

Update and Standardize cToken Implementation

Updated as of block [19326578](#) at 2/28/2024, 9:19:59 AM ET

- ID: 49
- Proposer: [0x8169522c2C57883E8EF80C498aAB7820dA539806](#)
- Start Block: 12687553 (6/22/2021, 9:36:06 PM ET)
- End Block: 12707263 (6/25/2021, 11:31:43 PM ET)
- Targets: [0x70e36f6BF80a52b3B46b3aF8e106CC0ed743E8e4](#) ;
[0x5d3a536E4D6DbD6114cc1Ead35777bAB948E3643](#) ;
[0xFace851a4921ce59e912d19329929CE6da6EB0c7](#) ;
[0x12392F67bdf24faE0AF363c24aC620a2f67DAd86](#) ;
[0x35A18000230DA775CAc24873d00Ff85BccdeD550](#) ;
[0xf650C3d88D12dB855b8bf7D11Be6C55A4e07dCC9](#) ;
[0xccF4429DB6322D5C611ee964527D42E5d685DD6a](#) ;
[0x3d9819210A31b4961b30EF54bE2aed79B9c9Cd3B](#)

Forum Post

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Proposal Text

Update and Standardize cToken Implementation

This proposal is a patch, developed by Compound Labs, which updates the base cToken implementation contract, and adopts it across all upgradable markets.

Changelog

The `seize` function has been modified to transfer 2.8% of a liquidation to cToken reserves, reducing the risk of cascading liquidations that could render the protocol insolvent. With each liquidation, the protocol's ability to recover (or utilize reserves) increases.

Given the proliferation of COMP-like governance tokens, the `delegate` function has been merged into the base cToken implementation.

Adoption

The seven upgradable cTokens, deployed starting 18 months ago, currently rely on five different cToken implementation contracts, many of which lack the most modern features.

This proposal unifies all upgradable cTokens with a single implementation, which reduces the surface area of technical debt, and slightly reduces gas costs.

Development

This patch was developed publicly, coupled with completed scenario analysis. In addition to the Compound Labs bug bounty program, a secondary bug bounty was offered through [Immunefi](#).









During the review period for [Proposal 048](#), community member pyggie identified potential improvements to the cToken event logs and public interface; these have been included in this proposal, alongside a bounty of 30 COMP for their efforts.

[Discussion](#)

Checks

Checks Compound Proposal Details Passed

Info:

- 1-  Function `_setImplementation(address,bool,bytes)` is removed from `0x70e36f6bf80a52b3b46b3af8e106cc0ed743e8e4` contract
- 2-  Function `_setImplementation(address,bool,bytes)` is removed from `0x5d3a536e4d6dbd6114cc1ead35777bab948e3643` contract
- 3-  Function `_setImplementation(address,bool,bytes)` is removed from `0xfac851a4921ce59e912d19329929ce6da6eb0c7` contract
- 4-  Function `_setImplementation(address,bool,bytes)` is removed from `0x12392f67bdf24fae0af363c24ac620a2f67dad86` contract
- 5-  Function `_setImplementation(address,bool,bytes)` is removed from `0x35a18000230da775cac24873d00ff85bccded550` contract
- 6-  Function `_setImplementation(address,bool,bytes)` is removed from `0xf650c3d88d12db855b8bf7d11be6c55a4e07dcc9` contract
- 7-  Function `_setImplementation(address,bool,bytes)` is removed from `0xccf4429db6322d5c611ee964527d42e5d685dd6a` contract
- 8-  Grant **30 COMP** tokens to [0x91400bE76b7171Cf932Ae252390d2b60e2C73013](#).