



Review of Week 4 Strat

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Lock Up Due to Oracle Failure

`_getWantTokenPrice` L763 - includes `require(minPrice>0)`, so calls will revert if any oracle fails.

`liquidatePosition` and `liquidateAllPositions` call `_getWantTokenPrice`, so neither function will execute if an oracle fails. But, there may be an urgent need to liquidate when an oracle fails.

Potential Solutions: Rewrite `liquidateAllPositions` so that it does not call `liquidatePosition/_getWantTokenPrice`

Or, use the remaining valid oracle if one oracle fails.




Strategy Does Not Immediately Detect Loss

prepareReturn L304 - _profit is calculated as $\text{estimatedTotalAssets}() - \text{totalDebt}$

liquidatePosition L407 - loss is calculated as $\text{debtOutstanding} + \text{profit} - \text{looseWant}$ (after freeing collateral)

If the strategy can free sufficient want to cover the debtOutstanding (plus profit), the strategy will not report a loss.

For example, the strategy may not report a loss despite experiencing a loss in the yVault or despite being partially liquidated.



Current Ratio and Amount to Mint Calculated Differently

`adjustPosition` L342 - When computing `currentRatio` calls `getPessimisticRatioOfCdpWithExternalPrice`, which at L214 takes the minimum of `getWantTokenPrice` and `getSpotPrice(ilk)`

`_mintMoreInvestmentToken` L556 - uses `getWantTokenPrice`. If `getWantTokenPrice` is higher than `getSpotPrice(ilk)`, the strategy will mint more investment tokens than what is actually indicated by the `currentRatio`. This could result in more frequent rebalancing.



Note: All profits swept into want

_takeYVaultProfit LL650-658 - All valueOfInvestment above balanceOfDebt is sold into want, so the debt cannot be paid with the contents of the yVault if the yVault experiences a loss after a harvest.



Note: Unable to payoff debt

There is an extreme corner case where there isn't sufficient investment token nor want to pay off the debt. The state would most likely occur after attempting to `liquidateAllPositions` after a `yVault` loss with `leaveDebtBehind` set to `true`. After this has executed, there could still be collateral and debt in the vault but no other assets to pay if off. (So, don't change your mind about `leaveDebtBehind` after calling `liquidateAllPositions`.)



external risk analysis based on maker modules

External risks

- Governance proposals should insure that the addition to the new user being whitelisted by yearn protocol
 - `grantCdpManagingRightsToUser`
- Analysis of the nature of `gemJoinAdapter` :
 - Possibility of the malicious join adapter .
- How to insure that when `dss-spell` is invoked , the relevant changes should not affect the strategy.