

Audit Report **Legends Doge**

January 2022

Type BEP20

Network BSC

Address 0xCd092F1f9858204d7986b3a2e36730fF1229a2e5

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Contract Review

| Contract Name | LegendsDoge |
|------------------|--|
| Compiler Version | v0.8.5+commit.a4f2e591 |
| Optimization | 200 runs |
| Licence | MIT |
| Explorer | https://bscscan.com/token/0xCd092F1f9858204d7986 b3a2e36730fF1229a2e5 |
| Symbol | LSD |
| Decimals | 9 |
| Total Supply | 1,000,000,000 |
| Source | contract.sol |
| Domain | legendsdogecoin.com |

Audit Updates

| Initial Audit | 18th January 2022 |
|---------------|-------------------|
| Corrected | |



Contract Analysis

CriticalMediumMinorPass

| 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 |
| • | ВТ | Contract Owner is not able to burn tokens from specific wallet |
| • | ВС | Contract Owner is not able to blacklist wallets from selling |



ST - Stop Transactions

| Criticality | medium |
|-------------|-------------------|
| Location | contract.sol#L675 |

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 maxTxAmount to zero.

```
if(sender != owner() && recipient != owner())
    require(amount <= _maxTxAmount, "Transfer amount exceeds the maxTxAmount.");</pre>
```

Recommendation

The contract could embody a check for not allowing setting the _maxTxAmount less than a reasonable amount. A suggested implementation could check that the maximum amount should be more than a fixed percentage of the total supply.

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.



ELFM - Exceed Limit Fees Manipulation

```
Criticality critical

Location contract.sol#L646
```

Description

The contract owner has the authority to increase over the allowed limit of 25%. The owner may take advantage of it by calling the updateFee function with a high percentage value.

```
function updateFee(uint256 _txFee,uint256 _burnFee,uint256 _charityFee)
onlyOwner() public{
    _TAX_FEE = _txFee* 100;
    _BURN_FEE = _burnFee * 100;
    _CHARITY_FEE = _charityFee* 100;
    ORIG_TAX_FEE = _TAX_FEE;
    ORIG_BURN_FEE = _BURN_FEE;
    ORIG_CHARITY_FEE = _CHARITY_FEE;
}
```

Recommendation

The contract could embody a check for the maximum acceptable value.

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

CriticalMediumMinor

| Severity | Code | Description |
|----------|------|--|
| • | L01 | Public Function could be Declared External |
| • | L02 | State Variables could be Declared Constant |
| • | L04 | Conformance to Solidity Naming Conventions |
| • | L09 | Dead Code Elimination |
| • | L07 | Missing Events Arithmetic |



L01 - Public Function could be Declared External

| Criticality | minor |
|-------------|---|
| Location | contract.sol#L646,L642,L597 and 18 more |

Description

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

```
updateFee
burn
reflectionFromToken
...
```

Recommendation

Use the external attribute for functions never called from the contract



L02 - State Variables could be Declared Constant

| Criticality | minor |
|-------------|------------------------|
| Location | contract.sol#L461,L463 |

Description

Constant state variables should be declared constant to save gas.

```
_MAX
_GRANULARITY
```

Recommendation

Add the constant attribute to state variables that never change.



L04 - Conformance to Solidity Naming Conventions

| Criticality | minor |
|-------------|---|
| Location | contract.sol#L503,L502,L479 and 17 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.

```
_maxWalletToken
_maxTxAmount
ORIG_CHARITY_FEE
...
```

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#L244,L228,L868 and 8 more |

Description

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

```
mod
_getTaxFee
_msgData
...
```

Recommendation

Remove unused functions.



L07 - Missing Events Arithmetic

| Criticality | minor |
|-------------|------------------------|
| Location | contract.sol#L646,L505 |

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.

```
_TAX_FEE = _txFee * 100
_maxTxAmount = _tTotal.mul(maxTxPercent).div(10 ** 4)
```

Recommendation

Emit an event for critical parameter changes.



Contract Functions

| Contract | Туре | Bases | | |
|----------|-----------------------|------------|------------|-----------|
| | Function Name | Visibility | Mutability | Modifiers |
| Cambaud | langla na andadia n | | | |
| Context | Implementation | Internal | | |
| | _msgSender | | | |
| | _msgData | Internal | | |
| IBEP20 | Interface | | | |
| | totalSupply | External | | - |
| | balanceOf | External | | - |
| | transfer | External | √ | - |
| | allowance | External | | - |
| | approve | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | | | | |
| SafeMath | Library | | | |
| | add | Internal | | |
| | sub | Internal | | |
| | sub | Internal | | |
| | mul | Internal | | |
| | div | Internal | | |
| | div | Internal | | |
| | mod | Internal | | |
| | mod | Internal | | |
| | | | | |
| Address | Library | | | |
| | isContract | Internal | | |
| | sendValue | Internal | ✓ | |
| | functionCall | Internal | √ | |
| | functionCall | Internal | √ | |
| | functionCallWithValue | Internal | ✓ | |
| | functionCallWithValue | Internal | ✓ | |



