

Blockchain Security | Smart Contract Audits | KYC

MADE IN GERMANY

Audit

Security Assessment 22. October, 2021



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Version	Date	Description
1.0	22. October 2021	Layout projectAutomated- /Manual-Security TestingSummary
1.1	22. October 2022	Fixed medium issue

Network

Binance Smart Chain (BEP20)

Website

https://milkywayex.finance/

Medium

https://milkywayex.medium.com/

Description

MilkywayEx is your one-stop decentralized trading platform on the Binance Smart Chain network.

We combine DEX services with DeFi rewarding to offer leveraged trading.

Project Engagement

During the 18th of October 2021, **MilkyWayEx Team** engaged Solidproof.io to audit smart contracts that they created. The engagement was technical in nature and focused on identifying security flaws in the design and implementation of the contracts. They provided Solidproof.io with access to their code repository and whitepaper.

Logo



Contract Link v1.0

https://bscscan.com/address/ 0x39d248e2979910351cc5892fdf420df0fb5f0f68#code

v1.1

https://bscscan.com/address/ 0xa7002fccc20f10a38c579a8d2d14d34f2a9a02a5#code

Vulnerability & Risk Level

Risk represents the probability that a certain source-threat will exploit vulnerability, and the impact of that event on the organization or system. Risk Level is computed based on CVSS version 3.0.

Level	Value	Vulnerability	Risk (Required Action)
Critical	9 - 10	A vulnerability that can disrupt the contract functioning in a number of scenarios, or creates a risk that the contract may be broken.	Immediate action to reduce risk level.
High	7 – 8.9	A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.	Implementation of corrective actions as soon aspossible.
Medium	4 – 6.9	A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.	Implementation of corrective actions in a certain period.
Low	2 – 3.9	A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.	Implementation of certain corrective actions or accepting the risk.
Informational	0 – 1.9	A vulnerability that have informational character but is not effecting any of the code.	An observation that does not determine a level of risk

Auditing Strategy and Techniques Applied

Throughout the review process, care was taken to evaluate the repository for security-related issues, code quality, and adherence to specification and best practices. To do so, reviewed line-by-line by our team of expert pentesters and smart contract developers, documenting any issues as there were discovered.

Methodology

The auditing process follows a routine series of steps:

- 1. Code review that includes the following:
 - i) Review of the specifications, sources, and instructions provided to SolidProof to make sure we understand the size, scope, and functionality of the smart contract.
 - ii) Manual review of code, which is the process of reading source code line-byline in an attempt to identify potential vulnerabilities.
 - iii) Comparison to specification, which is the process of checking whether the code does what the specifications, sources, and instructions provided to SolidProof describe.
- 2. Testing and automated analysis that includes the following:
 - i) Test coverage analysis, which is the process of determining whether the test cases are actually covering the code and how much code is exercised when we run those test cases.
 - ii) Symbolic execution, which is analysing a program to determine what inputs causes each part of a program to execute.
- 3. Best practices review, which is a review of the smart contracts to improve efficiency, effectiveness, clarify, maintainability, security, and control based on the established industry and academic practices, recommendations, and research.
- 4. Specific, itemized, actionable recommendations to help you take steps to secure your smart contracts.

Used Code from other Frameworks/Smart Contracts (direct imports)

Imported packages:

∴ /MilkyWayExRewardsTracker.sol
 ∴ /RewardsContract.sol
 ∴ /IUniswapV2Pair.sol
 ∴ /IUniswapV2Factory.sol
 ∴ /IUniswapV2Router.sol
 ∴ /DividendPayingToken.sol
 ∴ /SafeMath.sol
 ∴ /IterableMapping.sol
 ∴ /Ownable.sol

Tested Contract Files

This audit covered the following files listed below with a SHA-1 Hash.

