



Baby Safemoon BSFM BEP20

0x23cd470179e3354BeD205F3F2382573712E9





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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	BABY_SAFEMOON
Ticker/Simbol	BSFM
Blockchain	Binance Smart Chain BEP20
Contract Address	0x23cd470179e3354BeD205F3F2382573712E938a9
Creator Address	0x551138721bbe27F8b0647249b8809915E2d5141B
Current Owner Address	0x000000000000000000000000000000000000
Contract Explorer	https://bscscan.com/token/0x23cd470179e3354bed2 05f3f2382573712e938a9#code
Compiler Version	v0.8.19+commit.7dd6d404
License	None
Optimisation	Yes with 200 Runs
Total Supply	961,392.672792 BSFM
Decimals	18

Creation/Audit

Contract Deployed	17.02.2024
Audit Created	19.02.2024
Audit Update	V 1.0

Verified Socials

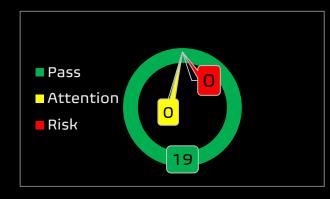
Website	https://babysafemoon.com
Telegram	https://t.me/baby_safemoon
Twitter (X)	https://x.com/baby_safemoon_



Contract Function Analysis

Pass Attention Item A Risky Item





Contract Verified	>	The contract source code is uploaded to blockchain explorer and is open source, so everybody can read it.
Contract		0x000000000000000000000000000000000000
Ownership		Sometimes referred to as the "zero address" or "dead address" and is not owned by anyone.
Виу Тах	5 %	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	5 %	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		Liqudity status on 18.02.2024
Status		Lp Locked: 91.04% Pinklock for 143 days.
		Lp Burned: 8.27%
Trading	✓	No Trading suspendable function found.
Disable Functions		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. Contract renounced, function can not be triggered by owner.
	Max 25%	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	✓	No Blacklist Setting function found. 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	A	Whitelist Setting function found. Contract renounced, function can not be triggered by owner.
		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		No Hidden or multi owner with authorisation
Analysis	✓	For contract with a hidden owner, developer can still manipulate the contract even if the ownership has been abandoned.
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	✓	No Self Destruct function found.
Function		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	✓	No Specific Tax Changing Functions found.
Changing Function		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	A	Max Transaction and Holding Modify function found. Contract renounced, function can not be triggered by owner.
and Holding min 0.5% Modify Function		If there is a function for this, the maximum trading amount or maximum position can be modified. Can cause honeypot
Transaction	✓	No Transaction Limiter Function Found.
Limiting Function		The number of overall token transactions may be limited (honeypot risk)



Details of Risk - Attention Items

Removing Risk of contract function based on renounced ownership



Following detected contract functions serve as informational purposes about the contract. The owner has no more authorisation to trigger the following functions.

1 Set Fee [25% Max]

Contract renounced, function can not be triggered by owner.

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).

```
function marketingFeesSetup(uint16 _buyFee1, uint16 _sellFee1, uint16 _transferFee1) public onlyOwner {
   totalFees[0] = totalFees[0] - marketingFees[0] + _buyFee1;
    totalFees[1] = totalFees[1] - marketingFees[1] + _sellFee1;
    totalFees[2] = totalFees[2] - marketingFees[2] + _transferFee1;
    require(totalFees[0] <= 2500 && totalFees[1] <= 2500 && totalFees[2] <= 2500, "TaxesDefaultRouter: Cannot exceed max total fee of 25%");
    marketingFees = [_buyFeet, _sellFeet, _transferFeet];
    emit marketingFeesUpdated(_buyFeet, _sellFeet, _transferFeet);
function autoBurnFeesSetup(uint16 _buyFee1, uint16 _sellFee1, uint16 _transferFee1) public onlyOwner {
    totalFees[0] = totalFees[0] - autoBurnFees[0] + _buyFee1;
    totalFees[1] = totalFees[1] - autoBurnFees[1] + _sellFee1;
    totalFees[2] = totalFees[2] - autoBurnFees[2] + _transferFee1;
    require(totalFees[0] <= 2500 && totalFees[1] <= 2500 && totalFees[2] <= 2500, "TaxesDefaultRouter: Cannot exceed max total fee of 25%");
    autoBurnFees = [_buyFeet, _sellFeet, _transferFeet];
    emit autoBurnFeesUpdated(_buyFee1, _sellFee1, _transferFee1);
```

Mhitelist (Set exluded wallets)

Contract renounced, function can not be triggered by owner.