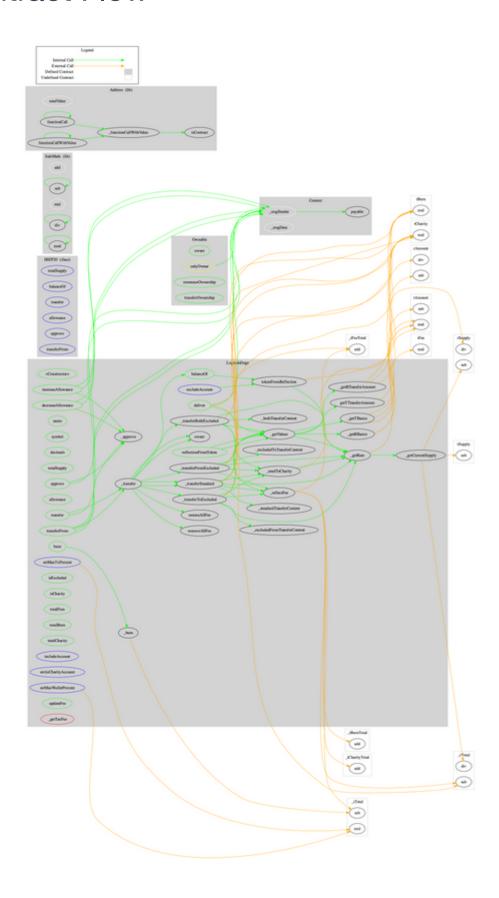
| | _functionCallWithValue | Private | ✓ | |
|-------------|-----------------------------|--------------------------------|----------|-----------|
| | | | | |
| Ownable | Implementation | Context | | |
| | owner | Public | | - |
| | renounceOwnership | Public | 1 | onlyOwner |
| | transferOwnership | Public | ✓ | onlyOwner |
| LegendsDoge | Implementation | Context, IBEP20, Ownable | | |
| | <constructor></constructor> | Public | 1 | - |
| | setMaxTxPercent | External | ✓ | onlyOwner |
| | setMaxWalletPercent | External | ✓ | onlyOwner |
| | name | Public | | - |
| | symbol | Public | | - |
| | decimals | Public | | - |
| | totalSupply | Public | | - |
| | balanceOf | Public | | - |
| | transfer | Public | 1 | - |
| | allowance | Public | | - |
| | approve | Public | 1 | - |
| | transferFrom | Public | 1 | - |
| | increaseAllowance | Public | 1 | - |
| | decreaseAllowance | Public | 1 | - |
| | isExcluded | Public | | - |
| | isCharity | Public | | - |
| | totalFees | Public | | - |
| | totalBurn | Public | | - |
| | totalCharity | Public | | - |
| | deliver | Public | ✓ | - |
| | reflectionFromToken | Public | | - |
| | tokenFromReflection | Public | | - |
| | excludeAccount | External | ✓ | onlyOwner |
| | includeAccount | External | 1 | onlyOwner |
| | setAsCharityAccount | External | 1 | onlyOwner |
| | burn | Public | 1 | - |



| updateFee | Public | ✓ | onlyOwner |
|------------------------------|----------|---|-----------|
| _burn | Internal | ✓ | |
| _approve | Private | ✓ | |
| _transfer | Private | ✓ | |
| _transferStandard | Private | ✓ | |
| _standardTransferContent | Private | ✓ | |
| _transferToExcluded | Private | ✓ | |
| _excludedFromTransferContent | Private | ✓ | |
| _transferFromExcluded | Private | ✓ | |
| _excludedToTransferContent | Private | ✓ | |
| _transferBothExcluded | Private | ✓ | |
| _bothTransferContent | Private | ✓ | |
| _reflectFee | Private | ✓ | |
| _getValues | Private | | |
| _getTBasics | Private | | |
| getTTransferAmount | Private | | |
| _getRBasics | Private | | |
| _getRTransferAmount | Private | | |
| _getRate | Private | | |
| _getCurrentSupply | Private | | |
| _sendToCharity | Private | ✓ | |
| removeAllFee | Private | ✓ | |
| restoreAllFee | Private | ✓ | |
| _getTaxFee | Private | | |



Contract Flow





Domain Info

| Domain Name | legendsdogecoin.com |
|---------------------------|-----------------------------|
| Registry Domain ID | 2668712200_DOMAIN_COM-VRSN |
| Creation Date | 2022-01-16T19:06:51Z |
| Updated Date | 2022-01-16T19:08:32Z |
| Registry Expiry Date | |
| Registrar WHOIS Server | whois.launchpad.com |
| Registrar URL | LaunchPad.com |
| Registrar | Launchpad, Inc. (HostGator) |
| Registrar IANA ID | 955 |

The domain has been created 2 days before the creation of the audit.

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



Summary

The smart contract analysis reported 2 issues. There are some functions that can be abused by the owner, like manipulating fees and indirectly stopping the transactions. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.



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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.

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



The Coinscope.co team

https://www.coinscope.co