

TechRate  
November, 2022



# SMART CONTRACTS SECURITY AUDIT REPORT



Techrate\_audits



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# Audit Details



Audited project

FuCoin



Deployer address

0x84d8e60f645db764f1bd3655c4ef85c3ba02c778



Client contacts:

<https://twitter.com/FuCoinTTM>



Blockchain

Binance Smart Chain



Project website:

<https://www.fucoin.cash>

# Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the disclaimer below – please make sure to read it in full.

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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

# Background

**TechRate was commissioned by FuCoin to perform an audit of smart contracts on commit:**

<https://bscscan.com/address/0xb25aA2d8F86552D2b9684E0733f2ebFBaC9536e3#code>

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be used to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

# Issues Checking Status

Issue description	Checking status
1. <b>Compiler errors.</b>	Passed
2. <b>Race conditions and Reentrancy. Cross-function race conditions.</b>	Passed
3. <b>Possible delays in data delivery.</b>	Passed
4. <b>Oracle calls.</b>	Passed
5. <b>Front running.</b>	Passed
6. <b>Timestamp dependence.</b>	Passed
7. <b>Integer Overflow and Underflow.</b>	Passed
8. <b>DoS with Revert.</b>	Passed
9. <b>DoS with block gas limit.</b>	Low issues
10. <b>Methods execution permissions.</b>	Passed
11. <b>Economy model of the contract.</b>	Passed
12. <b>The impact of the exchange rate on the logic.</b>	Passed
13. <b>Private user data leaks.</b>	Passed
14. <b>Malicious Event log.</b>	Passed
15. <b>Scoping and Declarations.</b>	Passed
16. <b>Uninitialized storage pointers.</b>	Passed
17. <b>Arithmetic accuracy.</b>	Passed
18. <b>Design Logic.</b>	Passed
19. <b>Cross-function race conditions.</b>	Passed
20. <b>Safe Open Zeppelin contracts implementation and usage.</b>	Passed
21. <b>Fallback function security.</b>	Passed

# Security Issues

## ✓ High Severity Issues

No high severity issues found.

## ✓ Medium Severity Issues

No medium severity issues found.

## ✓ Low Severity Issues

### 1. Out of gas

#### Issue:

- The function `manage_blacklist()` uses the loop to change blacklist status of addresses. It also could be aborted with `OUT_OF_GAS` exception if there will be a long addresses list.

#### Recommendation:





















Check that the array length is not too big.

## Owner privileges (In the period when the owner is not renounced)



- Owner can authorize addresses.
- Owner can change \_maxWalletToken.
- Owner can change sellMultiplier.
- Owner can enable trading.
- Owner can change blacklist mode.
- Owner can multiTransfer fixed and listed token amounts.
- Owner can change buyCooldownEnabled status and cooldownTimerInterval.
- Authorized addresses can withdraw contract BNBs.
- Authorized addresses can include in and exclude from dividends.
- Authorized addresses can include in and exclude from fee, timelock and transaction amount.
- Authorized addresses can change fees.
- Authorized addresses can change fee receivers.
- Authorized addresses can change swap threshold and disable/enable swap.
- Authorized addresses can change targetLiquidity.
- Authorized addresses can change distribution criteria.
- Authorized addresses can change distribution GAS.

# Testnet deployment

Contracts Description Table

Contract	Type	Bases		
L	Function Name	Visibility	Mutability	Modifiers
FuCoin	Implementation	IBEP20, Auth		
L	<a href="#">approve</a>	Public !		NO !
L	<a href="#">approveMax</a>	External !		NO !
L	<a href="#">transfer</a>	External !		NO !
L	<a href="#">transferFrom</a>	External !		NO !
L	<a href="#">setMaxWalletPercent base1000</a>	External !		onlyOwner
L	<a href="#">setMaxTxPercent base1000</a>	External !		onlyOwner
L	<a href="#">setTxLimit</a>	External !		authorized
L	<a href="#">set sell multiplier</a>	External !		onlyOwner
L	<a href="#">tradingStatus</a>	Public !		onlyOwner
L	<a href="#">cooldownEnabled</a>	Public !		onlyOwner
L	<a href="#">setIsDividendExempt</a>	External !		authorized
L	<a href="#">enable blacklist</a>	Public !		onlyOwner
L	<a href="#">manage blacklist</a>	Public !		onlyOwner
L	<a href="#">setIsFeeExempt</a>	External !		authorized
L	<a href="#">setIsTxLimitExempt</a>	External !		authorized
L	<a href="#">setIsTimelockExempt</a>	External !		authorized
L	<a href="#">setFees</a>	External !		authorized
L	<a href="#">setFeeReceivers</a>	External !		authorized
L	<a href="#">setSwapBackSettings</a>	External !		authorized
L	<a href="#">setTargetLiquidity</a>	External !		authorized

## Legend

Symbol	Meaning
	Function can modify state
	Function is payable



# Conclusion

Smart contracts contain low severity issues! Liquidity pair contract's security is not checked due to out of scope. The further transfers and operations with the funds raise are not related to this particular contract.

Liquidity locking details are provided by the team:

<https://www.pinksale.finance/pinklock/detail/0xbbE300c955F63F825c9553De98464F0bd9BA6C95?chain=BSC>

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*TechRate note:*

*Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.*