

Auction Price Multiplier

Alias: Parameter Name: buf Containing Contracts: MCD_CLIP_ILK Scope: Vault Type (Ilk) Technical Docs: [Liquidations 2.0](#)

Description

The Auction Price Multiplier parameter is a multiplier that is applied to the starting price of a collateral auction.

Each vault type has its own Auction Price Multiplier that can be adjusted by Maker Governance separately. This multiplier is intended to be greater than 1.0x because Liquidations 2.0 uses falling price auctions. This means that it is generally preferable for the auction price to begin above the market price and then fall to the correct value over some amount of time.

Example

Auction Price Multiplier = 1.6x OSM Price at Liquidation = 100

1. User A owns a vault with a liquidation price of 120.
2. The ETH OSM receives a price update for 100 and liquidation of User A's vault takes place.
3. An auction of User A's collateral begins with a starting price of 160 due to the Auction Price Multiplier of 1.6x.
- 5.

Purpose

In the general case, when falling price collateral auctions commence, the Auction Price Multiplier stops the Maker Protocol from beginning the auction lower than the current market price. An ideal outcome for the Maker Protocol is for collateral auctions to start slightly above the market price and then fall to the market price as quickly as possible.

Trade-offs

In a situation where a drop in collateral prices triggers liquidations but is swiftly followed by an increase in collateral prices, the Protocol runs the risk of starting an auction at a lower price than the market price. This is bad for the vault holder because the collateral will be sold at a discount. If this discount exceeds the liquidation penalty, this can also be bad for the Maker Protocol. An Auction Price Multiplier greater than 1.0x reduces the likelihood of this situation, as the starting auction price is artificially increased.

The advantage of the Auction Price Multiplier greater than 1.0x is best illustrated with an example.

Example

ETH drops from 1000 to 800 and liquidations are triggered for User A's vault.

Due to the OSM (Oracle Security Module), these liquidations are delayed by one hour. In that one hour, the ETH price then increases to 900.

ETH OSM Price at Liquidation = 800 ETH Market Price during Auction = 900

Scenario 1 - 1.0x Multiplier

Starting Auction Price = 800

1. Collateral Auction for User A's ETH begins at a price of 800.
2. Auction sells User A's ETH at a price of 800, 100 below the ETH market price.
3. Vault owner has lost a larger percentage of their collateral in the auction.
- 4.

Scenario 2 - 1.2x Multiplier

Starting Auction Price = 960

1. Collateral Auction for User A's ETH begins at a price of 960.
2. Auction price drops over time and reaches 900.
3. Auction sells User A's ETH at a price close to 900, the market price.
4. The downside to a higher Auction Price Multiplier is that, in a situation where the market price of a collateral type continues to drop, the falling price auction may never reach the market price before it expires. In this situation, the sale of the collateral is delayed and the result is an overall worse price than if the Auction Price Multiplier had been lower.

This negative effect of the Auction Price Multiplier can be mitigated by setting an [Auction Price Function](#) that complements the multiplier. For example, by setting a higher Auction Price Multiplier in combination with an exponentially decreasing Auction Price Function.

Changes

Adjusting an Auction Price Multiplier parameter for a specific vault type is a manual process that requires an executive vote. Changes to Auction Price Multiplier parameters are subject to the [GSM Pause Delay](#).

Why increase this parameter?

An Auction Price Multiplier parameter might be increased for a specific vault type if in the general case auctions were starting at prices below the market price.

Why decrease this parameter?

An Auction Price Multiplier parameter might be decreased for a specific vault type if in the general case auctions were being regularly reset due to the price reaching the [Max Auction Drawdown](#) price.

Considerations

The Starting Price for an auction is calculated using the OSM (Oracle Security Module) price feed multiplied by the Auction Price Multiplier.

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[Previous Auction Price Function](#) [Next Local Liquidation Limit](#) Last updated 1 year ago On this page * [Description](#) * [Purpose](#) * [Trade-offs](#) * [Changes](#) * [Considerations](#)

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