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)

```
function excludeFromFees(address account), bool isExcluded) public onlyOwner {
   isExcludedFromFees[accountf] = isExcludedf;
   emit ExcludeFromFees(account1, isExcluded1);
```





Max Transaction and Holding Modify function

Contract renounced, function can not be triggered by owner.

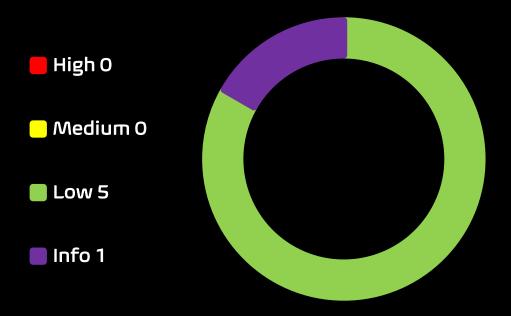
If there is a function for this, the maximum trading amount or maximum position can be modified. Can cause honeypot

```
function updateMaxWalletAmount(uint256 _maxWalletAmount() public onlyOwner {
   require( maxWalletAmount >= _maxWalletSafeLimit(), "MaxWallet: Limit too low");
   maxWalletAmount = _maxWalletAmount1;
    emit MaxWalletAmountUpdated(_maxWalletAmount†);
function _maxWalletSafeLimit() private view returns (uint256) {
   return totalSupply() / 1000;
function _maxTxSafeLimit() private view returns (uint256) {
   return totalSupply() * 5 / 10000;
function updateMaxBuyAmount(uint256 _maxBuyAmount1) public onlyOwner {
   require(_maxBuyAmount1 >= _maxTxSafeLimit(), "MaxTx: Limit too low");
    maxBuyAmount = _maxBuyAmount1;
    emit MaxBuyAmountUpdated(_maxBuyAmount1);
function updateMaxSellAmount(uint256 _maxSellAmount() public onlyOwner {
   require(_maxSellAmount| >= _maxTxSafeLimit(), "MaxTx: Limit too low");
   maxSellAmount = _maxSellAmount1;
    emit MaxSellAmountUpdated(_maxSellAmount1);
```



Contract Security

Total Findings: 6



- **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: (0)
- Low severity issues: (5)
 - Missing Events
 - Long number literals
 - Outdated Compiler Version
 - Floating Pragma
 - Upprove Front Running Attack (Sandwich Bot Attack)
- Informational severity issues: (1)
 - Public Functions Should be Declared External



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

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	low	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	Passed	Passed	Passed
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.

No High or Medium Severity Vulnerability Issues found

Approve of front running attack. Also known as Sandwich Bot attack. (2 Item)

Item: 1	Location:	Line 136-140	Severity:	Low
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Function	The approve() method overrides current allowance
	regardless of whether the spender already used it or not,
	so there is no way to increase or decrease allowance by a
	certain value atomically unless the token owner is a smart
	contract, not an account.
	This can be abused by a token receiver when they try to
	withdraw certain tokens from the sender's account.
	Meanwhile, if the sender decides to change the amount
	and sends another approve transaction, the receiver can
	notice this transaction before it's mined and can extract
	tokens from both the transactions, therefore, ending up
	with tokens from both the transactions. This is a front-
	running attack affecting the ERC20 Approve function.
	The function approve can be front-run by abusing
	the _approve function.
Remedation	1.Introduce mechanisms that limit the maximum
	acceptable gas price for transactions. This can help prevent
	front-runners from drastically increasing the gas fees to
	prioritize their transactions.
	2.Use transaction taxes to prevent against front-run
	attack
	detack

```
function approve(address spendert, uint256 amountt) public virtual override returns (bool) {
   address owner = _msgSender();
   _approve(owner, spender1, amount1);
   return true;
```



Line 324-332 Severity: Item: 2 Location: Low

Function

The <u>spendAllowance()</u> method overrides current allowance regardless of whether the spender already used it or not, so there is no way to increase or decrease allowance by a certain value atomically unless the token owner is a smart contract, not an account.

