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missing-zero-check

Impact: Low

Confidence: Medium

☐ ID-0

[AccessControl.constructor\(address,address\)._admin](#) lacks a zero-check on :
- [admin = _admin](#)

contracts/AccessControl.sol#L23

☐ ID-1

[AccessControl.constructor\(address,address\)._keeper](#) lacks a zero-check on :
- [keeper = _keeper](#)

contracts/AccessControl.sol#L23

calls-loop

Impact: Low

Confidence: Medium

☐ ID-2

[Uniswap.swapExactInputSingle\(uint256,address,address,address\)](#) has external calls inside a loop: [amountOut = swapRouter.exactInputSingle\(params\)](#)

contracts/Uniswap.sol#L24-L44

☐ ID-3

`PriceConsumerV3.getLatestPrice(AggregatorV3Interface)` has external calls inside a loop: `(price) = _feed.latestRoundData()`

contracts/PriceConsumerV3.sol#L45-L50

☐ ID-4

`TransferHelper.safeApprove(address,address,uint256)` has external calls inside a loop: `(success,data) = token.call(abi.encodeWithSelector(IERC20.approve.selector,to,value))`

node_modules/@uniswap/v3-periphery/contracts/libraries/TransferHelper.sol#L43-L50

reentrancy-benign

Impact: Low

Confidence: Medium

☐ ID-5

Reentrancy in `PortfolioManager.addOrder(address,PortfolioManager.OrderType,int256,uint256)`:

External calls:

- `(success,data) = assetToCharge.call(abi.encodeWithSelector(0x23b872dd,msg.sender,address(this),_amount))`

State variables written after the call(s):

- `orders.push(Order(_asset,_orderType,_price,_amount,msg.sender))`

contracts/PortfolioManager.sol#L60-L107

reentrancy-events

Impact: Low

Confidence: Medium

☐ ID-6

Reentrancy in `PortfolioManager.addOrder(address,PortfolioManager.OrderType,int256,uint256)`:

External calls:

- `(success,data) = assetToCharge.call(abi.encodeWithSelector(0x23b872dd,msg.sender,address(this),_amount))`

)

Event emitted after the call(s):

- [OrderAdded\(_asset,_price\)](#)

contracts/PortfolioManager.sol#L60-L107

pragma

Impact: Informational

Confidence: High

☐ ID-7

Different versions of Solidity are used:

- Version used: ['0.8.16', '>=0.5.0', '>=0.6.0', '>=0.7.5', '^0.8.0']
- [^0.8.0](#)
- [^0.8.0](#)
- [>=0.5.0](#)
- [>=0.7.5](#)
- [v2](#)
- [>=0.6.0](#)
- [0.8.16](#)
- [0.8.16](contracts/IWETH .sol#L2)
- [0.8.16](#)
- [0.8.16](#)
- [0.8.16](#)
- [0.8.16](#)
- [v2](#)

node_modules/@chainlink/contracts/src/v0.8/interfaces/AggregatorV3Interface.sol#L2

solc-version

Impact: Informational

Confidence: High

☐ ID-8

solc-0.8.16 is not recommended for deployment

☐ ID-9

Pragma version [0.8.16](#) necessitates a version too recent to be trusted. Consider deploying with

0.6.12/0.7.6/0.8.7

contracts/Uniswap.sol#L2

☐ ID-10

Pragma version[^]0.8.0 allows old versions

node_modules/@chainlink/contracts/src/v0.8/interfaces/AggregatorV3Interface.sol#L2

☐ ID-11

Pragma version0.8.16 necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.7

contracts/PortfolioManager.sol#L2

☐ ID-12

Pragma version[^]0.8.0 allows old versions

node_modules/@openzeppelin/contracts/token/ERC20/IERC20.sol#L4

☐ ID-13

Pragma version^{>=}0.6.0 allows old versions

node_modules/@uniswap/v3-periphery/contracts/libraries/TransferHelper.sol#L2

☐ ID-14

Pragma version^{>=}0.5.0 allows old versions

node_modules/@uniswap/v3-core/contracts/interfaces/callback/IUniswapV3SwapCallback.sol#L2

