



# Audit Report

## **Equity**

January 2022

Type	BEP20
Network	BSC Testnet
Address	0x8a9edb4196D636f56C09341E5F760A29Ec351c35
Audited by	© coinscope

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# Contract Review

<b>Contract Name</b>	Equity
<b>Compiler Version</b>	v0.8.10+commit.fc410830
<b>Optimization</b>	500 runs
<b>Licence</b>	None
<b>Explorer</b>	<a href="https://testnet.bscscan.com/token/0x8a9edb4196D636f56C09341E5F760A29Ec351c35">https://testnet.bscscan.com/token/0x8a9edb4196D636f56C09341E5F760A29Ec351c35</a>
<b>Symbol</b>	Equity
<b>Decimals</b>	18
<b>Total Supply</b>	1,020,000
<b>Source</b>	<pre>/projects/equity/contracts/Equity.sol, /projects/equity/contracts/token/ReflectiveToken.sol, /projects/equity/contracts/interfaces/IReflectionTracker. sol, /projects/equity/contracts/access/SharedOwnable.sol, @uniswap/v2-periphery/contracts/interfaces/IUniswapV 2Router02.sol, @uniswap/v2-periphery/contracts/interfaces/IUniswapV 2Router01.sol, @uniswap/v2-core/contracts/interfaces/IUniswapV2Fac tory.sol, @openzeppelin/contracts/utils/Context.sol, @openzeppelin/contracts/token/ERC20/extensions/IER C20Metadata.sol, @openzeppelin/contracts/token/ERC20/IERC20.sol, @openzeppelin/contracts/token/ERC20/ERC20.sol, @openzeppelin/contracts/access/Ownable.sol</pre>
<b>Domain</b>	equitycoin.finance

# Audit Updates

<b>Initial Audit</b>	4th January 2022
<b>Corrected</b>	

# Contract Analysis

● Critical
 ● Medium
 ● Minor
 ● Pass

Severity	Code	Description
<span style="color: blue;">●</span>	ST	Contract Owner is not able to stop or pause transactions
<span style="color: blue;">●</span>	OCTD	Contract Owner is not able to transfer tokens from specific address
<span style="color: blue;">●</span>	OTUT	Owner Transfer User's Tokens
<span style="color: red;">●</span>	ELFM	Contract Owner is not able to increase fees more than a reasonable percent (25%)
<span style="color: blue;">●</span>	ULTW	Contract Owner is not able to increase the amount of liquidity taken by dev wallet more than a reasonable percent
<span style="color: blue;">●</span>	MT	Contract Owner is not able to mint new tokens
<span style="color: blue;">●</span>	BT	Contract Owner is not able to burn tokens from specific wallet
<span style="color: blue;">●</span>	BC	Contract Owner is not able to blacklist wallets from selling

## ELFM - Exceed Limit Fees Manipulation

<b>Criticality</b>	critical
<b>Location</b>	<a href="https://bscscan.com/address/0x8983a6f5b70315f9373d39e14de5afeabf835588#code#L204">https://bscscan.com/address/0x8983a6f5b70315f9373d39e14de5afeabf835588#code#L204</a>

### Description

The contract shared owners have the authority to increase over the allowed limit of 25%. The shared owners may take advantage of it by calling the `setTransferFeeOf` function with a high percentage value. The maximum allowed value is the sum of `asSender` and `asRecipient` that it is  $35 + 35 = 70\%$

```
function setTransferFeeOf(address account, TransferFee memory transferFee)
external onlySharedOwners {
    return _setTransferFeeOf(account, transferFee);
}
```

```
uint256 feePercentage = _transferFeeOf[sender].asSender +
_transferFeeOf[recipient].asRecipient;
if (feePercentage > 0) {
    uint256 feeAmount = (amount / 100) * feePercentage;
    amount = amount - feeAmount;
    super._transfer(sender, address(this), feeAmount);
}
```

### Recommendation

The contract could change the `_maxFee` value to less than 12.5% so the total fee amount will be less than the acceptable 25%.

The team should carefully manage the private keys of the shared 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

● Critical    ● Medium    ● Minor

Severity	Code	Description
●	L01	Public Function could be Declared External
●	L04	Conformance to Solidity Naming Conventions
●	L09	Dead Code Elimination

## L01 - Public Function could be Declared External

**Criticality**

minor

**Location**

@openzeppelin/contracts/access/Ownable.sol#L27,L23,L197 and 9 more

### Description

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

```
isSharedOwner  
getCreator  
decreaseAllowance  
...
```

### Recommendation

Use the external attribute for functions never called from the contract



## L04 - Conformance to Solidity Naming Conventions

<b>Criticality</b>	minor
<b>Location</b>	@uniswap/v2-periphery/contracts/interfaces/IUniswapV2Router01.sol#L54,L41,L40 and 1 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.

```
_automatedReflectionTrackerCalls  
_maxFee  
_deadAddress  
...
```

### 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**

@openzeppelin/contracts/utils/Context.sol#L275,L21

### Description

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

```
_burn  
_msgData
```

### Recommendation

Remove unused functions.

# Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
<b>Ownable</b>	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_transferOwnership	Internal	✓	
<b>ERC20</b>	Implementation	Context, IERC20, IERC20Meta data		
	<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	✓	

<b>IERC20Metadata</b>	Interface	IERC20		
	name	External		-
	symbol	External		-
	decimals	External		-
<b>IERC20</b>	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
<b>Context</b>	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
<b>IUniswapV2Factory</b>	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
<b>IUniswapV2Router01</b>	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		-
<b>IUniswapV2Router02</b>	Interface	IUniswapV2Router01		
	removeLiquidityETHSupportingFeeOnTransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
<b>SharedOwnable</b>	Implementation	Ownable		
	<Constructor>	Public	✓	Ownable
	getCreator	Public		-
	isSharedOwner	Public		-
	setSharedOwner	Internal	✓	onlySharedOwners
	_setSharedOwner	Private	✓	
<b>Equity</b>	Implementation	ReflectiveTo		

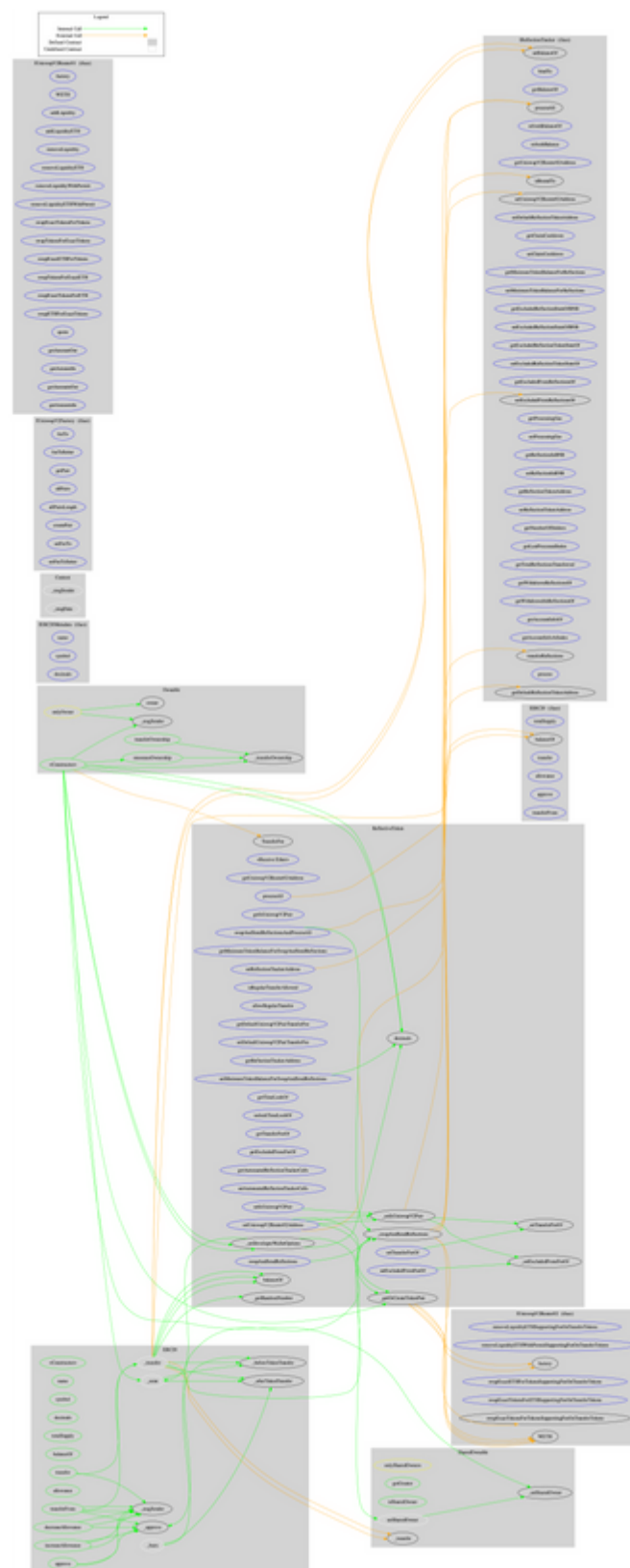
		ken		
	<Constructor>	Public	✓	ReflectiveToken
<b>IReflectionTracker</b>	Interface			
	isBoundTo	External		-
	bindTo	External	✓	-
	getBalanceOf	External		-
	setBalanceOf	External	✓	-
	refreshBalanceOf	External	✓	-
	refreshBalance	External	✓	-
	getUniswapV2Router02Address	External		-
	setUniswapV2Router02Address	External	✓	-
	getDefaultReflectionTokenAddress	External		-
	setDefaultReflectionTokenAddress	External	✓	-
	getClaimCooldown	External		-
	setClaimCooldown	External	✓	-
	getMinimumTokenBalanceForReflections	External		-
	setMinimumTokenBalanceForReflections	External	✓	-
	getExcludedReflectionStateOfBNB	External		-
	setExcludedReflectionStateOfBNB	External	✓	-
	getExcludedReflectionTokenStateOf	External		-
	setExcludedReflectionTokenStateOf	External	✓	-
	getExcludedFromReflectionsOf	External		-
	setExcludedFromReflectionsOf	External	✓	-
	getProcessingGas	External		-
	setProcessingGas	External	✓	-
	getReflectionInBNB	External		-
	setReflectionInBNB	External	✓	-
	getReflectionTokenAddress	External		-
	setReflectionTokenAddress	External	✓	-
	getNumberOfHolders	External		-
	getLastProcessedIndex	External		-
	getTotalReflectionsTransferred	External		-

