CFG NINJA AUDITS

Security Assessment

FIFA Finance Token

July 24, 2022

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Audit Summary

This report has been prepared for FIFA Finance Token on the Binance Smart Chain network. CFGNINJA provides both client-centered and user-centered examination of the smart contracts and their current status when applicable. This report represents the security assessment made to find issues and vulnerabilities on the source code along with the current liquidity and token holder statistics of the protocol.

A comprehensive examination has been performed, utilizing Cross Referencing, Static Analysis, In-House Security Tools, and line-by-line Manual Review.

The auditing process pays special attention to the following considerations:

- Testing the smart contracts against both common and uncommon attack vectors.
- Inspecting liquidity and holders statistics to inform the current status to both users and client when applicable.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Verifying contract functions that allow trusted and/or untrusted actors to mint, lock, pause, and transfer assets.

Project Overview

Token Summary

Parameter	Result
Address	0x82b50CC6Dfbc0DAaC4816BD78b73632787B022E6
Name	FIFA Finance
Token Tracker	FIFA Finance (FIFI)
Decimals	18
Supply	1,000,000,000
Platform	Binance Smart Chain
compiler	v0.6.12+commit.27d51765
Contract Name	FIFAFinance
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	https://bscscan.com/address/0x82b50CC6Dfbc0DAaC4816BD78b73632787B022E6#code
Payment Tx	0x93cce45bdd2c80cd926735631a21d70a4fb03162d207ef07797fbb8545293efb

Project Overview

Risk Analysis Summary

Parameter	Result
Buy Tax	11%
Sale Tax	11%
Is honeypot?	Not Clean
Can edit tax?	Yes
Is anti whale?	No
Is blacklisted?	No
Is whitelisted?	No
Holders	Not Clean
Security Score	50/100
Auditor Score	90/100
Confidence Level	Low

The following quick summary has been added to the project overview, however there are more details about the audit and their results please read every details.

Main Contract Assessed
Contract Name

Name	Contract	Live
FIFA Finance	0x82b50CC6Dfbc0DAaC4816BD78b73632787B022E6	Yes

TestNet Contract Assessed
Contract Name

Name	Contract	Live
FIFA Finance	0x0e0A1ccaab40969ad1aCEA0525A28f9cE6A672fB	Yes

Solidity Code Provided

SolID	File Sha-1	FileName
FIFI	034240bc3e5194471cee0b93c1dc25f7fd438275	fifa.sol
FIFI		
FIFI		

Smart Contract Vulnerability Checks

Vulnerability	Automatic Scan	Manual Scan	Result
Unencrypted Private Data On-Chain	Complete	Complete	Low / No Risk
Code With No Effects	Complete	Complete	Low / No Risk
Message call with hardcoded gas amount	Complete	Complete	Low / No Risk
Hash Collisions With Multiple Variable Length Arguments	Complete	Complete	Low / No Risk
Unexpected Ether balance	Complete	Complete	Low / No Risk
Presence of unused variables	Complete	Complete	Low / No Risk
Right-To-Left-Override control character (U+202E)	Complete	Complete	Low / No Risk
Typographical Error	Complete	Complete	Low / No Risk
DoS With Block Gas Limit	Complete	Complete	Low / No Risk
Arbitrary Jump with Function Type Variable	Complete	Complete	Low / No Risk
Insufficient Gas Griefing	Complete	Complete	Low / No Risk
Incorrect Inheritance Order	Complete	Complete	Low / No Risk
Write to Arbitrary Storage Location	Complete	Complete	Low / No Risk
Requirement Violation	Complete	Complete	Low / No Risk
Missing Protection against Signature Replay Attacks	Complete	Complete	Low / No Risk

Mint Check

The Project Owners of FIFA Finance does not have a mint function in the contract, owner cannot mint tokens after initial deploy

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The Project has a Total Supply of 1,000,000,000 and cannot mint any more than the Max Supply.