This can be abused by a token receiver when they try to withdraw certain tokens from the sender's account. Meanwhile, if the sender decides to change the amount and sends another approve transaction, the receiver can notice this transaction before it's mined and can extract tokens from both the transactions, therefore, ending up with tokens from both the transactions. This is a frontrunning attack affecting the ERC20 Approve function. The function approve can be front-run by abusing the approve function.

Remedation

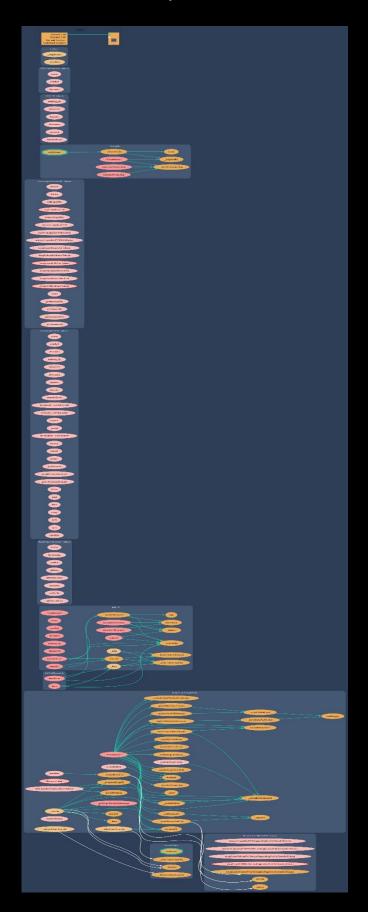
1.Introduce mechanisms that limit the maximum acceptable gas price for transactions. This can help prevent front-runners from drastically increasing the gas fees to prioritize their transactions.

2.Use transaction taxes to prevent against front-run attack

```
function _spendAllowance(address ownert, address spendert, uint256 amountt) internal virtual {
   uint256 currentAllowance = allowance(owner1, spender1);
   if (currentAllowance != type(uint256).max) {
       require(currentAllowance >= amount1, "ERC20: insufficient allowance");
        unchecked {
            _approve(owner1, spender1, currentAllowance - amount1);
```

