



Cyberscope

Audit Report

OptiFi

March 2022

Type BEP20

Network BSC

Address 0xb5D5D9C8E98cef68E7bdAd92b1De229d514179b6

Audited by © cyberscope

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Contract Review

| | |
|-------------------------|---|
| Contract Name | OptiFi |
| Compiler Version | v0.7.4+commit.3f05b770 |
| Optimization | 200 runs |
| Licence | Unlicense |
| Explorer | https://bscscan.com/token/0xb5D5D9C8E98cef68E7bdAd92b1De229d514179b6 |
| Symbol | \$OPTI |
| Decimals | 5 |
| Total Supply | 325,000 |
| Source | contract.sol |
| Domain | |

Audit Updates

| | |
|----------------------|-----------------|
| Initial Audit | 15th March 2022 |
| Corrected | 17th March 2022 |

Contract Analysis

● Critical ● Medium ● Minor ● Pass

| Severity | Code | Description |
|----------|------|---|
| ● | ST | Contract Owner is not able to stop or pause transactions |
| ● | OCTD | Contract Owner is not able to transfer tokens from specific address |
| ● | OTUT | Owner Transfer User's Tokens |
| ● | ELFM | Contract Owner is not able to increase fees more than a reasonable percent (25%) |
| ● | ULTW | Contract Owner is not able to increase the amount of liquidity taken by dev wallet more than a reasonable percent |
| ● | MT | Contract Owner is not able to mint new tokens |
| ● | BT | Contract Owner is not able to burn tokens from specific wallet |
| ● | BC | Contract Owner is not able to blacklist wallets from selling |

ST - Stop Transactions

| | |
|-------------|-------------------|
| Criticality | minor |
| Location | contract.sol#L738 |

Description

The contract owner has the authority to stop transactions for all users excluding the owner. The owner may take advantage of it by setting the `tradingOpen` to false.

```
if (!authorizations[sender] && !authorizations[recipient]) {  
    require(tradingOpen, "Trading is not enabled");  
}
```

Recommendation

The contract could not allow disabling the `tradingOpen` variable after the initial toggle.

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

ULTW - Unlimited Liquidity to Team Wallet

| | |
|-------------|-------------------|
| Criticality | minor |
| Location | contract.sol#L904 |

Description

The contract owner has the authority to transfer funds to the team wallet. These funds have been accumulated from fees collected from the contract. The owner may take advantage of it by calling the `withdrawAllToTreasury` function.

```
function withdrawAllToTreasury() external swapping onlyOwner {
    uint256 amountToSwap = _gonBalances[address(this)].div(_gonsPerFragment);
    require(
        amountToSwap > 0,
        "There are no OptiFi tokens deposited in token contract"
    );
    address[] memory path = new address[](2);
    path[0] = address(this);
    path[1] = router.WETH();
    router.swapExactTokensForETHSupportingFeeOnTransferTokens(
        amountToSwap,
        0,
        path,
        treasuryReceiver,
        block.timestamp
    );
}
```

Recommendation

The contract could embody a check for the maximum amount of funds that can be swapped. Since a huge amount may violate the token's price.

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

BC - Blacklisted Contracts

| | |
|-------------|-------------------|
| Criticality | medium |
| Location | contract.sol#L740 |

Description

The contract owner has the authority to stop contracts from transactions. The owner may take advantage of it by calling the `setBotBlacklist` function.

```
require(  
    !blacklist[sender] && !blacklist[recipient],  
    "Wallet is blacklisted"  
);
```

Recommendation

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

Contract Diagnostics

● Critical ● Medium ● Minor

| Severity | Code | Description |
|----------|------|--|
| ● | MTS | Manipulate Total Supply |
| ● | L01 | Public Function could be Declared External |
| ● | L02 | State Variables could be Declared Constant |
| ● | L04 | Conformance to Solidity Naming Conventions |
| ● | L05 | Unused State Variable |
| ● | L07 | Missing Events Arithmetic |
| ● | L09 | Dead Code Elimination |
| ● | L13 | Divide before Multiply Operation |
| ● | L14 | Uninitialized Variables in Local Scope |

MTS - Manipulate Total Supply

| | |
|-------------|-------------------|
| Criticality | minor |
| Location | contract.sol#L662 |

Description

The contract is manipulating the total supply. This change will have a direct impact on the token price and Market Cap

```
for (uint256 i = 0; i < times; i++) {  
    _totalSupply = _totalSupply.mul((10**RATE_DECIMALS).add(rebaseRate)).div(  
        10**RATE_DECIMALS  
    );  
}
```

Recommendation

The contract owner should carefully manage the adjustment of the circulating supply (increases or decreases), according to the token's price fluctuations.

