Risk Assessment for Governance Action (GA07)
Hard Fork to Protocol Version 10
#0b19476e40bbbb5e1e8ce153523762e2b6859e7ecacbaf06eae0ee6a447e79b9

Eastern Cardano Council

Version	ECC Reference
1.0.0	**GA07**

Scope

This document is a **risk assessment** associated with the "**Hard Fork to Protocol Version 10**" governance action that will impact the state of the Cardano network and its associated ecosystem.

The risk assessment is from the perspective of the Eastern Cardano Council (ECC), fulfilling its role as a member of the Interim Constitution Committee.

Management Framework

See the "ECC Risk Management Framework for Cardano Governance" document.

Risk Register

See the ECC Risk Register for Cardano Governance Sheet for a list of previously identified risks.

Risks are identified and rated using the following matrix based on *Likelihood* and *Consequence*, resulting in a *Risk Rating*.

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CONSEQUENCE					
	Insignificant	**Low**	**Medium**	**Major**	**Severe**
Almost certain	M-10	H-20	H-30	E-40	E-50
Likely	M-8	M-16	H-24	E-32	E-40
Possible	L-6	M-12	M-18	H-24	H-30
Unlikely	L-4	L-8	M-12	M-16	H-20
Rare	L-2	L-4	L-6	M-8	M-10

E	Extreme risk	H	High risk	M	Medium risk	L	Low risk

As a guiding principle the ECC will vote yes on governance actions that impact the Cardano ecosystem as constitutional, that contain risks that are:

1. Rated as **"Medium"** or **"Low"**,
2. Rated as **"High"** and have a **contingency plan** to deal with the associated risk should it arise.

Key Risks Relating to this Governance Action

#	Description	Likelihood / Consequence	Rating As-Is	Treatment Avoid, Reduce, Transfer, Accept
1	**Due to a lack of community DRep delegation, governance is controlled by a small number of large ADA holders, resulting in a low Cardano Governance MAV.** **Example threat vector:** ADA holders could propose and approve treasury withdrawal actions.	Possible / Major	High	Accept
2	**Due to the community delegating to a small number of DReps, governance is controlled by a small number of dReps, resulting in a low Cardano Governance MAV (Centralisation).** **Example threat vector:** DReps could propose and approve treasury withdrawal actions.	Possible / Major	High	Reduce
3	**Not enough Node Testing.** Recent code changes that have insufficient testing.	Possible / Major	High	Reduce
4	**Poor operational/user experience due to the ecosystem not being ready.** Ecosystem is not for the hard-hork to be initiated.	Possible / Major	High	Reduce

5	HF not occurring impact on ecosystem: Unable to escape from the current Interim Constitution, limiting Cardano growth and decentralisation	Possible / Major	High	Reduce
6	HF not occurring impact on ecosystem: No access to Treasury to fund work	Almost Certain / Major	Extreme	Reduce
7	HF not occurring impact on ecosystem: Broader perceptions from crypto ecosystem	Almost Certain / Major	Extreme	Reduce
8	HF not occurring impact on ecosystem: The concentration of power in the hands of the ICC will continue.	Almost Certain / Major	Extreme	Reduce

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Key Risk Scenarios & Analysis

As part of risk / threat analysis.

See *References* section at the end of this document for supporting information.

Risk #1

Due to a lack of community DRep delegation, governance is controlled by a small number of large ADA holders, resulting in a low Cardano Governance MAV.

Risk Analysis

#	Scenario	Description	Comments
A1.1	**DRep voting power greater than the threshold used to drain the Cardano Treasury**.	Three(3) or fewer entities combined with enough DRep voting power greater than the minimum threshold (67%) submit a Treasury Withdrawal action that transfers ADA to an address controlled (directly/indirectly) by the same three(3) or fewer entities.	SPO vote not required. 66.7% CC vote required to block the action via a "Not Constitutional" vote. If not also controlled by the same entities then OK - see item 1.2. 67% need to pass all Drep involved votes. https://cardanoscan.io/changreadiness https://cardanoupgrades.docs.intersectmbo.org/plomin-upgrade/chang-upgrade-2-readiness

A1.2	**DRep voting power greater than the threshold used to take control of the Constitutional Committee (ICC/CC) by updating members.**	Three(3) or fewer entities combined with enough DRep voting power greater than the minimum threshold (67%) submit an "Update Committee".	Not a risk if assume 51% of SPOs are not compromised and support the current CC/ICC or at least more than the proposer of the Governance Action.

