

Audit Report Valentine Floki

February 2022

Type BEP20

Network BSC

Address 0xca1e6f584e0d7eec74f553e9a7b64a4ded8a4b61

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Contract Review

Contract Name	FLOV
Compiler Version	v0.6.12+commit.27d51765
Optimization	200 runs
Licence	MIT
Explorer	https://bscscan.com/token/0xca1e6f584e0d7eec74f55 3e9a7b64a4ded8a4b61
Symbol	FLOV
Decimals	18
Total Supply	1,000,000,000,000
Source	contract.sol
Domain	valentinefloki.com

Audit Updates

Initial Audit	3rd February 2022
Corrected	



Contract Analysis

CriticalMediumMinorPass

Severity	Code	Description
•	ST	Contract Owner is not able to stop or pause transactions
•	OCTD	Contract Owner is not able to transfer tokens from specific address
•	OTUT	Owner Transfer User's Tokens
•	ELFM	Contract Owner is not able to increase fees more than a reasonable percent (25%)
•	ULTW	Contract Owner is not able to increase the amount of liquidity taken by dev wallet more than a reasonable percent
•	MT	Contract Owner is not able to mint new tokens
•	ВТ	Contract Owner is not able to burn tokens from specific wallet
•	ВС	Contract Owner is not able to blacklist wallets from selling



ST - Stop Transactions

Criticality	medium
Location	contract.sol#L1486

Description

The contract owner has the authority to stop transactions for all users excluding the owner. The owner may take advantage of it by setting the _maxTxAmount to zero.

```
if(from != owner() && to != owner())
    require(amount <= _maxTxAmount, "Transfer amount exceeds the maxTxAmount.");</pre>
```

Recommendation

The contract could embody a check for not allowing setting the _maxTxAmount less than a reasonable amount. A suggested implementation could check that the maximum amount should be more than a fixed percentage of the total supply.

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.



ELFM - Exceed Limit Fees Manipulation

Criticality	critical
Location	contract.sol#L1360,1365,1370

Description

The contract owner has the authority to increase over the allowed limit of 25%. The owner may take advantage of it by calling the setMarketingFee function with a high percentage value.

```
function setMarketingFee(uint256 _marketingFee) external onlyOwner{
   marketingFee = _marketingFee;
   totalFees = BUSDRewardsFee.add(liquidityFee).add(marketingFee);
}
```

Recommendation

The contract could embody a check for the maximum acceptable value.

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.



Contract Diagnostics

CriticalMediumMinor

Severity	Code	Description
•	L01	Public Function could be Declared External
•	L02	State Variables could be Declared Constant
•	L05	Unused State Variable
•	L04	Conformance to Solidity Naming Conventions
•	L09	Dead Code Elimination
•	L07	Missing Events Arithmetic



L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L1802,L1758,L1423 and 27 more

Description

Public functions that are never called by the contract should be declared external to save gas.

```
process
getAccountAtIndex
dividendTokenBalanceOf
...
```

Recommendation

Use the external attribute for functions never called from the contract



L02 - State Variables could be Declared Constant

Criticality	minor
Location	contract.sol#L1203

Description

Constant state variables should be declared constant to save gas.

deadWallet

Recommendation

Add the constant attribute to state variables that never change.



L05 - Unused State Variable

Criticality	minor
Location	contract.sol#L594

Description

There are segments that contains unused state variable.

MAX_INT256

Recommendation

Remove unused state variables.



L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L1713,L1216,L1211 and 15 more

Description

Solidity defines a naming convention that should be followed. Rule exceptions:

- Allow constant variable name/symbol/decimals to be lowercase.
- Allow _ at the beginning of the mixed_case match for private variables and unused parameters.

```
_account
_marketingWalletAddress
BUSDRewardsFee
...
```

Recommendation

Follow the Solidity naming convention. https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions



L09 - Dead Code Elimination

Criticality	minor
Location	contract.sol#L599,L611,L640 and 4 more

Description

Functions that are not used in the contract, and make the code's size bigger.

mul div abs ...

Recommendation

Remove unused functions.



L07 - Missing Events Arithmetic

Criticality	minor
Location	contract.sol#L1474,L1370,L1365 and 2 more

Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.

```
_maxTxAmount = maxTxAmount
marketingFee = _marketingFee
liquidityFee = value
...
```

Recommendation

Emit an event for critical parameter changes.