L01 - Public Function could be Declared External

| | |
|--------------------|--|
| Criticality | minor |
| Location | contract.sol#L495,499,512,517,543,547,551,1078,1109,1133 |

Description

Public functions that are never called by the contract should be declared external to save gas.

```
tradingStatus
setPairAddress
getLiquidityBacking
decimals
symbol
name
transferOwnership
renounceOwnership
unauthorize
...
```

Recommendation

Use the external attribute for functions never called from the contract

L02 - State Variables could be Declared Constant

Criticality

minor

Location

contract.sol#L597,598,564,562,563,583,588,584,581,585 and 2 more

Description

Constant state variables should be declared constant to save gas.

```
treasuryFee
swapEnabled
sellFee
liquidityFee
insuranceFundFee
feeDenominator
ecoFee
_symbol
_name
...
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

| | |
|--------------------|---|
| Criticality | minor |
| Location | contract.sol#L157,159,190,234,951,960,1013,1028,1055,1056 and 25 more |

Description

Solidity defines a naming convention that should be followed. Rule exceptions:

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

```
_maxTxAmount  
_totalSupply  
_lastAddLiquidityTime  
_lastRebasedTime  
_initRebaseStartTime  
_autoAddLiquidity  
_autoRebase  
ZERO  
DEAD  
...
```

Recommendation

Follow the Solidity naming convention.

<https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions>

L05 - Unused State Variable

Criticality

minor

Location

contract.sol#L14

Description

There are segments that contain unused state variables.

```
MAX_INT256
```

Recommendation

Remove unused state variables.

L07 - Missing Events Arithmetic

| | |
|--------------------|-----------------------------------|
| Criticality | minor |
| Location | contract.sol#L1028,1066,1074,1133 |

Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.

```
deadBlocks = _deadBlocks  
goldenMinutesDuration = _durationInSec  
buyFeeMultiplier = _buyMultiplier  
_maxTxAmount = TOTAL_GONS.div(1000).mul(maxTXPercentage_base1000)
```

Recommendation

Emit an event for critical parameter changes.

L09 - Dead Code Elimination

Criticality

minor

Location

contract.sol#L42

Description

Functions that are not used in the contract, and make the code's size bigger.

```
abs
```

Recommendation

Remove unused functions.

L13 - Divide before Multiply Operation

| | |
|--------------------|-------------------------------------|
| Criticality | minor |
| Location | contract.sol#L667,782,1028,1078,556 |

Description

Performing divisions before multiplications may cause lose of prediction.

```
_maxTxAmount = TOTAL_GONS.div(100).mul(1)
liquidityBalance = _gonBalances[pair].div(_gonsPerFragment)
_maxTxAmount = TOTAL_GONS.div(1000).mul(maxTXPercentage_base1000)
feeAmount = gonAmount.div(feeDenominator).mul(_totalFee)
times = deltaTime.div(1800)
```

Recommendation

The multiplications should be prior to the divisions.

L14 - Uninitialized Variables in Local Scope

Criticality

minor

Location

contract.sol#L1096,670

Description

There are variables that are defined in the local scope and are not initialized.

