

RugFreeCoins Audit



Amano Financial Token

Smart Contract Security Audit

April 25, 2022

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Audit details



Audited project Amano Financial Token



Contract Address

0x7B230b3825f9bee3279Dc1815D1ebc256B131B3E



Client contact

Amano Financial Team



Blockchain

Binance smart chain



Project website

https://amano.financial/

Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the disclaimer below – please make sure to read it in full.

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Background

Rugfreecoins was commissioned by the Amano Financial Team to perform an audit of the smart contract.

https://www.bscscan.com/address/0x7B230b3825f9bee3279Dc1815D1ebc256B131B3E

The focus of this audit is to verify that the smart contract is secure, resilient, and working according to the specifications.

The information in this report should be used to understand the risk exposure of the smart contract, project feasibility, long-term sustainability, and as a guide to improving the security posture of the smart contract by remediating the issues that were identified.

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About the project

Amano Financial is a token built on the Binance Smart Chain that is with an innovative investment use case the main purpose of which is to seek out constant revenue sources, **autostaking protocol backed by Defi 3.0 yield farming** on BSC. Amano Token will bring an unparallel, fixed APY of **306,720.043%**, while imposing profound ease, simplicity, and accessibility upon all Amano holders. Each transaction, purchase incurs 14% fee, and sale incurs a 20% fee.

Features

- 3% of the buy and 6% of the sell fee is directed to the Amano Buyback Assurance which helps sustain and back the Staking Rewards provided by the Positive Rebase.
- The sustainability fee of 3% when buying and 5% when selling for treasury, which
 is allocated for marketing is what allows Amano Token to hold the aforementioned
 promise. Tokens will be swapped into BNB and will be sent to a marketing wallet. This
 way, Amano Token will have enough funds to promote the coin and spend for future
 development without selling tokens as the traditional way.
- The additional component included under the sustainability section is a liquidity fee of 6% when buying and selling, which is a redistribution mechanism that ensures the trading pool always has sufficient liquidity.
- 2% when buying and 3% when selling of all Amano Token tokens traded are sent for manual burn. The more that is traded, the more get put into the burn causing the burn wallet to grow in size, larger and larger through self-fulfilling auto-compounding which in return acts to reduce the circulating supply of Amano Token and keeping the Amano Token Protocol stable.

ROADMAP

DEVELOPMENT PHASE 1

- Website
- Social Platforms
- KYC & Audit by ContractWolf | Gamma
- KYC & Audit by Coinsult
- Audit by RugFreeCoins
- Highest KYC by PinkSale
- PinkSale Fair Launch
- Application Launch
- Amano Dex

PHASE 2

- Solidity Finance Audit
- Certik Audit
- Amano Launchpad
- 1st Marketing Round

MARKETING

- All Social Media Influencers
- BscNews + BscDaily
- Amano Hero NFT & Airdrop
- BSCScan Ads & DeXTools Ads
- Coinzilla Ads & Poocoin Ads

LISTINGS

- CoinmarketCap & CoinGecko.com
- Amano Bank
- Token Tracker, dApp Trackers & Fork Trackers
- Dappradar & Dapp.com
- Amano Play-to-Earn Crypto Games
- Others

Tokenomics

14% fee when buying

- 3% of trade goes to Amano Buyback Assurance fund in BUSD
- 3% of trade goes to the treasury in BUSD
- 2% trade goes for the burn
- 6% of trade goes to the liquidity pool.

20% fee when selling

- 6% of trade goes to Amano Buyback Assurance Fund in BUSD
- 5% of trade goes to the treasury in BNB
- 3% trade goes for the burn
- 6% of trade goes to the liquidity pool.

Target market and the concept

Target market

- Anyone who's interested in the Crypto space with long-term investment plans.
- Anyone who's ready to earn a passive income by holding tokens.
- Anyone who's interested in trading tokens.
- Anyone who's ready in receiving automatic staking and compound rewards every 15 minutes.
- Anyone who's interested in receiving fixed interest of 0.022916% per 15 minutes and 306,720.043% per year.
- Anyone who's interested in taking part with the future plans of the Amano token.
- Anyone who's interested in making financial transactions with any other party using Amano Token as the currency.

