SKELETON ECOSYSTEM

SMART CONTRACT AUDIT

Blocklabs
[BLABS]
BEP 20

0x3bfC792A39cBBD3eD7D46784E21509Da30a5e1F8

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Global Disclaimer

This document serves as a disclaimer for the crypto smart contract audit conducted by Skeleton Ecosystem. The purpose of the audit was to review the codebase of the smart contracts for potential vulnerabilities and issues. It is important to note the following:

Limited Scope: The audit is based on the code and information available up to the audit completion date. It does not cover external factors, system interactions, or changes made after the audit. The audit itself can not guarantee 100% safaty and can not detect common scam methods like farming and developer sell-out.

No Guarantee of Security: While we have taken reasonable steps to identify vulnerabilities, it is impossible to guarantee the complete absence of security risks or issues. The audit report provides an assessment of the contract's security as of the audit date.

Continued Development: Smart contracts and blockchain technology are evolving fields. Updates, forks, or changes to the contract post-audit may introduce new risks that were not present during the audit.

Third-party Code: If the smart contract relies on third-party libraries or code, those components were not thoroughly audited unless explicitly stated. Security of these dependencies is the responsibility of their respective developers.

Non-Exhaustive Testing: The audit involved automated analysis, manual review, and testing under controlled conditions. It is possible that certain vulnerabilities or issues may not have been identified.

Risk Evaluation: The audit report includes a risk assessment for identified vulnerabilities. It is recommended that the development team carefully reviews and addresses these risks to mitigate potential exploits.

Not Financial Advice: This audit report is not intended as financial or investment advice. Decisions regarding the use, deployment, or investment in the smart contract should be made based on a comprehensive assessment of the associated risks.

By accessing and using this audit report, you acknowledge and agree to the limitations outlined above. Skeleton Ecosystem and its auditors shall not be held liable for any direct or indirect damages resulting from the use of the audit report or the smart contract itself.

Please consult with legal, technical, and financial professionals before making any decisions related to the smart contract.

Overview

Contract Name	Blocklabs
Ticker/Simbol	BLABS
Blockchain	Binance Smart Chain BEP20
Contract Address	0x3bfC792A39cBBD3eD7D46784E21509Da30a5e1F8
Creator Address	0x74318E185Cf3F60Ba4dd924dD3782532A179eBa3
Current Owner Address	0x74318E185Cf3F60Ba4dd924dD3782532A179eBa3
Contract Explorer	https://bscscan.com/token/0x3bfc792a39cbbd3ed7d46784e21509da30a5e1f8
Compiler Version	v0.8.7+commit.e28d00a7
License	MIT
Optimisation	Yes with 200 Runs
Total Supply	100,000,000 **$BLABS**
Decimals	9

Creation/Audit

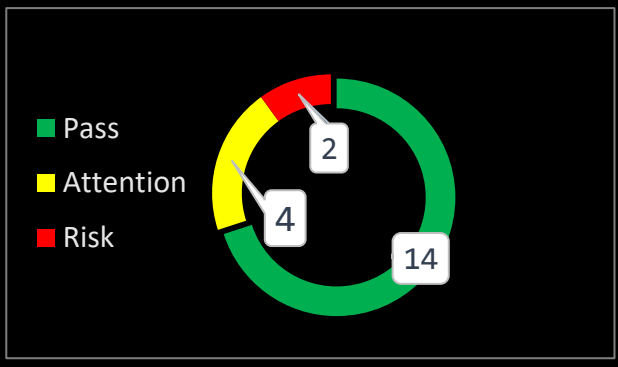
Contract Deployed	15 Oct 2023
Audit Created	18 Oct 2023
Audit Update	V 1.0

Verified Socials

Website	https://www.blocklabs.space/
Telegram	https://t.me/BlockLabsPortal
Twitter (X)	https://twitter.com/blocklabsbsc