```
rebaseRate  
i
```

Recommendation

All the local scoped variables should be initialized.

Contract Functions

| Contract | Type | Bases | | |
|------------------------------|---------------|------------|------------|-----------|
| | Function Name | Visibility | Mutability | Modifiers |
| | | | | |
| SafeMathInt | Library | | | |
| | mul | Internal | | |
| | div | Internal | | |
| | sub | Internal | | |
| | add | Internal | | |
| | abs | Internal | | |
| | | | | |
| SafeMath | Library | | | |
| | add | Internal | | |
| | sub | Internal | | |
| | sub | Internal | | |
| | mul | Internal | | |
| | div | Internal | | |
| | div | Internal | | |
| | mod | Internal | | |
| | | | | |
| IERC20 | Interface | | | |
| | totalSupply | External | | - |
| | balanceOf | External | | - |
| | allowance | External | | - |
| | transfer | External | ✓ | - |
| | approve | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | | | | |
| IPancakeSwap Pair | Interface | | | |
| | name | External | | - |
| | symbol | External | | - |
| | decimals | External | | - |

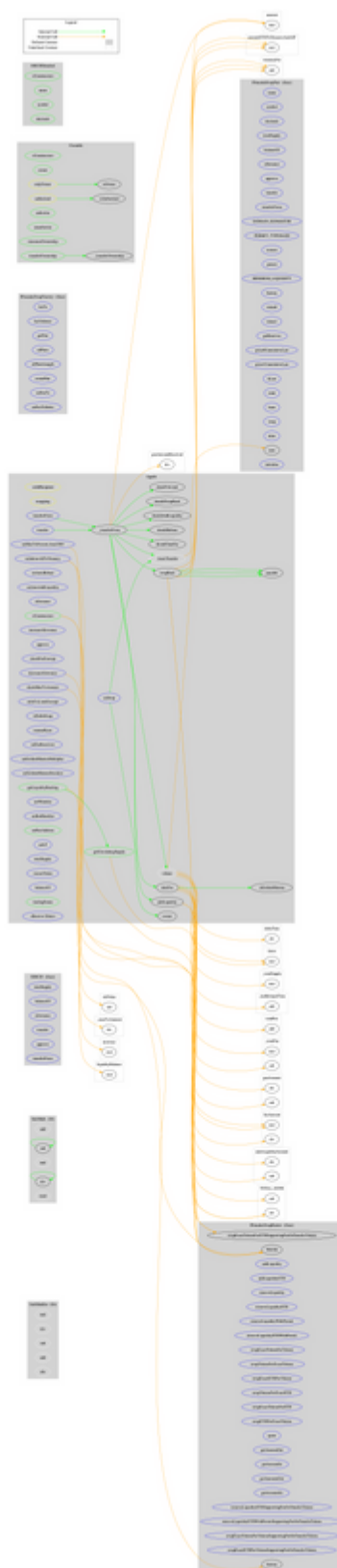
| | | | | |
|----------------------------|------------------------------|----------|---------|---|
| | totalSupply | External | | - |
| | balanceOf | External | | - |
| | allowance | External | | - |
| | approve | External | ✓ | - |
| | transfer | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | DOMAIN_SEPARATOR | External | | - |
| | PERMIT_TYPEHASH | External | | - |
| | nonces | External | | - |
| | permit | External | ✓ | - |
| | MINIMUM_LIQUIDITY | External | | - |
| | factory | External | | - |
| | token0 | External | | - |
| | token1 | External | | - |
| | getReserves | External | | - |
| | price0CumulativeLast | External | | - |
| | price1CumulativeLast | External | | - |
| | kLast | External | | - |
| | mint | External | ✓ | - |
| | burn | External | ✓ | - |
| | swap | External | ✓ | - |
| | skim | External | ✓ | - |
| | sync | External | ✓ | - |
| | initialize | External | ✓ | - |
| | | | | |
| IPancakeSwap Router | Interface | | | |
| | factory | External | | - |
| | WETH | External | | - |
| | addLiquidity | External | ✓ | - |
| | addLiquidityETH | External | Payable | - |
| | removeLiquidity | External | ✓ | - |
| | removeLiquidityETH | External | ✓ | - |
| | removeLiquidityWithPermit | External | ✓ | - |
| | removeLiquidityETHWithPermit | External | ✓ | - |
| | swapExactTokensForTokens | External | ✓ | - |

| | | | | |
|----------------------------|---|----------|---------|-----------|
| | swapTokensForExactTokens | External | ✓ | - |
| | swapExactETHForTokens | External | Payable | - |
| | swapTokensForExactETH | External | ✓ | - |
| | swapExactTokensForETH | External | ✓ | - |
| | swapETHForExactTokens | External | Payable | - |
| | quote | External | | - |
| | getAmountOut | External | | - |
| | getAmountIn | External | | - |
| | getAmountsOut | External | | - |
| | getAmountsIn | External | | - |
| | removeLiquidityETHSupportingFeeOnTransferTokens | External | ✓ | - |
| | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External | ✓ | - |
| | swapExactTokensForTokensSupportingFeeOnTransferTokens | External | ✓ | - |
| | swapExactETHForTokensSupportingFeeOnTransferTokens | External | Payable | - |
| | swapExactTokensForETHSupportingFeeOnTransferTokens | External | ✓ | - |
| | | | | |
| IPancakeSwapFactory | Interface | | | |
| | feeTo | External | | - |
| | feeToSetter | External | | - |
| | getPair | External | | - |
| | allPairs | External | | - |
| | allPairsLength | External | | - |
| | createPair | External | ✓ | - |
| | setFeeTo | External | ✓ | - |
| | setFeeToSetter | External | ✓ | - |
| | | | | |
| Ownable | Implementation | | | |
| | <Constructor> | Public | ✓ | - |
| | owner | Public | | - |
| | authorize | Public | ✓ | onlyOwner |
| | unauthorize | Public | ✓ | onlyOwner |

| | | | | |
|----------------------|-----------------------|---------------------------|---|--------------------------|
| | isOwner | Public | | - |
| | isAuthorized | Public | | - |
| | renounceOwnership | Public | ✓ | onlyOwner |
| | transferOwnership | Public | ✓ | onlyOwner |
| | _transferOwnership | Internal | ✓ | |
| | | | | |
| ERC20Detailed | Implementation | IERC20 | | |
| | <Constructor> | Public | ✓ | - |
| | name | Public | | - |
| | symbol | Public | | - |
| | decimals | Public | | - |
| | | | | |
| OptiFi | Implementation | ERC20Detailed, Ownable | | |
| | <Constructor> | Public | ✓ | ERC20Detailed Ownable |
| | rebase | Internal | ✓ | |
| | transfer | External | ✓ | validRecipient |
| | transferFrom | External | ✓ | validRecipient |
| | _basicTransfer | Internal | ✓ | |
| | _transferFrom | Internal | ✓ | |
| | isGoldenMinutes | Internal | | |
| | takeFee | Internal | ✓ | |
| | addLiquidity | Internal | ✓ | swapping |
| | swapBack | Internal | ✓ | swapping |
| | withdrawAllToTreasury | External | ✓ | swapping onlyOwner |
| | shouldTakeFee | Internal | | |
| | shouldRebase | Internal | | |
| | shouldAddLiquidity | Internal | | |
| | shouldSwapBack | Internal | | |
