



Audit Report

SQUWOOF

March 2022

Contract 0x9f62BE44AEb0E898Efd0E57B9EA1E7D5A2E2E793

SH A256 94c60de99b3e4663437830c6d977175ac77e9d550cb709fb3df0646eb876f0e7

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Contract Review

Website	https://squwoof.com
Commit	2a6b6eb6bfb89ca3b7353e81ad91f1e227f91cd7
SHA256	94c60de99b3e4663437830c6d977175ac77e9d550cb7 09fb3df0646eb876f0e7

Audit Updates

Initial Audit	09th March 2022
Corrected	

Contract Analysis

● Critical
 ● Medium
 ● Minor
 ● Pass

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
●	BT	Contract Owner is not able to burn tokens from specific wallet
●	BC	Contract Owner is not able to blacklist wallets from selling

Contract Diagnostics

● Critical ● Medium ● Minor

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
●	L12	Using Variables before Declaration
●	L15	Local Scope Variable Shadowing
●	L14	Uninitialized Variables in Local Scope

L01 - Public Function could be Declared External

Description

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

```
process
getAccountAtIndex
dividendTokenBalanceOf
withdrawableDividendOf
isExcludedFromFees
updateGasForProcessing
setAutomatedMarketMakerPair
excludeMultipleAccountsFromFees
updateUniswapV2Router
...
```

Recommendation

Use the external attribute for functions never called from the contract

L02 - State Variables could be Declared Constant

Description

Constant state variables should be declared constant to save gas.

```
_tokenSupply  
_routerAddress  
_marketingAddress  
_buyBackAddress
```

Recommendation

Add the constant attribute to state variables that never change.



L05 - Unused State Variable

Description

There are segments that contain unused state variables.

```
MAX_INT256
```

Recommendation

Remove unused state variables.

L04 - Conformance to Solidity Naming Conventions

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  
magnitude  
_owner  
MINIMUM_LIQUIDITY  
PERMIT_TYPEHASH  
DOMAIN_SEPARATOR  
WETH  
...
```

Recommendation

Follow the Solidity naming convention.

<https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions>

L09 - Dead Code Elimination

Description

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

```
mul  
div  
abs  
trySub  
tryMul  
tryMod  
tryDiv  
tryAdd  
mod  
...
```

Recommendation

Remove unused functions.

L12 - Using Variables before Declaration

Description

The contract is using a variable before the declaration. This is usually happening either if it has not been declared yet or the variable has been declared in a different scope.

```
lastProcessedIndex  
iterations  
claims
```

Recommendation

The variables should be declared before any usage of them.

L15 - Local Scope Variable Shadowing

Description

There are variables that are defined in the local scope containing the same name from an upper scope.

```
_symbol  
_name
```

Recommendation

The local variables should have different names from the upper scoped variables.

L14 - Uninitialized Variables in Local Scope

Description

There are variables that are defined in the local scope and are not initialized.