Core concept

Reward mechanism

5% of all trading fees are stored in the Amano Token fund which helps sustain and back the staking rewards provided by the positive rebase.

Amano Token fund which is a separate wallet in the ecosystem. The Amano Token fund uses an algorithm that backs the Rebase Rewards and is supported by a portion of the buy and sell trading fees that accrue in the wallet.

In simple terms, the staking rewards (rebase rewards) which are distributed every 15 minutes at a rate of **0.022916**% are backed by the Amano Token parameter, thus ensuring a high and stable interest rate to Amano Token holders.

Sustainable mechanism

The sustainability fee of 3% when buying and 6% selling for treasury that allocated for marketing is what allows Amano to promote the token and use funds to further the development of the platform. Tokens will be swapped into BNB and will be sent to a marketing wallet. This way, Amano token will have access to the funds without selling tokens as the traditional way, which will enable them to consume funds without hurting the project.

The liquidity fee of 6% when buying and selling, which is a redistribution mechanism that ensures the trading pool always has sufficient liquidity.

2% of Amano token tokens from buying and selling traded are burnt. The more that is traded, the more get put into the fire causing the burn wallet to grow in size, larger and larger through self-fulfilling Auto-Compounding, reducing the circulating supply and keeping the Amano token stable.

Potential to grow with score points

1.	Project efficiency	10/10
2.	Project uniqueness	9/10
3	Information quality	8/10
4	Service quality	9/10
5	System quality	9/10
6	Impact on the community	9/10
7	Impact on the business	9/10
8	Preparing for the future	8/10
Total	Points	8.875/10

Contract details

Token contract details for 25th April 2022

Contract name	Amano Financial
Contract address	0x7B230b3825f9bee3279Dc1815D1ebc256B131B3E
Token supply	5,000,000,000
Token ticker	AMANO
Decimals	18
Token holders	2
Transaction count	2
Auto liquidity receiver	0x000000000000000000000000000000000000
Firepit	
Amano Buyback Assurance Fund Receiver	0x000000000000000000000000000000000000
Treasury Receiver	0x000000000000000000000000000000000000
Contract deployer address	0xE296869532f6A38E372444cbcBf7a745179d6378
Contract's current owner address	0xe296869532f6a38e372444cbcbf7a745179d6378

Contract code function details

No	Category	Item	Result
1	Coding conventions	BRC20 Token standards	pass
		compile errors	pass
		Compiler version security	pass
		visibility specifiers	pass
		Gas consumption	pass
		SafeMath features	pass
		Fallback usage	pass
		tx.origin usage	pass
		deprecated items	pass
		Redundant code	pass
		Overriding variables	pass
2	Function call audit	Authorization of function call	pass
		Low level function (call/delegate call) security	pass
		Returned value security	pass
		Self-destruct function security	pass
3	Business security	Access control of owners	pass
		Business logics	pass
		Business implementations	pass
4	Integer overflow/underflow		pass
5	Reentrancy		pass
6	Exceptional reachable state		pass
7	Transaction ordering dependence		pass
8	Block properties dependence		pass
9	Pseudo random number generator (PRNG)		pass
10	DoS (Denial of Service)		pass
11	Token vesting implementation		pass
12	Fake deposit		pass

13 Event security pas

Contract description table

The below table represents the summary of the contracts and methods in the token contract. We scanned the whole contract and listed down all the Interfaces, functions, and implementations with their visibility and mutability.