SKELETON ECOSYSTEM
SMART CONTRACT AUDIT REPORT

BLOCKLABS BEP20



Contract Function Analysis

Pass Attention Item Risky Item

Contract Verified	✓	The contract source code is uploaded to blockchain explorer and is open source, so everybody can read it.
Contract Ownership	⚠	0x74318E185Cf3F60Ba4dd924dD3782532A179eBa3
Buy Tax	9 %	Shows the taxes for purchase transactions. Above 10% may be considered a high tax rate. More than 50% tax rate means may not be tradable. Fee can be set!
Sell Tax	9 %	Shows the taxes for sell transactions. Above 10% may be considered a high tax rate. More than 50% tax rate means may not be tradable. Fee can be set!
Honeypot Analyse	✓	Holder is able to buy and sell. If honeypot: The contract blocks sell transfer from holder wallet. Multiple events may cause honeypot. Trading disabled, extremely high tax
Liqudity Status	✓	LP Lock Status on 17.10.2023: 99% for 32 Days on Pinksale Locker
Trading Disable Function	!	Trading suspendable function found. If a suspendable code is included, the token maybe neither be bought or sold (honeypot risk). If contract is renounced this function can't be used
Set Fees function	!	Fee Setting function found The contract owner may contain the authority to modify the transaction tax. If the transaction tax is increased to more than 49%, the tokens may not be able to be traded (honeypot risk).
Proxy Contract	✓	Not a proxy contract!
Mint Function	✓	No Mint Function detected Mint function is transparent or non-existent. Hidden mint functions may increase the amount of tokens in circulation and effect the price of the token. Owner can mint new tokens and sell.

Balance Modifier Function	✅	No Balance Modifier function found. If there is a function for this, the contract owner can have the authority to modify the balance of tokens at other addresses. For example revoke the bought tokens from the holders wallet. Common form of scam: You buy the token, but it's disappearing from your wallet.
Blacklist Function	⚠️	Blacklist Setting function If there is a blacklist, some addresses may not be able to trade normally. Example: you buy the token and right after your Wallet getting blacklisted. Like so you will be unable to sell. Honeypot Risk.
Whitelist Function	✅	No Whitelist Setting function found but Contract If there is a function for this Developer can set zero fee or no max wallet size for adresses (for example team wallets can trade without fee. Can cause farming)
Hidden Owner Analysis	⚠️ ✅	Is a Multi owner contract but no authorised functions found besides deployer. For contract with a hidden owner, developer can still manipulate the contract even if the ownership has been abandoned. Fake renounce.
Retrieve Ownership Function	✅	No functions found which can retrieve ownership of the contract. If this function exists, it is possible for the project owner to regain ownership even after relinquishing it. Also known as fake renounce.
Self Destruct Function	✅	No Self Destruct function found. If this function exists and is triggered, the contract will be destroyed, all functions will be unavailable, and all related assets will be erased.
Specific Tax Changing Function	✅	No Specific Tax Changing Functions found. If it exists, the contract owner may set a very outrageous tax rate for assigned address to block it from trading. Can assign all wallets at once!
Trading Cooldown Function	✅	No Trading Cooldown Function found. If there is a trading cooldown function, the user will not be able to sell the token within a certain time or block after buying. Like a temporary honeypot.
Max Transaction and Holding Modify Function	⚠️	Max Transaction and Holding Modify function found. If there is a function for this, the maximum trading amount or maximum position can be modified. Can cause honeypot
Transaction Limiting Function	✅	No Transaction Limiter Function Found. The number of overall token transactions may be limited (honeypot risk)

Details of Risk - Attention Items

⚠ Set Fee (remedation: renounce ownership)