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Mint Notes:

Auditor Notes: A Mint Function was not found during the code review

Project Owner Notes:

Owner can't mint new coins

Fees Check

The Project Onwers of FIFA Finance has the ability to set fees to 50%
We Recommend the team to create a new contract with fees restrictions to avoid any problems, as alternative the team can use multi signature wallet to ensure the project is safe from a potential fee increase.

Tax Fee Notes:

Auditor Notes: Contract currently have 11% tax and can be increased, if the customer use the settee function it will break the contract. there is a log that revert to 10% and this logic does not work as intended

Project Owner Notes: .

MaxTx Check

The Project Onwers of FIFA Finance does not has the ability to set max tx amount

The Team allow any investors to swap, transfer or sale their total amount if needed.

MaxTX Notes:

Auditor Notes: No max tx found.

Project Owner Notes:

Project Has No MaxTX

Pause Trade Check

The Project Onwers of FIFA Finance Owner can pause trading but he can't move tokens (Owner can't pause trading)

The Team has done a great job to avoid stop trading, and investors has the ability to trade at any given time without any problems

Pause Trade Notes:

Auditor Notes: Not found.

Project Owner Notes:

Contract Ownership

The contract ownership of FIFA Finance is not currently renounced. The ownership of the contract grants special powers to the protocol creators, making them the sole addresses that can call sensible ownable functions that may alter the state of the protocol.

The current owner is the address 0x9562381A8C497cDd3dae2126DD71e911D2Ad9730 which can be viewed from:
HERE

The owner wallet has the power to call the functions displayed on the priviliged functions chart below, if the owner wallet is compromised this privileges could be exploited.

We recommend the team to renounce ownership at the right timing if possible, or gradually migrate to a timelock with governing functionalities in respect of transparency and safety considerations.

We recommend the team to use a Multisignature Wallet if contract is not going to be renounced, this will give the ability to the team to have more control over the contract.

Liquidity Ownership

The token does not have liquidity at the moment of the audit, block 19812659

KYC Information

The Project Owners of FIFA Finance is not KYC. .

The owner wallet has the power to call the functions displayed on the priviliged functions chart below, if the owner wallet is compromised this privileges could be exploited.

We recommend the team to renounce ownership at the right timing if possible, or gradually migrate to a timelock with governing functionalities in respect of transparency and safety considerations.

KYC Information Notes:

Auditor Notes: Asked project owner about KYC or Doxxed

Project Owner Notes:

Mythx Security Summary Checks

ID	Severity	Name	File	location
SWC-100	Pass	Function Default Visibility	fifa.sol	L: 0 C: 0
SWC-101	Pass	Integer Overflow and Underflow.	fifa.sol	L: 0 C: 0
SWC-102	Pass	Outdated Compiler Version file.	fifa.sol	L: 0 C: 0
SWC-103	Low	A floating pragma is set.	fifa.sol	L: 5 C: 0
SWC-104	Pass	Unchecked Call Return Value.	fifa.sol	L: 0 C: 0
SWC-105	Pass	Unprotected Ether Withdrawal.	fifa.sol	L: 0 C: 0
SWC-106	Pass	Unprotected SELFDESTRUCT Instruction	fifa.sol	L: 0 C: 0
SWC-107	Pass	Read of persistent state following external call.	fifa.sol	L: 0 C: 0
SWC-108	Pass	State variable visibility is not set..	fifa.sol	L: 0 C: 0
SWC-109	Pass	Uninitialized Storage Pointer.	fifa.sol	L: 0 C: 0
SWC-110	Pass	Assert Violation.	fifa.sol	L: 0 C: 0
SWC-111	Pass	Use of Deprecated Solidity Functions.	fifa.sol	L: 0 C: 0
SWC-112	Pass	Delegate Call to Untrusted Callee.	fifa.sol	L: 0 C: 0
SWC-113	Pass	Multiple calls are executed in the same transaction.	fifa.sol	L: 0 C: 0