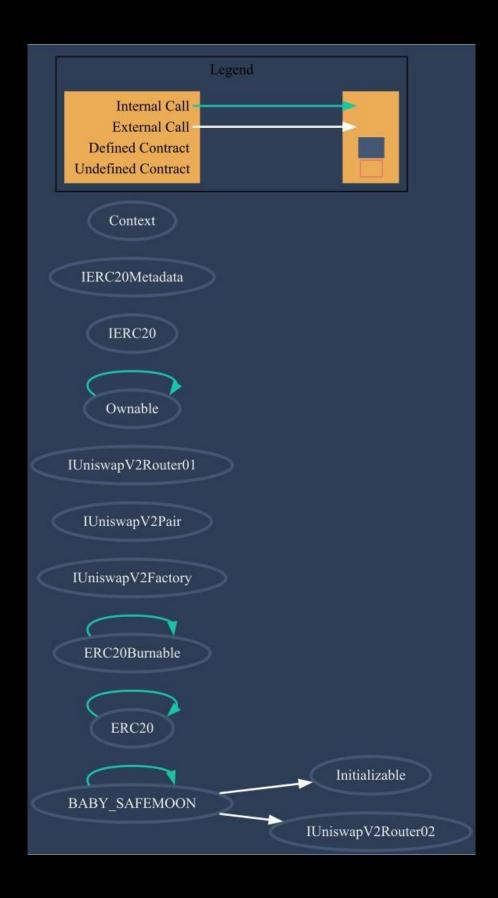


Contract Flow Graph



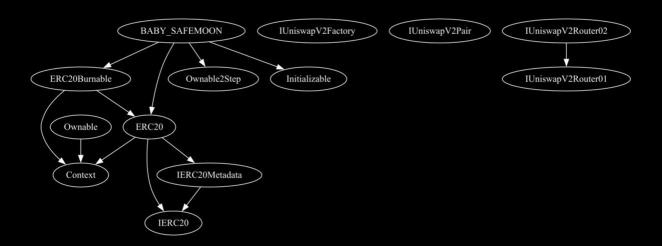


Contract Interaction Graph





Inheritance Graph





Contract Functions

Contract	Туре		Bases	
L	Function Name	Visibility	Mutability	Modifiers
BABY_SAFEMOO N	Implementation	ERC20, ERC20Burnable, Ownable2Step, Initializable		
L		Public 🎚		ERC20
L	initialize	External 🎚		initializer
L		External 🎚	dip	МОД
L	decimals	Public 🎚		Nol
L	_swapTokensFo rCoin	Private 🖺		
L	updateSwapThr eshold	Public 🌡		onlyOwner
L	getSwapThresh oldAmount	Public 🎚		NOÎ
L	getAllPending	Public 🎚		Nol
L	marketingAddre ssSetup	Public 🎚		onlyOwner
L	marketingFeesS etup	Public 🌡		onlyOwner
L	autoBurnFeesSe tup	Public 🎚		onlyOwner
L	_swapAndLiquif Y	Private 🖺		
L	_addLiquidity	Private 🖺		
L	addLiquidityFro mLeftoverToke ns	External 🌡		NO[



_	quidityFeesSet up kcludeFromFee s	Public 🏿	onlyOwner
L e			orny o writer
	3	Public 🎚	onlyOwner
L	_transfer	Internal 🖺	
L _L	updateRouterV 2	Private 🖺	
L	setAMMPair	External [onlyOwner
L .	_setAMMPair	Private 🖺	
L ex	cludeFromLim its	External 🎚	onlyOwner
L	excludeFromLi mits	Internal 🖺	
L U	pdateMaxWall etAmount	Public 🌡	onlyOwner
r _r	naxWalletSafe Limit	Private 🖺	
r _r	naxTxSafeLimi t	Private 🖺	
L u	pdateMaxBuy Amount	Public 🌡	onlyOwner
լ սյ	odateMaxSellA mount	Public 🎚	onlyOwner
L	enableTrading	External 🎚	onlyOwner
	cludeFromTra ingRestriction	Public 🌡	onlyOwner
	beforeTokenTr ansfer	Internal 🖺	
L _a	ifterTokenTran sfer	Internal 🖺	



Contract	Туре	Bases		
ERC20	Implementation	Context, IERC20, IERC20Metadat a		
L		Public 🎚		МО[
L	name	Public 🎚		Мо[
L	symbol	Public 🎚		ПоП
L	decimals	Public 🎚		NO
L	totalSupply	Public 🎚		Nol
L	balanceOf	Public 🎚		NO[
L	transfer	Public 🎚		Nol
L	allowance	Public 🎚		Nol
L	арргоvе	Public 🎚		Nol
L	transferFrom	Public 🎚		NO[
L	increaseAllowan ce	Public 🌡		NOÏ
L	decreaseAllowa nce	Public 🌡		Nol
L	_transfer	Internal 🖺		
L	_mint	Internal 🖺		
L	_burn	Internal 🖺		
L	_арргоvе	Internal 🖺		
L	_spendAllowanc e	Internal 🖺		
L	_beforeTokenTr ansfer	Internal 🖺		
L	_afterTokenTran sfer	Internal 🖺		



