MACS – Minimum Acceptable Crypto Standard

Annex A (informative)

Authoritative English Translation

Trust as a Structural Precondition for Capital-Market-Compatible Systems

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This Annex forms part of MACS Version 1.0.
The content is considered fixed in this version.
Changes may occur only within the framework of future versions of the standard.

Reference document: **MACS Core**

Terms and definitions follow the **MACS Glossary**.

MACS Reading Logic

The MACS Core defines minimum requirements for organizations in dealing with cryptographically secured digital assets.
The Annexes explain structural interrelationships and analyze systemic properties that are relevant for the application of these requirements.
Terms and definitions are maintained centrally in the MACS Glossary.

1. Introduction

This Annex explains the structural conditions under which digital asset systems can be classified by institutional market participants as **trustworthy, reliable and capital-market-compatible**.

While the MACS Core describes minimum requirements for organizations that hold, safeguard or transfer cryptographically secured digital assets, this Annex examines the structural properties of digital asset systems on which such requirements are based.

Digital asset systems combine technical protocols, organizational structures and economic coordination mechanisms.

Trustworthiness does not arise from individual properties, but from the interaction of these structural elements.

This Annex therefore describes central ordering structures, functional logics and governance mechanisms that are relevant for the assessment of the stability, predictability and controllability of such systems.

Structure of the Annex

The following sections develop the structural dimensions of trustworthiness in digital asset systems.

The Annex is structured as follows:

Section 2 – Structural Ordering Assumptions of Digital Asset Systems
describes external, internal and systemic ordering assumptions that organizations make when using digital asset systems.

Section 3 – Functional Logic of Digital Asset Systems
analyzes central functional areas such as acquisition, safeguarding, transfer, valuation, as well as the handling of changes and exception situations.

Section 4 – Governance and System Behavior under Stress
explains how governance structures become visible in stress situations and which structural questions become relevant in such situations.

Section 5 – Organizational Implications for Institutional Market Participants
derives from this the requirements for the allocation of responsibility, competence, control mechanisms and decision-making capability within organizations.

2. Structural Ordering Assumptions of Digital Asset Systems

Organizations that use digital asset systems or invest in such systems make fundamental assumptions about their structural properties.

These assumptions concern external framework conditions, internal organizational structures as well as systemic properties of the underlying networks.

2.1 External Ordering Assumptions

External ordering assumptions concern framework conditions outside the system itself.

These include in particular:

- state legal systems
- regulatory frameworks
- enforceability of property rights
- stability of institutional structures
- availability of relevant market infrastructures

Organizations assume that these framework conditions are sufficiently stable to enable economic activities in connection with digital assets.

2.2 Internal Ordering Assumptions

Internal ordering assumptions concern organizational structures within institutions that use digital asset systems.

These include in particular:

- clear allocation of responsibilities
- defined decision processes
- documented access rights
- control and monitoring mechanisms

These structures enable organizations to manage digital assets in a traceable and controllable manner.

2.3 Systemic Ordering Assumptions

Systemic ordering assumptions concern properties of the underlying networks and protocols.

Organizations make assumptions regarding:

- the stability of the system architecture
- the integrity of the technical implementation
- the maintainability and adaptability of the system

Systemic ordering assumptions also concern the **distribution of decision-making authority and influence** within a network.

Organizations make assumptions regarding,

- how decision-making authority is distributed
- whether individual actors can exercise significant influence on rule changes or operational interventions
- to what extent functions are substitutable

A high concentration of decision-making authority may increase adaptability but may also create dependency risks.
A broad distribution of decision-making authority may strengthen robustness but may also increase coordination requirements.

Systemic ordering assumptions also concern the **mechanisms of coordination within a network**.

Coordination may arise in different ways, including through:

- formalized decision procedures
- collective voting processes
- hierarchical intervention rights
- economic incentive mechanisms

Reliability does not result from a specific coordination model, but from its transparency, predictability and structural traceability.

Governance structures may be implemented organizationally or technically.

In some systems, decision rules are implemented primarily through organizational procedures.
In other systems, governance rules are fully or partly embedded directly in software logic.

3. Functional Logic of Digital Asset Systems

Digital asset systems exhibit specific functional logics that may differ from traditional financial infrastructures.

This Annex analyzes these functional logics along central areas of application.

3.1 Acquisition and Acceptance

When acquiring or accepting digital assets, organizations make assumptions regarding,

- under which conditions assets come into existence
- how their existence and attribution are determined
- which conditions apply for economic recognition.

3.2 Safekeeping and Access

Safekeeping concerns the secure control over digital assets.

Organizations make assumptions regarding,

- how access to assets is controlled
- how access rights can be granted and revoked
- which technical or organizational safeguarding mechanisms exist.

3.3 Transfer and Settlement

Transfer and settlement concern the change of ownership or control states within a system.

Organizations make assumptions regarding,

- when a transaction is considered completed
- under which conditions finality can be assumed
- how deviations or conflicts are handled.

3.4 Valuation and Reporting

Valuation and reporting require that information about assets can be determined and traced on a continuous basis.

Organizations make assumptions regarding,

- how valuations are determined
- which market information forms the basis
- how uncertainties are taken into account.

3.5 Changes and Exception Situations

The reliability of digital asset systems becomes particularly visible in **stress situations**.

Under such conditions, structural questions emerge:

- How are changes to system rules carried out?
- Who holds decision authority in exception situations?
- How are decisions documented and made traceable?

Reliability does not only concern current stability, but also **consistency of expectations over time**.

Capital-market compatibility requires that market participants are able to make assumptions regarding the future application of rules.

This includes:

- consistent enforcement of existing rules
- traceable procedures for rule changes
- transparency regarding decision-making processes.

4. Governance and System Behavior under Stress

Governance structures become particularly visible when systems operate under stress.

Stress may arise from:

- technical disruptions
- market stress
- coordination conflicts
- regulatory interventions.

In such situations, fundamental questions emerge:

- How is decision authority distributed?
- Who possesses the necessary operational knowledge?
- How is information made accessible?
- How are decisions documented?

Governance structures largely determine how systems respond to stress and how trust can be preserved over time.

5. Organizational Implications for Institutional Market Participants

Institutional market participants must establish structures that enable the responsible use of digital asset systems.

These include in particular:

- clear allocation of responsibilities
- sufficient professional competence
- effective control mechanisms
- dokumentierte Entscheidungsprozesse
- consideration of dependencies on external actors.

Formal responsibility without competence does not establish controllability.
Controls without the ability to respond do not create reliability.

Concluding Statement

Trust in digital asset systems does not arise from individual properties, but from the interaction of governance, technical implementation, coordination mechanisms and organizational controllability.

End of Annex A v1.0 – Authoritative English Translation