ID	Severity	Name	File	location
SWC-114	Pass	Transaction Order Dependence.	fifa.sol	L: 0 C: 0
SWC-115	Low	Authorization through tx.origin.	fifa.sol	L: 474 C: 15
SWC-116	Pass	A control flow decision is made based on The block.timestamp environment variable.	fifa.sol	L: 0 C: 0
SWC-117	Pass	Signature Malleability.	fifa.sol	L: 0 C: 0
SWC-118	Pass	Incorrect Constructor Name.	fifa.sol	L: 0 C: 0
SWC-119	Pass	Shadowing State Variables.	fifa.sol	L: 0 C: 0
SWC-120	Low	Potential use of block.number as source of randonmness.	fifa.sol	L: 0 C: 0
SWC-121	Pass	Missing Protection against Signature Replay Attacks.	fifa.sol	L: 0 C: 0
SWC-122	Pass	Lack of Proper Signature Verification.	fifa.sol	L: 0 C: 0
SWC-123	Pass	Requirement Violation.	fifa.sol	L: 0 C: 0
SWC-124	Pass	Write to Arbitrary Storage Location.	fifa.sol	L: 0 C: 0
SWC-125	Pass	Incorrect Inheritance Order.	fifa.sol	L: 0 C: 0
SWC-126	Pass	Insufficient Gas Griefing.	fifa.sol	L: 0 C: 0
SWC-127	Pass	Arbitrary Jump with Function Type Variable.	fifa.sol	L: 0 C: 0
SWC-128	Pass	DoS With Block Gas Limit.	fifa.sol	L: 0 C: 0

ID	Severity	Name	File	location
SWC-129	Pass	Typographical Error.	fifa.sol	L: 0 C: 0
SWC-130	Pass	Right-To-Left-Override control character (U +202E).	fifa.sol	L: 0 C: 0
SWC-131	Pass	Presence of unused variables.	fifa.sol	L: 0 C: 0
SWC-132	Pass	Unexpected Ether balance.	fifa.sol	L: 0 C: 0
SWC-133	Pass	Hash Collisions with Multiple Variable Length Arguments.	fifa.sol	L: 0 C: 0
SWC-134	Pass	Message call with hardcoded gas amount.	fifa.sol	L: 0 C: 0
SWC-135	Pass	Code With No Effects (Irrelevant/Dead Code).	fifa.sol	L: 0 C: 0
SWC-136	Pass	Unencrypted Private Data On-Chain.	fifa.sol	L: 0 C: 0

We scan the contract for additional security issues using MYTHX and industry standard security scanning tool

Security Check Details Page

SWC-103 - Floating Pragma.

CWE-664: Improper Control of a Resource Through its Lifetime.

Description:

Contracts should be deployed with the same compiler version and flags that they have been tested with thoroughly. Locking the pragma helps to ensure that contracts do not accidentally get deployed using, for example, an outdated compiler version that might introduce bugs that affect the contract system negatively.

Remediation:

Lock the pragma version and also consider known bugs (https://github.com/ethereum/solidity/releases) for the compiler version that is chosen.

Pragma statements can be allowed to float when a contract is intended for consumption by other developers, as in the case with contracts in a library or EthPM package. Otherwise, the developer would need to manually update the pragma in order to compile locally.

References:

Ethereum Smart Contract Best Practices - Lock pragmas to specific compiler version.

SWC-115 - Authorization through tx.origin

CWE-477: Use of Obsolete Function

Description:

tx.origin is a global variable in Solidity which returns the address of the account that sent the transaction. Using the variable for authorization could make a contract vulnerable if an authorized account calls into a malicious contract. A call could be made to the vulnerable contract that passes the authorization check since tx.origin returns the original sender of the transaction which in this case is the authorized account.

Remediation:

tx.origin should not be used for authorization. Use msg.sender instead.

References:

Solidity Documentation - tx.origin

Ethereum Smart Contract Best Practices - Avoid using tx.origin

SigmaPrime - Visibility.