A file with a different Hash has been modified, intentionally or otherwise, after the security review. A different Hash could be (but not necessarily) an indication of a changed condition or potential vulnerability that was not within the scope of this review.

v1.0

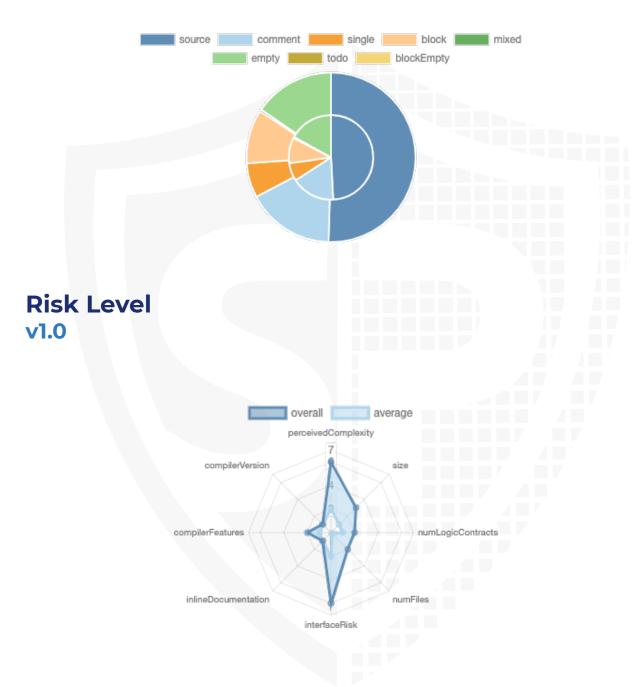
File Name	SHA-1 Hash
contracts/DividendPayingToken.sol	17d53cb94689058b901400a6784c037e3af36bb0
contracts/MilkyWayExRewardsTracker.sol	04aca27460e461b47d5ac6216a296332e9da8df1
contracts/IUniswapV2Pair.sol	a5f9c99358e8488f73b373148f031d4b11e935e7
contracts/RewardsContract.sol	ad4a6d0940b4b31c01f595457e92252a81104089
contracts/SafeMathUint.sol	8b0e5a5ecfff9df63b44f5a3b2e382772e8e22b4
contracts/MilkyWayExToken.sol	58b2844159322edc4f6f82ad169b535d9119a128
contracts/Context.sol	e0c372022e49b1d2923932f29603ae4e0a6cad75
contracts/IUniswapV2Factory.sol	ea3cec8ac8aa96b839615f6c09c45b0bb589c309
contracts/DividendPayingTokenInterface.sol	5d601031c738ef91b52629287badfcef5485bdc0
contracts/IERC20Metadata.sol	4cc38ac1b6e456242c07fffbe9921ddf3de260cb
contracts/SafeMathInt.sol	54330e881076020b806231dde99ff0e13fee9a1e
contracts/SafeMath.sol	cff19c662ce063d1e29d5b197111e7cc454e1a51
contracts/IUniswapV2Router.sol	b5a32b744d4f23c4a7baee28760b0765ae1fe145
contracts/Ownable.sol	b40c1f66bb4745e9ec498ff9af16dfb59f4e7d60
contracts/IterableMapping.sol	2e22f708ad8a140954a27d47906ba5f9978c8c19
contracts/ERC20.sol	248ce26e2fa5b02dd441a83e9348adc4e829aad7
contracts/DividendPayingTokenOptionalInterface.sol	243ea42fd26ba8ec267a8d7a80d809d1ebea2a85
contracts/IERC20.sol	64a882695eb836b8c1065d6af0dacfe9c71d5f4b

v1.1

File Name	SHA-1 Hash
contracts/IERC20.sol	64a882695eb836b8c1065d6af0dacfe9c71d5f4b
contracts/IUniswapV2Router.sol	b5a32b744d4f23c4a7baee28760b0765ae1fe145
contracts/SafeMath.sol	cff19c662ce063d1e29d5b197111e7cc454e1a51
contracts/Ownable.sol	b40c1f66bb4745e9ec498ff9af16dfb59f4e7d60
contracts/IterableMapping.sol	2e22f708ad8a140954a27d47906ba5f9978c8c19
contracts/ERC20.sol	248ce26e2fa5b02dd441a83e9348adc4e829aad7
contracts/DividendPayingTokenOptionalInterface.sol	243ea42fd26ba8ec267a8d7a80d809d1ebea2a85
contracts/DividendPayingToken.sol	17d53cb94689058b901400a6784c037e3af36bb0
contracts/MilkyWayExRewardsTracker.sol	04aca27460e461b47d5ac6216a296332e9da8df1
contracts/IUniswapV2Pair.sol	a5f9c99358e8488f73b373148f031d4b11e935e7
contracts/RewardsContract.sol	ad4a6d0940b4b31c01f595457e92252a81104089
contracts/SafeMathUint.sol	8b0e5a5ecfff9df63b44f5a3b2e382772e8e22b4
contracts/MilkyWayExToken.sol	8656251bd696adc2d18c514443d2a5b80e3418d9
contracts/Context.sol	e0c372022e49b1d2923932f29603ae4e0a6cad75
contracts/IUniswapV2Factory.sol	ea3cec8ac8aa96b839615f6c09c45b0bb589c309
contracts/DividendPayingTokenInterface.sol	5d601031c738ef91b52629287badfcef5485bdc0
contracts/IERC20Metadata.sol	4cc38ac1b6e456242c07fffbe9921ddf3de260cb
contracts/SafeMathInt.sol	54330e881076020b806231dde99ff0e13fee9a1e

