



Sugarbaby

Smart Contract Security Audit

Date 20/June/2021

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.

Purpose

This document details ApeAudits' findings and recommended solutions. This audit was performed on June 20, 2021.

Token Name	Sugarbaby
Token Symbol	SUGAR
Contract Address	0x781Da372B1B87c4Aa126c23e3510e3e6F14Ac89F
Bscscan Link	https://bscscan.com/address/0x781Da372B1B87c4Aa126c23e3510e3e6F14Ac89F

Findings

NO.	Audit Items	Audit Subclass	Audit Subclass Result
1	Overflow Audit	N/A	Passed
2	Race Conditions Audit	N/A	Passed
3	Authority Control Audit	Permission Vulnerability Audit Excessive Auditing Authority	Passed Passed
4	Safe Design Audit	Zeppelin Module Safe Compiler Version Hard-coded Version Fallback Function Safeuse Show Coding Security Function Return Value Security Call Function Security	Passed Passed Passed Passed Passed Passed Passed
5	Denial of Service Audit	N/A	Passed
6	Gas Optimization Audit	N/A	Passed
7	Design Logic Audit	N/A	Passed
8	Malicious Event Log Audit	N/A	Passed
9	"False Deposit" Vulnerability Audit	N/A	Passed
10	Uninitialized Storage Pointers Audit	N/A	Passed
11	Arithmetic Accuracy Deviation Audit	N/A	Passed

Sugarbaby.sol

High Severity Issues

- None.

Medium Severity Issues

- **Issue:**
Line 363, in `_transfer(address, address, uint256)` - function `restoreAllFee()` is not called. Combined with line 290 in `setFee(uint256)`, this could cause the tax to skyrocket when many addresses sell at the same time, regardless of their `sellnumber` and `sellcooldown`. The tax will be reset upon any buy transaction.

Recommendation:

There isn't much that the team can do now that the contract has been deployed, but we recommend being transparent about the issue and explaining its nuances.

Low Severity Issues

- **Issue:**
Line 315, in `_transfer(address, address, uint256)` - `bots` is never populated, so this line does nothing.

Recommendation:

This cannot be changed now that the contract has been deployed.

