



# Smart Contract Security Audit Report

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**CBK**

September 2022

Security Status



[www.hacksafe.io](https://www.hacksafe.io)



# Audit Details



## Audited project

CBK



## Deployer address

0xfA9dA51631268A30Ec3DDd1CcBf46c65FAD99251



## Client contacts

CBK Team



## Blockchain

Binance Smart Chain



## 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 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.



# Procedure

## **Step 1 - In-Depth Manual Review**

Manual line-by-line code reviews to ensure the logic behind each function is sound and safe from various attack vectors. This is the most important and lengthy portion of the audit process (as automated tools often cannot find the nuances that lead to exploits such as flash loan attacks).

## **Step 2 - Automated Testing**

Simulation of a variety of interactions with your Smart Contract on a test blockchain leveraging a combination of automated test tools and manual testing to determine if any security vulnerabilities exist.

## **Step 3 – Leadership Review**

The engineers assigned to the audit will schedule meetings with our leadership team to review the contracts, any comments or findings, and ask questions to further apply adversarial thinking to discuss less common attack vectors.

## **Step 4 - Resolution of Issues**

Consulting with the team to provide our recommendations to ensure the code's security and optimize its gas efficiency, if possible. We assist project team's in resolving any outstanding issues or implementing our recommendations.

## **Step 5 - Published Audit Report**

Boiling down results and findings into an easy-to-read report tailored to the project. Our audit reports highlight resolved issues and any risks that exist to the project or its users, along with any remaining suggested remediation measures. Diagrams are included at the end of each report to help users understand the interactions which occur within the project.

# Background

**HackSafe was commissioned by CBK to perform an audit of smart contracts:**

- <https://bscscan.com/address/0x4f60a160d8c2dddaafe16fcc57566db84d674bd6#code>

**The purpose of the audit was to achieve the**

- 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.

# Contract Details

## Token contract details for 16.09.2022

Token Type	: ERC20
Contract name	: AnyswapV5ERC20
Contract address	: 0x4f60a160D8C2DDdaAfe16FCC57566dB84D674BD6
Compiler version	: v0.8.2+commit.661d1103
Total supply	: 10,837,935.666076
Token ticker	: CBK
Decimals	: 18
Token holders	: 1,490
Transactions count	: 11,300
Contract deployer address	: 0xfA9dA51631268A30Ec3DDd1CcBf46c65FAD99251
Owner address	: 0x533e3c0e6b48010873b947bddc4721b1bdff9648
Vault address	: 0x533e3c0e6b48010873b947bddc4721b1bdff9648
MPC address	: 0x533e3c0e6b48010873b947bddc4721b1bdff9648



# Social profiles

Twitter Profile	: <a href="https://twitter.com/theYellowBlocks">https://twitter.com/theYellowBlocks</a>
Github profile	: <a href="https://github.com/Crossing-the-Yellow-Blocks/">https://github.com/Crossing-the-Yellow-Blocks/</a>
Telegram profile	: <a href="https://t.me/cbkcommunityfans">https://t.me/cbkcommunityfans</a>
Coinmarketcap profile	: <a href="https://coinmarketcap.com/currencies/crossing-the-yellow-blocks/">https://coinmarketcap.com/currencies/crossing-the-yellow-blocks/</a>
Coingecko profile	: <a href="https://www.coingecko.com/en/coins/crossing-the-yellow-blocks/">https://www.coingecko.com/en/coins/crossing-the-yellow-blocks/</a>

# Audit Summary

According to the standard audit assessment, Customer`s solidity smart contracts are “poor”. This token contract does contain owner control, which do not make it fully decentralized as owner does have control over smart contract.

Insecure	Poor	Secure	Well-secured
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We used various tools like Slither, Mythril and Remix IDE. At the same time this finding is based on critical analysis of the manual audit. All issues found during automated analysis were manually reviewed and applicable vulnerabilities are presented in the issues checking status.