Contract	Туре	Bases		
L	Function Name	Visibility	Mutability	Modifiers
SafeMathInt	Library			
L	mul	Internal 🖺		
L	div	Internal 🦺		
L	sub	Internal 🦺		
L	add	Internal 🦺		
L	abs	Internal 🦺		
IERC20	Interface			
L	totalSupply	External		NO
L	balanceOf	External		NO
L	allowance	External		NO
L	transfer	External		NO
L	approve	External [NO
L	transferFrom	External		NO
SafeMath	Library			

L	add	Internal 🦲	
L	sub	Internal 🦺	
L	sub	Internal 🦺	
L	mul	Internal 🦺	
L	div	Internal 🦺	
L	div	Internal 🦺	
L	mod	Internal 🦺	
InterfaceLP	Interface		
L	sync	External [NO.
		1	
Roles	Library		
L	add	Internal 🦲	
L	remove	Internal 🦺	
L	has	Internal 🖺	
ERC20 Detailed	Implementation	IERC20	
L		Public [NO.
L	name	Public	NO.
L	symbol	Public [NO.
L	decimals	Public [NO.

IDEXRouter	Interface			
L	factory	External [NO
L	WETH	External		NO
L	addLiquidity	External		NO
L	addLiquidityETH	External	ED	NO
L	swapExactTokensForTokensSupportingFe eOnTransferTokens	External [NO
L	swapExactETHForTokensSupportingFeeO nTransferTokens	External [(1)	NO.
L	swapExactTokensForETHSupportingFeeO nTransferTokens	External [NO.
IDEX Factory	Interface			
L	createPair	External		NO.
Ownable	Implementation			
L		Public		NO
L	owner	Public [NO
L	renounceOwnership	Public		onlyOwner
L	transferOwnership	Public		onlyOwner
L	_transferOwnership	Internal 🦺		
Amano Financial	Implementation	ERC20 Detailed, Ownable		
L		Public		ERC20 Detailed

L		External [<u>u</u>	NO
L	totalSupply	External [NO
L	allowance	External [NO
L	balanceOf	Public		NO
L	checkFeeExempt	External [NO
L	checkSwapThreshold	External [NO
L	shouldRebase	Internal 🖺		
L	shouldTakeFee	Internal 🖺		
L	shouldSwapBack	Public		NO
L	getCirculatingSupply	Public [NO
L	getLiquidityBacking	Public [NO
L	isOverLiquified	Public [NO
L	manualSync	Public [NO
L	transfer	External [validRecipient
L	_basicTransfer	Internal 🦺		
L	_transferFrom	Internal 🦺		
L	transferFrom	External [validRecipient
L	_swapAndLiquify	Private 🖺		
L	_addLiquidity	Private 🖺		
L	_addLiquidityBusd	Private 🖺		
L	_swapTokensForBNB	Private 🖺		

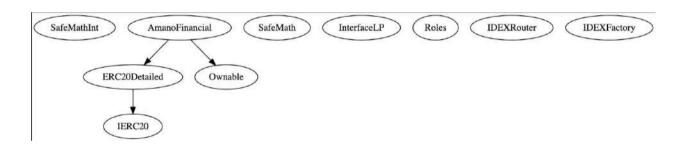
L	_swapTokensForBusd	Private P	
L	swapBack	Internal 🦺	swapping
L	takeFee	Internal 🦺	
L	decreaseAllowance	External	NO.
L	increaseAllowance	External	NO
L	approve	External [NO.
L	_rebase	Private P	
L	coreRebase	Private P	
L	manualRebase	External [onlyOwner
L	setAutomatedMarketMakerPair	Public	onlyOwner
L	setInitialDistributionFinished	External [onlyOwner
L	setFeeExempt	External [onlyOwner
L	setFees	External [onlyOwner
L	setRebaseFrequency	External [onlyOwner
L	setSwapBackSettings	External [onlyOwner
L	setFeeReceivers	External [onlyOwner
L	clearStuckBalance	External [onlyOwner
L	rescueToken	External [onlyOwner
L	setAutoRebase	External [onlyOwner
L	setRewardYield	External [onlyOwner
L	setFeesOnNormalTransfers	External [onlyOwner

L	setNextRebase	External [onlyOwner
L	setMaxSellTransaction	External	onlyOwner

Legend

Symbol	Meaning
	Function can modify state
CD	Function is payable

Inheritance Hierarchy



Security issue checking status

- High severity issues
 No High severity issues found
- Medium severity issues
 No medium severity issues found
- Low severity issues
 No low severity issues found
- Centralization Risk