The contract owner may contain the authority to modify the transaction tax. If the transaction tax is increased to more than 49%, the tokens may not be able to be traded

```
ftrace | funcSig
813  function setSellFees(uint256 _liquidityFeeSell, uint256 _buybackFeeSell, uint256 _reflectionFeeSell, uint256 _marketingFeeSell, uint256 _devFeeSell, uint256 _feeDen
814      liquidityFeeSell = _liquidityFeeSell;
815      buybackFeeSell = _buybackFeeSell;
816      reflectionFeeSell = _reflectionFeeSell;
817      marketingFeeSell = _marketingFeeSell;
818      devFeeSell = _devFeeSell;
819      totalFeeSell = _liquidityFeeSell.add(_buybackFeeSell).add(_reflectionFeeSell).add(_marketingFeeSell).add(_devFeeSell);
820      feeDenominator = _feeDenominator;
821  }
```

⚠ Blacklist (remedation: renounce ownership)

If there is a blacklist, some addresses may not be able to trade normally. Example: you buy the token and right after your Wallet getting blacklisted. Like so you will be unable to sell. Honeypot Risk.

```
ftrace | funcSig
653      function blacklistAddress(address _address, bool _value) public authorized{
654          isBlacklisted[_address] = _value;
655      }
656
```

⚠ Max Transaction and Holding Modify Function (remedation: renounce ownership)

If there is a function for this, the maximum trading amount or maximum position can be modified.

```
ftrace | funcSig
777      function setSellTxLimitInPercent(uint256 maxSellTxPercent) external authorized {
778          _maxSellTxAmount = _totalSupply.mul(maxSellTxPercent).div(10000);
779      }
```

```
ftrace | funcSig
486      function setMaxWalletPercent(uint256 maxWallPercent) external onlyOwner() {
487          _maxWalletToken = _totalSupply.mul(maxWallPercent).div(10000);
488
489      }
```

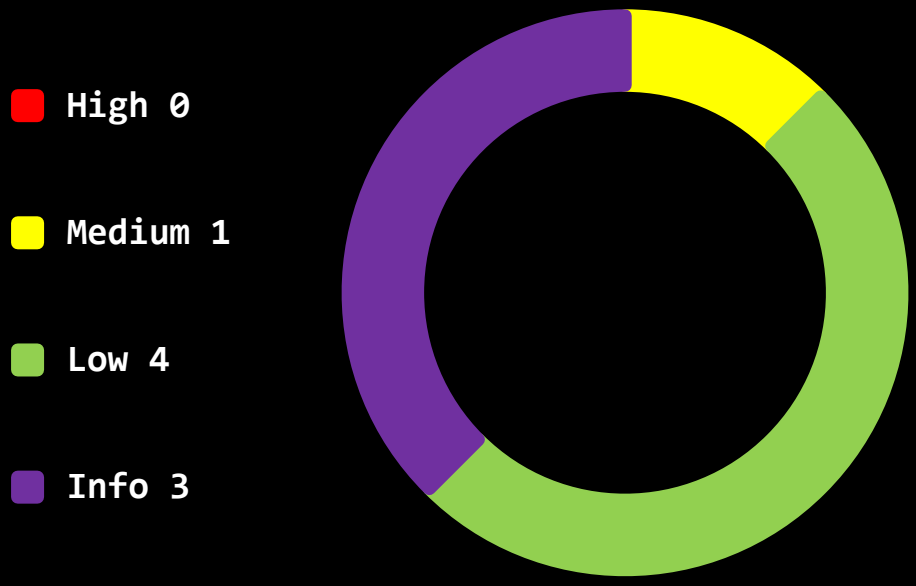
Trading Disable Function (remedation: renounce ownership)

If a suspendable code is included, the token maybe neither be bought or sold (honeypot risk). If contract is renounced this function can't be used

```
ftrace | funcSig
634     function tradingStatus(bool _status) public onlyOwner {
635         tradingOpen = _status;
636         launch();
637     }
```

Contract Security

Total Findings: 5



High Severity Issues: High possibility to cause problems, need to be resolved.

Medium Severity Issue: Will likely cause problems, recommended to resolve.

Low Severity Issues: Won’t cause problems, but for improvement purposes could be adjusted.

