Seminar Civil Law and Computer Science
Distributed Trust in Finance

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Topic description

What is the role of governance structures that establish the conditions for protocol changes?

In the context of blockchains, governance refers to the means of achieving the direction, control and coordination of stakeholders within the context of a given blockchain project. While blockchain development and governance share multiple similarities with traditional open-source software projects as many of the large public blockchains are developed and released as open-source software. However, on-chain governance as a new phenomenon is mostly limited to certain blockchain projects. Here the decision rights, accountability and incentives are distributed and operationalized through on-chain voting mechanisms within the system to be changed.

1. Computer Science Task

Explore several (five or more) different blockchains that have on-chain governance structures, such as TEZOS, TERRA, DFINITY, or DASH:

- Describe and compare their governance mechanisms
- What gives power to vote?
- On what questions can participants vote?
- How is voting implemented technically? Include details!
- How does one make proposals for voting?
- What are the risks of monopolies or oligopolies forming?
- Compare this also to proof-of-stake blockchains (Cardano, NEO, EOS), where the stake (number of coins owned) directly influences the power of participants within the consensus protocol
- Provide data analytics on the ownership and voting behavior in a selected governance system

2. Law Task

Relate blockchain based governance structures to legal concepts and analyze them in detail:

- Classify governance tokens and associated structures under Swiss private law
- What is “stake” and how does it relate to existing governance mechanisms?

- Compare and contrast such mechanisms with governance mechanisms under Swiss private law and identify opportunities and challenges. For example, “Schriftformerfordernis” vs digital signatures and identities

Materials/Literature

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