Metrics

Source Lines v1.0



Capabilities

Components

Version	Contracts	Libraries	Interfaces	Abstract
1.0	6	4	8	1

Exposed Functions

This section lists functions that are explicitly declared public or payable. Please note that getter methods for public stateVars are not included.

Version	Public	Payable
1.0	174	8

Version	External	Internal	Private	Pure	View
1.0	115	136	6	24	74

State Variables

Version	Total	Public
1.0	60	41

Capabilities

Version	Solidity Versions observed	Experim ental Features	Can Receive Funds	Uses Assembl Y	Has Destroya ble Contract s
1.0	^0.7.6		yes	**** (0 asm blocks)	

Version	Transf ers ETH	Low- Level Calls	Delega teCall	Uses Hash Functi ons	ECRec over	New/ Create/ Create 2
1.0						yes → NewCon tract:Mi lkyWayEx RewardsT racker → NewCon tract:Re wardsCon tract

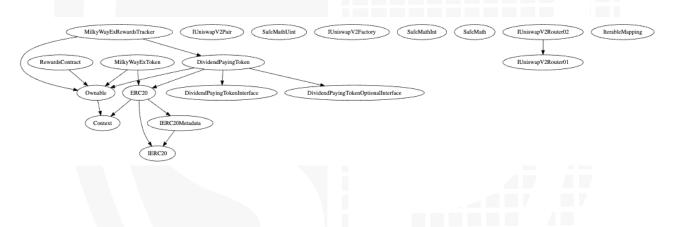
Scope of Work

The above token Team provided us with the files that needs to be tested (Github, Bscscan, Etherscan, files, etc.). The scope of the audit is the main contract (usual the same name as team appended with .sol).

We will verify the following claims:

- 1. Correct implementation of Token standard
- 2. Deployer cannot mint any new tokens
- 3. Deployer cannot burn or lock user funds
- 4. Deployer cannot pause the contract
- 5. Overall checkup (Smart Contract Security)

Inheritance Graph v1.0



Verify Claims

Correct implementation of Token standard

Tested	Verified
√	√

Function	Description	Exist	Tested	Verified
TotalSupply	provides information about the total token supply	\checkmark	√	\checkmark
BalanceOf	provides account balance of the owner's account	√	√	√
Transfer	executes transfers of a specified number of tokens to a specified address	√	√	√
TransferFrom	executes transfers of a specified number of tokens from a specified address	√	√	√
Approve	allow a spender to withdraw a set number of tokens from a specified account	√	√	√
Allowance	returns a set number of tokens from a spender to the owner	√	√	√

Write functions of contract



Deployer cannot mint any new tokens

Name	Exist	Tested	Verified	File
Deployer cannot mint	✓	✓	✓	Main
Comment	Line: -			

Max / Total Supply: 16.000.000.000



Deployer cannot burn or lock user funds

Name	Exist	Tested	Verified
Deployer cannot lock	\checkmark	√	X
Deployer cannot burn	✓	✓	✓

Comments:

v1.0

- Deployer can lock user funds
 - · If address is added to preventer mapping in RewardsContract.sol
- Deployer can lock dividends if address is added to excludedFromDividends mapping with excludeFromDividends function

Deployer cannot pause the contract

Name	Exist	Tested	Verified
Deployer cannot pause	\checkmark	\checkmark	\checkmark



Overall checkup (Smart Contract Security)

Tested	Verified
\checkmark	\checkmark

Legend

Attribute	Symbol
Verfified / Checked	\checkmark
Partly Verified	
Unverified / Not checked	X
Not available	-

