Cyberscope

Audit Report

Your Crypto Bank

January 2024

Network	MATIC
Address	0x88f4532991b92875022ce498236229cf94f97582
Audited by	© cyberscope

Analysis

Critical Medium Minor / Informative Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Passed
●	OTUT	Transfers User's Tokens	Passed
●	ELFM	Exceeds Fees Limit	Passed
●	MT	Mints Tokens	Passed
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

Diagnostics

Critical Medium Minor / Informative

Severity	Code	Description	Status
	L19	Stable Compiler Version	Unresolved

Table of Contents

Review

Contract Name	YourCryptoBank
Compiler Version	v0.8.22+commit.4fc1097e
Optimization	200 runs
Explorer	https://polygonscan.com/address/0x88f4532991b92875022ce498236229cf94f97582
Address	0x88f4532991b92875022ce498236229cf94f97582
Network	MATIC
Symbol	YCB
Decimals	18
Total Supply	4,000,000

Audit Updates

Initial Audit	06 Jan 2024

Source Files

Filename	SHA256
ycb-token.sol	d3c7f1f8d2b6dcf9a3fdd37d3b7e3a409f97ae47692bba281b1beaca909647a6
@openzeppelin/contracts/utils/Strings.sol	0519199dbc635f98ce2e4537986604ee618bca665c65e9a1738702dfacf72010
@openzeppelin/contracts/utils/StorageSlot.sol	b4a5fb7ab93bfeda06509eafbd5f71fde0e0de84b6d9129553bd535a42166c15

@openzeppelin/contracts/utils/ShortStrings.sol	ddd52921d2996abf2e3d9c1c4f6d00194a3e3b278a164948f995862371444a55
@openzeppelin/contracts/utils/Nonces.sol	1c16c3cf8bb0679cbd47cddd8b141fea193e76966c94c858c5bccc94b8695030
@openzeppelin/contracts/utils/Context.sol	847fda5460fee70f56f4200f59b82ae622bb03c79c77e67af010e31b7e2cc5b6
@openzeppelin/contracts/utils/math/SignedMath.sol	768c28e3a33c3312e57ae8a1caaec2893bc89ac6e386621de018f85e9a2d6e99
@openzeppelin/contracts/utils/math/Math.sol	a6ee779fc42e6bf01b5e6a963065706e882b016affbedfd8be19a71ea48e6e15
@openzeppelin/contracts/utils/cryptography/MessageHashUtils.sol	2fd5c641cf452efd15f784827cb2835664970d7fbc166bf80824ed27011cc374
@openzeppelin/contracts/utils/cryptography/EIP712.sol	27dac0732a0154f432c0a7a1d1f067ab51116105e157d0e5d68d040fd83954d5
@openzeppelin/contracts/utils/cryptography/ECDSA.sol	37828cb50b47bcc51c7b770bde15d5885d871ef1e67028057a0b788c3568726e
@openzeppelin/contracts/token/ERC20/IERC20.sol	6f2faae462e286e24e091d7718575179644dc60e79936ef0c92e2d1ab3ca3cee
@openzeppelin/contracts/token/ERC20/ERC20.sol	ddff96777a834b51a08fec26c69bb6ca2d01d150a3142b3fdd8942e07921636a
@openzeppelin/contracts/token/ERC20/extensions/IERC20Permit.sol	912509e0e9bf74e0f8a8c92d031b5b26d2d35c6d4abf3f56251be1ea9ca946bf
@openzeppelin/contracts/token/ERC20/extensions/IERC20Metadata.sol	1d079c20a192a135308e99fa5515c27acfbb071e6cdb0913b13634e630865939
@openzeppelin/contracts/token/ERC20/extensions/ERC20Permit.sol	677cb995a34f0cc937f3d77d4626c46fbf47cdef4c9cc0314c27672c0459cf80
@openzeppelin/contracts/token/ERC20/extensions/ERC20FlashMint.sol	58f4f4e5b759b5709a7ba705dfe60a26a60fb18154bff8cdf145a7c4e8c4c368

@openzeppelin/contracts/token/ERC20/extensions/ERC20Burnable.sol	2e6108a11184dd0caab3f3ef31bd15fed1bc7e4c781a55bc867ccedd8474565c
@openzeppelin/contracts/interfaces/draft-IERC6093.sol	4aea87243e6de38804bf8737bf86f750443d3b5e63dd0fd0b7ad92f77cdbd3e3
@openzeppelin/contracts/interfaces/IERC5267.sol	efd1ebd1e04b6ef9c3b8781a097588f83da954323f438d54a71dc06508e6c7b8
@openzeppelin/contracts/interfaces/IERC3156FlashLender.sol	3fb668ca6aaf756f5db9049abd2a18f638ff70307ca7ce59f85e772bae17380d
@openzeppelin/contracts/interfaces/IERC3156FlashBorrower.sol	06a759fc3607f87bfb716c95ac2f67c64b1485703bdd9467f1fea7ecc1180215
@openzeppelin/contracts/access/Ownable.sol	38578bd71c0a909840e67202db527cc6b4e6b437e0f39f0c909da32c1e30cb81

