

Advanced Manual Smart Contract Audit

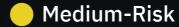


Project: Opinion

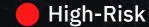
Website: https://pinion.solutions/



6 low-risk code issues found



0 medium-risk code issues found



0 high-risk code issues found

Contract Address

0xd50C50f867909A4C3B5cF19F58810DcE9D998171

Disclaimer: Coinsult is not responsible for any financial losses. Nothing in this contract audit is financial advice, please do your own research.

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Coinsult is not responsible if a project turns out to be a scam, rug-pull or honeypot. We only provide a detailed analysis for your own research.

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Tokenomics

Rank	Address	Quantity (Token)	Percentage
1	0xff3ddc75bd57164921b2ee5cc72f09e6c39e8399	499,951,919.823055505	99.9904%
2	0x5ea64dbc9b156ba11350b3b9025e27fbfb41aeb3	45,120.173258	0.0090%
3	0x3c0b275cf0f23d6764ec451f14777255fa5ec3b1	1,000.000000076	0.0002%
4	Null Address: 0x000dEaD	1,000.000000076	0.0002%

Source Code

Coinsult was comissioned by Opinion to perform an audit based on the following smart contract:

https://bscscan.com/address/0xd50C50f867909A4C3B5cF19F58810DcE9D998171#code

Manual Code Review

In this audit report we will highlight all these issues:



6 low-risk code issues found



0 medium-risk code issues found



0 high-risk code issues found

The detailed report continues on the next page...

Contract contains Reentrancy vulnerabilities

Additional information: This combination increases risk of malicious intent. While it may be justified by some complex mechanics (e.g. rebase, reflections, buyback).

More information: Slither

```
function transfer(
   address from,
   address to,
   uint256 amount
) private {
   require(from != address(0), "BEP20: transfer from the zero address");
   require(to != address(0), "BEP20: transfer to the zero address");
   require(amount > 0, "Transfer amount must be greater than zero");
   // is the token balance of this contract address over the min number of
   // also, don't swap & liquify if sender is uniswap pair.
   uint256 contractTokenBalance = balanceOf(address(this));
   bool overMinTokenBalance = contractTokenBalance >= numTokenSellToAddToLiquidity;
       overMinTokenBalance &&
       !inSwapAndLiquify &&
       from != uniswapV2Pair &&
       swapAndLiquifyEnabled
   ) {
       contractTokenBalance = numTokensSellToAddToLiquidity:
```

Recommendation

Apply the check-effects-interactions pattern.

Exploit scenario

```
function withdrawBalance(){
    // send userBalance[msg.sender] Ether to msg.sender
    // if mgs.sender is a contract, it will call its fallback function
    if( ! (msg.sender.call.value(userBalance[msg.sender])() ) ){
        throw;
    }
    userBalance[msg.sender] = 0;
}
```

Bob uses the re-entrancy bug to call withdrawBalance two times, and withdraw more than its initial deposit to the contract.

Avoid relying on block.timestamp

block.timestamp can be manipulated by miners.

Recommendation

Do not use block.timestamp, now or blockhash as a source of randomness

Exploit scenario

```
contract Game {
    uint reward_determining_number;
    function guessing() external{
        reward_determining_number = uint256(block.blockhash(10000)) % 10;
    }
}
```

Eve is a miner. Eve calls guessing and re-orders the block containing the transaction. As a result, Eve wins the game.

No zero address validation for some functions

Detect missing zero address validation.

```
function setMarketingWallet(address newWallet) external onlyOwner() {
   MarketingWallet = newWallet;
}
```

Recommendation

Check that the new address is not zero.

Exploit scenario

```
contract C {

modifier onlyAdmin {
   if (msg.sender != owner) throw;
   _;
}

function updateOwner(address newOwner) onlyAdmin external {
   owner = newOwner;
}
```

Bob calls updateOwner without specifying the newOwner, soBob loses ownership of the contract.

Missing events arithmetic

Detect missing events for critical arithmetic parameters.

```
function setTaxFeePercent(uint256 taxFee) external onlyOwner() {
   _taxFee = taxFee;
   require (taxFee< 5 ,&quot;Cannot set Tax fee more than 5%!&quot;);
}
```

Recommendation

Emit an event for critical parameter changes.

Exploit scenario

```
contract C {

modifier onlyAdmin {
   if (msg.sender != owner) throw;
   _;
  }

function updateOwner(address newOwner) onlyAdmin external {
   owner = newOwner;
  }
}
```

updateOwner() has no event, so it is difficult to track off-chain changes in the buy price.

Conformance to Solidity naming conventions

Allow _ at the beginning of the mixed_case match for private variables and unused parameters.

```
uint256 public _marketingFee = 2;
```

Recommendation

Follow the Solidity naming convention.

Rule exceptions

- Allow constant variable name/symbol/decimals to be lowercase (ERC20).
- Allow _ at the beginning of the mixed_case match for private variables and unused parameters.

Redundant Statements

Detect the usage of redundant statements that have no effect.

```
function _msgData() internal view virtual returns (bytes memory) {
   this; // silence state mutability warning without generating bytecode - see https://github.com/er
   return msg.data;
}
```

Recommendation

Remove redundant statements if they congest code but offer no value.

Exploit scenario

```
contract RedundantStatementsContract {
    constructor() public {
        uint; // Elementary Type Name
        bool; // Elementary Type Name
        RedundantStatementsContract; // Identifier
    }
    function test() public returns (uint) {
        uint; // Elementary Type Name
        assert; // Identifier
        test; // Identifier
        return 777;
    }
}
```

Each commented line references types/identifiers, but performs no action with them, so no code will be generated for such statements and they can be removed.

Owner privileges

- Owner cannot set fees higher than 25%
- Owner cannot pause trading
- Owner can change max transaction amount
- Owner can exclude from fees
- ⚠ Owner can set max wallet balance

Extra notes by the team

No notes

Contract Snapshot

```
contract OPIN is Context , IBEP20, Ownable {
    using SafeMath for uint256;
    using Address for address;

mapping (address => uint256) private _rOwned;
    mapping (address => uint256) private _tOwned;
    mapping (address => mapping (address => uint256)) private _allowances;

mapping (address => bool) private _isExcludedFromFee;

mapping (address => bool) private _isExcluded;
    address[] private _excluded;

uint256 private constant MAX = ~uint256(0);
    uint256 private _tTotal = 500000000 * 10**9;
    uint256 private _rTotal = (MAX - (MAX % _tTotal));
    uint256 private _tFeeTotal;
```

Project Overview

Not KYC verified by Coinsult

Opinion

Audited by Coinsult.net



Date: 8 June 2022

✓ Advanced Manual Smart Contract Audit