OnlyOwner functions

rewardsAdd

rewardsRemove

excludeFromDividends

includeInDividends

rewardsSend

rewardsTime

excludeFromFees

withdrawETH

elonSet

updateGasForProcessing

updateHolderRewardsOffset

updateSingleHolderRewardsOffset

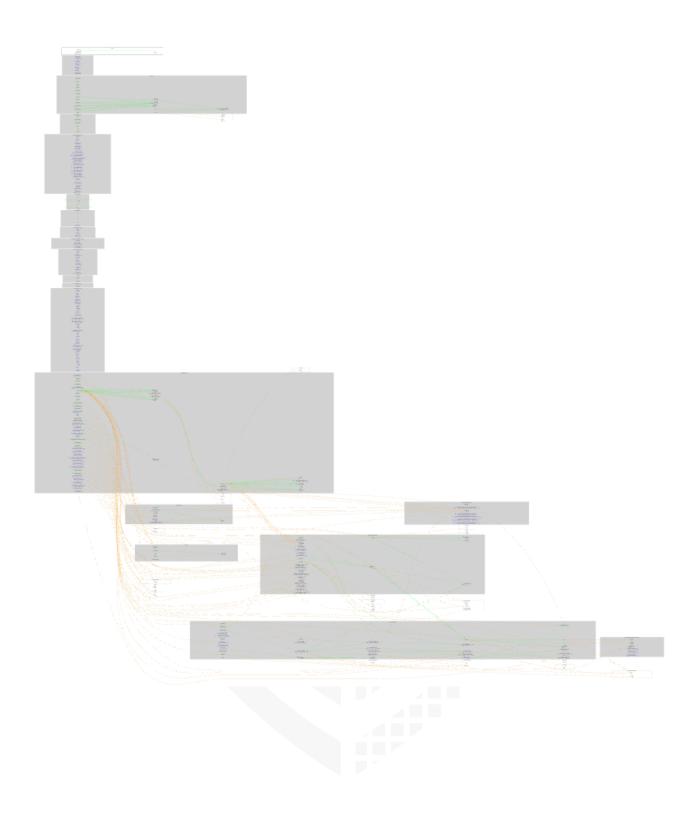
clearHolderRewardsOffset

changeMinimumBalanceToReceiveRewards

changeRewardsPercentage

changeBotWallet

CallGraph



Source Units in Scope

v1.0

Туре	File	Logic Contracts	Interfaces	Lines	nLines	nSLOC	Comment Lines	Complex. Score	Capabilities
2	contracts/DividendPayingToken.sol	1		391	391	239	93	224	. <u>Š</u> .
1	contracts/MilkyWayExRewardsTracker.sol	1		222	212	158	4	114	
Q	contracts/IUniswapV2Pair.sol		1	55	10	5	1	55	
9	contracts/RewardsContract.sol	1		68	68	48	3	52	
\(\rightarrow\)	contracts/SafeMathUint.sol	1		15	15	8	5	3	
2	contracts/MilkyWayExToken.sol	1		464	450	318	14	320	. <u>\$</u> .6
©	contracts/Context.sol	1		24	24	10	12	1	
Q	contracts/IUniswapV2Factory.sol		1	20	9	4	1	17	
Q	contracts/DividendPayingTokenInterface.sol		1	40	12	3	20	10	. <u>Š</u> .
Q	contracts/IERC20Metadata.sol		1	19	14	4	6	9	*
\(\rightarrow\)	contracts/SafeMathInt.sol	1		59	59	29	20	14	
\(\rightarrow\)	contracts/SafeMath.sol	1		47	47	32	2	8	
Q	contracts/IUniswapV2Router.sol		2	141	8	4	1	64	. <u>\$</u>
9	contracts/Ownable.sol	1		47	47	23	14	17	
\equiv 	contracts/IterableMapping.sol	1		65	65	49	2	19	
9	contracts/ERC20.sol	1		286	270	85	154	80	
Q	contracts/DividendPayingTokenOptionalInterface.sol		1	25	12	3	14	7	
Q	contracts/IERC20.sol		1	82	27	17	57	13	*
	Totals	11	8	2070	1740	1039	423	1027	<u>\$6</u>