High Centralization Risk

The owner can enable/disable trading anytime

```
ftrace|funcSig
function setInitialDistributionFinished(bool _value1) external onlyOwner {
    require(initialDistributionFinished != _value1, "Not changed");
    initialDistributionFinished = _value1;
}
```

The owner can set max sell transaction to very low value

```
ftrace|funcSig
function setMaxSellTransaction(uint256 _maxTxn†) external onlyOwner {
    require(_maxTxn† != 0, "cannot be 0");
    maxSellTransactionAmount = _maxTxn†;
}
```

- ★ Informed and fixed
- ❖ Fee limit set only for buy Fees, the owner can change sell fees more than 100%

```
ftrace | funcSig
function setFees(
   uint256 liquidityFee ↑,
   uint256 _amanoAssuranceValue 1,
   uint256 _treasuryFee*,
   uint256 _sellFeeTreasuryAdded 1,
   uint256 sellFeeABAAdded 1,
   uint256 _feeDenominator↑
) external onlyOwner {
   require(
      _sellFeeTreasuryAdded * <= MAX_FEE_RATE &&
          "wrong"
   );
   liquidityFee = _liquidityFee1;
   buyFeeABA = _amanoAssuranceValue1;
   treasuryFee = _treasuryFee *;
   sellFeeTreasuryAdded = _sellFeeTreasuryAdded1;
   sellFeeABAAdded = sellFeeABAAdded 1;
   totalBuyFee = liquidityFee.add(treasuryFee).add(buyFeeABA).add(
      burnFeeBuy
   );
   totalSellFee = totalBuyFee
      .add(sellFeeTreasuryAdded)
      .add(sellFeeABAAdded)
      .add(burnFeeSell);
   feeDenominator = _feeDenominator1;
   require(totalBuyFee <= feeDenominator / 4);</pre>
```

Owner privileges

The owner can manually rebase the contract

```
ftrace|funcSig
function manualRebase() external onlyOwner {
    require(!inSwap, "Try again");
    require(nextRebase <= block.timestamp, "Not in time");

    uint256 circulatingSupply = getCirculatingSupply();
    int256 supplyDelta = int256(
        circulatingSupply.mul(rewardYield).div(rewardYieldDenominator))
    );

    coreRebase(supplyDelta);
    manualSync();
}</pre>
```

The owner can add/remove pair address

```
function setAutomatedMarketMakerPair(address _pair*, bool _value*)
   public
   onlyOwner
   require(
       automatedMarketMakerPairs[_pair†] != _value†,
       "Value already set"
   automatedMarketMakerPairs[_pair†] = _value†;
   if (_value1) {
       _markerPairs.push(_pair1);
       require(_markerPairs.length > 1, "Required 1 pair");
       for (uint256 i = 0; i < _markerPairs.length; i++) {</pre>
            if (_markerPairs[i] == _pair1) {
                _markerPairs[i] = _markerPairs[_markerPairs.length - 1];
                _markerPairs.pop();
               break:
   emit SetAutomatedMarketMakerPair(_pair*, _value*);
```

The owner can enable/disable trading anytime

```
ftrace|funcSig
function setInitialDistributionFinished(bool _value1) external onlyOwner {
    require(initialDistributionFinished != _value1, "Not changed");
    initialDistributionFinished = _value1;
}
```

The owner can include/exclude wallets from fees

```
ftrace|funcSig
function setFeeExempt(address _addr 1, bool _value 1) external onlyOwner {
    require(_isFeeExempt[_addr 1] != _value 1, "Not changed");
    _isFeeExempt[_addr 1] = _value 1;
}
```

