



Renq Finance

# Smart Contract Audit Report

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# AUDITED DETAILS

## Audited Project

Project name	Token ticker	Blockchain
Renq Finance	RENQ	Ethereum

## Addresses

Contract address	0xff8C479134A18918059493243943150776cF8CF2
Contract deployer address	0x9aE6a1CeD6BD853Db632158B104a7326684A37C7

## Project Website

<a href="https://renq.io/">https://renq.io/</a>
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## Codebase

<a href="https://etherscan.io/address/0xff8C479134A18918059493243943150776cF8CF2#code">https://etherscan.io/address/0xff8C479134A18918059493243943150776cF8CF2#code</a>
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# SUMMARY

Renq aims to connect all isolated blockchains and establish a cross-chain asset exchange network, providing all necessary underlying support for the DeFi ecosystem. Let every digital asset holder experience a truly safe, free and transparent DeFi service.

## Contract Summary

### Documentation Quality

Renq Finance provides a very good documentation with standard of solidity base code.

- The technical description is provided clearly and structured and also don't have any high risk issue.

### Code Quality

The Overall quality of the basecode is standard.

- Standard solidity basecode and rules are already followed by Renq Finance with the discovery of several low issues.

### Test Coverage

Test coverage of the project is 100% ( Through Codebase )

## Audit Findings Summary

- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 30, 61, 150, 237, 263, 656 and 698.

# CONCLUSION

We have audited the Renq Finance project released on December 2022 to discover issues and identify potential security vulnerabilities in Renq Finance Project. This process is used to find technical issues and security loopholes which might be found in the smart contract.

The security audit report provides a satisfactory result with some low-risk issues.

The issues found in the Renq Finance smart contract code do not pose a considerable risk. The writing of the contract is close to the standard of writing contracts in general. The low-risk issues found are floating pragmas set on several lines. Specifying a fixed compiler version is recommended to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

# AUDIT RESULT

Article	Category	Description	Result
Default Visibility	SWC-100 SWC-108	Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously.	PASS
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	PASS
Outdated Compiler Version	SWC-102	It is recommended to use a recent version of the Solidity compiler.	PASS
Floating Pragma	SWC-103	Contracts should be deployed with the same compiler version and flags that they have been tested thoroughly.	ISSUE FOUND
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	PASS
Unprotected Ether Withdrawal	SWC-105	Due to missing or insufficient access controls, malicious parties can withdraw from the contract.	PASS
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	PASS
Reentrancy	SWC-107	Check effect interaction pattern should be followed if the code performs recursive call.	PASS
Uninitialized Storage Pointer	SWC-109	Uninitialized local storage variables can point to unexpected storage locations in the contract.	PASS
Assert Violation	SWC-110 SWC-123	Properly functioning code should never reach a failing assert statement.	PASS
Deprecated Solidity Functions	SWC-111	Deprecated built-in functions should never be used.	PASS
Delegate call to Untrusted Callee	SWC-112	Delegatecalls should only be allowed to trusted addresses.	PASS

DoS (Denial of Service)	SWC-113 SWC-128	Execution of the code should never be blocked by a specific contract state unless required.	PASS
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	PASS
Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	PASS
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	PASS
Signature Unique ID	SWC-117 SWC-121 SWC-122	Signed messages should always have a unique id. A transaction hash should not be used as a unique id.	PASS
Incorrect Constructor Name	SWC-118	Constructors are special functions that are called only once during the contract creation.	PASS
Shadowing State Variable	SWC-119	State variables should not be shadowed.	PASS
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	PASS
Write to Arbitrary Storage Location	SWC-124	The contract is responsible for ensuring that only authorized user or contract accounts may write to sensitive storage locations.	PASS
Incorrect Inheritance Order	SWC-125	When inheriting multiple contracts, especially if they have identical functions, a developer should carefully specify inheritance in the correct order. The rule of thumb is to inherit contracts from more /general/ to more /specific/.	PASS
Insufficient Gas Griefing	SWC-126	Insufficient gas grieving attacks can be performed on contracts which accept data and use it in a sub-call on another contract.	PASS
Arbitrary Jump Function	SWC-127	As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.	PASS

Typographical Error	SWC-129	A typographical error can occur for example when the intent of a defined operation is to sum a number to a variable.	PASS
Override control character	SWC-130	Malicious actors can use the Right-To-Left-Override unicode character to force RTL text rendering and confuse users as to the real intent of a contract.	PASS
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	PASS
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	PASS
Hash Collisions Variable	SWC-133	Using abi.encodePacked() with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The transfer() and send() functions forward a fixed amount of 2300 gas.	PASS
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS



# SMART CONTRACT ANALYSIS

Started	Thursday Dec 15 2022 09:52:28 GMT+0000 (Coordinated Universal Time)
Finished	Friday Dec 16 2022 09:44:14 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	Renq.sol

## Detected Issues

[illegible]

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 30

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- Renq.sol

### Locations

```
29  * manner, since when dealing with meta-transactions the account sending and
30  * paying for execution may not be the actual sender (as far as an application
31  * is concerned).
32  *
33  * This contract is only required for intermediate, library-like contracts.
34
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 61

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- Renq.sol

### Locations

```
60  *
61  * This module is used through inheritance. It will make available the modifier
62  * `onlyOwner`, which can be applied to your functions to restrict their use to
63  * the owner.
64  */
65
```

# SWC-103 | A FLOATING PRAGMA IS SET.

LINE 150

## low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

## Source File

- Renq.sol

## Locations

```

149  /**
150   * @dev Emitted when the allowance of a `spender` for an `owner` is set by
151   * a call to {approve}. `value` is the new allowance.
152   */
153   event Approval(address indexed owner, address indexed spender, uint256 value);
154

```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 237

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- Renq.sol

### Locations

```
236  */
237  function symbol() external view returns (string memory);
238
239  /**
240   * @dev Returns the decimals places of the token.
241
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 263

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- Renq.sol

### Locations

```
262 * TIP: For a detailed writeup see our guide
263 * https://forum.openzeppelin.com/t/how-to-implement-erc20-supply-mechanisms/226[How
264 * to implement supply mechanisms].
265 *
266 * We have followed general OpenZeppelin Contracts guidelines: functions revert
267
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 656

### low SEVERITY

The current pragma Solidity directive is `""^0.8.0""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- Renq.sol

### Locations

```
655  */
656  function burn(uint256 amount) public virtual {
657    _burn(_msgSender(), amount);
658  }
659
660
```

## SWC-103 | A FLOATING PRAGMA IS SET.

LINE 698

### low SEVERITY

The current pragma Solidity directive is `""^0.8.15""`. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

### Source File

- Renq.sol

### Locations

```
697
698  function _transfer(
699  address sender,
700  address recipient,
701  uint256 amount
702
```



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This is a limited report on our findings based on our analysis, in accordance with good industry practice as of the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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