

Advanced Manual **Smart Contract Audit**

September 24, 2022

Audit requested by



Bitcoinair

0x53c9408607888Fe36c5E072e0436CEF9e99B23fa

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Audit Summary

Audit Scope

Project Name	Bitcoinaire
Website	https://bitcoinaire.uk/
Blockchain	Binance Smart Chain
Smart Contract Language	Solidity
Contract Address	0x53c9408607888Fe36c5E072e0436CEF9e99B23fa
Audit Method	Static Analysis, Manual Review
Date of Audit	24 September 2022

This audit report has been prepared by Coinsult's experts at the request of the client. In this audit, the results of the static analysis and the manual code review will be presented. The purpose of the audit is to see if the functions work as intended, and to identify potential security issues within the smart contract.

The information in this report should be used to understand the risks associated with the smart contract. This report can be used as a guide for the development team on how the contract could possibly be improved by remediating the issues that were identified.

Tokenomics

Rank	Address	Quantity (Token)	Percentage
1	0x7e6010447a737a7cc287cb9d7e095c9503b677f5	500,000,000.5086	50.0000%
2	Pinksale: PinkLock V2	399,999,999.4914	40.0000%
3	Null Address: 0x000...dEaD	100,000,000	10.0000%

Source Code

Coinsult was commissioned by Bitcoinaire to perform an audit based on the following code:

<https://bscscan.com/address/0x53c9408607888Fe36c5E072e0436CEf9e99B23fa#code>

Dividend tracker currently at:

<https://bscscan.com/address/0xea96aadbb90623d65b59991567713d8467162ef9>

Not audited by coinsult (not verified)

✗ Contains 1 unfixed high-risk issue.

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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.

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

The information provided in this audit is for informational purposes only and should not be considered investment advice. Coinsult does not endorse, recommend, support or suggest to invest in any project.

Coinsult can not be held responsible for when a project turns out to be a rug-pull, honeypot or scam.

Global Overview

Manual Code Review

In this audit report we will highlight the following issues:

Vulnerability Level	Total	Pending	Acknowledged	Resolved
● Informational	0	0	0	0
● Low-Risk	3	3	0	0
● Medium-Risk	0	0	0	0
● High-Risk	1	1	0	0

Privilege Overview

Coinsult checked the following privileges:

Contract Privilege	Description
Owner can mint?	● Owner cannot mint new tokens
Owner can blacklist?	● Owner cannot blacklist addresses
Owner can set fees > 25%?	● Owner can set the sell fee to 25% or higher
Owner can exclude from fees?	● Owner can exclude from fees
Owner can pause trading?	● Owner cannot pause the contract
Owner can set Max TX amount?	● Owner can set max transaction amount

More owner privileges are listed later in the report.

 **Low-Risk:** Could be fixed, will not bring problems.

Too many digits

Literals with many digits are difficult to read and review.

```
// use by default 300,000 gas to process auto-claiming dividends
uint256 public gasForProcessing = 300000;

uint256 public maxTransactionAmount = 15000000 * (10**18); // 15,000,000 (1.5%)
```

Recommendation

Use: Ether suffix, Time suffix, or The scientific notation

Exploit scenario

```
contract MyContract{
    uint 1_ether = 1000000000000000000;
}
```

While `1_ether` looks like 1 ether, it is 10 ether. As a result, it's likely to be used incorrectly.

● **Low-Risk:** Could be fixed, will not bring problems.

No zero address validation for some functions

Detect missing zero address validation.

```
function setMarketingWallet(address payable wallet) external onlyOwner{
    _marketingWalletAddress = wallet;
}
```

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, so Bob loses ownership of the contract.

● **Low-Risk:** Could be fixed, will not bring problems.

Missing events arithmetic

Detect missing events for critical arithmetic parameters.

```
function updateSellTax(uint256 _rewardFee, uint256 _marketingFee, uint256 _liquidityFee, uint256 _burnFee) {
    sellRewardFee = _rewardFee;
    sellMiningFee = _marketingFee;
    sellLiquidityFee = _liquidityFee;
    sellBurnFee = _burnFee;
    require(sellTotalFee <= 25, "BITC: Total tax must be less than or equal to 25 %");
}

function updateSwapTokensAtAmount(uint256 _newLimit) external onlyOwner {
    swapTokensAtAmount = _newLimit * (10**18);
}
```

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.

● **High-Risk:** Must be fixed, will bring problems.

Selltotalfee never updated

```
function updateSellTax(uint256 _rewardFee, uint256 _marketingFee, uint256 _liquidityFee, uint256 _burnFee) public {
    sellRewardFee = _rewardFee;
    sellMiningFee = _marketingFee;
    sellLiquidityFee = _liquidityFee;
    sellBurnFee = _burnFee;
    require(sellTotalFee <= 25, "BITC: Total tax must be less than or equal to 25 %");
}
```

Recommendation

sellTotalFee is never calculated within the updateSellTax function, meaning it will always be the constant of 12%, this way the owner can set the sell fee to 100%

Contract Privileges

Maximum Fee Limit Check


Coinsult tests if the owner of the smart contract can set the transfer, buy or sell fee to 25% or more. It is bad practice to set the fees to 25% or more, because owners can prevent healthy trading or even stop trading when the fees are set too high.