Informational Severity Issues: Not harmful in any way, information for the developer team.

Contract Security

List of Found Issues

High severity Issues: (0)

Medium severity issues: (1)

- Unchecked Array Lenght

Low severity issues: (4)

- Missing Events
- Long Number Literals
- Floating Pragma
- Outdated Compiler Version

Informational severity issues: (3)

- Hard Coded Address
- Public Functions Should be Declared External
- Dos with failed Call

Contract Weakness Classisication

THE SMART CONTRACT WEAKNESS CLASSIFICATION REGISTRY (SWC REGISTRY) IS AN IMPLEMENTATION OF THE WEAKNESS CLASSIFICATION SCHEME PROPOSED IN EIP-1470. IT IS LOOSELY ALIGNED TO THE TERMINOLOGIES AND STRUCTURE USED IN THE COMMON WEAKNESS ENUMERATION (CWE) WHILE OVERLAYING A WIDE RANGE OF WEAKNESS VARIANTS THAT ARE SPECIFIC TO SMART CONTRACTS.

ID	Description	AI	Manual	Result
SWC-100	Function Default Visibility	Passed	Passed	Passed
SWC-101	Integer Overflow and Underflow	Passed	Passed	Passed
SWC-102	Outdated Compiler Version	Passed	Passed	Passed
SWC-103	Floating Pragma	Low	Passed	Passed
SWC-104	Unchecked Call Return Value	Passed	Passed	Passed
SWC-105	Unprotected Ether Withdrawal	Passed	Passed	Passed
SWC-106	Unprotected SELFDESTRUCT Instruction	Passed	Passed	Passed
SWC-107	Reentrancy	Passed	Passed	Passed
SWC-108	State Variable Default Visibility	Passed	Passed	Passed
SWC-109	Uninitialized Storage Pointer	Passed	Passed	Passed
SWC-110	Assert Violation	Passed	Passed	Passed
SWC-111	Use of Deprecated Solidity Functions	Passed	Passed	Passed
SWC-112	Delegatecall to Untrusted Callee	Passed	Passed	Passed
SWC-113	DoS with Failed Call	Medium	Low	Low
SWC-114	Transaction Order Dependence	Passed	Passed	Passed
SWC-115	Authorization through tx.origin	Passed	Passed	Passed
SWC-116	Block values as a proxy for time	Passed	Passed	Passed
SWC-117	Signature Malleability	Passed	Passed	Passed
SWC-118	Incorrect Constructor Name	Passed	Passed	Passed
SWC-119	Shadowing State Variables	Passed	Passed	Passed
SWC-120	Weak Sources of Randomness from Chain Attributes	Passed	Passed	Passed

SWC-121	Missing Protection against Signature Replay Attacks	**Passed**	**Passed**	**Passed**
SWC-122	Lack of Proper Signature Verification	**Passed**	**Passed**	**Passed**
SWC-123	Requirement Violation	**Passed**	**Passed**	**Passed**
SWC-124	Write to Arbitrary Storage Location	**Passed**	**Passed**	**Passed**
SWC-125	Incorrect Inheritance Order	**Passed**	**Passed**	**Passed**
SWC-126	Insufficient Gas Griefing	**Passed**	**Passed**	**Passed**
SWC-127	Arbitrary Jump with Function Type Variable	**Passed**	**Passed**	**Passed**
SWC-128	DoS With Block Gas Limit	**Passed**	**Passed**	**Passed**
SWC-129	Typographical Error	**low**	**Passed**	**Passed**
SWC-130	Right-To-Left-Override control character (U+202E)	**Passed**	**Passed**	**Passed**
SWC-131	Presence of unused variables	**Passed**	**Passed**	**Passed**
SWC-132	Unexpected Ether balance	**Passed**	**Passed**	**Passed**
SWC-133	Hash Collisions With Multiple Variable Length Arguments	**Passed**	**Passed**	**Passed**
SWC-134	Message call with hardcoded gas amount	**Passed**	**Passed**	**Passed**
SWC-135	Code With No Effects	**Passed**	**Passed**	**Passed**
SWC-136	Unencrypted Private Data On-Chain	**Passed**	**Passed**	**Passed**

Detected High and Medium Severity Vulnerability Description.