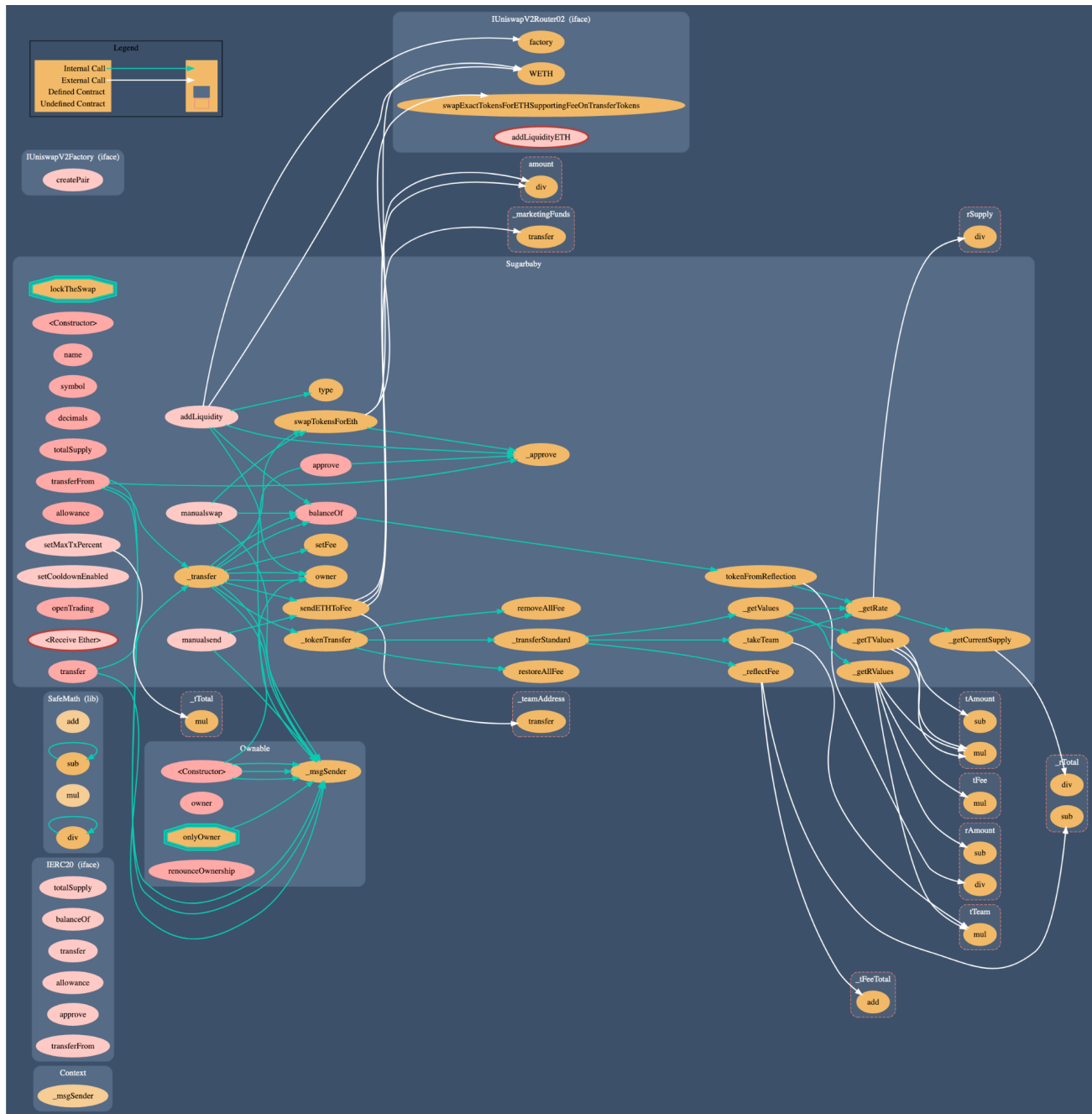
Conclusion

One medium severity issue found. When multiple sells occur in succession, the tax will increase for every sell, regardless of the seller. The tax will be reset upon any buy transaction.

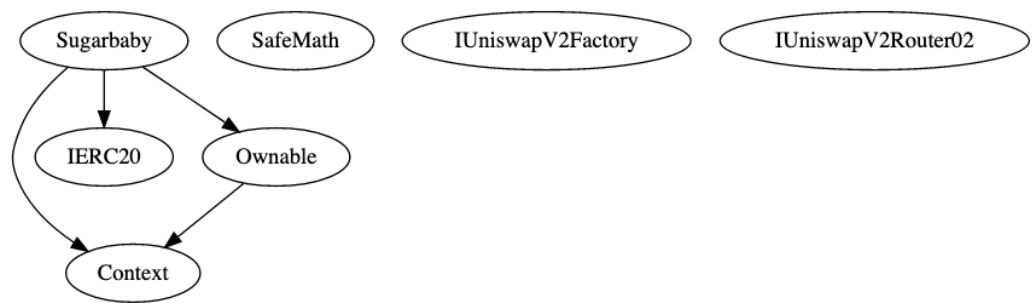
ApeAudits note:

Please check the disclaimer above and note, the audit is provided 'as-is' and makes no statements or warranties whatsoever. The report is provided only for the contract(s) mentioned in the report.

Appendix A - Call Graph



Appendix B - Inheritance Graph



Appendix C - Function Information

- + Context
 - [Int] _msgSender
- + [Int] IERC20
 - [Ext] totalSupply
 - [Ext] balanceOf
 - [Ext] transfer #
 - [Ext] allowance
 - [Ext] approve #
 - [Ext] transferFrom #
- + [Lib] SafeMath
 - [Int] add
 - [Int] sub
 - [Int] sub
 - [Int] mul
 - [Int] div
 - [Int] div
- + Ownable (Context)
 - [Pub] <Constructor> #
 - [Pub] owner
 - [Pub] renounceOwnership #
 - modifiers: onlyOwner
- + [Int] IUniswapV2Factory
 - [Ext] createPair #
- + [Int] IUniswapV2Router02
 - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #
 - [Ext] factory
 - [Ext] WETH
 - [Ext] addLiquidityETH (\$)
- + Sugarbaby (Context, IERC20, Ownable)
 - [Pub] <Constructor> #
 - [Pub] name
 - [Pub] symbol
 - [Pub] decimals
 - [Pub] totalSupply
 - [Pub] balanceOf
 - [Pub] transfer #
 - [Pub] allowance
 - [Pub] approve #

- [Pub] transferFrom #
- [Ext] setCooldownEnabled #
 - modifiers: onlyOwner
- [Prv] tokenFromReflection
- [Prv] removeAllFee #
- [Prv] restoreAllFee #
- [Prv] setFee #
- [Prv] _approve #
- [Prv] _transfer #
- [Prv] swapTokensForEth #
 - modifiers: lockTheSwap
- [Prv] sendETHToFee #
- [Pub] openTrading #
 - modifiers: onlyOwner
- [Ext] addLiquidity #
 - modifiers: onlyOwner
- [Ext] manualswap #
- [Ext] manualsend #
- [Prv] _tokenTransfer #
- [Prv] _transferStandard #
- [Prv] _takeTeam #
- [Prv] _reflectFee #
- [Ext] <Fallback> (\$)
- [Prv] _getValues
- [Prv] _getTValues
- [Prv] _getRValues
- [Prv] _getRate
- [Prv] _getCurrentSupply
- [Ext] setMaxTxPercent #
 - modifiers: onlyOwner

(\$) = payable function

= non-constant function