| | setAutoRebase | External | ✓ | onlyOwner |
| | setAutoAddLiquidity | External | ✓ | onlyOwner |
| | allowance | External | | - |
| | decreaseAllowance | External | ✓ | - |
| | increaseAllowance | External | ✓ | - |

| | | | | |
|--|----------------------------|----------|---------|-----------|
| | approve | External | ✓ | - |
| | checkFeeExempt | External | | - |
| | checkTxLimit | Internal | | |
| | checkMaxTxAmount | External | | - |
| | setMaxTxPercent_base1000 | External | ✓ | onlyOwner |
| | setIsTxLimitExempt | External | ✓ | onlyOwner |
| | getCirculatingSupply | Public | | - |
| | isNotInSwap | External | | - |
| | manualSync | External | ✓ | - |
| | setFeeReceivers | External | ✓ | onlyOwner |
| | setGoldenMinutesMultiplier | External | ✓ | onlyOwner |
| | setGoldenMinutesDuration | External | ✓ | onlyOwner |
| | getLiquidityBacking | Public | | - |
| | airDrop | External | ✓ | onlyOwner |
| | setWhitelist | External | ✓ | onlyOwner |
| | setBotBlacklist | External | ✓ | onlyOwner |
| | setPairAddress | Public | ✓ | onlyOwner |
| | setLP | External | ✓ | onlyOwner |
| | totalSupply | External | | - |
| | rescueToken | External | ✓ | onlyOwner |
| | balanceOf | External | | - |
| | tradingStatus | Public | ✓ | onlyOwner |
| | <Receive Ether> | External | Payable | - |

Contract Flow



Domain Info

| | |
|-------------------------------|---|
| Domain Name | optifi.finance |
| Registry Domain ID | f7dd274e057c45c6ad8049b84899ab44-DONUTS |
| Creation Date | 2022-03-10T19:39:25Z |
| Updated Date | 2022-03-11T02:35:48Z |
| Registry Expiry Date | 2023-03-10T19:39:25Z |
| Registrar WHOIS Server | http://www.hostinger.com |
| Registrar URL | http://www.hostinger.com |
| Registrar | Hostinger, UAB |
| Registrar IANA ID | 1636 |

The domain has been created 5 days before the creation of the audit. It will expire in 12 months.

There is no public billing information, the creator is protected by the privacy settings.

Summary

There are some functions that can be abused by the owner, like blacklisting contracts, transferring funds to the team's wallet and stopping transactions. The maximum fee percentage that can be set is 14% in buys and 18% in sales. The contract is also using a rebase technique that manipulates the total supply. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

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.

Cyberscope 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 Cyberscope 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 Cyberscope 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 Cyberscope team disclaims any liability for the resulting losses.

About Cyberscope

Coinscope audit and K.Y.C. service has been rebranded to Cyberscope.

Coinscope is the leading early coin listing, voting and auditing authority firm. The audit process is analyzing and monitoring many aspects of the project. That way, it gives the community a good sense of security using an informative report and a generic score.

Cyberscope and Coinscope are aiming to make crypto discoverable and efficient globally. They provides all the essential tools to assist users draw their own conclusions.



The Cyberscope team

<https://www.cyberscope.io>



Cyberscope

Audit Report

OptiFi

March 2022

Type BEP20

Network TESTNET.BSC

Address 0xe7d808b92333544e55188c3C78fd97770386A520

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Contract Review

| | |
|-------------------------|---|
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| Compiler Version | v0.7.4+commit.3f05b770 |
| Optimization | 200 runs |
| Licence | Unlicense |
| Explorer | https://testnet.bscscan.com/token/0xe7d808b92333544e55188c3C78fd97770386A520 |
| Symbol | OPTI |
| Decimals | 5 |
| Total Supply | 325,000 |
| Source | contract.sol |
| Domain | optifi.finance |

Audit Updates

| | |
|----------------------|-----------------|
| Initial Audit | 15th March 2022 |
| Corrected | |

Contract Analysis

● Critical ● Medium ● Minor ● Pass

| Severity | Code | Description |
|----------|------|---|
| ● | ST | Contract Owner is not able to stop or pause transactions |
| ● | OCTD | Contract Owner is not able to transfer tokens from specific address |
| ● | OTUT | Owner Transfer User's Tokens |
| ● | ELFM | Contract Owner is not able to increase fees more than a reasonable percent (25%) |
| ● | ULTW | Contract Owner is not able to increase the amount of liquidity taken by dev wallet more than a reasonable percent |
| ● | MT | Contract Owner is not able to mint new tokens |
| ● | BT | Contract Owner is not able to burn tokens from specific wallet |
| ● | BC | Contract Owner is not able to blacklist wallets from selling |

ULTW - Unlimited Liquidity to Team Wallet

| | |
|-------------|-------------------|
| Criticality | minor |
| Location | contract.sol#L874 |

Description

The contract owner has the authority to transfer funds to the team wallet. These funds have been accumulated from fees collected from the contract. The owner may take advantage of it by calling the `withdrawAllToTreasury` function.