v1.1

File	Logic Contracts	Interfaces	Lines	nLines	nSLOC	Comment Lines	Complex. Score	Capabilities
contracts/IERC20.sol		1	82	27	17	57	13	<u>*</u>
contracts/IUniswapV2Router.sol		2	141	8	4	1	64	.Š.
contracts/SafeMath.sol	1		47	47	32	2	8	
contracts/Ownable.sol	1		47	47	23	14	17	
contracts/IterableMapping.sol	1		65	65	49	2	19	
contracts/ERC20.sol	1		286	270	85	154	80	
contracts/DividendPayingTokenOptionalInterface.sol		1	25	12	3	14	7	
contracts/DividendPayingToken.sol	1		391	391	239	93	224	.Š.
contracts/MilkyWayExRewardsTracker.sol	1		222	212	158	4	114	
contracts/IUniswapV2Pair.sol		1	55	10	5	1	55	
contracts/RewardsContract.sol	1		68	68	48	3	52	
contracts/SafeMathUint.sol	1		15	15	8	5	3	
contracts/MilkyWayExToken.sol	1		465	451	319	14	321	<u>\$</u> 6
contracts/Context.sol	1		24	24	10	12	1	
contracts/IUniswapV2Factory.sol		1	20	9	4	1	17	
contracts/DividendPayingTokenInterface.sol		1	40	12	3	20	10	.Š.
contracts/IERC20Metadata.sol		1	19	14	4	6	9	<u>*</u>
contracts/SafeMathInt.sol	1		59	59	29	20	14	
Totals	11	8	2071	1741	1040	423	1028	<u>\$6*</u>
	contracts/IERC20.sol contracts/IUniswapV2Router.sol contracts/SafeMath.sol contracts/Ownable.sol contracts/IterableMapping.sol contracts/IterableMapping.sol contracts/DividendPayingTokenOptionalInterface.sol contracts/DividendPayingToken.sol contracts/IbividendPayingToken.sol contracts/IUniswapV2Pair.sol contracts/RewardsContract.sol contracts/SafeMathUint.sol contracts/MilkyWayExToken.sol contracts/IUniswapV2Patr.sol contracts/IUniswapV2Patr.sol contracts/IUniswapV2Factory.sol contracts/IUniswapV2Factory.sol contracts/DividendPayingTokenInterface.sol contracts/IERC20Metadata.sol contracts/SafeMathInt.sol	contracts/IERC20.sol contracts/IUniswapV2Router.sol contracts/SafeMath.sol 1 contracts/Ownable.sol 1 contracts/IterableMapping.sol 1 contracts/IterableMapping.sol 1 contracts/DividendPayingTokenOptionalInterface.sol contracts/DividendPayingToken.sol 1 contracts/IUniswapV2Pair.sol contracts/RewardsContract.sol 1 contracts/SafeMathUint.sol 1 contracts/MilkyWayExToken.sol 1 contracts/Context.sol 1 contracts/IUniswapV2Pair.sol contracts/SafeMathUint.sol 1 contracts/IUniswapV2Pair.sol contracts/DividendPayingToken.sol 1 contracts/DividendPayingToken.sol contracts/IUniswapV2Factory.sol contracts/DividendPayingTokenInterface.sol contracts/DividendPayingTokenInterface.sol contracts/IERC20Metadata.sol contracts/SafeMathInt.sol 1	contracts/IERC20.sol 1 contracts/IUniswapV2Router.sol 2 contracts/SafeMath.sol 1 contracts/Ownable.sol 1 contracts/IterableMapping.sol 1 contracts/IterableMapping.sol 1 contracts/DividendPayingTokenOptionalInterface.sol 1 contracts/DividendPayingTokenOptionalInterface.sol 1 contracts/DividendPayingToken.sol 1 contracts/IUniswapV2Pair.sol 1 contracts/RewardsContract.sol 1 contracts/SafeMathUint.sol 1 contracts/SafeMathUint.sol 1 contracts/Context.sol 1 contracts/IUniswapV2Factory.sol 1 contracts/IUniswapV2Factory.sol 1 contracts/IUniswapV2Factory.sol 1 contracts/IERC20Metadata.sol 1 contracts/IERC20Metadata.sol 1	contracts/IERC20.sol 1 82 contracts/IUniswapV2Router.sol 2 141 contracts/SafeMath.sol 1 47 contracts/Ownable.sol 1 47 contracts/IterableMapping.sol 1 65 contracts/ERC20.sol 1 286 contracts/DividendPayingTokenOptionalInterface.sol 