```
lastProcessedIndex  
claims  
iterations
```

Recommendation

All the local scoped variables should be initialized.

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IUniswapV2Router01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	✓	-
	removeLiquidityETH	External	✓	-
	removeLiquidityWithPermit	External	✓	-
	removeLiquidityETHWithPermit	External	✓	-
	swapExactTokensForTokens	External	✓	-
	swapTokensForExactTokens	External	✓	-
	swapExactETHForTokens	External	Payable	-
	swapTokensForExactETH	External	✓	-
	swapExactTokensForETH	External	✓	-
	swapETHForExactTokens	External	Payable	-
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-
IUniswapV2Router02	Interface	IUniswapV2Router01		
	removeLiquidityETHSupportingFeeOnTransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-

	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
IUniswapV2Pair	Interface			
	name	External		-
	symbol	External		-
	decimals	External		-
	totalSupply	External		-
	balanceOf	External		-
	allowance	External		-
	approve	External	✓	-
	transfer	External	✓	-
	transferFrom	External	✓	-
	DOMAIN_SEPARATOR	External		-
	PERMIT_TYPEHASH	External		-
	nonces	External		-
	permit	External	✓	-
	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	✓	-
IUniswapV2Factory	Interface			

	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
SafeMathInt	Library			
	mul	Internal		
	div	Internal		
	sub	Internal		
	add	Internal		
	abs	Internal		
	toInt256Safe	Internal		
SafeMathUint	Library			
	toInt256Safe	Internal		
SafeMath	Library			
	tryAdd	Internal		
	trySub	Internal		
	tryMul	Internal		
	tryDiv	Internal		

	tryMod	Internal		
	add	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	mod	Internal		
	sub	Internal		
	div	Internal		
	mod	Internal		
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
ERC20	Implementation	Context, IERC20		
	<Constructor>	Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	_transfer	Internal	✓	
	_mint	Internal	✓	
	_burn	Internal	✓	
	_approve	Internal	✓	

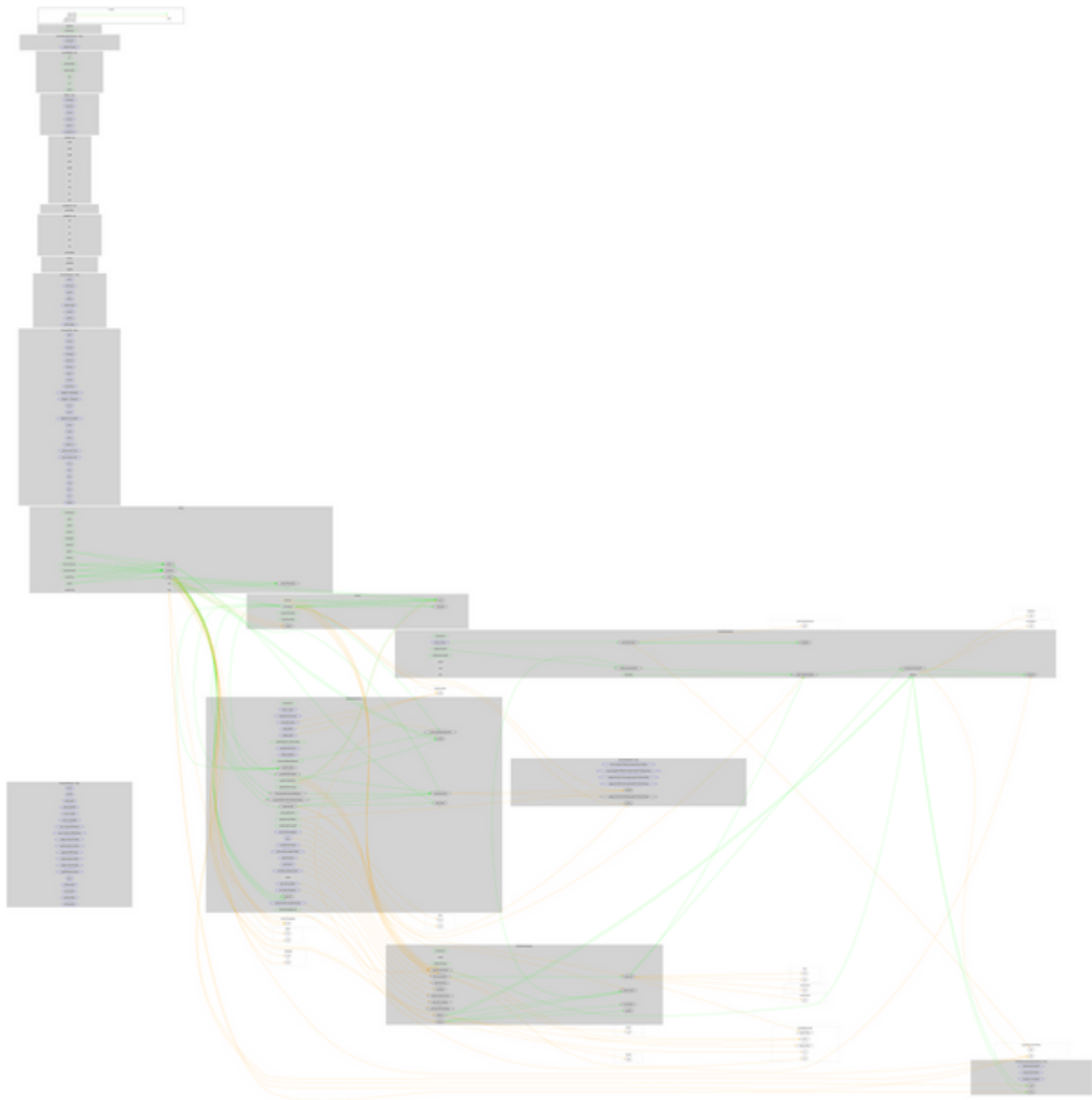
	_setupDecimals	Internal	✓	
	_beforeTokenTransfer	Internal	✓	
IterableMapping	Library			
	get	Public		-
	getIndexOfKey	Public		-
	getKeyAtIndex	Public		-
	size	Public		-
	set	Public	✓	-
	remove	Public	✓	-
DividendPayingTokenInterface	Interface			
	dividendOf	External		-
	withdrawDividend	External	✓	-
DividendPayingTokenOptionalInterface	Interface			
	withdrawableDividendOf	External		-
	withdrawnDividendOf	External		-
	accumulativeDividendOf	External		-
DividendPayingToken	Implementation	ERC20, DividendPayingTokenInterface, DividendPayingTokenOptionalInterface		
