Pig Token

Smart Contract Audit Report

SYSFIXED

27 Feb 2021

TABLE OF CONTENTS

AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
Pig Token	PIG	Binance Smart Chain

Addresses

Contract address	0x8850d2c68c632e3b258e612abaa8fada7e6958e5
Contract deployer address	0x54901D18fc35Eb2AA8fA7017d6b8a651c4390191

Project Website

https://pigtoken.finance/

Codebase

https://bscscan.com/address/0x8850d2c68c632e3b258e612abaa8fada7e6958e5#code

SUMMARY

PIG yield farming token includes the following deflationary mechanisms: locking liquidity on all transactions constantly reduces the circulating supply, creating an ever-rising price floor. The blackhole, which initially swallowed 50% of the pool, is getting the 2% yield auto-compounded as well, meaning its exponential.

Contract Summary

Documentation Quality

Pig Token provides a very good documentation with standard of solidity base code.

- The technical description is provided clearly and structured and also dont have any high risk issue.

Code Quality

The Overall quality of the basecode is standard.

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

Test Coverage

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

Audit Findings Summary

- SWC-100 SWC-108 | Explicitly define visibility for all state variables on lines 747.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 135, 167, 190, 191, 226, 262, 489, 730, 730, 730, 730, 731, 731, 750, 750, 750, 750, 751, 751, 751, 751, 882, 884, 921, 967, 986, 992 and 884.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 36.
- SWC-110 SWC-123 | It is recommended to use of revert(), assert(), and require() in Solidity, and the new REVERT opcode in the EVM on lines 883, 884, 884, 968, 968, 969, 970, 1095 and 1096.

CONCLUSION

We have audited the Pig Token project released on February 2021 to discover issues and identify potential security vulnerabilities in Pig Token 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 satisfactory results with low-risk issues.

The issues found in the Pig Token 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 some arithmetic operation issues, a floating pragma is set, a state variable visibility is not set, and out-of-bounds array access which the index access expression can cause an exception in case of the use of an invalid array index value. The current pragma Solidity directive is ""^0.6.12"". 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. It is best practice to set the visibility of state variables explicitly. The default visibility for "inSwapAndLiquify" is internal. Other possible visibility settings are public and private.

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.	ISSUE FOUND
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	ISSUE FOUND
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.	ISSUE FOUND
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 griefing 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	Friday Feb 26 2021 04:49:51 GMT+0000 (Coordinated Universal Time)
Finished	Saturday Feb 27 2021 03:54:32 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	PigToken.sol

Detected Issues

ID	Title	Severity	Status
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "%" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "%" DISCOVERED	low	acknowledged
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SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged

SWC-101	COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-108	STATE VARIABLE VISIBILITY IS NOT SET.	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
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SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 135

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
134   function add(uint256 a, uint256 b) internal pure returns (uint256) {
135   uint256 c = a + b;
136   require(c >= a, "SafeMath: addition overflow");
137
138   return c;
139
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 167

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
166   require(b <= a, errorMessage);
167   uint256 c = a - b;
168
169   return c;
170   }
171
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 190

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
189
190   uint256 c = a * b;
191   require(c / a == b, "SafeMath: multiplication overflow");
192
193   return c;
194
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 191

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
190   uint256 c = a * b;
191   require(c / a == b, "SafeMath: multiplication overflow");
192
193   return c;
194   }
195
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 226

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
225   require(b > 0, errorMessage);
226   uint256 c = a / b;
227   // assert(a == b * c + a % b); // There is no case in which this doesn't hold
228
229   return c;
230
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 262

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
261   require(b != 0, errorMessage);
262   return a % b;
263   }
264   }
265
266
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 489

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
488   _owner = address(0);
489   _lockTime = now + time;
490   emit OwnershipTransferred(_owner, address(0));
491   }
492
493
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 730

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
729   uint256 private constant MAX = ~uint256(0);
730   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
731   uint256 private _rTotal = (MAX - (MAX % _tTotal));
732   uint256 private _tFeeTotal;
733
734
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 730

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
729   uint256 private constant MAX = ~uint256(0);
730   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
731   uint256 private _rTotal = (MAX - (MAX % _tTotal));
732   uint256 private _tFeeTotal;
733
734
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 730

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
729   uint256 private constant MAX = ~uint256(0);
730   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
731   uint256 private _rTotal = (MAX - (MAX % _tTotal));
732   uint256 private _tFeeTotal;
733
734
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 730

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
729   uint256 private constant MAX = ~uint256(0);
730   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
731   uint256 private _rTotal = (MAX - (MAX % _tTotal));
732   uint256 private _tFeeTotal;
733
734
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 731

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
730   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
731   uint256 private _rTotal = (MAX - (MAX % _tTotal));
732   uint256 private _tFeeTotal;
733
734   string private _name = "Pig Token";
735
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 731