```
function withdrawAllToTreasury() external swapping onlyOwner {
    uint256 amountToSwap = _gonBalances[address(this)].div(_gonsPerFragment);
    require(
        amountToSwap > 0,
        "There is no OptiFi token deposited in token contract"
    );
    address[] memory path = new address[](2);
    path[0] = address(this);
    path[1] = router.WETH();
    router.swapExactTokensForETHSupportingFeeOnTransferTokens(
        amountToSwap,
        0,
        path,
        treasuryReceiver,
        block.timestamp
    );
}
```

Recommendation

The contract could embody a check for the maximum amount of funds that can be swapped. Since a huge amount may violate the token's price.

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

BC - Blacklisted Contracts

| | |
|-------------|-------------------|
| Criticality | medium |
| Location | contract.sol#L716 |

Description

The contract owner has the authority to stop contracts from transactions. The owner may take advantage of it by calling the `setBotBlacklist` function.

```
require(!blacklist[sender] && !blacklist[recipient], "in_blacklist");
```

Recommendation

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

Contract Diagnostics

● Critical ● Medium ● Minor

| Severity | Code | Description |
|----------|------|--|
| ● | MAL | Misused Algorithmic Logic |
| ● | MTS | Manipulate Total Supply |
| ● | L01 | Public Function could be Declared External |
| ● | L02 | State Variables could be Declared Constant |
| ● | L05 | Unused State Variable |
| ● | L04 | Conformance to Solidity Naming Conventions |
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| ● | L07 | Missing Events Arithmetic |
| ● | L14 | Uninitialized Variables in Local Scope |
| ● | L13 | Divide before Multiply Operation |

MAL - Misused Algorithmic Logic

| | |
|-------------|-------------------|
| Criticality | minor |
| Location | contract.sol#L652 |

Description

The algorithmic flow does not follow the required business logic.

In the following statement the third and the forth **if** will never be fulfilled since an unsigned integer is either less than or greater/equal to 365 days. Hence, always the first two **if** statements will be fulfilled.