SWC-120 - Weak Sources of Randomness from Chain Attributes

CWE-330: Use of Insufficiently Random Values

Description:

Solidity allows for ambiguous naming of state variables when inheritance is used. Contract A with a variable x could inherit contract B that also has a state variable x defined. This would result in two separate versions of x, one of them being accessed from contract A and the other one from contract B. In more complex contract systems this condition could go unnoticed and subsequently lead to security issues.

Shadowing state variables can also occur within a single contract when there are multiple definitions on the contract and function level.

Remediation:

Using commitment scheme, e.g. RANDAO. Using external sources of randomness via oracles, e.g. Oraclize. Note that this approach requires trusting in oracle, thus it may be reasonable to use multiple oracles. Using Bitcoin block hashes, as they are more expensive to mine.

References:

How can I securely generate a random number in my smart contract?)

When can BLOCKHASH be safely used for a random number? When would it be unsafe?

The Run smart contract.

SWC Information Notes:

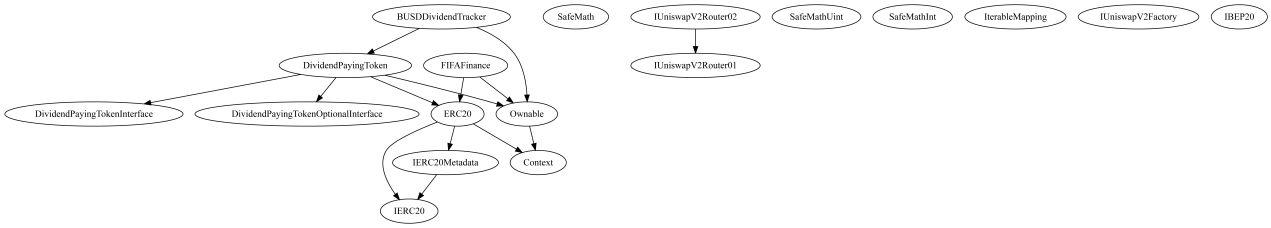
Auditor Notes: No Vulnerabilities where found during the security scan.

Project Owner Notes:

Call Graph and Inheritance

The contract for FIFA Finance has the following call graph structure

The Project has a Total Supply of 1,000,000,000 and has the following inheritance



Tokenomics

The contract for FIFA Finance has the following tokenomics.

