

# **Security Review of**

Azuro

January 2023

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## Files in scope

Following files in <https://github.com/Azuro-protocol/Azuro-v2/tree/52b52a13edc632a88c238ad7669b98e30c896389/contracts>:

```
- libraries/  
  - AffiliateHelper.sol  
  - CoreTools.sol  
  - FixedMath.sol  
  - Math.sol  
  - SafeCast.sol  
- utils/  
  - LiquidityTree.sol  
  - OwnableUpgradeable.sol  
- Access.sol  
- AzuroBet.sol  
- Core.sol  
- CoreBase.sol  
- Factory.sol  
- LP.sol  
- SafeOracle.sol
```

## Current status

All discovered issues have been fixed by the developer. No known issues are present in: <https://github.com/Azuro-protocol/Azuro-v2/tree/8f9b43887062f36aa4c3910f6a05323a2aa294b3/contracts>

## Issues

### 1. Public view function LiquidityTree.getLeavesAmount() returns incorrect value

*type: incorrect implementation / severity: minor*

`LiquidityTree.getLeavesAmount()` always returns `treeNode[node].amount` which means all function arguments except `node` are effectively ignored.

*status - fixed*

The function has been removed and the issue is no longer present in: <https://github.com/Azuro-protocol/Azuro-v2/tree/8f9b43887062f36aa4c3910f6a05323a2aa294b3/contracts>

### 2. Public view function LiquidityTree.getLeavesAmount() returns incorrect value

*type: incorrect implementation / severity: minor*

In `SafeOracle.createCondition` it's possible to set `proposeDeadline` in the past, either so that the condition is immediately resolvable by the owner, or that `applyCancelCondition` can be immediately called.

*status - fixed*

The issue has been fixed and is no longer present in: <https://github.com/Azuro-protocol/Azuro-v2/tree/8f9b43887062f36aa4c3910f6a05323a2aa294b3/contracts>

### 3. Public view function LiquidityTree.getLeavesAmount() returns incorrect value

*type: incorrect implementation / severity: medium*

In `SafeOracle` conditions can be in a state where both `resolveCondition` and `cancelCondition` are callable by the owner and also `applyCancelCondition` is callable because `resolveCondition` and `cancelCondition` are callable even after `condition.proposeDeadline + DECISION_PERIOD`.

*status - fixed*

The issue has been fixed and is no longer present in: <https://github.com/Azuro-protocol/Azuro-v2/tree/8f9b43887062f36aa4c3910f6a05323a2aa294b3/contracts>