```
if (deltaTimeFromInit < (365 days)) {  
    rebaseRate = 4863;  
} else if (deltaTimeFromInit >= (365 days)) {  
    rebaseRate = 245;  
} else if (deltaTimeFromInit >= ((15 * 365 days) / 10)) {  
    rebaseRate = 16;  
} else if (deltaTimeFromInit >= (7 * 365 days)) {  
    rebaseRate = 3;  
}
```

Recommendation

The algorithm should be reshaped so it will match to the business logic.

MTS - Manipulate Total Supply

| | |
|--------------------|-------------------|
| Criticality | minor |
| Location | contract.sol#L662 |

Description

The contract is manipulating the total supply. This change will have a direct impact on the token price and Market Cap

```
for (uint256 i = 0; i < times; i++) {  
    _totalSupply = _totalSupply.mul(10**RATE_DECIMALS).add(rebaseRate).div(  
        10**RATE_DECIMALS  
    );  
}
```

Recommendation

The contract owner should carefully manage the adjustment of the circulating supply (increases or decreases), according to the token's price fluctuations.

L01 - Public Function could be Declared External

Criticality

minor

Location

contract.sol#L492,497,523,527,531,1048,1079

Description

Public functions that are never called by the contract should be declared external to save gas.

```
setPairAddress  
getLiquidityBacking  
decimals  
symbol  
name  
transferOwnership  
renounceOwnership
```

Recommendation

Use the external attribute for functions never called from the contract

L02 - State Variables could be Declared Constant

Criticality

minor

Location

contract.sol#L573,574,544,542,543,563,568,564,561,565 and 2 more

Description

Constant state variables should be declared constant to save gas.

```
treasuryFee  
swapEnabled  
sellFee  
liquidityFee  
insuranceFundFee  
feeDenominator  
ecoFee  
_symbol  
_name  
...
```

Recommendation

Add the constant attribute to state variables that never change.

L05 - Unused State Variable

Criticality

minor

Location

contract.sol#L14

Description

There are segments that contain unused state variables.

```
MAX_INT256
```

Recommendation

Remove unused state variables.

L04 - Conformance to Solidity Naming Conventions

Criticality

minor

Location

contract.sol#L157,159,190,234,921,930,983,998,1025,1026 and 23 more

Description

Solidity defines a naming convention that should be followed. Rule exceptions:

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

```
_maxTxAmount  
_totalSupply  
_lastAddLiquidityTime  
_lastRebasedTime  
_initRebaseStartTime  
_autoAddLiquidity  
_autoRebase  
ZERO  
DEAD  
...
```

Recommendation

Follow the Solidity naming convention.

<https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions>

L09 - Dead Code Elimination

Criticality

minor

Location

contract.sol#L42

Description

Functions that are not used in the contract, and make the code's size bigger.

```
abs
```

Recommendation

Remove unused functions.

L07 - Missing Events Arithmetic

Criticality

minor

Location

contract.sol#L998,1036,1044

Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.

```
goldenMinutesDuration = _durationInSec  
buyFeeMultiplier = _buyMultiplier  
_maxTxAmount = TOTAL_GONS.div(1000).mul(maxTXPercentage_base1000)
```

Recommendation

Emit an event for critical parameter changes.

L14 - Uninitialized Variables in Local Scope

Criticality

minor

Location

contract.sol#L646,1066

Description

These are variables that are defined in the local scope and are not initialized.

```
i
rebaseRate
```

Recommendation

All the local scoped variables should be initialized.

L13 - Divide before Multiply Operation

Criticality

minor

Location

contract.sol#L643,754,998,1048,536

Description

Performing divisions before multiplications may cause lose of prediction.