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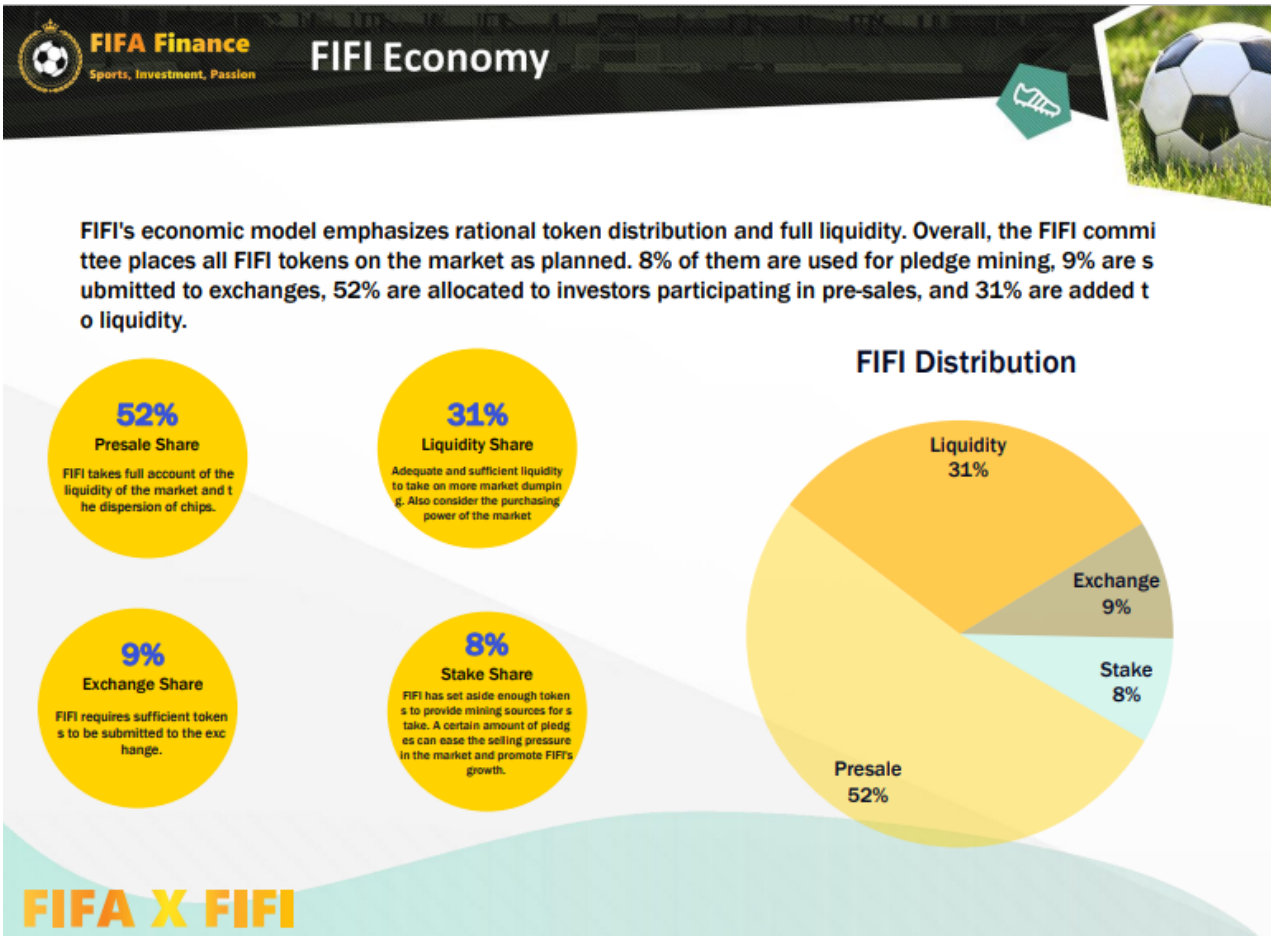

Priviliged Functions (onlyOwner)

Function Name	Parameters	Visibility
renounceOwnership	none	public
transferOwnership	address newOwner	public
setFee	_BUSDRewardsFee (uint256), _BUSDRewardsShare (uint256)	public
updateDividendTracker	none	external
rescueToken	_tokenAddress (address), _amount (uint256)	external
rescueBNB		public
updateUniswapV2Router		public
setSwapAndLiquifyEnabled	_enabled (bool)	public
setDevWallet	Wallet (address)	external
setBurnWallet	Wallet (address)	external
setPresaleContract	Wallet (address)	external
setFoudWalletAddress	Wallet (address)	external
setAutomatedMarketMakerPair		external
includeInFee	account (address)	external
excludeFromFee	account (address)	external

Function Name	Parameters	Visibility
updateGasForProcessing		external
updateClaimWait		external
excludeFromDividends		external
setSnipeBlocks		external

Auditors Final Veredict

Important Notes To The Users:

- Owner can charge fees up to 10%, however, there is a problem with this function
- Owner can't set max tx amount.
- Owner can't pause trading.
- No high-risk Exploits/Vulnerabilities Were Found in the Source Code.
- Reviewed Whitepaper and seems ok, however, there are a few minor discrepancies.

Audit Passed

Social Media Checks

Social Media	URL	Result
Twitter	https://twitter.com/FIFAFinance	Pass
Instagram		Fail
Website	https://www.fifa.finance/	Pass
Telegram	https://t.me/FIFAFinanceGlobal	Pass

We recommend to have 3 or more social media sources including a completed working websites.

