TechRate
October, 2023

SMART CONTRACTS SECURITY AUDIT REPORT

Techrate_audits Techrate Techrate1

Audit Details

Audited project

Kobe

Deployer address

Not deployed

Client contacts:

Kobe team

Blockchain

Not deployed

Project website:

Not provided

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 Kobe to perform an audit of smart contracts on commit:

- audit-contracts.zip

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.**	Passed
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
20.	**Safe Open Zeppelin contracts implementation and usage.**	Passed
21.	**Fallback function security.**	Passed

Security Issues

High Severity Issues

No high severity issues found.

Medium Severity Issues

No medium severity issues found.

Low Severity Issues

No low severity issues found.

Notes:

- KobeUsdtReceiver's giveMeToken() function has no modifiers.

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

- Kobe
  - Owner can change the arbitrage contract address.
  - Owner can change the USDT receiver address.
  - Owner can toggle the swap functionality.
  - Owner can toggle fees on or off.
  - Owner can update the swap threshold amount.
  - Owner can update the Uniswap router address.
  - Owner can set whether an address is an automated market maker pair or not.
  - Owner can update the buy, sell, transfer, and treasury fees.
  - Owner can exclude or include an account from fees.
  - Owner can transfer foreign tokens to another address.
  - Owner can set the treasury address.
  - Owner or the arbitrage contract owner can force a swapBack.
- KobeTreasury
  - Owner or whitelisted module can whitelist or blacklist a module.
  - Owner or whitelisted module can send ERC20 tokens to a specified address.

    - Owner or whitelisted module can transfer native cryptocurrency to a specified address.
    - Owner or whitelisted module can call an external contract with a specified value and calldata.
    - Owner or whitelisted module can perform multiple delegate calls with different calldata.

- KobeArbitrage
    - Owner or whitelisted module can whitelist or blacklist a module.
    - Owner or whitelisted module can send ERC20 tokens to a specified address.
    - Owner or whitelisted module can transfer native cryptocurrency to a specified address.

Conclusion

Smart contracts do not contain high 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.

Security score: 84.

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.