We found 0 critical, 1 high, 0 medium and 0 low and some very low-level issues. These issues are not critical ones.



# CBK Token Distribution

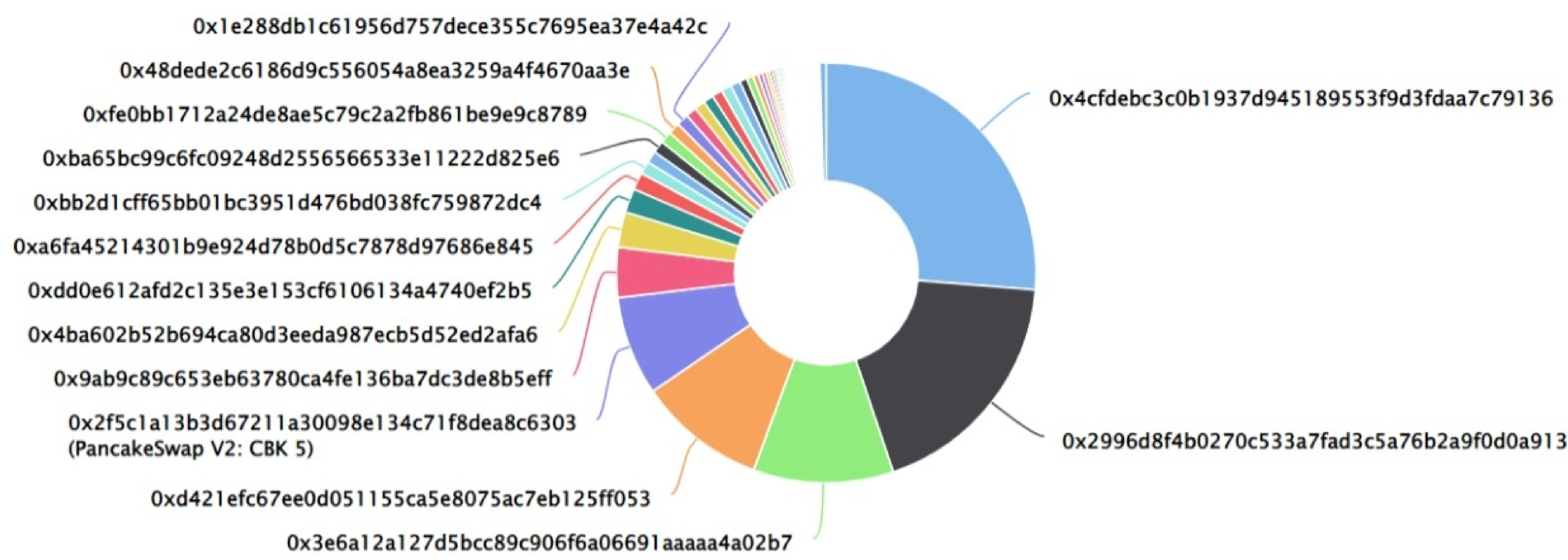
 The top 100 holders collectively own 99.52% (10,786,033.48 Tokens) of CBK



Token Total Supply: 10,837,935.67 Token | Total Token Holders: 1,490




CBK Top 100 Token Holders

Source: BscScan.com



## CBK Top 20 Token Holders

(A total of 10,786,033.48 tokens held by the top 100 accounts from the total supply of 10,837,935.67 token)

