

audit report 0x6b093998D36f2C7F0cc359441FBB24CC629D5FF0

Sever Issues:

AdvancedTokenStorage.balances (Desktop/Torque.sol#583) is never initialized. It is used in:

- AdvancedTokenStorage.balanceOf(address) (Desktop/Torque.sol#595-602)

AdvancedTokenStorage.allowed (Desktop/Torque.sol#584) is never initialized. It is used in:

- AdvancedTokenStorage.allowance(address,address) (Desktop/Torque.sol#604-612)

AdvancedTokenStorage.totalSupply_ (Desktop/Torque.sol#585) is never initialized. It is used in:

- AdvancedTokenStorage.totalSupply() (Desktop/Torque.sol#587-593)

Remove Uninitialized state variable.

Mild Severity:

Contract locking ether found:

Contract LoanToken (Desktop/Torque.sol#615-665) has payable functions:

- LoanToken.fallback() (Desktop/Torque.sol#628-647)

But does not have a function to withdraw the ether

Remove the payable attribute or add a withdraw function.

Low Severity:

Address.isContract(address) (Desktop/Torque.sol#361-370) uses assembly

- INLINE ASM (Desktop/Torque.sol#368)

Pausable._isPaused(bytes4) (Desktop/Torque.sol#508-518) uses assembly

- INLINE ASM (Desktop/Torque.sol#515-517)

LoanToken.fallback() (Desktop/Torque.sol#628-647) uses assembly

- INLINE ASM (Desktop/Torque.sol#638-646)

Avoid using evm assembly

Low Severity:

Address.sendValue(address,uint256) (Desktop/Torque.sol#400-406) is never used and should be removed

Address.toPayable(address) (Desktop/Torque.sol#378-380) is never used and should be removed

Context._msgData() (Desktop/Torque.sol#429-432) is never used and should be removed

SafeMath.add(uint256,uint256) (Desktop/Torque.sol#57-62) is never used and should be removed

SafeMath.div(uint256,uint256) (Desktop/Torque.sol#129-131) is never used and should be removed

SafeMath.div(uint256,uint256,string) (Desktop/Torque.sol#146–153) is never used and should be removed
SafeMath.divCeil(uint256,uint256) (Desktop/Torque.sol#158–160) is never used and should be removed
SafeMath.divCeil(uint256,uint256,string) (Desktop/Torque.sol#165–175) is never used and should be removed
SafeMath.min256(uint256,uint256) (Desktop/Torque.sol#210–212) is never used and should be removed
SafeMath.mod(uint256,uint256) (Desktop/Torque.sol#188–190) is never used and should be removed
SafeMath.mod(uint256,uint256,string) (Desktop/Torque.sol#205–208) is never used and should be removed
SafeMath.mul(uint256,uint256) (Desktop/Torque.sol#104–116) is never used and should be removed
SafeMath.sub(uint256,uint256) (Desktop/Torque.sol#73–75) is never used and should be removed
SafeMath.sub(uint256,uint256,string) (Desktop/Torque.sol#88–93) is never used and should be removed
SignedSafeMath.add(int256,int256) (Desktop/Torque.sol#296–301) is never used and should be removed
SignedSafeMath.div(int256,int256) (Desktop/Torque.sol#260–267) is never used and should be removed
SignedSafeMath.mul(int256,int256) (Desktop/Torque.sol#232–246) is never used and should be removed
SignedSafeMath.sub(int256,int256) (Desktop/Torque.sol#279–284) is never used and should be removed

Remove unused functions.

Low Severity:

Constant Pausable.Pausable_FunctionPause (Desktop/Torque.sol#501) is not in UPPER_CASE_WITH_UNDERSCORES
Constant LoanTokenBase.sWEI_PRECISION (Desktop/Torque.sol#526) is not in UPPER_CASE_WITH_UNDERSCORES
Variable LoanTokenBase._flTotalAssetSupply (Desktop/Torque.sol#546) is not in mixedCase
Parameter LoanToken.setTarget(address)._newTarget (Desktop/Torque.sol#650) is not in mixedCase

Follow the Solidity naming convention: <https://solidity.readthedocs.io/en/v0.4.25/style-guide.html#naming-conventions>

Low Severity:

LoanTokenBase.WEI_PRECISION (Desktop/Torque.sol#523) is never used in LoanToken (Desktop/Torque.sol#615–665)

LoanTokenBase.WEI_PERCENT_PRECISION (Desktop/Torque.sol#524) is never used in LoanToken (Desktop/Torque.sol#615-665)
LoanTokenBase.sWEI_PRECISION (Desktop/Torque.sol#526) is never used in LoanToken (Desktop/Torque.sol#615-665)
LoanTokenBase.lastSettleTime_ (Desktop/Torque.sol#533) is never used in LoanToken (Desktop/Torque.sol#615-665)
LoanTokenBase._flTotalAssetSupply (Desktop/Torque.sol#546) is never used in LoanToken (Desktop/Torque.sol#615-665)
LoanTokenBase.checkpointPrices_ (Desktop/Torque.sol#551) is never used in LoanToken (Desktop/Torque.sol#615-665)

Remove unused variables

Low Severity:

IERC20.decimals (Desktop/Torque.sol#20) should be constant
IERC20.name (Desktop/Torque.sol#19) should be constant
IERC20.symbol (Desktop/Torque.sol#21) should be constant
LoanTokenBase.baseRate (Desktop/Torque.sol#537) should be constant
LoanTokenBase.checkpointSupply (Desktop/Torque.sol#547) should be constant
LoanTokenBase.decimals (Desktop/Torque.sol#530) should be constant
LoanTokenBase.initialPrice (Desktop/Torque.sol#548) should be constant
LoanTokenBase.kinkLevel (Desktop/Torque.sol#543) should be constant
LoanTokenBase.loanTokenAddress (Desktop/Torque.sol#535) should be constant
LoanTokenBase.lowUtilBaseRate (Desktop/Torque.sol#539) should be constant
LoanTokenBase.lowUtilRateMultiplier (Desktop/Torque.sol#540) should be constant
LoanTokenBase.maxScaleRate (Desktop/Torque.sol#544) should be constant
LoanTokenBase.name (Desktop/Torque.sol#528) should be constant
LoanTokenBase.rateMultiplier (Desktop/Torque.sol#538) should be constant
LoanTokenBase.symbol (Desktop/Torque.sol#529) should be constant
LoanTokenBase.targetLevel (Desktop/Torque.sol#542) should be constant

Add the constant attributes to state variables that never change.

Gas Optimization:

totalSupply() should be declared external:
- IERC20.totalSupply() (Desktop/Torque.sol#22)
balanceOf(address) should be declared external:
- IERC20.balanceOf(address) (Desktop/Torque.sol#23)
allowance(address,address) should be declared external:
- IERC20.allowance(address,address) (Desktop/Torque.sol#24)
approve(address,uint256) should be declared external:
- IERC20.approve(address,uint256) (Desktop/Torque.sol#25)
transfer(address,uint256) should be declared external:

- IERC20.transfer(address,uint256) (Desktop/Torque.sol#26)

transferFrom(address,address,uint256) should be declared external:

- IERC20.transferFrom(address,address,uint256) (Desktop/Torque.sol#27)

owner() should be declared external:

- Ownable.owner() (Desktop/Torque.sol#461-463)

setTarget(address) should be declared external:

- LoanToken.setTarget(address) (Desktop/Torque.sol#649-655)

Use the external attribute for functions never called from the contract to save gas.