```
_maxTxAmount = TOTAL_GONS.div(100).mul(1)
liquidityBalance = _gonBalances[pair].div(_gonsPerFragment)
_maxTxAmount = TOTAL_GONS.div(1000).mul(maxTXPercentage_base1000)
_gonBalances[autoLiquidityReceiver] =
_gonBalances[autoLiquidityReceiver].add(gonAmount.div(feeDenominator).mul(liquidityFee))
_gonBalances[address(this)] =
_gonBalances[address(this)].add(gonAmount.div(feeDenominator).mul(_treasuryFee.add(insuranceFundFee).add(ecoFee)))
_totalFee = _totalFee.mul(buyFeeMultiplier).div(100)
times = deltaTime.div(1800)
```

Recommendation

The multiplications should be prior to the divisions.

Contract Functions

| Contract | Type | Bases | | |
|------------------------------|---------------|------------|------------|-----------|
| | Function Name | Visibility | Mutability | Modifiers |
| | | | | |
| SafeMathInt | Library | | | |
| | mul | Internal | | |
| | div | Internal | | |
| | sub | Internal | | |
| | add | Internal | | |
| | abs | Internal | | |
| | | | | |
| SafeMath | Library | | | |
| | add | Internal | | |
| | sub | Internal | | |
| | sub | Internal | | |
| | mul | Internal | | |
| | div | Internal | | |
| | div | Internal | | |
| | mod | Internal | | |
| | | | | |
| IERC20 | Interface | | | |
| | totalSupply | External | | - |
| | balanceOf | External | | - |
| | allowance | External | | - |
| | transfer | External | ✓ | - |
| | approve | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | | | | |
| IPancakeSwap Pair | Interface | | | |
| | name | External | | - |
| | symbol | External | | - |
| | decimals | External | | - |

| | | | | |
|----------------------------|------------------------------|----------|---------|---|
| | totalSupply | External | | - |
| | balanceOf | External | | - |
| | allowance | External | | - |
| | approve | External | ✓ | - |
| | transfer | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | DOMAIN_SEPARATOR | External | | - |
| | PERMIT_TYPEHASH | External | | - |
| | nonces | External | | - |
| | permit | External | ✓ | - |
| | MINIMUM_LIQUIDITY | External | | - |
| | factory | External | | - |
| | token0 | External | | - |
| | token1 | External | | - |
| | getReserves | External | | - |
| | price0CumulativeLast | External | | - |
| | price1CumulativeLast | External | | - |
| | kLast | External | | - |
| | mint | External | ✓ | - |
| | burn | External | ✓ | - |
| | swap | External | ✓ | - |
| | skim | External | ✓ | - |
| | sync | External | ✓ | - |
| | initialize | External | ✓ | - |
| | | | | |
| IPancakeSwap Router | Interface | | | |
| | factory | External | | - |
| | WETH | External | | - |
| | addLiquidity | External | ✓ | - |
| | addLiquidityETH | External | Payable | - |
| | removeLiquidity | External | ✓ | - |
| | removeLiquidityETH | External | ✓ | - |
| | removeLiquidityWithPermit | External | ✓ | - |
| | removeLiquidityETHWithPermit | External | ✓ | - |
| | swapExactTokensForTokens | External | ✓ | - |

| | | | | |
|----------------------------|---|----------|---------|-----------|
| | swapTokensForExactTokens | External | ✓ | - |
| | swapExactETHForTokens | External | Payable | - |
| | swapTokensForExactETH | External | ✓ | - |
| | swapExactTokensForETH | External | ✓ | - |
| | swapETHForExactTokens | External | Payable | - |
| | quote | External | | - |
| | getAmountOut | External | | - |
| | getAmountIn | External | | - |
| | getAmountsOut | External | | - |
| | getAmountsIn | External | | - |
| | removeLiquidityETHSupportingFeeOnTransferTokens | External | ✓ | - |
| | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External | ✓ | - |
| | swapExactTokensForTokensSupportingFeeOnTransferTokens | External | ✓ | - |
| | swapExactETHForTokensSupportingFeeOnTransferTokens | External | Payable | - |
| | swapExactTokensForETHSupportingFeeOnTransferTokens | External | ✓ | - |
| | | | | |
| IPancakeSwapFactory | Interface | | | |
| | feeTo | External | | - |
| | feeToSetter | External | | - |
| | getPair | External | | - |
| | allPairs | External | | - |
| | allPairsLength | External | | - |
| | createPair | External | ✓ | - |
| | setFeeTo | External | ✓ | - |
| | setFeeToSetter | External | ✓ | - |
| | | | | |
| Ownable | Implementation | | | |