❖ The owner can change all fees, each fees maximum up 20%, total buy fees maximum up to 25% and total sell fees maximum up to 45%

```
function setFees(
   uint256 _liquidityFee ↑,
   uint256 _amanoAssuranceValue *,
   uint256 _treasuryFee*,
   uint256 _sellFeeTreasuryAdded *,
   uint256 _sellFeeABAAdded *
) external onlyOwner {
      _sellFeeABAAdded * <= MAX_FEE_RATE,
      "wrong"
   liquidityFee = _liquidityFee1;
   buyFeeABA = _amanoAssuranceValue*;
   treasuryFee = _treasuryFee†;
   sellFeeTreasuryAdded = _sellFeeTreasuryAdded†;
   sellFeeABAAdded = _sellFeeABAAdded1;
   totalBuyFee = liquidityFee.add(treasuryFee).add(buyFeeABA).add(
      burnFeeBuy
   totalSellFee = totalBuyFee
      .add(sellFeeTreasuryAdded)
      .add(sellFeeABAAdded)
      .add(burnFeeSell);
   require(totalBuyFee <= feeDenominator / 4);</pre>
   require(totalSellFee <= 45);
```

The owner can change rebase frequency

```
ftrace|funcSig
function setRebaseFrequency(uint256 _rebaseFrequency1) external onlyOwner {
    require(_rebaseFrequency1 <= MAX_REBASE_FREQUENCY, "Too high");
    rebaseFrequency = _rebaseFrequency1;
}</pre>
```

The owner can enable/disable swap back and can change swap point

```
ftrace|funcSig
function setSwapBackSettings(
    bool _enabled ,
    uint256 _num ,
    uint256 _denom ;
) external onlyOwner {
    swapEnabled = _enabled ;
    gonSwapThreshold = TOTAL_GONS.div(_denom ).mul(_num );
}
```

The owner can change all fee receivers' address

```
ftrace|funcSig
function setFeeReceivers(
   address _liquidityReceiver1,
   address _treasuryReceiver1,
   address _amanoBuybackAssuranceFundReciver1
) external onlyOwner {
   liquidityReceiver = _liquidityReceiver1;
   treasuryReceiver = _treasuryReceiver1;
   amanoBuybackAssuranceFundReciver = _amanoBuybackAssuranceFundReciver1;
}
```

❖ The owner can get BNB and other bep20 tokens in the contract to owner wallet

```
ftrace|funcSig
function clearStuckBalance(address _receiver1) external onlyOwner {
    uint256 balance = address(this).balance;
    payable(_receiver1).transfer(balance);
}

ftrace|funcSig
function rescueToken(address tokenAddress1, uint256 tokens1)
    external
    onlyOwner
    returns (bool success1)
{
    return ERC20Detailed(tokenAddress1).transfer(msg.sender, tokens1);
}
```

The owner can change reward yield rate

```
ftrace | funcSig

function setRewardYield(
    uint256 _rewardYieldf,
    uint256 _rewardYieldDenominatorf
) external onlyOwner {
    rewardYield = _rewardYieldf;
    rewardYieldDenominator = _rewardYieldDenominatorf;
}
```

❖ The owner can enable/disable fees on wallet-to-wallet transactions

```
ftrace|funcSig
function setFeesOnNormalTransfers(bool _enabled ↑) external onlyOwner {
    require(feesOnNormalTransfers != _enabled ↑, "Not changed");
    feesOnNormalTransfers = _enabled ↑;
}
```

❖ The owner can manually change next auto rebase time

```
ftrace|funcSig
function setNextRebase(uint256 _nextRebase1) external onlyOwner {
    nextRebase = _nextRebase1;
}
```

❖ The owner can change max sell amount to any amount greater than 0

```
ftrace|funcSig
function setMaxSellTransaction(uint256 _maxTxn1) external onlyOwner {
    require(_maxTxn1 != 0, "cannot be 0");
    maxSellTransactionAmount = _maxTxn1;
}
```

Audit conclusion

RugFreeCoins team has performed in-depth testings, line by line manual code review, and automated audit of the smart contract. The smart contract was analyzed mainly for common smart contract vulnerabilities, exploits, manipulations, and hacks. According to the smart contract audit.

Smart contract functional Status: PASSED

Number of risk issues: 2

Solidity code functional issue level: PASSED

Number of owner privileges: 13

Centralization risk correlated to the active owner: HIGH

Smart contract active ownership: YES