Rank	Address	Quantity (Token)	Percentage
1	0x4cfdebc3c0b1937d945189553f9d3fdaa7c79136	2,850,172.378730005890159109	26.2981%
2	0x2996d8f4b0270c533a7fad3c5a76b2a9f0d0a913	2,009,255	18.5391%
3	0x3e6a12a127d5bcc89c906f6a06691aaaaa4a02b7	1,169,735.392797392281133613	10.7930%
4	 0xd421efc67ee0d051155ca5e8075ac7eb125ff053	1,068,508.583727225644885564	9.8590%
5	 PancakeSwap V2: CBK 5	826,154.713320336259651357	7.6228%
6	0x9ab9c89c653eb63780ca4fe136ba7dc3de8b5eff	416,667.333477944254782887	3.8445%
7	0x4ba602b52b694ca80d3eeda987ecb5d52ed2afa6	295,883.435468288803773736	2.7301%
8	0xdd0e612afd2c135e3e153cf6106134a4740ef2b5	201,550.138255992319382223	1.8597%
9	0xa6fa45214301b9e924d78b0d5c7878d97686e845	143,057.857	1.3200%
10	0xbb2d1cff65bb01bc3951d476bd038fc759872dc4	106,531.030785620136128955	0.9829%
11	0x70a23bc7dca530934efcd4328be24a7b4c3cf2b2	100,000	0.9227%
12	0xba65bc99c6fc09248d2556566533e11222d825e6	100,000	0.9227%
13	0xfe0bb1712a24de8ae5c79c2a2fb861be9e9c8789	100,000	0.9227%
14	0x48dede2c6186d9c556054a8ea3259a4f4670aa3e	100,000	0.9227%
15	0x1e288db1c61956d757dece355c7695ea37e4a42c	100,000	0.9227%
16	0xb8b3ca0bc040cfd6fd333387ea503ca221dc6055	91,061	0.8402%
17	0xb2af645003b87bc0ad2984f15abea1c9eac09a65	87,165.588304444995120284	0.8043%
18	 0x932c996d809ae29bbcce9c5912f24f557511d9da	86,755.924523955219630204	0.8005%
19	0x15bf51b185b83afc7f5b32f4df2ed5cf63b125a2	86,308.4	0.7964%
20	0x821dbf8f699d7adcc7ba2615e63bdb761ba9f247	85,755.854452977387250067	0.7913%

# Contract functions details

## `+[Int]` IERC20

- `-[Ext]` totalSupply
- `-[Ext]` decimals
- `-[Ext]` balanceOf
- `-[Ext]` transfer
- `-[Ext]` allowance
- `-[Ext]` approve
- `-[Ext]` transferFrom
- `-[Ext]` permit
- `-[Ext]` transferWithPermit

## `+[Int]` IERC2612

- `-[Ext]` nonces

## `+[Int]` IAnyswapV3ERC20 (IERC20, IERC2612)

- `-[Ext]` approveAndCall
- `-[Ext]` transferAndCall

## `+[Int]` ITransferReceiver

- `-[Ext]` onTokenTransfer

## `+[Int]` IApprovalReceiver

- `-[Ext]` onTokenApproval

## `+[Lib]` Address

- `-[Int]` isContract

## `+[Lib]` SafeERC20

- `-[Int]` safeTransfer
- `-[Int]` safeTransferFrom
- `-[Int]` safeApprove
- `-[Pvt]` callOptionalReturn

## `+AnyswapV5ERC20` (IAnyswapV3ERC20)

- `-[Pub]` owner
- `-[Pub]` mpc
- `-[Ext]` setVaultOnly `#`
  - `-modifiers: onlyVault`
- `-[Ext]` initVault `#`
  - `-modifiers: onlyVault`
- `-[Ext]` setMinter `#`



# Contract functions details

- modifiers: onlyVault
- [Ext] setVault #
  - modifiers: onlyVault
- [Ext] applyVault #
  - modifiers: onlyVault
- [Ext] applyMinter #
  - modifiers: onlyVault
- [Ext] revokeMinter #
  - modifiers: onlyVault
- [Ext] getAllMinters
- [Ext] changeVault #
  - modifiers: onlyVault
- [Pub] changeMPCOwner #
  - modifiers: onlyVault
- [Ext] mint #
  - modifiers: onlyAuth
- [Ext] burn #
  - modifiers: onlyAuth
- [Pub] Swapin #
  - modifiers: onlyAuth
- [Pub] Swapout #
- <constructor>
- [Ext] totalSupply
- [Ext] depositWithPermit
- [Ext] depositWithTransferPermit
- [Ext] deposit #
- [Ext] deposit #
- [Ext] deposit #
- [Ext] depositVault #
  - modifiers: onlyVault
- [Int] \_deposit #
- [Ext] withdraw #
- [Ext] withdraw #
- [Ext] withdraw #
- [Ext] withdrawVault #
  - modifiers: onlyVault
- [Int] \_withdraw #
- [Int] \_mint #