| | <Constructor> | Public | ✓ | - |
| | owner | Public | | - |
| | isOwner | Public | | - |
| | renounceOwnership | Public | ✓ | onlyOwner |

| | | | | |
|----------------------|-----------------------|---------------------------|---|--------------------------|
| | transferOwnership | Public | ✓ | onlyOwner |
| | _transferOwnership | Internal | ✓ | |
| | | | | |
| ERC20Detailed | Implementation | IERC20 | | |
| | <Constructor> | Public | ✓ | - |
| | name | Public | | - |
| | symbol | Public | | - |
| | decimals | Public | | - |
| | | | | |
| OptiFi | Implementation | ERC20Detailed, Ownable | | |
| | <Constructor> | Public | ✓ | ERC20Detailed Ownable |
| | rebase | Internal | ✓ | |
| | transfer | External | ✓ | validRecipient |
| | transferFrom | External | ✓ | validRecipient |
| | _basicTransfer | Internal | ✓ | |
| | _transferFrom | Internal | ✓ | |
| | isGoldenMinutes | Internal | | |
| | takeFee | Internal | ✓ | |
| | addLiquidity | Internal | ✓ | swapping |
| | swapBack | Internal | ✓ | swapping |
| | withdrawAllToTreasury | External | ✓ | swapping onlyOwner |
| | shouldTakeFee | Internal | | |
| | shouldRebase | Internal | | |
| | shouldAddLiquidity | Internal | | |
| | shouldSwapBack | Internal | | |
| | setAutoRebase | External | ✓ | onlyOwner |
| | setAutoAddLiquidity | External | ✓ | onlyOwner |
| | allowance | External | | - |
| | decreaseAllowance | External | ✓ | - |
| | increaseAllowance | External | ✓ | - |
| | approve | External | ✓ | - |
| | checkFeeExempt | External | | - |
| | checkTxLimit | Internal | | |

| | | | | |
|--|----------------------------|----------|---------|-----------|
| | checkMaxTxAmount | External | | - |
| | setMaxTxPercent_base1000 | External | ✓ | onlyOwner |
| | setIsTxLimitExempt | External | ✓ | onlyOwner |
| | getCirculatingSupply | Public | | - |
| | isNotInSwap | External | | - |
| | manualSync | External | ✓ | - |
| | setFeeReceivers | External | ✓ | onlyOwner |
| | setGoldenMinutesMultiplier | External | ✓ | onlyOwner |
| | setGoldenMinutesDuration | External | ✓ | onlyOwner |
| | getLiquidityBacking | Public | | - |
| | airDrop | External | ✓ | onlyOwner |
| | setWhitelist | External | ✓ | onlyOwner |
| | setBotBlacklist | External | ✓ | onlyOwner |
| | setPairAddress | Public | ✓ | onlyOwner |
| | setLP | External | ✓ | onlyOwner |
| | totalSupply | External | | - |
| | rescueToken | External | ✓ | onlyOwner |
| | balanceOf | External | | - |
| | <Receive Ether> | External | Payable | - |

Contract Flow



Domain Info

| | |
|-------------------------------|---|
| Domain Name | optifi.finance |
| Registry Domain ID | f7dd274e057c45c6ad8049b84899ab44-DONUTS |
| Creation Date | 2022-03-10T19:39:25Z |
| Updated Date | 2022-03-11T02:35:48Z |
| Registry Expiry Date | 2023-03-10T19:39:25Z |
| Registrar WHOIS Server | http://www.hostinger.com |
| Registrar URL | http://www.hostinger.com |
| Registrar | Hostinger, UAB |
| Registrar IANA ID | 1636 |

The domain has been created 5 days before the creation of the audit. It will expire in 12 months.

There is no public billing information, the creator is protected by the privacy settings.

Summary

There are some functions that can be abused by the owner, like blacklisting contracts and transferring funds to the team's wallet. The maximum fee percentage that can be set is 14% in buys and 18% in sales. The contract is also using a rebase technique that manipulates the total supply. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

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.

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Coinscope audit and K.Y.C. service has been rebranded to Cyberscope.

Coinscope is the leading early coin listing, voting and auditing authority firm. The audit process is analyzing and monitoring many aspects of the project. That way, it gives the community a good sense of security using an informative report and a generic score.

Cyberscope and Coinscope are aiming to make crypto discoverable and efficient globally. They provides all the essential tools to assist users draw their own conclusions.



The Cyberscope team

<https://www.cyberscope.io>