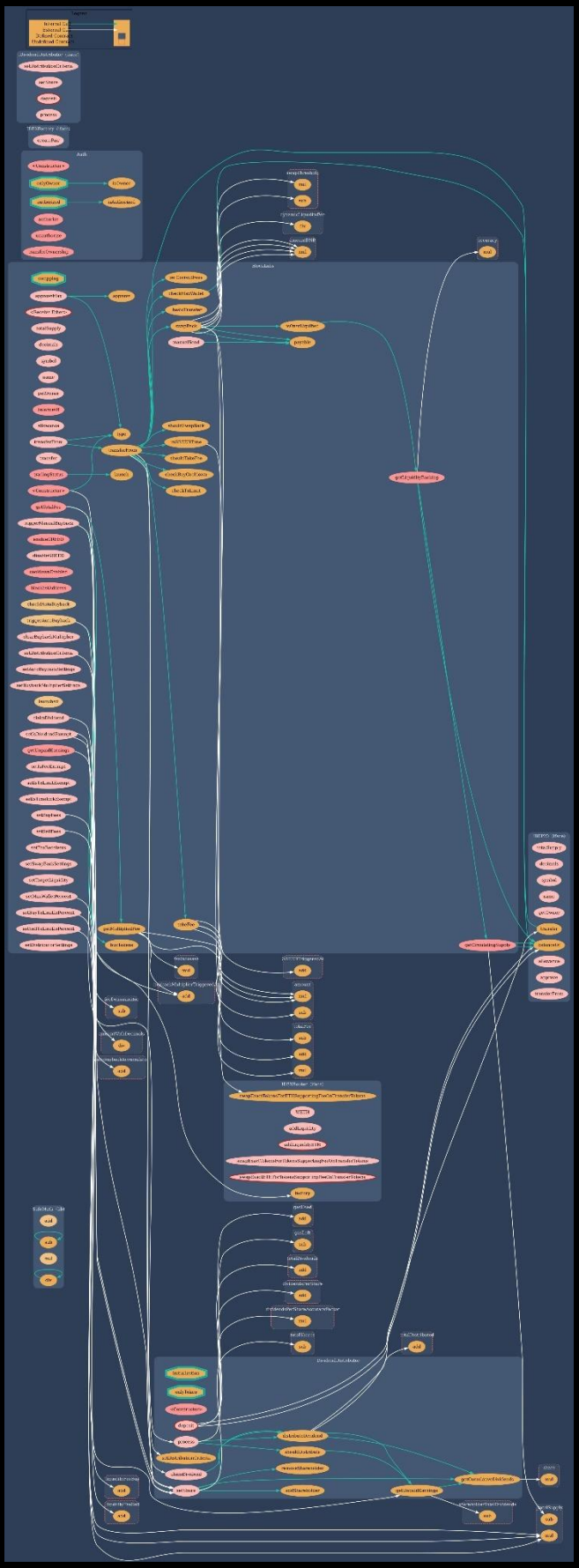
⚠ Unchecked Array Lenght (1 Items)

