

Preamble

In light of the current market events and the endgame launch announcement, it is of major importance to monitor the Smart Burn Engine (SBE) to ensure parameters are optimized for cost efficiency.

The first part of the analysis focuses on the performance of the SBE in the period 21 February - 13 March, while the second part on the optimal parameter reconfiguration. [The Stability Fee increase](#) allows for MakerDAO to have higher profit estimates and reserves which, according to the [Stability Scope 9.1.2](#), should lead towards higher Rate of MKR Accumulation. The change of this meta-parameter affects then changes in other meta-parameters, namely bump

and hop

, which then need to be optimized.

This proposal accompanied by the analysis consists of (i) increase to The Rate Of MKR Accumulation for 120M, from 80M to 200M and (ii) reconfiguration of hop

and bump

parameters which need to be adjusted to the new target rate of accumulation.

To sum up, we suggest the Stability Facilitator to propose increasing the Rate of MKR Accumulation to 200M, lowering the hop

parameter to 11,826 seconds, and increasing bump

to 75,000. Refer to the analysis section for a breakdown of how these numbers were calculated.

Further on this proposal is in compliance with the [GOV12.1.2 bootstrapping edit proposal](#), assuming the successful ratification, the recommended hop

and bump

parameters should be proposed by the Stability Facilitators and included in the next available executive vote.

Smart Burn Engine Meta-Parameter Reconfiguration Proposal

As mentioned above, The Rate of MKR Accumulation meta-parameter (defined in the Stability Scope 9.1.2A) increase from the current value of [80 million Dai per year](#) to the proposed value of 200 million DAI per year as per [GOV12.1.2 bootstrapping edit proposal](#) does not require a governance poll, since it is included in the GOV12.1.2 bootstrapping edit proposal.

Smart Burn Engine hop Parameter Reconfiguration Proposal

We suggest the Stability Facilitator to propose the following parameter changes which can go directly to executive vote, assuming that the [GOV12.1.2 bootstrapping edit proposal](#) passes:

Decrease the hop

parameter for 7,884 seconds from 19,710 seconds to 11,826 seconds.

Increase the bump

parameter for 25,000 DAI from 50,000 DAI to 75,000 DAI.

This proposal changes assume that hop

and bump

contained in executive vote [0xD8D60b7A9998098261DF5175B5b0Fb567CD0Fb1A](#) had been executed. If this is not the case, the reconfiguration changes values will be different, but nonetheless, the final targeted figures for hop

and 11,826 and bump

and 75,000 DAI should still be implemented as dictated by the Stability Scope language.

Stability Scope Bounded Mutable Alignment Artifact Changes

No additional changes are required in addition to what is proposed in the [GOV12.1.2 bootstrapping edit proposal](#).

Analysis

Data Gathering

The analysis covers the period 21 February 2024 - 13 March 2024, and takes into account the parameters update proposed on 17 January and effective on-chain on 29 January at 17:42 UTC. At the time of writing, the last [Parameter Reconfiguration Proposal](#) was not yet effective on chain, so the analysis is still focused on the [parameters proposed on 17 January 2024](#), where hop

was equal to 26,280 seconds, bump

equal to 50,000 DAI, and The Annual Rate of MKR Accumulation equal to 60M DAI.

All data is pulled and presented as of 00:00 UTC 14 March 2024.

We pulled data from Etherscan on [Uniswap v2 DAI/MKR LP accumulation by the DSS Pause Proxy](#) as well as [DAI tokens Transferred from the DSS Flapper](#), while ETH prices are weighted average prices across major exchanges. This provides a general overview of the amount of DAI used and LP tokens accumulated which can help determine total execution costs, efficiency, and LP focused metrics.

[Smart Burn Engine - Transaction Statistics and Metrics 13 March 2024](#)

[Smart Burn Engine - Parameter Configuration 13 March 2024](#)

Further information can be found on the [Makerburn](#) site.

SBE Transaction Analysis

For the period 21 February 2024 - 13 March 2024, the SBE has used a total of 7,192,816 DAI - of which 3,600,000 spent and 3,592,816 paired - to accumulate a total of 70,575 units of Uniswap v2 DAI/MKR LP token. Compared to 20 February the Uniswap v2 DAI/MKR LP has grown by \$24,164,175 in nominal terms (a 25.97% increase) to reach a total pool size of \$117,212,886.

In the period 21 February 2024 - 13 March 2024, the DAI necessary to be paired has dropped from 29,932 to 29,931 and in the period 29 January - 20 February from 49,903 to 49,891, following the trend highlighted in the previous analyses. This time too, the reason behind the drop is the growth in the pool liquidity size, which comes from SBE's transactions but also due to general increases in the price of MKR.

Distribution of Delay Periods

During the 21 February 2024 - 13 March 2024 period (21.65 days), the SBE executed a total of 72 actions, corresponding to the theoretical maximum of 72 transactions given hop

of 26,280.

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Grafico

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[\[//makerdao-forum-backup.s3.dualstack.us-east-1.amazonaws.com/original/3X/b/1/b1331158e80f161d28e8980fdeee23d00c55b0bb.png\]](#)

The maximum delay registered was equal to 4.60 minutes while 90% of total delays were lower than 2 minutes, meaning that the SBE has been operating with quasi-perfect efficiency

Market Impact

The realized Market Impact of the SBE's trades can be calculated by looking at the amount of DAI that must be paired with MKR to provide in the LP, accounting for the 0.3% swap fee charged by Uniswap. To calculate the average market impact of each execution, we use the equation:

The market impact has been declining steadily, especially since MKR started to appreciate in value, giving an additional rationale to go towards higher bumps.