Social Media Information Notes:

Auditor Notes: undefined

Project Owner Notes: No other social media

FIFI-01 | Potential Sandwich Attacks.

Category	Severity	Location	Status
Security	Medium	fifa.sol: 1852,0	Pending

Description:

A sandwich attack might happen when an attacker observes a transaction swapping tokens or adding liquidity without setting restrictions on slippage or minimum output amount. The attacker can manipulate the exchange rate by frontrunning (before the transaction being attacked) a transaction to purchase one of the assets and make profits by back running (after the transaction being attacked) a transaction to sell the asset. The following functions are called without setting restrictions on slippage or minimum output amount, so transactions triggering these functions are vulnerable to sandwich attacks, especially when the input amount is large:

- swapExactTokensForETHSupportingFeeOnTransferTokens()
- addLiquidityETH()

Remediation:

We recommend setting reasonable minimum output amounts, instead of 0, based on token prices when calling the aforementioned functions.

References:

What Are Sandwich Attacks in DeFi — and How Can You Avoid Them?.

FIFI-02 | Function Visibility Optimization.

Category	Severity	Location	Status
Gas Optimization	Informational	fifa.sol: 0,0	Pending

Description:

The following functions are declared as public and are not invoked in any of the contracts contained within the projects scope:

Function Name	Parameters	Visibility
renounceOwnership	none	public
transferOwnership	address newOwner	public
setFee	_BUSDRewardsFee (uint256), _BUSDRewardsShare (uint256)	public
name		public
symbol		public
decimals		public

The functions that are never called internally within the contract should have external visibility

Remediation:

We advise that the functions' visibility specifiers are set to external and the array-based arguments change their data location from memory to calldata , optimizing the gas cost of the function.

References:

external vs public best practices.

FIFI-03 | Lack of Input Validation.

Category	Severity	Location	Status
Volatile Code	Minor	fifa.sol: 0,0	Pending

Description:

The given input is missing the check for the non-zero address.

Remediation:

We advise the client to add the check for the passed-in values to prevent unexpected errors as below:

```
...
 require(receiver != address(0), "Receiver is the zero address");
...
```


FIFI-04 | Centralized Risk In addLiquidity.

Category	Severity	Location	Status
Coding Style	Major	fifa.sol: 0,0	Pending

Description:

uniswapV2Router.addLiquidityETH{value: ethAmount}(address(this), tokenAmount, 0, 0, owner(), block.timestamp);

The addLiquidity function calls the uniswapV2Router.addLiquidityETH function with the to address specified as owner() for acquiring the generated LP tokens from the FIFI-WBNB pool.
As a result, over time the _owner address will accumulate a significant portion of LP tokens.If the _owner is an EOA (Externally Owned Account), mishandling of its private key can have devastating consequences to the project as a whole.

Remediation:

We advise the to address of the uniswapV2Router.addLiquidityETH function call to be replaced by the contract itself, i.e. address(this) , and to restrict the management of the LP tokens within the scope of the contract's business logic. This will also protect the LP tokens from being stolen if the _owner account is compromised. In general, we strongly recommend centralized privileges or roles in the protocol to be improved via a decentralized mechanism or via smart-contract based accounts with enhanced security practices, f.e. Multisignature wallets.

Indicatively, here are some feasible solutions that would also mitigate the potential risk:

Time-lock with reasonable latency, i.e. 48 hours, for awareness on privileged operations;
Assignment of privileged roles to multi-signature wallets to prevent single point of failure due to the private key;
Introduction of a DAO / governance / voting module to increase transparency and user involvement");

FIFI-05 | Missing Event Emission.

Category	Severity	Location	Status
Volatile Code	Major	fifa.sol: 0,0	Pending

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.The linked code does not create an event for the transfer.

Remediation:

Emit an event for critical parameter changes. It is recommended emitting events for the sensitive functions that are controlled by centralization roles.
    ");

Disclaimer

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