Item: 1	Location:	Line 272	Severity:	Medium

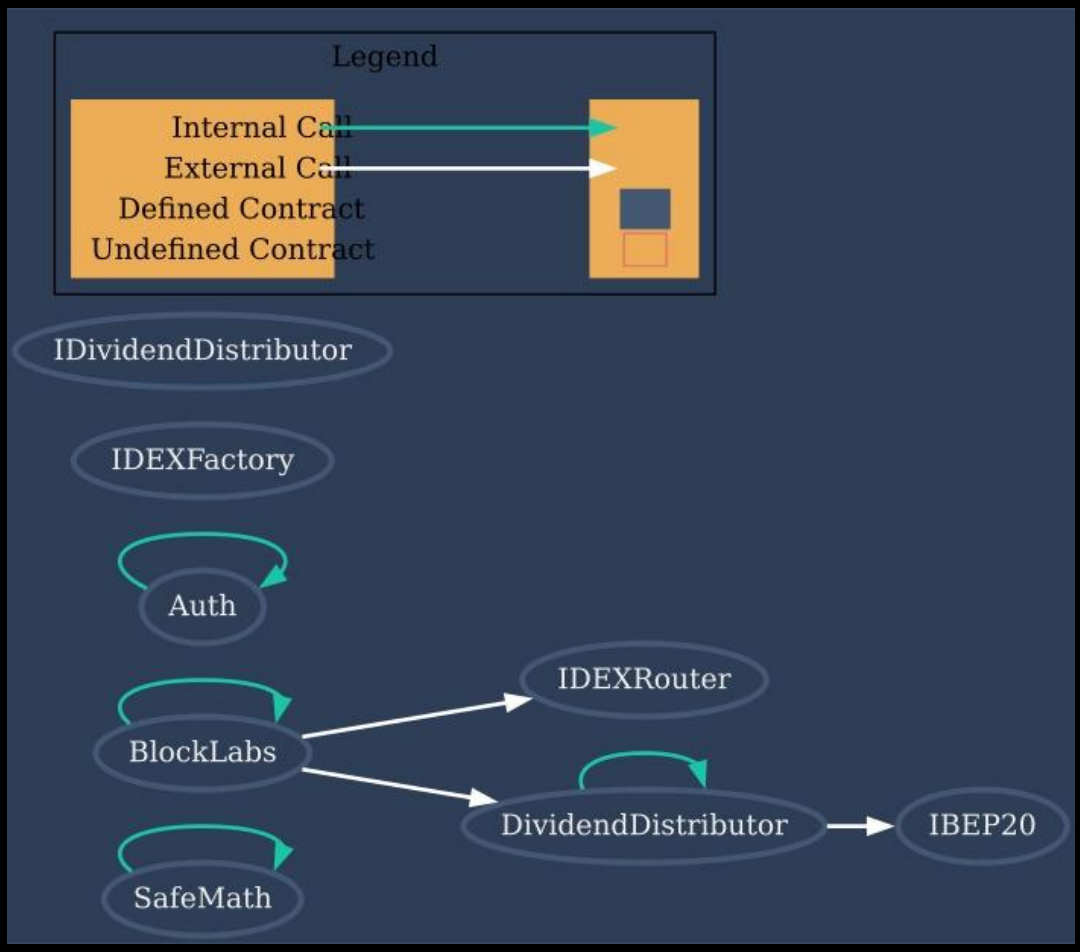
Function	Ethereum is a very resource-constrained environment. Prices per computational step are orders of magnitude higher than with centralized providers. Moreover, Ethereum miners impose a limit on the total number of Gas consumed in a block. If array.length is large enough, the function exceeds the block gas limit, and transactions calling it will never be confirmed. for (uint256 i = 0; i < array.length ; i++) { coslty Func(); } This becomes a security issue if an external actor influences array.length. E.g., if an array enumerates all registered addresses, an adversary can register many addresses, causing the problem described above.
Remedation	Either explicitly or just due to normal operation, the number of iterations in a loop can grow beyond the block gas limit, which can cause the complete contract to be stalled at a certain point. Therefore, loops with a bigger or unknown number of steps should always be avoided.

```
271
272     while(gasUsed < gas! && iterations < shareholderCount) {
273         if(currentIndex >= shareholderCount){
274             currentIndex = 0;
275         }
```