Risk Controls & Contingency Plans

How to reduce the risk rating level to ECC acceptable level.

#	Description	Controls (if Reducing) or Contingency Plan (if Accepting)	Rating With Control
C1.1	**Lack of community dRep Delegation leads to** DRep voting power greater than threshold used to drain the Cardano Treasury.	Assuming: 1/ CC member updates are protected by SPOs. 2/ CEXs are not involved in governance based on the current regulator environment. Ensure Cardano Governance MAV* of five(5) which equates to 5 x largest known wallet ADA being actively delegated to community dReps * Does EDI cover Governance MAV?	Medium

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Risk #2
Due to the community delegating to a small number of DReps, governance is controlled by a small number of dReps, resulting in a low Cardano Governance MAV (Centralisation).

Risk Analysis

#	Scenario	Description	Comments
A2.1	**A small number of DReps with the majority of community delegation work together to drain the Cardano treasury.**	Three(3) or fewer DReps combined with enough voting power greater than the minimum threshold (67%) submit aTreasury Withdrawal action that transfers ADA to an address controlled (directly/indirectly) by the same three(3) or fewer entities.	SPO vote not required. 66.7% CC vote required to block the action via a "Not Constitutional" vote. If not also controlled by the same entities then OK - see item 1.2. 67% need to pass all Drep involved votes.
A2.2	**DRep voting power greater than the threshold used to take control of the Constitutional Committee (ICC/CC) by updating members.**	Three(3) or fewer DReps combined with enough voting power greater than the minimum threshold (67%) submit an "Update Committee".	Not a risk if assume 51% of SPOs are not compromised and support the current CC/ICC or at least more than the proposer of the Governance Action.

Risk Controls & Contingency Plans

How to reduce the risk rating level to ECC acceptable levels.

#	Description	Controls (if Reducing) or Contingency Plan (if Accepting)	Rating With Control
C2.1	**Concentration of DRep voting power.** DRep voting power greater than threshold used to drain the Cardano Treasury.	Assuming: 1/ CC member updates are protected by SPOs. Ensure Cardano Governance MAV* of five(5) which equates to 5 x largest DReps.	Medium

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Risk #3

"Not enough code testing"

Risk Analysis

#	Scenario	Description	Comments
A3.1	**A network hard fork governance action is initiated, but during the voting period the code is updated.**	Code is updated due to an issue that is discovered and the SPOs have to re-update the node software to enable the latest code.	Have the SPOs updated? Was the new code tested enough - is there evidence of testing?

Risk Controls & Contingency Plans

How to reduce the risk rating level to ECC acceptable levels.

#	Description	Controls (if Reducing) or Contingency Plan (if Accepting)	Rating With Control
C3.1	**SPOs running the latest node**	Check the Readiness Page	Medium
C3.2	**Code Testing**	Observe the testing scripts, with the process of testing, including expected outcome vs actual outcomes.	Medium

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Risk #4

"Poor operational/user experience due to the ecosystem not being ready"

Risk Analysis

#	Scenario	Description	Comments
A4.1	**A network hard fork is initiated, but key exchanges are not upgraded stopping transfers**	Users can not move ADA from exchanges to the network and visa-versa.	

Risk Controls & Contingency Plans

How to reduce the risk rating level to ECC acceptable level if treatment is "Reduce" or Contingency plan if treatment is "Accept".

#	Description	Controls (if Reducing) or Contingency Plan (if Accepting)	Rating With Control
C4.1	**Key ecosystem exchanges not updated to the latest node.**	Check the following readiness pages and make sure key entities are updated: ● https://cardanoscan.io/changreadiness ● https://cardanoupgrades.docs.intersectmbo.org/plomin-upgrade/chang-upgrade-2-readiness	Medium

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Risk #5

"HK not occurring impact on ecosystem: Unable to escape from the current Interim Constitution, limiting Cardano growth and decentralisation"

Risk Analysis

#	Scenario	Description	Comments
A5.1	**Governance can not progress beyond interim stage**	Cardano stalls and can not progress.	

Risk Controls & Contingency Plans

How to reduce the risk rating level to ECC acceptable level if treatment is "Reduce" or Contingency plan if treatment is "Accept".

