Magic Square

SQRpProRata
Smart Contract Audit Interim Report

Ver. 1.3
June 20, 2024

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Methodology

During the audit process we have analyzed various security aspects in line with our methodology, which includes:

- Manual code analysis
- Best code practices
- ERC20/BEP20 compliance (if applicable)
- Locked ether
- Pool Asset Security (backdoors in the underlying ERC-20)
- FA2 compliance (if applicable)
- Logical bugs & code logic issues
- Error handling issues
- General Denial Of Service(DOS)
- Cryptographic errors
- Weak PRNG issues
- Protocol and header parsing errors
- Private data leaks
- Using components with known vulnerabilities
- Unchecked call return method
- Code with no effects
- Unused vars
- Use of deprecated functions
- Authorization issues
- Reentrancy
- Arithmetic Overflows / Underflows
- Hidden Malicious Code
- External Contract Referencing
- Short Address/Parameter Attack
- Race Conditions / Front Running
- Uninitialized Storage Pointers
- Floating Points and Precision
- Signatures Replay

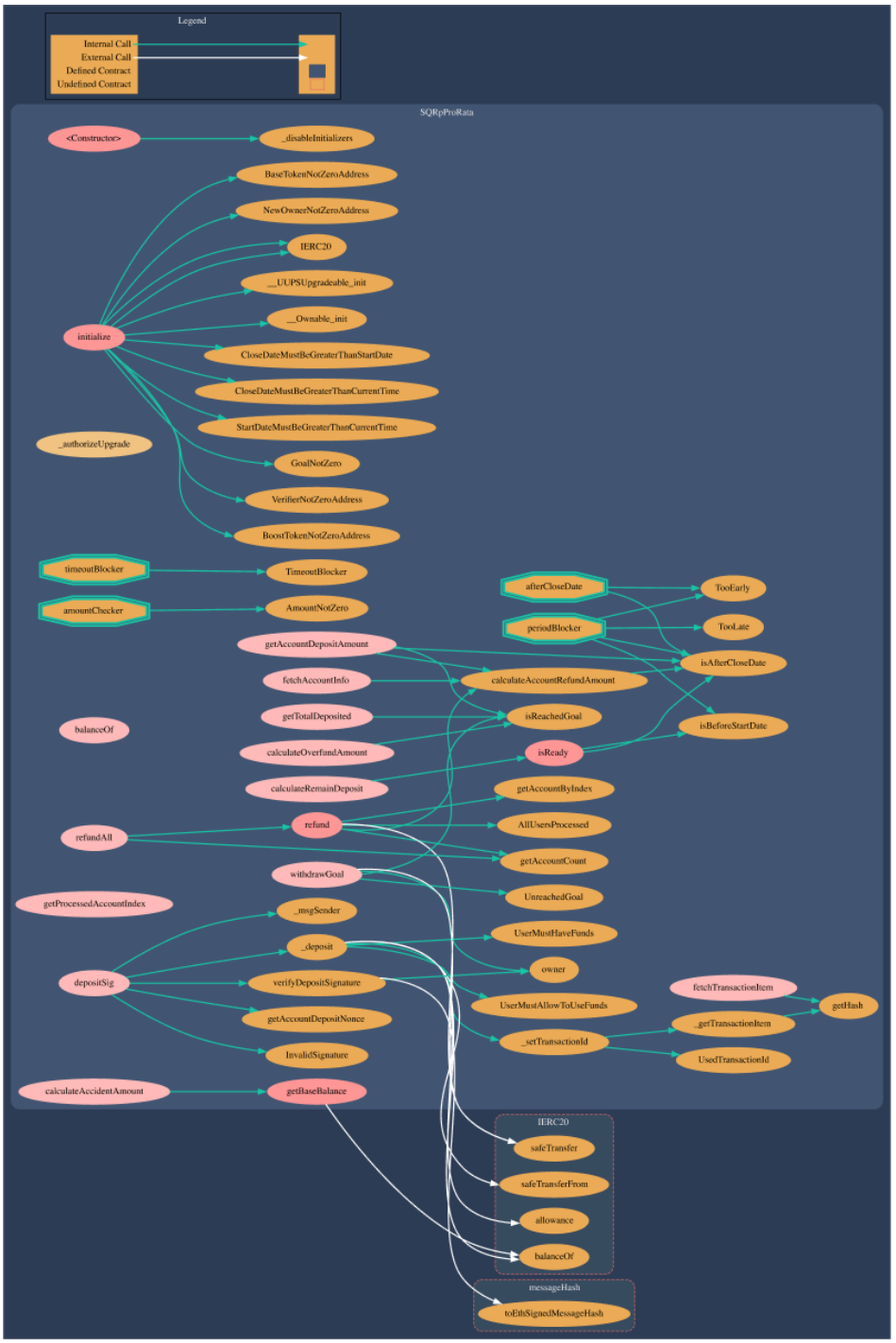
Vulnerabilities we have discovered are listed below.