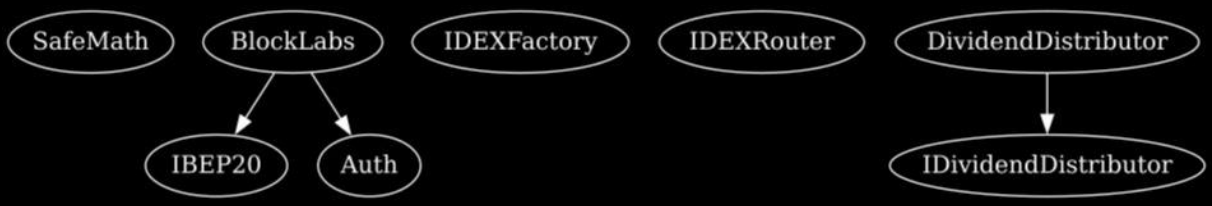
Contract Flow Graph



Contract Interaction Graph



Inheritance Graph



Contract Functions

Contract	Type	Bases		
L	**Function Name**	**Visibility**	**Mutability**	**Modifiers**
SafeMath	Library			
L	add	Internal 🔒		
L	sub	Internal 🔒		
L	sub	Internal 🔒		
L	mul	Internal 🔒		
L	div	Internal 🔒		
L	div	Internal 🔒		
IBEP20	Interface			
L	totalSupply	External ❗		NO❗
L	decimals	External ❗		NO❗
L	symbol	External ❗		NO❗
L	name	External ❗		NO❗
L	getOwner	External ❗		NO❗
L	balanceOf	External ❗		NO❗
L	transfer	External ❗	🛑	NO❗
L	allowance	External ❗		NO❗
L	approve	External ❗	🛑	NO❗
L	transferFrom	External ❗	🛑	NO❗

Contract	Type	Bases		
Auth	Implementation			
L		Public ❗	🛑	NO❗
L	authorize	Public ❗	🛑	onlyOwner
L	unauthorize	Public ❗	🛑	onlyOwner
L	isOwner	Public ❗		NO❗
L	isAuthorized	Public ❗		NO❗
L	transferOwnership	Public ❗	🛑	onlyOwner
IDEXFactory	Interface			
L	createPair	External ❗	🛑	NO❗
IDEXRouter	Interface			
L	factory	External ❗		NO❗
L	WETH	External ❗		NO❗
L	addLiquidity	External ❗	🛑	NO❗
L	addLiquidityETH	External ❗	💵	NO❗
L	swapExactTokensForTokensSupportingFeeOnTransferTokens	External ❗	🛑	NO❗
L	swapExactETHForTokensSupportingFeeOnTransferTokens	External ❗	💵	NO❗
L	swapExactTokensForETHSupportingFeeOnTransferTokens	External ❗	🛑	NO❗

Contract	Type	Bases		
IDividendDistributor	Interface			
L	setDistributionCriteria	External ❗	🛑	NO❗
L	setShare	External ❗	🛑	NO❗
L	deposit	External ❗	💸	NO❗
L	process	External ❗	🛑	NO❗
DividendDistributor	Implementation	IDividendDistributor		
L		Public ❗	🛑	NO❗
L	setDistributionCriteria	External ❗	🛑	onlyToken
L	setShare	External ❗	🛑	onlyToken
L	deposit	External ❗	💸	onlyToken
L	process	External ❗	🛑	onlyToken
L	shouldDistribute	Internal 🔒		
L	distributeDividend	Internal 🔒	🛑	
L	claimDividend	External ❗	🛑	onlyToken
L	getUnpaidEarnings	Public ❗		NO❗
L	getCumulativeDividends	Internal 🔒		
L	addShareholder	Internal 🔒	🛑	
L	removeShareholder	Internal 🔒	🛑	

