwner				
	L checkWhitelist External ! NO !				
	L startTrading External ! ● onlyOwner				
	L updateBuyTax External ! ● onlyOwner				
	L updateSellTax External ! ● onlyOwner				

CONTRACT ASSESSMENT

	L		_takeTax	Internal						
	L		_transfer	Internal						
	L		internalSwap	Internal						
	L		swapToETH	Internal						
	L		withdrawStuckETH	External	!				onlyOwner	
	L		withdrawStuckTokens	External	!				onlyOwner	
	L		<Receive Ether>	External	!			NO	!	

Legend

	Symbol		Meaning	
:----- -----				
			Function can modify state	
			Function is payable	



FUNCTIONAL TESTING

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

<https://testnet.bscscan.com/tx/0xe6947588abdc5b024d7bf1e544d6a82baaa0348ec04c457f68c51aeb1ee582f3>

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

<https://testnet.bscscan.com/tx/0x9ed4436f6655e1fcf8ed7472c6be48a30275ac5690a782049ceff7e15a239b6e>

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

<https://testnet.bscscan.com/tx/0xb076b138a298006cca9098fc067977d216be7797dc73f4b2d534d501b3d7e446>

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

<https://testnet.bscscan.com/tx/0xbdbe9f5a1a2c6bfaa5cb0777650e7123c11014b48076bbe5c23631a7b9bff9f4>

5- Buying when not excluded from fees (0-10% tax) (**passed**):

<https://testnet.bscscan.com/tx/0xfb0b7f3b1bb42852e6e5175a6445da2ea15362f89a90c3fc83419d832db78f7>

6- Selling when not excluded from fees (0-10% tax) (**passed**):

<https://testnet.bscscan.com/tx/0x57cb5f875aafc9fa8ac2236a1dfb7cd bde07a72da56fa94762e5584fc5bc7718>



FUNCTIONAL TESTING

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

<https://testnet.bscscan.com/tx/0xfdd27a2b813318f25a58bc1bdb5e217bdab42686cb90cd02c8e7d61060770c9f>

8- Internal swap (BNB Fees sent to marketing wallet) (passed):

<https://testnet.bscscan.com/address/0x99a95a52953f1336f378047f00878ac0e100765f#internaltx>



MANUAL TESTING

Centralization – Trades must be enabled

Severity: High

function: enableTrading

Status: Open

Overview:

The smart contract owner must enable trades for holders. If trading remain disabled, no one would be able to buy/sell/transfer tokens.

```
function enableTrading() external onlyOwner {  
    tradingActive = true;  
    swapEnabled = true;  
}
```

Suggestion

To mitigate this centralization issue, we propose the following options:

1. Renounce Ownership: Consider relinquishing control of the smart contract by renouncing ownership. This would remove the ability for a single entity to manipulate the router, reducing centralization risks.
2. Multi-signature Wallet: Transfer ownership to a multi-signature wallet. This would require multiple approvals for any changes to the mainRouter, adding an additional layer of security and reducing the centralization risk.
3. Transfer ownership to a trusted and valid 3rd party in order to guarantee enabling of the trade



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. Team provides no guarantees against the sale of team tokens or the removal of liquidity by the project audited in this document. Always Do your own research and protect yourselves from being scammed. The Auditace team has audited this project for general information and only expresses their opinion based on similar projects and checks from popular diagnostic tools. Under no circumstances did Auditace receive a payment to manipulate those results or change the awarding badge that we will be adding in our website. Always Do your own research and protect yourselves from scams. This document should not be presented as a reason to buy or not buy any particular token. The Auditace team disclaims any liability for the resulting losses.



ABOUT AUDITACE

We specialize in providing thorough and reliable audits for Web3 projects. With a team of experienced professionals, we use cutting-edge technology and rigorous methodologies to evaluate the security and integrity of blockchain systems. We are committed to helping our clients ensure the safety and transparency of their digital assets and transactions.



<https://auditace.tech/>



https://t.me/Audit_Ace



https://twitter.com/auditace_



<https://github.com/Audit-Ace>