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Chart

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[/makerdao-forum-backup.s3.dualstack.us-east-1.amazonaws.com/original/3X/0/9/09f6ba280017c9c4279e284d17c3e5c487b164cd.png)

Parameter Optimization

The aim of the analysis is assessing whether increasing the Rate of MKR Accumulation to 200M would impact current parameters. Given the fact that the estimate of annual profits has risen significantly after the [Accelerated Proposal of 8 March](#), it is now feasible for Maker to increase the Rate of MKR Accumulation towards higher levels. The estimates of annual profits equal to ~196M and the margin of ~18M on top of the surplus buffers' upper limit allow for Maker to be more active in the Uniswap v2 DAI/MKR LP.

For the current pool liquidity size of \$117,212,886, parameters would be optimized to reduce costs at bump

= 75,000 and hop

= 11,826 seconds. This can be seen from the following graph, illustrating the relationship between bumps and costs for the current LP size.

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Chart

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[/makerdao-forum-backup.s3.dualstack.us-east-1.amazonaws.com/original/3X/0/9/0953a671ab9d1cbb01921d7da38fca673b44af3.png)

This is significantly below the sandwich limit bump after which sandwich attacks become profitable. Thanks to the [defi sandwich tool](#), we can simulate pool sizes and find at which bump size sandwich attacks are profitable. Given the current size, sandwich attacks are not profitable up to a bump size of 178,573.

Conclusion

The main takeaways from this analysis are the following:

- The SBE is currently transacting at the theoretical rate of MKR accumulation.
- The surplus buffer is currently above the DAI 50M threshold and does not hinder SBE's actions
- The market impact of SBE's activity is declining, even after the parameters update.
- Current parameters are not optimized for cost efficiency in case of an increase in the theoretical rate of MKR accumulation, and should move towards a smaller hop

and higher bump

for the current LP Size.

- BA Labs will continue monitoring the SBE and propose an update to the parameters and meta parameters according to the language in the Stability Scope when it is needed.
- This proposal is in compliance with meta-parameters defined in the [GOV12.1.2 bootstrapping edit proposal](#).

References

Data sheets:

[Smart Burn Engine - Transaction Statistics and Metrics 13 March 2024](#)

[Smart Burn Engine - Parameter Configuration 13 March 2024](#)

More about SBE:

[Introduction of Smart Burn Engine and Initial Parameters](#)

[Smart Burn Engine - Performance to 30 July 2023](#)

[Smart Burn Engine Parameters Update #1](#)

[Smart Burn Engine - Transaction Analysis #2](#)

[Smart Burn Engine - Transaction Analysis and Parameter Reconfiguration Update #3](#)

[Smart Burn Engine - Transaction Analysis and Parameter Reconfiguration Update #4](#)

[Smart Burn Engine - The Rate Of MKR Accumulation Reconfiguration and Transaction Analysis & Parameter Reconfiguration Update #5](#)

External Resources:

<https://etherscan.io/token/0x517f9dd285e75b599234f7221227339478d0fcc8?a=0xbe8e3e3618f7474f8cb1d074a26affef007e98fb>

<https://etherscan.io/token/0x6b175474e89094c44da98b954eedeac495271d0f?a=0x0c10ae443ccb4604435ba63da80ccc63311615bc>

[Accelerated Proposal: Rate System, GSM Delay, PSM-USDC-A ttl Changes](#) [Maker Core

](/c/maker-core/92)

This post covers proposed protocol parameter changes by BA Labs as a member of the Stability Advisory Council. Final changes are pending approval by the responsible Stability Facilitators. As previously mentioned in [MIP104 Stability Scope Language Out-of-Schedule Language Change](#), the crypto market is currently experiencing relatively high volatility and high rates. As a prudent response, Maker governance has the ability to utilize article “3.3: Dai Savings Rate and Base Rate Changes in Demand S...

[Stability Scope Parameter Changes #8](#) [Maker Core

](/c/maker-core/92)

Stability Scope Parameter Changes #8 Introduction This post covers BA Labs’ eighth parameter changes proposal as a member of the Stability Advisory Council. Final changes are pending approval by the responsible Stability Facilitators. For further context, refer to BA Labs’ previous Stability Scope Parameter Changes proposals below. Previous Stability Scope Parameter Change Proposals

<https://forum.makerdao.com/t/decentralized-collateral-scope-parameter-changes-1-april-2023/20302...>

[GOV12.1.2 bootstrapping edit proposal](#) [Maker Core

](/c/maker-core/92)

Stability Scope Bounded Mutable Alignment Artifact Preamble

MIP#: 104

Title: Stability Scope Bounded Mutable Alignment Artifact

Author(s): @rune

Contributors:

Tags: endgame, scope-framework

Type: General

Status: Accepted

Date Proposed: 2023-02-06

Date Ratified: 2023-03-27

Dependencies:

Replaces:

Ratification Poll URL: <https://vote.makerdao.com/polling/Qmbndmkr>

Forum URL: <https://forum.makerdao.com/t/mip104-the-decentralized-collateral-scope-framework/19685>

0: The Stability Scope T...

makerburn.com

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Dashboard for watching DAI minting and MKR token burning in real time.