Contract	Туре	Bases		
ERC20Burnable	Implementation	Context, ERC20		
L	burn	Public 🎚		Nol
L	burnFrom	Public 🌡		Nol
Initializable	Implementation			
Initializable	Implementation			
IUniswapV2Fact ory	Interface			
L	feeTo	External 🎚		Nol
L	feeToSetter	External 🎚		NO
L	getPair	External 🎚		NO
L	allPairs	External 🎚		NO
L	allPairsLength	External 🎚		NO
L	createPair	External 🎚		NO
L	setFeeTo	External 🎚		NO
L	setFeeToSetter	External [Nol
IUniswapV2Pair	Interface			
L	name	External [Nol
L	symbol	External 🎚		Nol
L	decimals	External [Nol
L	totalSupply	External [Nol
L	balanceOf	External [Nol
L	allowance	External [Nol
L	approve	External [ПОП



Contract	Туре	Bases		
L	transfer	External [Мо[
L	transferFrom	External 🎚		По[
L	DOMAIN_SEPAR ATOR	External [lon
L	PERMIT_TYPEHA SH	External 🎚		Nol
L	nonces	External 🎚		NOÏ
L	permit	External 🎚		Мо[
L	MINIMUM_LIQUI DITY	External 🏻		Nol
L	factory	External 🎚		NOÎ
L	token0	External 🎚		NO
L	token1	External 🎚		NO[
L	getReserves	External 🎚		Мо[
L	price0Cumulativ eLast	External 🎚		Nol
L	price1Cumulativ eLast	External 🎚		Nol
L	kLast	External 🎚		Мо[
L	mint	External 🎚		ПоП
L	burn	External [ПоП
L	swap	External 🎚		МО[
L	skim	External 🎚		МО[
L	sync	External 🎚		NO[
L	initialize	External 🎚		Nol
IUniswapV2Rout er01	Interface			



Contract	Туре	Bases		
L	factory	External [NO[
L	WETH	External [NO[
L	addLiquidity	External 🎚		NO
L	addLiquidityETH	External 🎚	<u>db</u>	NO
L	removeLiquidity	External 🎚		Nol
L	removeLiquidity ETH	External 🎚		Nol
L	removeLiquidity WithPermit	External 🎚		lon
L	removeLiquidity ETHWithPermit	External 🎚		lon
L	swapExactToke nsForTokens	External 🎚		lon
L	swapTokensFor ExactTokens	External 🎚		lon
L	swapExactETHF orTokens	External 🎚	Ф	Nol
L	swapTokensFor ExactETH	External [Nol
L	swapExactToke nsForETH	External 🎚		Nol
L	swapETHForExa ctTokens	External 🎚	dia .	Nol
L	quote	External 🎚		Nol
L	getAmountOut	External 🎚		Nol
L	getAmountIn	External 🎚		NO
L	getAmountsOut	External [Nol
L	getAmountsIn	External [Пои



Contract	Туре	Bases		
IUniswapV2Rout er02	Interface	IUniswapV2Rout er01		
L	removeLiquidity ETHSupportingF eeOnTransferTo kens	External 🎚		lon
L	removeLiquidity ETHWithPermit SupportingFeeO nTransferToken s	External [NO[
L	swapExactToke nsForTokensSup portingFeeOnTr ansferTokens	External [No[
L	swapExactETHF orTokensSuppor tingFeeOnTrans ferTokens	External 🌡	е́р	NO[
L	swapExactToke nsForETHSuppo rtingFeeOnTran sferTokens	External 🌡		Nol
Ownable	Implementation	Context		
L		Public 🎚		ПоП
L	owner	Public 🎚		ПоП
L	_checkOwner	Internal 🖺		
L	renounceOwner ship	Public 🌡		onlyOwner
L	transferOwners hip	Public 🌡		onlyOwner
L	_transferOwner ship	Internal 🖺		
IERC20	Interface			
L	totalSupply	External [Мо[



Contract	Туре	Bases		
L	balanceOf	External [No[
L	transfer	External [No[
L	allowance	External [No[
L	арргоvе	External [No[
L	transferFrom	External 🏻		Nol
IERC20Metadat a	Interface	IERC20		
L	name	External 🎚		Мо[
L	symbol	External 🎚		Мо[
٦	decimals	External [Nol
Context	Implementation			
L	_msgSender	Internal 🖺		
L	_msgData	Internal 🖺		

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