Contract	Type	Bases		
BlockLabs	Implementation	IBEP20, Auth		
L		Public ❗	🛑	Auth
L		External ❗	💸	NO❗
L	totalSupply	External ❗		NO❗
L	decimals	External ❗		NO❗
L	symbol	External ❗		NO❗
L	name	External ❗		NO❗
L	getOwner	External ❗		NO❗
L	balanceOf	Public ❗		NO❗
L	allowance	External ❗		NO❗
L	approve	Public ❗	🛑	NO❗
L	approveMax	External ❗	🛑	NO❗
L	transfer	External ❗	🛑	NO❗
L	transferFrom	External ❗	🛑	NO❗
L	setMaxWalletPercent	External ❗	🛑	onlyOwner
L	_transferFrom	Internal 🔒	🛑	
L	_basicTransfer	Internal 🔒	🛑	
L	setCorrectFees	Internal 🔒	🛑	
L	inGREEDTime	Public ❗		NO❗
L	checkTxLimit	Internal 🔒		
L	checkBuyCoolddown	Internal 🔒	🛑	

Contract	Type	Bases		
L	checkMaxWallet	Internal 🔒		
L	shouldTakeFee	Internal 🔒		
L	getTotalFee	Public ❗		NO❗
L	getMultipliedFee	Public ❗		NO❗
L	takeFee	Internal 🔒	🛑	
L	shouldSwapBack	Internal 🔒		
L	tradingStatus	Public ❗	🛑	onlyOwner
L	enableGREED	Public ❗	🛑	authorized
L	disableGREED	External ❗	🛑	authorized
L	cooldownEnabled	Public ❗	🛑	authorized
L	blacklistAddress	Public ❗	🛑	authorized
L	swapBack	Internal 🔒	🛑	swapping
L	shouldAutoBuyback	Internal 🔒		
L	triggerManualBuyback	External ❗	🛑	authorized
L	clearBuybackMultiplier	External ❗	🛑	authorized
L	triggerAutoBuyback	Internal 🔒	🛑	
L	buyTokens	Internal 🔒	🛑	swapping
L	setAutoBuybackSettings	External ❗	🛑	authorized

Contract	Type	Bases		
L	setBuybackMultiplierSettings	External ❗	🔘	authorized
L	launched	Internal 🔒		
L	launch	Internal 🔒	🔘	
L	setBuyTxLimitInPercent	External ❗	🔘	authorized
L	setSellTxLimitInPercent	External ❗	🔘	authorized
L	setIsDividendExempt	External ❗	🔘	authorized
L	setIsFeeExempt	External ❗	🔘	authorized
L	setIsTxLimitExempt	External ❗	🔘	authorized
L	setIsTimelockExempt	External ❗	🔘	authorized
L	setBuyFees	External ❗	🔘	authorized
L	setSellFees	External ❗	🔘	authorized
L	setFeeReceivers	External ❗	🔘	authorized
L	setSwapBackSettings	External ❗	🔘	authorized
L	setTargetLiquidity	External ❗	🔘	authorized
L	manualSend	External ❗	🔘	authorized
L	setDistributionCriteria	External ❗	🔘	authorized
L	claimDividend	External ❗	🔘	NO❗

Contract	Type	Bases		
L	getUnpaidEarnings	Public ❗		NO❗
L	setDistributorSettings	External ❗	🛑	authorized
L	getCirculatingSupply	Public ❗		NO❗
L	getLiquidityBacking	Public ❗		NO❗
L	isOverLiquified	Public ❗		NO❗

🛑 Function can modify state

💵 Function is payable

Audit Scope

Audit Method.

Our smart contract audit is an extensive methodical examination and analysis of the smart contract's code that is used to interact with the blockchain. Goal: discover errors, issues and security vulnaribilities in the code. Findings getting reported and improvements getting suggested.

Automatic and Manual Review
We are using automated tools to scan functions and weeknesses of the contract. Transfers, integer over-undeflow checks such as all CWE events.

Tools we use:
Visual Studio Code
CWE
SWC
Solidity Scan
SVD

In manual code review our auditor looking at source code and performing line by line examination. This method helps to clarify developer's coding decisions and business logic.

Skeleton Ecosystem

https://skeletonecosystem.com

https://github.com/SkeletonEcosystem/Audits