1 391 contracts/DividendPayingToken.sol 1 391 contracts/IluniswapV2Pair.sol 1 222 contracts/RewardsContract.sol 1 68 contracts/RewardsContract.sol 1 68 contracts/SafeMathUint.sol 1 15 contracts/Context.sol 1 465 contracts/Context.sol 1 24 contracts/IUniswapV2Factory.sol 1 20 contracts/IDividendPayingTokenInterface.sol 1 40 contracts/IERC20Metadata.sol 1 1 19 contracts/SafeMathInt.sol 1 59	contracts/IERC20.sol 1 82 27 contracts/IERC20.sol 2 141 8 contracts/SafeMath.sol 1 47 47 contracts/Ownable.sol 1 47 47 contracts/IterableMapping.sol 1 65 65 contracts/ERC20.sol 1 286 270 contracts/DividendPayingTokenOptionalInterface.sol 1 25 12 contracts/DividendPayingToken.sol 1 391 391 391 contracts/MilkyWayExRewardsTracker.sol 1 222 212 contracts/HuniswapV2Pair.sol 1 55 10 contracts/RewardsContract.sol 1 68 68 contracts/SafeMathUint.sol 1 15 15 contracts/Gontext.sol 1 465 451 contracts/Context.sol 1 24 24 contracts/DividendPayingTokenInterface.sol 1 40 12 contracts/IERC20Metadata.sol 1 1 49 59	contracts/IERC20.sol 1 82 27 17 contracts/IUniswapV2Router.sol 2 141 8 4 contracts/SafeMath.sol 1 47 47 32 contracts/Ownable.sol 1 47 47 23 contracts/IterableMapping.sol 1 65 65 49 contracts/ERC20.sol 1 286 270 85 contracts/DividendPayingTokenOptionalInterface.sol 1 25 12 3 contracts/DividendPayingToken.sol 1 391 391 239 contracts/MilkyWayExRewardsTracker.sol 1 222 212 158 contracts/IUniswapV2Pair.sol 1 55 10 5 contracts/RewardsContract.sol 1 68 68 48 contracts/SafeMathUint.sol 1 15 15 8 contracts/Gontext.sol 1 24 24 10 contracts/IUniswapV2Factory.sol 1 20 9 4	contracts/IERC20.sol 1 82 27 17 57 contracts/IUniswapV2Router.sol 2 141 8 4 1 contracts/SafeMath.sol 1 47 47 32 2 contracts/Contacts/Contacts/Contacts/Demanders 1 47 47 23 14 contracts/Demanders 1 65 65 49 2 contracts/Demanders 1 286 270 85 154 contracts/DividendPayingTokenOptionalInterface.sol 1 25 12 3 14 contracts/DividendPayingToken.sol 1 391 391 239 93 contracts/MilkyWayExRewardsTracker.sol 1 222 212 158 4 contracts/MilkyWayExRewardsTracker.sol 1 222 212 158 4 contracts/RewardsContract.sol 1 55 10 5 1 contracts/SafeMathUint.sol 1 465 48 3 contracts/Context.sol <td< td=""><td>contracts/IERC20.sol 1 82 27 17 57 13 contracts/IUniswapV2Router.sol 2 141 8 4 1 64 contracts/SqfeMath.sol 1 47 47 32 2 8 contracts/IUniswapV2Poinsol 1 47 47 23 14 17 contracts/IUniswapVaping.sol 1 65 65 49 2 19 contracts/ERC20.sol 1 286 270 85 154 80 contracts/DividendPayingTokenOptionalInterface.sol 1 25 12 3 14 7 contracts/IUnidendPayingToken.sol 1 391 391 239 93 224 contracts/MilkyWayExRewardsTracker.sol 1 222 212 158 4 114 contracts/IUniswapV2Pair.sol 1 55 10 5 1 55 contracts/RewardsContract.sol 1 68 68 48 3 52</td></td<>	contracts/IERC20.sol 1 82 27 17 57 13 contracts/IUniswapV2Router.sol 2 141 8 4 1 64 contracts/SqfeMath.sol 1 47 47 32 2 8 contracts/IUniswapV2Poinsol 1 47 47 23 14 17 contracts/IUniswapVaping.sol 1 65 65 49 2 19 contracts/ERC20.sol 1 286 270 85 154 80 contracts/DividendPayingTokenOptionalInterface.sol 1 25 12 3 14 7 contracts/IUnidendPayingToken.sol 1 391 391 239 93 224 contracts/MilkyWayExRewardsTracker.sol 1 222 212 158 4 114 contracts/IUniswapV2Pair.sol 1 55 10 5 1 55 contracts/RewardsContract.sol 1 68 68 48 3 52

