

# Audit Report<br/>Toon King

February 2022

Type BEP20

Network BSC

Address 0x2943333FB1483e3230D5337Af64e472c5871A2Fd

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## **Contract Review**

Contract Name	ToonKingVII
Compiler Version	v0.8.10+commit.fc410830
Optimization	200 runs
Licence	MIT
Explorer	https://bscscan.com/token/0x2943333FB1483e3230D 5337Af64e472c5871A2Fd
Symbol	TKTv2
Decimals	18
Total Supply	1,000,000,000,000
Source	contract.sol
Domain	toonkingtoken.com

## **Audit Updates**

Initial Audit	17th 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



## **Contract Diagnostics**

CriticalMediumMinor

Severity	Code	Description
•	L01	Public Function could be Declared External
•	L05	Unused State Variable
•	L04	Conformance to Solidity Naming Conventions
•	L09	Dead Code Elimination
•	L12	Using Variables before Declaration
•	L07	Missing Events Arithmetic
•	L15	Local Scope Variable Shadowing
•	L14	Uninitialized Variables in Local Scope
•	L08	Tautology or Contradiction



## L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L800,808,1006,1014,1394,1063,1076,1093,1116,1147 and 15 more

## 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



## L05 - Unused State Variable

Criticality	minor
Location	contract.sol#L397

## Description

There are segments that contain unused state variables.

MAX\_INT256

#### Recommendation

Remove unused state variables.



## L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L9,1447,1454,1466,1480,1370,1740,1746,1747,1748 and 10 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
deadWallet
_buyback
_develop
_reward
_liq
_market
_w2
_w1
...
```

#### 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#L740,1499,263,681,641,707,658,492,546,562 and 5 more

## Description

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

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

#### Recommendation

Remove unused functions.



## L12 - Using Variables before Declaration

Criticality	minor
Location	contract.sol#L2030,2029,2031

#### 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.



## L07 - Missing Events Arithmetic

Criticality	minor
Location	contract.sol#L1745,1765,1793,1797,1806,1811,1816

#### 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.

```
buybackLimit = value
maxWalletAmount = amount
maxSellAmount = amount
maxBuyAmount = amount
swapTokensAtAmount = amount
transferMarketingFee = _market
marketingFee = _market
```

#### Recommendation

Emit an event for critical parameter changes.



## L15 - Local Scope Variable Shadowing

Criticality	minor
Location	contract.sol#L1390,1447,1454,1466,1480

#### Description

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

```
_owner
_symbol
_name
```

#### Recommendation

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



## L14 - Uninitialized Variables in Local Scope

Criticality	minor
Location	contract.sol#L2030,2031,2029

#### Description

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

iterations
lastProcessedIndex
claims

#### Recommendation

All the local scoped variables should be initialized.



## L08 - Tautology or Contradiction

Criticality	minor
Location	contract.sol#L1745

#### Description

Detects expressions that are tautologies or contradictions. For instance, an uint variable will always be greater than or equal to zero.