Findings Breakdown

Critical	0
Medium	0
Minor / Informative	1

Severity	Unresolved	Acknowledged	Resolved	Other
Critical	0	0	0	0
Medium	0	0	0	0
Minor / Informative	1	0	0	0

L19 - Stable Compiler Version

Criticality	Minor / Informative
Location	ycb-token.sol#L2
Status	Unresolved

Description

The `^` symbol indicates that any version of Solidity that is compatible with the specified version (i.e., any version that is a higher minor or patch version) can be used to compile the contract. The version lock is a mechanism that allows the author to specify a minimum version of the Solidity compiler that must be used to compile the contract code. This is useful because it ensures that the contract will be compiled using a version of the compiler that is known to be compatible with the code.

```
pragma solidity ^0.8.20;
```

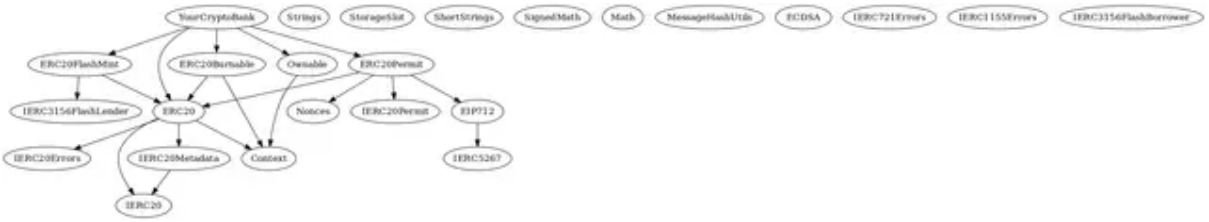
Recommendation

The team is advised to lock the pragma to ensure the stability of the codebase. The locked pragma version ensures that the contract will not be deployed with an unexpected version. An unexpected version may produce vulnerabilities and undiscovered bugs. The compiler should be configured to the lowest version that provides all the required functionality for the codebase. As a result, the project will be compiled in a well-tested LTS (Long Term Support) environment.