Legend

Attribute	Description
Lines	total lines of the source unit
nLines	normalized lines of the source unit (e.g. normalizes functions spanning multiple lines)
nSLOC	normalized source lines of code (only source-code lines; no comments, no blank lines)
Comment Lines	lines containing single or block comments
Complexity Score	a custom complexity score derived from code statements that are known to introduce code complexity (branches, loops, calls, external interfaces,)

Audit Results

AUDIT PASSED

Critical issues

- no critical issues found -

High issues

- no high issues found -

Medium issues

Issue	File	Type	Line	Description
#1	MilkyW ayExTok en	Low level calls (low-level-calls)	376 (ED)	Check the call success. Ensure that the return value of a low-level call is checked or logged

Low issues

Issue	File	Type	Line	Description
#1	MilkyW ayExTok en	A floating pragma is set	3	The current pragma Solidity directive is ""^0.7.6"".
#2	MilkyW ayExTok en	Missing Zero Address Validation (missing- zero-check)	164	Check that the address is not zero
#3	Dividen dPaying Token	Missing Zero Address Validation (missing- zero-check)	196	Check that the address is not zero
#4	Dividen dPaying Token	Tautology or contradiction (tautology)	156, 165	Fix the incorrect comparison by changing the value type or the comparison
#5	MilkyW ayExTok en	Tautology or contradiction (tautology)	419, 425	Fix the incorrect comparison by changing the value type or the comparison

Informational issues

Issue	File	Type	Line	Description
#1	MilkyW ayExTok en	State variables that could be declared constant (constable-states)	29, 28, 40,	Add the `constant` attributes to state variables that never change
#2	MilkyW ayExRe wardsTr acker	State variables that could be declared constant (constable-states)	37	Add the `constant` attributes to state variables that never change
#3	Reward sContra ct	State variables that could be declared constant (constable-states)	18	Add the `constant` attributes to state variables that never change

Audit Comments

22. October 2021: v1.0

- · Deployer can lock user funds
 - · If address is added to preventer mapping in RewardsContract.sol
- Deployer can lock dividends if address is added to excludedFromDividends mapping with excludeFromDividends function
- The return value of a low-level call is not checked and may lead to wrong results

v1.1

· Fixed medium issue

SWC Attacks

ID	Title	Relationships	Status
<u>SW</u> <u>C-13</u> <u>6</u>	Unencrypted Private Data On-Chain	CWE-767: Access to Critical Private Variable via Public Method	PASSED
<u>SW</u> <u>C-13</u> <u>5</u>	Code With No Effects	CWE-1164: Irrelevant Code	PASSED
<u>SW</u> <u>C-13</u> <u>4</u>	Message call with hardcoded gas amount	CWE-655: Improper Initialization	PASSED
<u>SW</u> <u>C-13</u> <u>3</u>	Hash Collisions With Multiple Variable Length Arguments	CWE-294: Authentication Bypass by Capture-replay	PASSED
<u>SW</u> <u>C-13</u> <u>2</u>	Unexpected Ether balance	CWE-667: Improper Locking	PASSED
<u>SW</u> <u>C-13</u> <u>1</u>	Presence of unused variables	CWE-1164: Irrelevant Code	PASSED
<u>SW</u> <u>C-13</u> <u>0</u>	Right-To-Left- Override control character (U+202E)	CWE-451: User Interface (UI) Misrepresentation of Critical Information	PASSED
<u>SW</u> <u>C-12</u> <u>9</u>	Typographical Error	CWE-480: Use of Incorrect Operator	PASSED
<u>SW</u> <u>C-12</u> <u>8</u>	DoS With Block Gas Limit	CWE-400: Uncontrolled Resource Consumption	PASSED

