

# Introduction

In Q1, 2024, [MIP113: Governance Scope Bounded Mutable Alignment Artifact](#) (the Governance Scope) was updated to include two new sections related to SparkLend security, namely (i) [10.2.8: SparkLend Freezer Mom](#) and (ii) [10.3.1: Multisig Freeze of SparkLend](#).

The SparkLend Freezer Mom contract (defined in section 10.2.8 of the Governance Scope) allows Maker Governance to bypass the GSM delay to either freeze or pause any markets in SparkLend. The contract also allows the undoing of such actions for any market in SparkLend. This additional safety feature was implemented as part of the SparkLend Proxy Spell (Ethereum) at [0x2f2c514137173bc98B3699A0d291f7593637c596](#), following an [executive vote](#) on January 12.

The implementation details of an External Security Access Multisig (defined in section 10.3.1 in the Governance Scope), on the other hand, have not yet been defined or ratified by Maker Governance.

Therefore, with this post, [@BA-Labs](#) (i) introduces the practical details regarding the SparkLend External Security Access Multisig, and (ii) recommends to the Governance Facilitators to propose a governance poll regarding the SparkLend External Security Access Multisig is placed into the voting system in the next governance polling cycle.

## SparkLend External Security Access Multisig

According to section 10.3.1 in the Governance Scope, the Multisig Freeze feature of SparkLend should exist alongside the SparkLend Freezer Mom contract, ensuring that the Maker community can take timely action in case of an emergency which requires immediate intervention. The solution can only be used in cases of extreme emergencies such as potential code exploits which have existential threat potential.

## Motivation and Argumentation

SparkLend is based on Aave v3 code base, which implies that technical exploits or malfunctions can be replicated between the protocols in some cases. SparkLend strategy has been much more risk-averse compared to Aave, since only blue-chip highly liquid asset are considered and non-essential features are disabled, which will likely continue to be the case, as Aave is adding additional features in the upcoming V3.1 while SparkLend is continuing to remove them in addition to development of new safety features. Nevertheless, since Aave governance has the ability to pause the markets in the form of [Aave Guardians](#) while SparkLend is currently subject to governance spell process, the potential exploit time window is much longer in SparkLend. For this reason, we believe it is important to have an emergency access ability to react in a timely manner in the case there is a known exploit identified and prevent potential existential threat to the Maker Ecosystem and users of SparkLend.

## Technical Ability and Maker Governance

The [multisig](#) can enable or disable the GSM delay exception [SparkLend Freezer Mom](#) without a governance spell while the Maker governance can reverse the action via a spell or entirely remove the multisig access in case there is a suspicion that it could or did act maliciously, which means that governance preserves full control.

In the case of malicious use of the multisig access, the governance would therefore execute an emergency spell to reverse the action and remove the multisig access, and additionally make the decision of potentially reinstating the multisig and replacing the rogue or compromised signers.

The multisig at launch would be 2/n, the n being 5 with intention of increasing the amount of signers later in time. Initial list of signers consists of two members from Governance Facilitators, BA Labs as a member of Stability Scope Advisory Council and finally one member from Phoenix Labs, the development team behind SparkLend. Preferably the n should be increased later in time with diversity in terms of various factors which can increase the possibility of positive activation of SparkLend Freezer Mom functionality.

Initial SparkLend signers are;

- VoteWizard (Governance Facilitator)
- LDR (Governance Facilitator)
- Hexonaut (Phoenix Labs)
- MonetSupply (BA Labs)
- Rema (BA Labs)

Each action and its argumentation with the multisig must be reported to the Maker community in a reasonable time window in the form of a forum post. This includes the activate/disable pause or freeze function. Any changes to the signers of the multisig, either addition or removal are subject to the governance poll. Only exception is, when a signer self-reports a loss of

access to their private key due to any reason or explicitly expresses their wish to be removed in the form of a comment under this forum post or a separate forum post. In such instances Maker governance should replace this specific signer as soon as possible. Any other changes, which were not executed due to self-reporting by individuals or ratified by the governance should be questioned immediately and likely considered malicious, at which point governance should consider executing a spell to remove access from the multisig.

## Conditions and Guidelines For Activation

Since this access is a great responsibility, it is vital that conditions for activation of the pause and/or freeze are predefined to the extent which is possible. Obviously it is impossible to exactly define what could possibly go wrong, but at the same time some general guidelines can be defined;

- The multisig should be used when time is of the essence and normal governance process of emergency spell would not be sufficient to prevent the issue being exploited
- The ability is mainly meant to prevent technical vulnerabilities or unwanted functionality of the smart contracts or corresponding parts in the system such as price oracle or their usage and behavior which was not intended
- The best examples of when the multisig access should be utilized is (i) a responsible vulnerability disclosure occurs to either Maker Ecosystem Actors directly, to the AaveDAO or other protocols utilizing the same codebase, or (ii) an active vulnerability exploit is occurring or had occurred in SparkLend or one of the protocols utilizing the same codebase and a timely action can prevent or at least partially prevent the damage

BA Labs recommends to the Governance Facilitator to propose the governance poll and inclusion in the next available executive spell for activation of external security access to the SparkLend Freezer Mom contract to the following multisig wallet;

- 0x44efFc473e81632B12486866AA1678edbb7BEeC3

Assuming that this proposal passes, a proposal to update the Governance Scope to incorporate these new changes will be made at a later date.