	getWithdrawnReflectionsOf	External		-
	getWithdrawableReflectionsOf	External		-
	getAccountInfoOf	External		-
	getAccountInfoAtIndex	External		-
	transferReflections	External	Payable	-
	transferReflections	External	✓	-
	process	External	✓	-
	processAll	External	✓	-
	processAll	External	✓	-
<b>ReflectiveToken</b>	Implementation	ERC20, SharedOwnable		
	<Constructor>	Public	✓	ERC20
	<Receive Ether>	External	Payable	-
	getUniswapV2Router02Address	External		-
	setUniswapV2Router02Address	External	✓	onlySharedOwners
	getIsUniswapV2Pair	External		-
	setIsUniswapV2Pair	External	✓	onlySharedOwners
	_setIsUniswapV2Pair	Private	✓	
	getMinimumTokenBalanceForSwapAndSendReflections	External		-
	setMinimumTokenBalanceForSwapAndSendReflections	External	✓	onlySharedOwners
	isRegularTransferAllowed	External		-
	allowRegularTransfer	External	✓	onlySharedOwners
	getDefaultUniswapV2PairTransferFee	External		-
	setDefaultUniswapV2PairTransferFee	External	✓	onlySharedOwners
	getReflectionTrackerAddress	External		-
	setReflectionTrackerAddress	External	✓	onlySharedOwners
	getTimeLockOf	External		-
	unlockTimeLockOf	External	✓	onlySharedOwners
	getTransferFeeOf	External		-

	setTransferFeeOf	External	✓	onlySharedOwners
	getExcludedFromFeeOf	External		-
	setExcludedFromFeeOf	External	✓	onlySharedOwners
	getAutomatedReflectionTrackerCalls	External		-
	setAutomatedReflectionTrackerCalls	External	✓	onlySharedOwners
	swapAndSendReflections	External	✓	onlySharedOwners
	processAll	External	✓	onlySharedOwners
	swapAndSendReflectionsAndProcessAll	External	✓	onlySharedOwners
	_transfer	Internal	✓	
	_getOrCreateTokenPair	Private	✓	
	_setDeveloperWalletOptions	Private	✓	
	_setTransferFeeOf	Private	✓	
	_setExcludedFromFeeOf	Private	✓	
	_swapAndSendReflections	Private	✓	
	_getRandomNumber	Private		



# Contract Flow



## Domain Info

<b>Domain Name</b>	equitycoin.finance
<b>Registry Domain ID</b>	44fb488ca1de4eb79eaf7b9a92c09072-DONUTS
<b>Creation Date</b>	2021-12-02T02:30:46Z
<b>Updated Date</b>	2021-12-15T01:59:06Z
<b>Registry Expiry Date</b>	2022-12-02T02:30:46Z
<b>Registrar WHOIS Server</b>	whois.godaddy.com/
<b>Registrar URL</b>	<a href="http://www.godaddy.com/domains/search.aspx?ci=8990">http://www.godaddy.com/domains/search.aspx?ci=8990</a>
<b>Registrar</b>	GoDaddy.com, LLC
<b>Registrar IANA ID</b>	146

The domain has been created about 1 month before the creation of the audit. It will expire in 11 months.

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

## Summary

Equity is aiming to provide crypto users an option that works like a traditional savings account at a bank. The token has a friendly and growing community. There are some informative comments that do not affect the contract security. The contract analysis reported one medium threat issue. The contract owner can potentially set the total fees to 70% for specific addresses. It could have a check for a more reasonable maximum value like 25%. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

# Disclaimer

All the content provided in this document is for general information only and should not be used as financial advice or a reason to buy any investment.

Coinscope team provides no guarantees against the sale of team tokens or the removal of liquidity by the project audited in this document. Always Do your own research and protect yourselves from being scammed.

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# About Coinscope

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>