<u>SW</u> <u>C-12</u> <u>7</u>	Arbitrary Jump with Function Type Variable	CWE-695: Use of Low-Level Functionality	PASSED
<u>SW</u> <u>C-12</u> <u>5</u>	Incorrect Inheritance Order	CWE-696: Incorrect Behavior Order	PASSED
<u>SW</u> <u>C-12</u> <u>4</u>	Write to Arbitrary Storage Location	CWE-123: Write-what-where Condition	PASSED
<u>SW</u> <u>C-12</u> <u>3</u>	Requirement Violation	CWE-573: Improper Following of Specification by Caller	PASSED
<u>SW</u> <u>C-12</u> <u>2</u>	Lack of Proper Signature Verification	CWE-345: Insufficient Verification of Data Authenticity	PASSED
<u>SW</u> <u>C-12</u> <u>1</u>	Missing Protection against Signature Replay Attacks	CWE-347: Improper Verification of Cryptographic Signature	PASSED
<u>SW</u> <u>C-12</u> <u>0</u>	Weak Sources of Randomness from Chain Attributes	CWE-330: Use of Insufficiently Random Values	PASSED
<u>SW</u> <u>C-11</u> <u>9</u>	Shadowing State Variables	CWE-710: Improper Adherence to Coding Standards	PASSED
<u>SW</u> <u>C-11</u> <u>8</u>	Incorrect Constructor Name	CWE-665: Improper Initialization	PASSED
<u>SW</u> <u>C-11</u> <u>7</u>	Signature Malleability	CWE-347: Improper Verification of Cryptographic Signature	PASSED

<u>SW</u> <u>C-11</u> <u>6</u>	Timestamp Dependence	CWE-829: Inclusion of Functionality from Untrusted Control Sphere	PASSED
<u>SW</u> <u>C-11</u> <u>5</u>	Authorization through tx.origin	CWE-477: Use of Obsolete Function	PASSED
<u>SW</u> <u>C-11</u> <u>4</u>	Transaction Order Dependence	CWE-362: Concurrent Execution using Shared Resource with Improper Synchronization ('Race Condition')	PASSED
<u>SW</u> <u>C-11</u> <u>3</u>	DoS with Failed Call	CWE-703: Improper Check or Handling of Exceptional Conditions	PASSED
<u>SW</u> <u>C-11</u> <u>2</u>	Delegatecall to Untrusted Callee	CWE-829: Inclusion of Functionality from Untrusted Control Sphere	PASSED
<u>SW</u> <u>C-111</u>	Use of Deprecated Solidity Functions	CWE-477: Use of Obsolete Function	PASSED
<u>SW</u> <u>C-11</u> <u>O</u>	Assert Violation	CWE-670: Always-Incorrect Control Flow Implementation	PASSED
<u>SW</u> <u>C-10</u> <u>9</u>	Uninitialized Storage Pointer	CWE-824: Access of Uninitialized Pointer	PASSED
<u>SW</u> <u>C-10</u> <u>8</u>	State Variable Default Visibility	CWE-710: Improper Adherence to Coding Standards	PASSED
<u>SW</u> <u>C-10</u> <u>7</u>	Reentrancy	CWE-841: Improper Enforcement of Behavioral Workflow	PASSED
<u>SW</u> <u>C-10</u> <u>6</u>	Unprotected SELFDESTRUC T Instruction	CWE-284: Improper Access Control	PASSED

<u>SW</u> <u>C-10</u> <u>5</u>	Unprotected Ether Withdrawal	CWE-284: Improper Access Control	PASSED
<u>SW</u> <u>C-10</u> <u>4</u>	Unchecked Call Return Value	CWE-252: Unchecked Return Value	PASSED
<u>SW</u> <u>C-10</u> <u>3</u>	Floating Pragma	CWE-664: Improper Control of a Resource Through its Lifetime	NOT PASSED
<u>SW</u> <u>C-10</u> <u>2</u>	Outdated Compiler Version	CWE-937: Using Components with Known Vulnerabilities	PASSED
<u>SW</u> <u>C-10</u> <u>1</u>	Integer Overflow and Underflow	CWE-682: Incorrect Calculation	PASSED
<u>SW</u> <u>C-10</u> <u>0</u>	Function Default Visibility	CWE-710: Improper Adherence to Coding Standards	PASSED



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