



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: --

Checksum:

942d00495b2ca9ad9f2ec46ccff6c4d7a1f552c6

Owner:--

Deployer:--



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



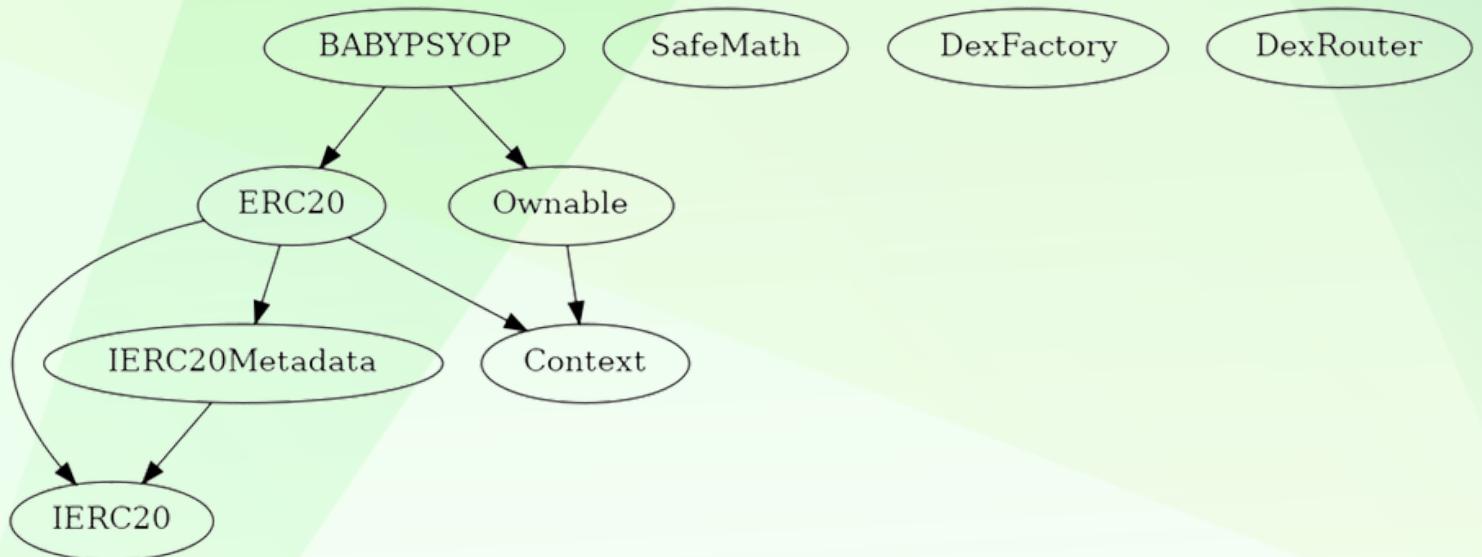
CLASSIFICATION OF RISK

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.

```
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Suggestion

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

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