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
730   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
731   uint256 private _rTotal = (MAX - (MAX % _tTotal));
732   uint256 private _tFeeTotal;
733
734   string private _name = "Pig Token";
735
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 750

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
749
750   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
751   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
752
753   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
754
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 750

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
749
750   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
751   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
752
753   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
754
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 750

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
749
750   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
751   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
752
753   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
754
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 750

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
749
750   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
751   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
752
753   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
754
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 751

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
750   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
751   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
752
753   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
754   event SwapAndLiquifyEnabledUpdated(bool enabled);
755
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 751

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
750   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
751   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
752
753   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
754   event SwapAndLiquifyEnabledUpdated(bool enabled);
755
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 751

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
750   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
751   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
752
753   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
754   event SwapAndLiquifyEnabledUpdated(bool enabled);
755
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 751

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
750   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
751   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
752
753   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
754   event SwapAndLiquifyEnabledUpdated(bool enabled);
755
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 882

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
881   require(_isExcluded[account], "Account is already excluded");
882   for (uint256 i = 0; i < _excluded.length; i++) {
883   if (_excluded[i] == account) {
884   _excluded[i] = _excluded[_excluded.length - 1];
885   _tOwned[account] = 0;
886
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 884

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
883   if (_excluded[i] == account) {
884   _excluded[i] = _excluded[_excluded.length - 1];
885   _tOwned[account] = 0;
886   _isExcluded[account] = false;
887   _excluded.pop();
888
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 921

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
920   _maxTxAmount = _tTotal.mul(maxTxPercent).div(
921   10**2
922   );
923   }
924
925
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 967

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
966   uint256 tSupply = _tTotal;
967   for (uint256 i = 0; i < _excluded.length; i++) {
968   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
969   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
970   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
971
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 986

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
985   return _amount.mul(_taxFee).div(
986   10**2
987   );
988   }
989
990
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 992

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
991   return _amount.mul(_liquidityFee).div(
992   10**2
993   );
994   }
995
996
```

SWC-101 | COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED

LINE 884

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- PigToken.sol

Locations

```
883   if (_excluded[i] == account) {
884   _excluded[i] = _excluded[_excluded.length - 1];
885   _tOwned[account] = 0;
886   _isExcluded[account] = false;
887   _excluded.pop();
888
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 36

low SEVERITY

The current pragma Solidity directive is ""^0.6.12"". 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

- PigToken.sol

Locations

```
35
36   pragma solidity ^0.6.12;
37   // SPDX-License-Identifier: Unlicensed
38   interface IERC20 {
39
40
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 747

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "inSwapAndLiquify" is internal. Other possible visibility settings are public and private.

Source File

- PigToken.sol

Locations

```
746
747   bool inSwapAndLiquify;
748   bool public swapAndLiquifyEnabled = true;
749
750   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
751
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 883

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- PigToken.sol

Locations

```
882   for (uint256 i = 0; i < _excluded.length; i++) {
883   if (_excluded[i] == account) {
884   _excluded[i] = _excluded[_excluded.length - 1];
885   _tOwned[account] = 0;
886   _isExcluded[account] = false;
887
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 884

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- PigToken.sol

Locations

```
883   if (_excluded[i] == account) {
884   _excluded[i] = _excluded[_excluded.length - 1];
885   _tOwned[account] = 0;
886   _isExcluded[account] = false;
887   _excluded.pop();
888
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 884

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- PigToken.sol

Locations

```
883   if (_excluded[i] == account) {
884   _excluded[i] = _excluded[_excluded.length - 1];
885   _tOwned[account] = 0;
886   _isExcluded[account] = false;
887   _excluded.pop();
888
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 968

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- PigToken.sol

Locations

```
967   for (uint256 i = 0; i < _excluded.length; i++) {
968   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
969   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
970   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
971   }
972
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 968

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- PigToken.sol

Locations

```
967   for (uint256 i = 0; i < _excluded.length; i++) {
968   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
969   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
970   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
971   }
972
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 969

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- PigToken.sol

Locations

```
968   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
969   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
970   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
971   }
972   if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
973
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 970

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- PigToken.sol

Locations

```
969   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
970   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
971   }
972   if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
973   return (rSupply, tSupply);
974
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1095

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- PigToken.sol

Locations

```
1094   address[] memory path = new address[](2);
1095   path[0] = address(this);
1096   path[1] = uniswapV2Router.WETH();
1097
1098   _approve(address(this), address(uniswapV2Router), tokenAmount);
1099
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1096

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- PigToken.sol

Locations

```
1095   path[0] = address(this);
1096   path[1] = uniswapV2Router.WETH();
1097
1098   _approve(address(this), address(uniswapV2Router), tokenAmount);
1099
1100
```

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