#	Description	Controls (if Reducing) or Contingency Plan (if Accepting)	Rating With Control
C5.1	**Allow Governance Framework to Progress**	• Approve the Hard Fork	Low

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Risk #6

"HK not occurring impact on ecosystem: No access to Treasury to fund work"

Risk Analysis

#	Scenario	Description	Comments
A6.1	**Ecosystem can not get access to operational and development funds**	Impacts Cardano core operations and growth.	

Risk Controls & Contingency Plans

How to reduce the risk rating level to ECC acceptable level if treatment is "Reduce" or Contingency plan if treatment is "Accept".

#	Description	Controls (if Reducing) or Contingency Plan (if Accepting)	Rating With Control
C6.1	**Allow Governance Framework to Progress**	• Approve the Hard Fork	Low

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Risk #7

"HK not occurring impact on ecosystem: Broader perceptions from crypto ecosystem"

Risk Analysis

#	Scenario	Description	Comments
A7.1	**Governance rollout stalls**	The broader market uses this evidence for negative stories to shake confidence in the Cardano ecosystem.	Price drop impacts projects that have treasury in ADA but have expenses in TradCurrencies.

Risk Controls & Contingency Plans

How to reduce the risk rating level to ECC acceptable level if treatment is "Reduce" or Contingency plan if treatment is "Accept".

#	Description	Controls (if Reducing) or Contingency Plan (if Accepting)	Rating With Control
C7.1	**Allow Governance Framework to Progress**	• Approve the Hard Fork	Low

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Risk #8

"HK not occurring impact on ecosystem: The concentration of power in the hands of the ICC will continue."

Risk Analysis

#	Scenario	Description	Comments
A8.1	**Interim Constitution Continues**	The ICC maintains powers.	

Risk Controls & Contingency Plans

How to reduce the risk rating level to ECC acceptable level if treatment is "Reduce" or Contingency plan if treatment is "Accept".

#	Description	Controls (if Reducing) or Contingency Plan (if Accepting)	Rating With Control
C8.1	**Allow Governance Framework to Progress**	● Approve the Hard Fork	Low

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References

For use with risk analysis.

Readiness:

- https://cardanoscan.io/changreadiness
- https://cardanoupgrades.docs.intersectmbo.org/plomin-upgrade/chang-upgrade-2-readiness

Voting Thresholds:

In Cardano's governance framework, various actions require approval from different bodies: the Constitutional Committee (CC), Delegated Representatives (DReps), and Stake Pool Operators (SPOs). Each action type has specific voting thresholds for these groups:

Governance Action Type	CC Threshold	DReps Threshold	SPOs Threshold
1. Motion of No Confidence	N/A	67%	51%
2a. Update Committee/Threshold (Normal State)	N/A	67%	51%
2b. Update Committee/Threshold (No Confidence)	N/A	60%	51%
3. New Constitution or Guardrails Script	66.7%	75%	N/A
4. Hard-Fork Initiation	66.7%	60%	51%
5a. Protocol Parameter Changes (Network)	66.7%	67%	N/A
5b. Protocol Parameter Changes (Economic)	66.7%	67%	N/A
5c. Protocol Parameter Changes (Technical)	66.7%	67%	N/A
5d. Protocol Parameter Changes (Governance)	66.7%	75%	N/A
6. Treasury Withdrawal	66.7%	67%	N/A
7. Info	66.7%	100%	100%

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General Analysis:

Let's assume that the DRep delegation rate is low and DRep is corrupted.

- Before the hard fork - In the end, you need to trust ICC (or sometimes SPO)
- After the hard fork - In the end, you need to trust ICC or SPO.

In other words, does the essence of the risk of DRep's low delegation rate come down to whether or not you trust SPO?

Because the situation in which you need to trust ICC (or SPO) remains the same before and after the hard fork.

So logically, just because the ICC blocked the hard fork as unconstitutional due to the low delegation rate of DRep, doesn't that mean that some risk is mitigated if SPO is trustworthy?"

In yesterday's conversation, Nicholas of the Cardano Foundation expressed the view that as a constitutional committee, it is the role of the SPO to vote taking into account the risk of a low DRep delegation rate in PLOMIN-HF, since a low DRep delegation rate is not a constitutional problem.

Also, Charles Hoskinson had previously said in an AMA that it would be good if the DRep delegation amount was about 50% of the SPO delegation amount. (I may have misheard.)

Also, Jack of Intersect expressed the view that it would be good if it was at a level equal to or higher than the Catalyst participation amount.