Contract Functions

Contract	Туре	Bases		
	Function Name	Visibility	Mutability	Modifiers
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	1	-
	allowance	External		-
	approve	External	1	-
	transferFrom	External	✓	-
IERC20Metad ata	Interface	IERC20		
	name	External		-
	symbol	External		-
	decimals	External		-
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
SafeMath	Library			
	add	Internal		
	sub	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
	mod	Internal		
	mod	Internal		



ERC20	Implementation	Context, IERC20, IERC20Met adata		
	<constructor></constructor>	Public	1	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	1	-
	transferFrom	Public	1	-
	increaseAllowance	Public	1	-
	decreaseAllowance	Public	1	-
	_transfer	Internal	1	
	_mint	Internal	1	
	_burn	Internal	1	
	_approve	Internal	✓	
	_beforeTokenTransfer	Internal	✓	
SafeMathUint	Library			
	toInt256Safe	Internal		
SafeMathInt	Library			
	mul	Internal		
	div	Internal		
	sub	Internal		
	add	Internal		
	abs	Internal		
	toUint256Safe	Internal		
DividendPayin gTokenInterfa ce	Interface			
	dividendOf	External		-



	withdrawDividend	External	✓	-
DividendPayin gTokenOption alInterface	Interface			
	withdrawableDividendOf	External		-
	withdrawnDividendOf	External		-
	accumulativeDividendOf	External		-
Ownable	Implementation	Context		
	<constructor></constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
DividendPayin gToken	Implementation	ERC20, Ownable, DividendPay ingTokenInt erface, DividendPay ingTokenOp tionalInterfa ce		
	<constructor></constructor>	Public	1	ERC20
	distributeBUSDDividends	Public	✓	onlyOwner
	withdrawDividend	Public	1	-
	_withdrawDividendOfUser	Internal	1	
	dividendOf	Public		-
	withdrawableDividendOf	Public		-
	withdrawnDividendOf	Public		-
	accumulativeDividendOf	Public		-
	_transfer	Internal	1	
	_mint	Internal	1	
	_burn	Internal	1	
	_setBalance	Internal	✓	
IterableMappi ng	Library			



	get	Public		-
	getIndexOfKey	Public		-
	getKeyAtIndex	Public		-
	size	Public		-
	set	Public	✓	-
	remove	Public	✓	-
IUniswapV2Pa ir	Interface			
	name	External		-
	symbol	External		-
	decimals	External		-
	totalSupply	External		-
	balanceOf	External		-
	allowance	External		-
	approve	External	1	-
	transfer	External	✓	-
	transferFrom	External	✓	-
	DOMAIN_SEPARATOR	External		-
	PERMIT_TYPEHASH	External		-
	nonces	External		-
	permit	External	1	-
	MINIMUM_LIQUIDITY	External		-
	factory	External		-
	token0	External		-
	token1	External		-
	getReserves	External		-
	price0CumulativeLast	External		-
	price1CumulativeLast	External		-
	kLast	External		-
	mint	External	✓	-
	burn	External	✓	-
	swap	External	✓	-
	skim	External	✓	-
	sync	External	✓	-
	initialize	External	1	-



IUniswapV2Fa ctory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
IUniswapV2Ro uter01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	✓	-
	removeLiquidityETH	External	✓	-
	removeLiquidityWithPermit	External	✓	-
	removeLiquidityETHWithPermit	External	1	-
	swapExactTokensForTokens	External	✓	-
	swapTokensForExactTokens	External	✓	-
	swapExactETHForTokens	External	Payable	-
	swapTokensForExactETH	External	1	-
	swapExactTokensForETH	External	✓	-
	swapETHForExactTokens	External	Payable	-
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-
IUniswapV2Ro uter02	Interface	IUniswapV2 Router01		



