# TECH • RATE

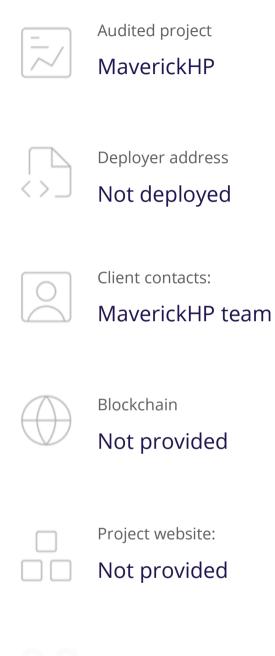
# SMART CONTRACTS SECURITY **AUDIT REPORT**







### **Audit Details**







### 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 MaverickHP to perform an audit of smart contracts on commit:

https://github.com/MaverickHP/TRT-TSC/commit/20517c7e551313fc8b60196c2385c0f125e3dd5e

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.  | Compiler errors.  | Passed          |
| 2.  | Race conditions and Reentrancy. Cross-function race conditions. | Passed          |
| 3.  | Possible delays in data delivery.                               | Passed          |
| 4.  | Oracle calls.   | Passed          |
| 5.  | Front running.  | Passed          |
| 6.  | Timestamp dependence.   | Passed          |
| 7.  | Integer Overflow and Underflow.                                 | Passed          |
| 8.  | DoS with Revert.  | Passed          |
| 9.  | DoS with block gas limit.                                       | Low issues      |
| 10. | Methods execution permissions.                                  | Passed          |
| 11. | Economy model of the contract.                                  | Passed          |
| 12. | The impact of the exchange rate on the logic.                   | Passed          |
| 13. | Private user data leaks.  | Passed          |
| 14. | Malicious Event log.  | Passed          |
| 15. | Scoping and Declarations.                                       | Passed          |
| 16. | Uninitialized storage pointers.                                 | Passed          |
| 17. | Arithmetic accuracy.  | Passed          |
| 18. | Design Logic.   | Passed          |
| 19. | Cross-function race conditions.                                 | Passed 1780     |
| 20. | Safe Open Zeppelin contracts implementation and usage.          | Passed          |
| 21. | Fallback function security.                                     | Passed          |

### **Security Issues**

No high severity issues found.

No medium severity issues found.

- Low Severity Issues
  - 1. Out of gas

#### Issue:

- The function excludeFromDividends() uses the loop to find and remove addresses from the \_excluded list. Function will be aborted with OUT OF GAS exception if there will be a long excluded addresses list.
- The function \_getCurrentSupply() also uses the loop for evaluating total supply. It also could be aborted with OUT\_OF\_GAS exception if there will be a long excluded addresses list.

#### **Recommendation:**

Check that the excluded array length is not too big.

#### Notes:

- Warning: Function state mutability can be restricted to pure
  - name(), symbol(), totalSupply().

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

- Owner can enable/disable trading.
- Owner can block/unblock accounts.
- Owner can include addresses in \_isAllowedToTradeWhenDisabled array.
- Owner can exclude from fees, dividends, max wallet and transaction limit.
- Owner can change all fees.
- Owner can change fee receivers addresses.
- Owner can change maxWalletAmount and maxTxAmount.
- Owner can exclude from dividends.
- Owner can change minimumTokensBeforeSwap.
- Owner can withdraw contract ETHs.

### 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 NOT provided by the team.

#### 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.