	<Constructor>	Public	✓	ERC20
	<Receive Ether>	External	Payable	-
	distributeDividends	Public	Payable	-
	withdrawDividend	Public	✓	-
	_withdrawDividendOfUser	Internal	✓	
	dividendOf	Public		-

	withdrawableDividendOf	Public		-
	withdrawnDividendOf	Public		-
	accumulativeDividendOf	Public		-
	_transfer	Internal	✓	
	_mint	Internal	✓	
	_burn	Internal	✓	
	_setBalance	Internal	✓	
ERC20Dividen dToken	Implementation	ERC20, Ownable		
	<Constructor>	Public	✓	ERC20
	<Receive Ether>	External	Payable	-
	setSwapTokensAtAmount	External	✓	onlyOwner
	updateDividendTracker	Public	✓	onlyOwner
	updateUniswapV2Router	Public	✓	onlyOwner
	excludeFromFees	Public	✓	onlyOwner
	excludeMultipleAccountsFromFees	Public	✓	onlyOwner
	changeMaxSellAmount	External	✓	onlyOwner
	setMarketingWallet	External	✓	onlyOwner
	setTokenRewardsFee	External	✓	onlyOwner
	setLiquiditFee	External	✓	onlyOwner
	setMarketingFee	External	✓	onlyOwner
	setAutomatedMarketMakerPair	Public	✓	onlyOwner
	_setAutomatedMarketMakerPair	Private	✓	
	updateGasForProcessing	Public	✓	onlyOwner
	updateClaimWait	External	✓	onlyOwner
	getClaimWait	External		-
	getTotalDividendsDistributed	External		-
	isExcludedFromFees	Public		-
	withdrawableDividendOf	Public		-
	dividendTokenBalanceOf	Public		-
	excludeFromDividends	External	✓	onlyOwner
	getAccountDividendsInfo	External		-
	getAccountDividendsInfoAtIndex	External		-
	processDividendTracker	External	✓	-
	claim	External	✓	-

	getLastProcessedIndex	External		-
	getNumberOfDividendTokenHolders	External		-
	_transfer	Internal	✓	
	swapAndLiquify	Private	✓	
	swapTokensForEth	Private	✓	
	addLiquidity	Private	✓	
	swapAndSendDividends	Private	✓	
	swapAndSendDividendsToMarketing	Private	✓	
	swapAndSendDividendsToBuyBackAddress	Private	✓	
ERC20DividendTracker	Implementation	Ownable, DividendPayingToken		
	<Constructor>	Public	✓	DividendPayingToken
	_transfer	Internal		
	withdrawDividend	Public		-
	excludeFromDividends	External	✓	onlyOwner
	updateClaimWait	External	✓	onlyOwner
	getLastProcessedIndex	External		-
	getNumberOfTokenHolders	External		-
	getAccount	Public		-
	getAccountAtIndex	Public		-
	canAutoClaim	Private		
	setBalance	External	✓	onlyOwner
	process	Public	✓	-
	processAccount	Public	✓	onlyOwner
	Implementation	ERC20DividendToken		
	<Constructor>	Public	✓	ERC20DividendToken



Contract Flow



Summary

The Smart Contract analysis reported no compiler error or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions. There is also a limit of max 12% fees.

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The Coinscope.co team

<https://www.coinscope.co>