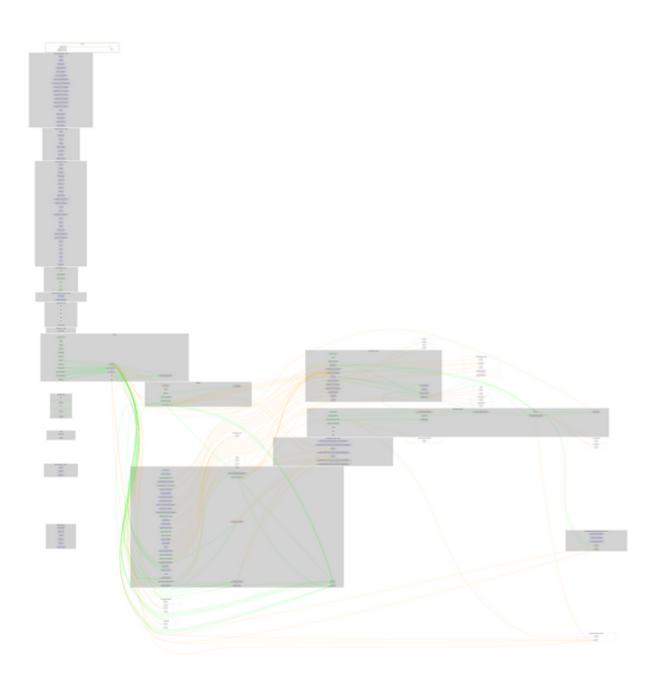
	removeLiquidityETHSupportingFeeOn TransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupporti ngFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupporting FeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupporting FeeOnTransferTokens	External	1	-
FLOV	Implementation	ERC20, Ownable		
	<constructor></constructor>	Public	1	ERC20
	<receive ether=""></receive>	External	Payable	-
	updateDividendTracker	Public	1	onlyOwner
	updateUniswapV2Router	Public	1	onlyOwner
	excludeFromFees	Public	1	onlyOwner
	excludeMultipleAccountsFromFees	Public	1	onlyOwner
	setExcludeFromAll	Public	1	onlyOwner
	setMarketingWallet	External	1	onlyOwner
	setSwapTokensAtAmount	External	1	onlyOwner
	setBUSDRewardsFee	External	1	onlyOwner
	setLiquiditFee	External	1	onlyOwner
	setMarketingFee	External	1	onlyOwner
	setAutomatedMarketMakerPair	Public	1	onlyOwner
	_setAutomatedMarketMakerPair	Private	1	
	updateGasForProcessing	Public	1	onlyOwner
	updateClaimWait	External	1	onlyOwner
	getClaimWait	External		-
	getTotalDividendsDistributed	External		-
	isExcludedFromFees	Public		-
	withdrawableDividendOf	Public		-
	dividendTokenBalanceOf	Public		-
	excludeFromDividends	External	1	onlyOwner
	getAccountDividendsInfo	External		-
	getAccountDividendsInfoAtIndex	External		-



	processDividendTracker	External	1	-
	claim	External	1	-
	getLastProcessedIndex	External		-
	getNumberOfDividendTokenHolders	External		-
	setMaxTxPercent	External	1	onlyOwner
	_transfer	Internal	1	
	swapAndLiquify	Private	1	
	swapTokensForEth	Private	1	
	swapTokensForBUSD	Private	1	
	addLiquidity	Private	1	
	swapAndSendDividends	Private	1	
FLOVDividend Tracker	Implementation	Ownable, DividendPay ingToken		
	<constructor></constructor>	Public	1	DividendPayin gToken
	_transfer	Internal	1	
	withdrawDividend	Public	1	-
	excludeFromDividends	External	1	onlyOwner
	updateClaimWait	External	1	onlyOwner
	getLastProcessedIndex	External		-
	getNumberOfTokenHolders	External		-
	getAccount	Public		-
	getAccountAtIndex	Public		-
	canAutoClaim	Private		
	setBalance	External	1	onlyOwner
	process	Public	✓	-
	processAccount	Public	1	onlyOwner



Contract Flow





Domain Info

Domain Name	valentinefloki.com
Registry Domain ID	2666395860_DOMAIN_COM-VRSN
Creation Date	2022-01-06T18:49:00Z
Updated Date	2022-02-01T23:42:06Z
Registry Expiry Date	2024-01-06T18:49:00Z
Registrar WHOIS Server	whois.godaddy.com
Registrar URL	http://www.godaddy.com
Registrar	GoDaddy.com, LLC
Registrar IANA ID	146

The domain has been created 28 days before the creation of the audit. It will expire in almost 2 years.

There is no public billing information, the creator is protected by the privacy settings.



Summary

Floki Valentine is a meme token. The Project has a friendly and growing community. The Smart Contract analysis reported some issues. There are some functions that can be abused by the owner, like manipulating fees and indirectly stopping the transactions. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.



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Coinscope is the leading early coin listing, voting and auditing authority firm. The audit process is analyzing and monitoring many aspects of the project. That way, it gives the community a good sense of security using an informative report and a generic score.

Coinscope is aiming to make crypto discoverable and efficient globally. It provides all the essential tools to assist users draw their own conclusions.



The Coinscope.co team

https://www.coinscope.co