# Contract functions details

- [Int] \_burn #
- [Ext] approve #
- [Ext] approveAndCall #
- [Ext] permit
- [Ext] transferWithPermit #
- [Int] verifyEIP712
- [Int] verifyPersonalSign
- [Int] prefixed
- [Ext] transfer #
- [Ext] transferFrom #
- [Ext] transferAndCall #

(\$) = payable function

# = non-constant function



# Issues Checking Status

No.	Title	Status
1.	Unlocked Compiler Version	Passed
2.	Missing Input Validation	Passed
3.	Race conditions and Reentrancy. Cross-function race conditions.	Passed
4.	Possible delays in data delivery	Passed
5.	Oracle calls.	Passed
6.	Timestamp dependence.	High issue
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.	Private use data leaks.	Passed
13.	Malicious Event log.	Passed
14.	Scoping and Declarations.	Passed
15.	Uninitialized storage pointers.	Passed
16.	Arithmetic accuracy.	Passed
17.	Design Logic.	Passed
18.	Safe Open Zeppelin contracts implementation and usage.	Passed
19.	Incorrect Naming State Variable	Passed
20.	Too old version	Passed

# Severity Definitions

Risk Level	Description
Critical	Critical vulnerabilities are usually straightforward to exploit and can lead to assets loss or data manipulations.
High	High-level vulnerabilities are difficult to exploit; however, they also have a significant impact on smart contract execution, e.g., public access to crucial functions
Medium	Medium-level vulnerabilities are important to fix; however, they can't lead to assets loss or data manipulations.
Low	Low-level vulnerabilities are mostly related to outdated, unused, etc. code snippets that can't have a significant impact on execution.



# Security Issues

## ✔ Critical Severity Issues

No critical severity issue found.

## ✔ High Severity Issues

One high severity issues found.

### 1. Timestamp dependence

- **Description**

The contract have used `block.timestamp` many times in some functions like `applyMinter`, `applyVault`, `changeVault`, `changeMPCOwner`, `permit`, `block.timestamp`, `mpc`, `initVault`, `setMinter`, `setVault` as the miners here can manipulate the smart contract in order to attack the contract.

- **Recommendation**

We advise you to not use `block.timestamp` in your contract and apply the 15-second rule which says that If the scale of your time-dependent event can vary by 15 seconds and maintain integrity, it is safe to use a `block.timestamp`.

## ✔ Medium Severity Issues

No medium severity issues found.

## ✔ Low Severity Issues

No low severity issue found.

# Centralization

## Vault/ auth Privileges :

- CBK Contract:
  - vault can set minter.
  - Vault can apply vault and minter.
  - Vault can revoke minter.
  - Vault can change mpcowner and vault address.
  - Vault can deposit and withdraw.
  - Vault can set vault.
  - Auth can mint, burn, swapin.

This smart contract has some functions which can be executed by the Vault/Auth (Admin) only. If the admin wallet private key would be compromised, it would create trouble as smart contract ownership has not been renounced. Following are the only vault/auth functions:

- Setvaultonly
- Initvault
- Setminter
- Setvault
- Applyvault
- Applyminter
- Revokeminter
- Changevault
- Changempcowner
- Mint
- Burn
- Swapin
- Withdrawvault



# Conclusion

Smart contract contains high severity issues! The further transfer and operations with the fund raised are not related to this particular contract.

HackSafe 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.