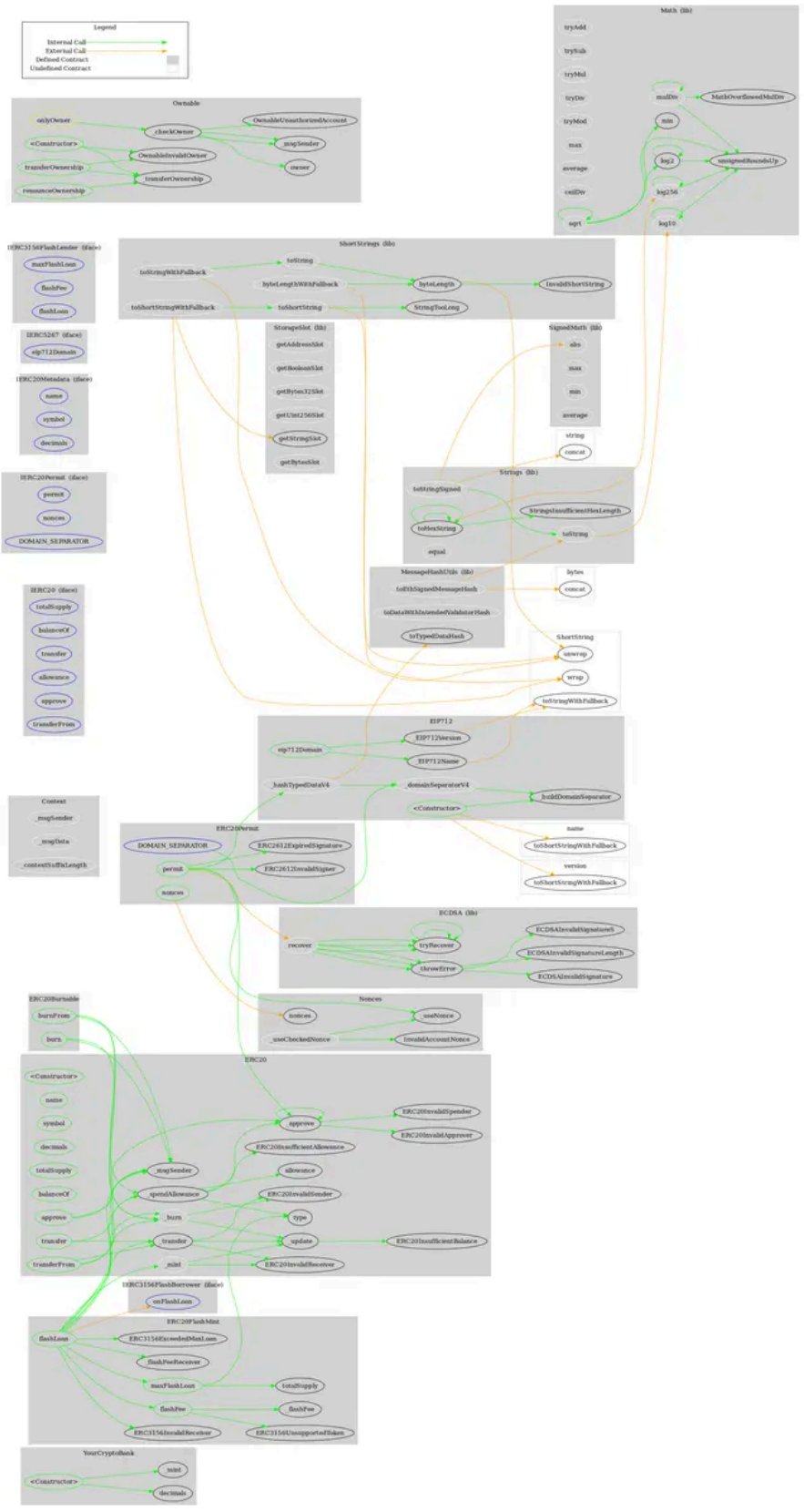
Functions Analysis

Contract	Type	Bases		
	Function Name	**Visibility**	**Mutability**	**Modifiers**
YourCryptoBank	Implementation	ERC20, ERC20Burnable, ERC20Permit, ERC20FlashMint, Ownable		
		Public	✓	ERC20 ERC20Permit Ownable

Inheritance Graph



Flow Graph


Legend
Internal Call
External Call
Defined Contract
Undefined Contract
Ownable
onlyOwner
checkOwner
OwnableUnauthorizedAccount
<Constructor>
OwnableInvalidOwner
_msgSender
owner
transferOwnership
transferOwnership
renounceOwnership
Math (lib)
tryAdd
trySub
tryMul
tryDiv
tryMod
max
average
ceilDiv
sqrt
mulDiv
MathOverflowedMulDiv
min
log2
unsignedRoundsUp
log256
log10
IERC3156FlashLender (iface)
maxFlashLoan
flashFee
flashLoan
ShortStrings (lib)
toString
toStringWithFallback
byteLength
InvalidShortString
toShortString
toShortStringWithFallback
StringTooLong
IERC5267 (iface)
eip712Domain
StorageSlot (lib)
getAddressSlot
getBooleanSlot
getBytes32Slot
getUint256Slot
getStringSlot
getBytesSlot
SignedMath (lib)
abs
max
min
average
IERC20Metadata (iface)
name
symbol
decimals
string
concat
IERC20Permit (iface)
permit
nonces
DOMAIN_SEPARATOR
Strings (lib)
toStringSigned
toHexString
StringsInsufficientHexLength
toString
equal
MessageHashUtils (lib)
toEthSignedMessageHash
toDataWithIntendedValidatorHash
toTypedDataHash
bytes
concat
IERC20 (iface)
totalSupply
balanceOf
transfer
allowance
approve
transferFrom
ShortString
unwrap
wrap
toStringWithFallback
EIP712
eip712Domain
_hashTypedDataV4
EIP712Version
EIP712Name
_domainSeparatorV4
<Constructor>
_buildDomainSeparator
Context
_msgSender
_msgData
_contextSuffixLength
ERC20Permit
DOMAIN_SEPARATOR
permit
nonces
ERC2612ExpiredSignature
ERC2612InvalidSigner
name
toShortStringWithFallback
version
toShortStringWithFallback
ECDSA (lib)
recover
tryRecover
throwError
ECDSAInvalidSignatureS
ECDSAInvalidSignatureLength
ECDSAInvalidSignature
ERC20Burnable
burnFrom
burn
Nonces
nonces
_useNonce
_useCheckedNonce
InvalidAccountNonce
ERC20
<Constructor>
name
symbol
decimals
totalSupply
balanceOf
approve
transfer
transferFrom
approve
ERC20InvalidSpender
ERC20InvalidApprover
_msgSender
spendAllowance
ERC20InsufficientAllowance
allowance
ERC20InvalidSender
_burn
type
transfer
update
ERC20InsufficientBalance
_mint
ERC20InvalidReceiver
IERC3156FlashBorrower (iface)
onFlashLoan
ERC20FlashMint
flashLoan
ERC3156ExceededMaxLoan
_flashFeeReceiver
maxFlashLoan
totalSupply
flashFee
flashFee
ERC3156InvalidReceiver
ERC3156UnsupportedToken
YourCryptoBank
_mint
<Constructor>
decimals

Summary

Your Crypto Bank - YCB contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. Your Crypto Bank - YCB is an interesting project that has a friendly and growing community. 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.

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The Cyberscope team

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