BananoDOS

Smart Contract Security Audit

November, 2020

TechRate

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 below 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 BananoDOS to perform an audit of smart contracts:

- ***Ban.sol***

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 warnings.	No issues identified
2	Race conditions and Reentrancy. Cross-function race conditions.	No issues identified
3	Possible delays in data delivery.	No issues identified
4	Oracle calls.	No issues identified
5	Front running.	No issues identified
6	Timestamp dependence.	No issues identified
7	Integer Overflow and Underflow.	No issues identified
8	DoS with Revert.	No issues identified
9	DoS with block gas limit.	No issues identified
10	Methods execution permissions.	No issues identified
11	Economy model. If application logic is based on an incorrect economic model, the application would not function correctly and participants would incur financial losses. This type of issue is most often found in bonus rewards systems, Staking and Farming contracts, Vault and Vesting contracts, etc.	Some issues identified
12	The impact of the exchange rate on the logic.	No issues identified
13	Private user data leaks.	No issues identified

Security Issues

High Severity Issues

Smart contract does not contain high severity issues.

Medium Severity Issues

Smart contract does not contain medium severity issues.

Low Severity Issues

1. Multi address transfer issue

Issue:
In function multiTransfer there could be the case, when receivers array length is not equal to amounts array length. This can lead to incorrect sending of funds to many recipients.

Recommendation:

Add checking that arrays size are equal:

`require(receivers.length == amounts.length)`.

2. Division by zero

Issue:
In the function div there is a possibility of dividing by zero.

Recommendation:

Add checking that divisor can not be zero:

```
require(b > 0);
```

Conclusion

Smart contract does not contain any security issues and could be deployed to the mainnet. Smart contract is safe for investors.