Vulnerabilities found:

Severity	Amount
INFO	0
LOW	0
MEDIUM	0
HIGH	0
CRITICAL	0
TOTAL:	0

1. SQRpProRata.sol

1.1 Contract structure



Pic.1.1 SQRpProRata.sol structure

1.2 Contract methods analysis

`constructor()`
Vulnerabilities not detected
Math issues not detected

`initialize(`
`address _newOwner,`
`address _baseToken,`
`address _boostToken,`
`address _verifier,`
`uint256 _goal,`
`uint32 _startDate, //0 - skip`
`uint32 _closeDate`
`)`

Vulnerabilities not detected
Math issues not detected

`_authorizeUpgrade(address newImplementation)`
Vulnerabilities not detected
Math issues not detected

`isBeforeStartDate()`
Vulnerabilities not detected
Math issues not detected

`isAfterCloseDate()`
Vulnerabilities not detected
Math issues not detected

`isReady()`
Vulnerabilities not detected
Math issues not detected

`isReachedGoal()`
Vulnerabilities not detected
Math issues not detected

`getAccountCount()`
Vulnerabilities not detected
Math issues not detected

`fetchAccountInfo(address account)`
Vulnerabilities not detected
Math issues not detected

`getBaseBalance()`
Vulnerabilities not detected
Math issues not detected

`balanceOf(address account)`
Vulnerabilities not detected
Math issues not detected

`getHash(string calldata value)`
Vulnerabilities not detected
Math issues not detected

`getAccountDepositNonce(address account)`
Vulnerabilities not detected
Math issues not detected

`getAccountByIndex(uint32 index)`
Vulnerabilities not detected
Math issues not detected

`getAccountDepositAmount(address account)`
Vulnerabilities not detected
Math issues not detected

`getTotalDeposited()`
Vulnerabilities not detected
Math issues not detected

`calculateAccidentAmount()`
Vulnerabilities not detected
Math issues not detected

`calculateRemainDeposit()`
Vulnerabilities not detected
Math issues not detected

`calculateOverfundAmount()`
Vulnerabilities not detected
Math issues not detected

`calculateAccountRefundAmount(address account)`
Vulnerabilities not detected
Math issues not detected

fetchTransactionItem(string calldata transactionId)
Vulnerabilities not detected
Math issues not detected

_getTransactionItem(string calldata transactionId)
Vulnerabilities not detected
Math issues not detected

getProcessedAccountIndex()
Vulnerabilities not detected
Math issues not detected

`_setTransactionId(string calldata transactionId, uint256 amount)`
Vulnerabilities not detected
Math issues not detected

`_deposit( address account, uint256 amount, string calldata transactionId, uint32 timestampLimit )`
Vulnerabilities not detected
Math issues not detected

```
verifyDepositSignature(
address account,
uint256 amount,
bool boost,
uint32 nonce,
string calldata transactionId,
uint32 timestampLimit,
bytes calldata signature
)
```

Vulnerabilities not detected

Math issues not detected

```
depositSig(
uint256 amount,
bool boost,
string calldata transactionId,
uint32 timestampLimit,
bytes calldata signature
)
```

Vulnerabilities not detected

Math issues not detected

TOKEN FLOW	Tokens In, public

`refund(uint32 _batchSize)`	
Vulnerabilities not detected	
Math issues not detected	
TOKEN FLOW	Tokens Out, onlyOwner

`refundAll()`	
Vulnerabilities not detected	
Math issues not detected	
TOKEN FLOW	Tokens Out, onlyOwner

`withdrawGoal()`	
Vulnerabilities not detected	
Math issues not detected	
TOKEN FLOW	Tokens Out, onlyOwner

Verification checksums

Contract name	Bytecode hash(SHA-256)
SQRpProRata.sol	93b876107fe959f26ae9511fafe54e97901131f65 81880ae46e4b38f71aef5ac