University
of Basel

Center for
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Smart Contracts and Decentralized Finance
Defi Introduction

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Definition

DeFi employs public **Blockchain networks** and **smart contracts**
to build **open**, **transparent**, **composable** and **non-custodial**
financial protocols.

Open
By default – no access restrictions.
Not only on Blockchain but also on protocol level, i.e.,
no KYC, no whitelisting, no minimum amounts.

Transparent
Mathematically verifiable by anyone.
All relevant logic is on-chain with every step
of a process transparently defined in code.

Composable
Interoperable lego pieces. Protocols can be used by humans (EOA) and external smart contracts (CA). They can be combined to new services.

Non-Custodial
No trust requirements, due to the full-transparency of the smart contract logic in combination with a public blockchain as settlement layer.

Definition

What it is **NOT**:

- CBDC / Programmable Euro
- Running an In-house "Blockchain"
- Heavily centralized settlement chain
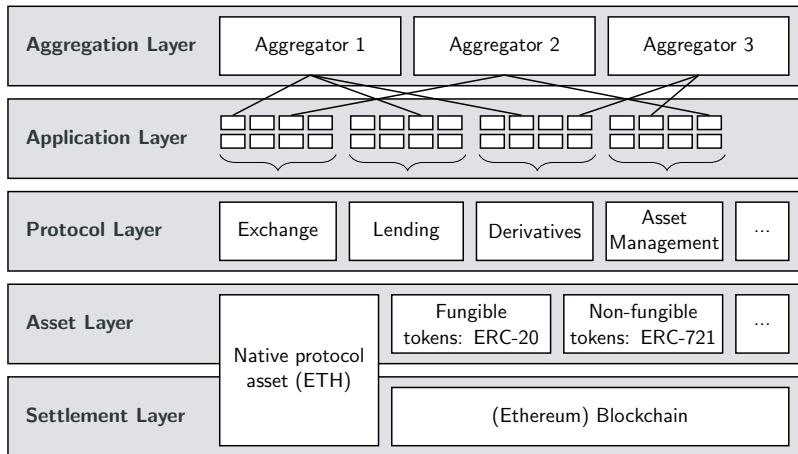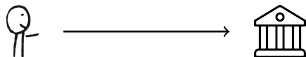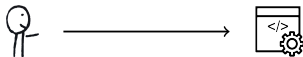
DeFi Building Blocks

Figure: The DeFi Stack [1]
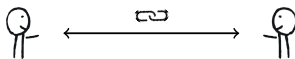
Why DeFi?

Trust-based execution

Deterministic Execution

Centralized Clearing and Settlement

Atomic Settlement (Peer-to-Peer)

Silo Services

Programmatic Composability

References and Recommended Reading

[1] Fabian Schär, *Decentralized finance: On blockchain- and smart contract-based financial markets*, Review of the Federal Reserve Bank of St Louis **103** (2021), no. 2, 153–74, Available at: `http://dx.doi.org/10.20955/r.103.153-74`.