☐ ID-15

Pragma version0.8.16 necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.7

contracts/PriceConsumerV3.sol#L2

☐ ID-16

Pragma version0.8.16 necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.7

contracts/Objects.sol#L2

☐ ID-17

Pragma version0.8.16 necessitates a version too recent to be trusted. Consider deploying with

0.6.12/0.7.6/0.8.7

contracts/AccessControl.sol#L2

☐ ID-18

Pragma version[0.8.16](contracts/IWETH .sol#L2) necessitates a version too recent to be trusted.
Consider deploying with 0.6.12/0.7.6/0.8.7

contracts/IWETH .sol#L2

low-level-calls

Impact: Informational

Confidence: High

☐ ID-19

Low level call in [TransferHelper.safeTransferETH\(address,uint256\)](#):

- [\(success\) = to.call{value: value}\(new bytes\(0\)\)](#)

node_modules/@uniswap/v3-periphery/contracts/libraries/TransferHelper.sol#L56-L59

☐ ID-20

Low level call in [PortfolioManager.addOrder\(address,PortfolioManager.OrderType,int256,uint256\)](#):

- [\(success,data\) =
assetToCharge.call\(abi.encodeWithSelector\(0x23b872dd,msg.sender,address\(this\),_amount\)
\)](#)

contracts/PortfolioManager.sol#L60-L107

☐ ID-21

Low level call in [TransferHelper.safeApprove\(address,address,uint256\)](#):

- [\(success,data\) = token.call\(abi.encodeWithSelector\(IERC20.approve.selector,to,value\)\)](#)

node_modules/@uniswap/v3-periphery/contracts/libraries/TransferHelper.sol#L43-L50

☐ ID-22

Low level call in [TransferHelper.safeTransferFrom\(address,address,address,uint256\)](#):

- [\(success,data\) =
token.call\(abi.encodeWithSelector\(IERC20.transferFrom.selector,from,to,value\)\)](#)

node_modules/@uniswap/v3-periphery/contracts/libraries/TransferHelper.sol#L13-L22

☐ ID-23

Low level call in `TransferHelper.safeTransfer(address,address,uint256)`:

- `(success,data) = token.call(abi.encodeWithSelector(IERC20.transfer.selector,to,value))`

`node_modules/@uniswap/v3-periphery/contracts/libraries/TransferHelper.sol#L29-L36`

naming-convention

Impact: Informational

Confidence: High

☐ ID-24

Parameter `PortfolioManager.executeOrders(uint256[])._orders` is not in mixedCase

`contracts/PortfolioManager.sol#L168`

☐ ID-25

Parameter

`PortfolioManager.addOrder(address,PortfolioManager.OrderType,int256,uint256)._asset` is not in mixedCase

`contracts/PortfolioManager.sol#L61`

☐ ID-26

Parameter

`PortfolioManager.addOrder(address,PortfolioManager.OrderType,int256,uint256)._orderType` is not in mixedCase

`contracts/PortfolioManager.sol#L62`

☐ ID-27

Parameter

`PortfolioManager.addOrder(address,PortfolioManager.OrderType,int256,uint256)._amount` is not in mixedCase

`contracts/PortfolioManager.sol#L64`

☐ ID-28

Parameter `PriceConsumerV3.getLatestPrice(AggregatorV3Interface)._feed` is not in mixedCase

`contracts/PriceConsumerV3.sol#L46`

☐ ID-29

Parameter

`PortfolioManager.addOrder(address,PortfolioManager.OrderType,int256,uint256)._price` is not in mixedCase

contracts/PortfolioManager.sol#L63

similar-names

Impact: Informational

Confidence: Medium

☐ ID-30

Variable `IUniswapV3SwapCallback.uniswapV3SwapCallback(int256,int256,bytes).amount0Delta` is too similar to

`IUniswapV3SwapCallback.uniswapV3SwapCallback(int256,int256,bytes).amount1Delta`

node_modules/@uniswap/v3-core/contracts/interfaces/callback/IUniswapV3SwapCallback.sol#L17