```
require(bool,string)(_liq <= 600,6% max liq fee)
require(bool,string)(_market <= 800,8% max marketing fee)
require(bool,string)(_develop <= 400,4% max develop fee)
require(bool,string)(_reward <= 1000,10% max reward fee)</pre>
```

#### Recommendation

Fix the incorrect comparison by changing the value type or the comparison.



## **Contract Functions**

Contract	Туре	Bases		
	Function Name	Visibility	Mutability	Modifiers
IUniswapV2Ro uter01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	<b>√</b>	-
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	1	-
	removeLiquidityETH	External	<b>✓</b>	-
	removeLiquidityWithPermit	External	1	-
	removeLiquidityETHWithPermit	External	1	-
	swapExactTokensForTokens	External	1	-
	swapTokensForExactTokens	External	1	-
	swapExactETHForTokens	External	Payable	-
	swapTokensForExactETH	External	<b>✓</b>	-
	swapExactTokensForETH	External	1	-
	swapETHForExactTokens	External	Payable	-
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-
IUniswapV2Ro uter02	Interface	IUniswapV2 Router01		
	removeLiquidityETHSupportingFeeOn TransferTokens	External	<b>✓</b>	-
	removeLiquidityETHWithPermitSuppor tingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportin gFeeOnTransferTokens	External	1	-



	swapExactETHForTokensSupportingF eeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingF eeOnTransferTokens	External	<b>√</b>	-
IUniswapV2Fa ctory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	1	-
	setFeeTo	External	1	-
	setFeeToSetter	External	1	-
IterableMappin g	Library			
	get	Internal		
	getIndexOfKey	Internal		
	getKeyAtIndex	Internal		
	size	Internal		
	set	Internal	✓	
	remove	Internal	1	
DividendPayin gTokenOptiona IInterface	Interface			
	withdrawableDividendOf	External		-
	withdrawnDividendOf	External		-
	accumulativeDividendOf	External		-
DividendPayin gTokenInterfac e	Interface			
	dividendOf	External		-
	withdrawDividend	External	1	-



SafeMathInt	Library			
	mul	Internal		
	div	Internal		
	sub	Internal		
	add	Internal		
	abs	Internal		
	toUint256Safe	Internal		
SafeMathUint	Library			
	toInt256Safe	Internal		
0-6-84-4	Library			
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		
Context	Implementation			
Context	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
	<constructor></constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	1	onlyOwner



	_transferOwnership	Internal	✓	
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
IERC20Metada ta	Interface	IERC20		
	name	External		-
	symbol	External		-
	decimals	External		-
ERC20	Implementation	Context, IERC20, IERC20Met adata		
	<constructor></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	✓	
	_beforeTokenTransfer	Internal	✓	



	_afterTokenTransfer	Internal	✓	
DividendPayin gToken	Implementation	ERC20, Ownable, DividendPay ingTokenInt erface, DividendPay ingTokenOp tionalInterfa ce		
	<constructor></constructor>	Public	✓	ERC20
	decimals	Public		-
	distributeETHDividends	Public	<b>√</b>	onlyOwner
	withdrawDividend	Public	<b>√</b>	-
	_withdrawDividendOfUser	Internal	1	
	dividendOf	Public		-
	withdrawableDividendOf	Public		-
	withdrawnDividendOf	Public		-
	accumulativeDividendOf	Public		-
	_transfer	Internal	1	
	_mint	Internal	1	
	_burn	Internal	1	
	_setBalance	Internal	1	
ToonKingVII	Implementation	ERC20, Ownable		
	<constructor></constructor>	Public	✓	ERC20
	<receive ether=""></receive>	External	Payable	-
	decimals	Public		-
	updateDividendTracker	Public	1	onlyOwner
	updateUniswapV2Router	Public	1	onlyOwner
	excludeFromFees	Public	1	onlyOwner
	excludeMultipleAccountsFromFees	Public	1	onlyOwner
	setWallets	External	1	onlyOwner
	setFees	External	1	onlyOwner
	setTransferFees	External	1	onlyOwner
	setAutomatedMarketMakerPair	Public	1	onlyOwner



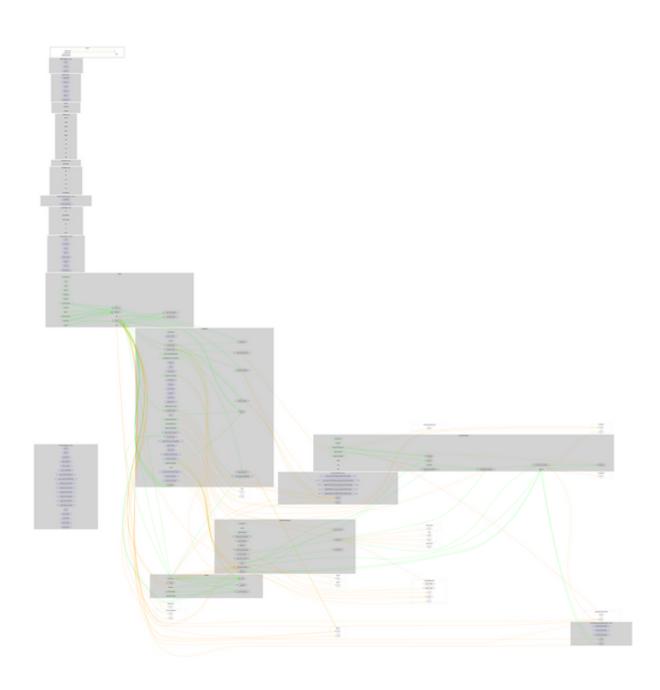
	setSwapTokens	External	✓	onlyOwner
	setMaxBuy	External	✓	onlyOwner
	enableTrading	External	✓	onlyOwner
	setMaxSell	External	✓	onlyOwner
	setMaxWallet	External	✓	onlyOwner
	setBuyBackLimit	External	1	onlyOwner
	_setAutomatedMarketMakerPair	Private	✓	
	updateGasForProcessing	Public	1	onlyOwner
	updateClaimWait	External	✓	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		-
	_transfer	Internal	1	
	swapAndDistribute	Private	1	
	swapAndSendToFee	Private	1	
	swapAndLiquify	Private	1	
	swapTokensForEth	Private	<b>✓</b>	
	swapTokensForBUSD	Private	<b>✓</b>	
	swapETHForTokens	Private	<b>✓</b>	
	addLiquidity	Private	<b>✓</b>	
	swapAndSendDividends	Private	<b>✓</b>	
TOKENDividen dTracker	Implementation	Ownable, DividendPay ingToken		
	<constructor></constructor>	Public	✓	DividendPayin gToken



_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



## **Contract Flow**





## Domain Info

Domain Name	toonkingtoken.com
Registry Domain ID	2661754528_DOMAIN_COM-VRSN
Creation Date	2021-12-15T04:21:41Z
Updated Date	2022-02-14T02:15:17Z
Registry Expiry Date	
Registrar WHOIS Server	whois.launchpad.com
Registrar URL	LaunchPad.com
Registrar	Launchpad, Inc. (HostGator)
Registrar IANA ID	955

The domain has been created 2 months before the creation of the audit.

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



## 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 30% fees.



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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

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