Type of fee	Description
Transfer fee	● Owner cannot set the transfer fee to 25% or higher
Buy fee	● Owner cannot set the buy fee to 25% or higher
Sell fee	● Owner can set the sell fee to 25% or higher

Type of fee	Description
Max transfer fee	0%
Max buy fee	0%
Max sell fee	100%

Contract Pausability Check

Coinsult tests if the owner of the smart contract has the ability to pause the contract. If this is the case, users can no longer interact with the smart contract; users can no longer trade the token.

Privilege Check	Description
Can owner pause the contract?	 Owner cannot pause the contract


Max Transaction Amount Check

Coinsult tests if the owner of the smart contract can set the maximum amount of a transaction. If the transaction exceeds this limit, the transaction will revert. Owners could prevent normal transactions to take place if they abuse this function.

Privilege Check	Description
Can owner set max tx amount?	● Owner can set max transaction amount

Exclude From Fees Check

Coinsult tests if the owner of the smart contract can exclude addresses from paying tax fees. If the owner of the smart contract can exclude from fees, they could set high tax fees and exclude themselves from fees and benefit from 0% trading fees. However, some smart contracts require this function to exclude routers, dex, cex or other contracts / wallets from fees.


Privilege Check	Description
Can owner exclude from fees?	 Owner can exclude from fees

Ability To Mint Check

Coinsult tests if the owner of the smart contract can mint new tokens. If the contract contains a mint function, we refer to the token's total supply as non-fixed, allowing the token owner to "mint" more tokens whenever they want.

A mint function in the smart contract allows minting tokens at a later stage. A method to disable minting can also be added to stop the minting process irreversibly.


Minting tokens is done by sending a transaction that creates new tokens inside of the token smart contract. With the help of the smart contract function, an unlimited number of tokens can be created without spending additional energy or money.

Privilege Check	Description
Can owner mint?	 Owner cannot mint new tokens

Ability To Blacklist Check

Coinsult tests if the owner of the smart contract can blacklist accounts from interacting with the smart contract. Blacklisting methods allow the contract owner to enter wallet addresses which are not allowed to interact with the smart contract.

This method can be abused by token owners to prevent certain / all holders from trading the token. However, blacklists might be good for tokens that want to rule out certain addresses from interacting with a smart contract.

Privilege Check	Description
Can owner blacklist?	 Owner cannot blacklist addresses

Other Owner Privileges Check

Coinsult lists all important contract methods which the owner can interact with.

- ⚠ Owner can set balance of dividend tracker (mint dividend tokens)
- ⚠ Owner can update the dividend tracker to another contract
- ⚠ Owner can update the UniswapV2Router

Notes

Notes by Bitcoinaire

No notes provided by the team.

Notes by Coinconsult

✗ Contract will fail if the fees are set to a different value than 12%. Because totalSellFees is hardcoded.

Contract Snapshot

This is how the constructor of the contract looked at the time of auditing the smart contract.

```
contract BITC is ERC20, Ownable {
    using SafeMath for uint256;

    IUniswapV2Router02 public uniswapV2Router;
    address public uniswapV2Pair;

    bool private swapping;

    BitcoinDividendTracker public dividendTracker;

    address public deadWallet = 0x00000000000000000000000000000000dEaD; // dead

    address public rewardToken = address(0x7130d2A12B9BCbFAe4f2634d864A1Ee1Ce3Ead9c); //BTC (Bep20)

    uint256 public maxTransactionAmount = 15000000 * (10**18); // 15,000,000 (1.5%)
    uint256 public swapTokensAtAmount = 2000 * (10**18);

    uint256 public sellRewardFee = 8;
    uint256 public sellLiquidityFee = 1;
    uint256 public sellMiningFee = 2; // sellMiningFee
    uint256 public sellBurnFee = 1;
    uint256 public sellTotalFee = 12;

    address payable public _marketingWalletAddress = payable(0xDB5F92E73F163aD56997bEF818F2beB2Da4C55ff); //

    // use by default 300,000 gas to process auto-claiming dividends
    uint256 public gasForProcessing = 300000;

    // exclude from fees and max transaction amount
    mapping (address => bool) private _isExcludedFromFees;

    // store addresses that a automatic market maker pairs. Any transfer *to* these addresses
    // could be subject to a maximum transfer amount
    mapping (address => bool) public automatedMarketMakerPairs;
```

Website Review

Coinsult checks the website completely manually and looks for visual, technical and textual errors. We also look at the security, speed and accessibility of the website. In short, a complete check to see if the website meets the current standard of the web development industry.



Type of check	Description
Mobile friendly?	● The website is mobile friendly
Contains jQuery errors?	● The website does not contain jQuery errors
Is SSL secured?	● The website is SSL secured
Contains spelling errors?	● The website does not contain spelling errors

Certificate of Proof

● Not KYC verified by Coinsult

Bitcoinaire

Audited by Coinsult.net



Date: 24 September 2022

✓ Advanced Manual Smart Contract Audit

End of report **Smart Contract Audit**

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