Decentralization is spurring the natural evolution of the financial system, akin to moving from landline phones to mobile phones.

Decentralized Finance (DeFi) is built on open software systems, called **permissionless blockchains,** meaning the network's code is publicly available, transparent, and can be freely used, audited, or iterated on by anyone. In this system, individuals engage in financial transactions with full self-ownership: they make all decisions and maintain custody and control over their digital assets without traditional intermediaries.

DeFi lives on **blockchain infrastructure:** nodes and miners or validators. Nodes store and share the ledger. Depending on the blockchain, miners secure the network by solving cryptographic puzzles and proposing blocks of transactions to the rest of the network, or validators (who have staked collateral to maintain good-faith participation) are selected to propose blocks of transactions to the rest of the network. Together, they keep the system decentralized, secure, and running efficiently without financial intermediaries. *(For more on blockchain infrastructure, refer to DEF's DeFi 101.)*

Digital Assets are blockchain-based units that let users trade, own, or use value digitally. They are also referred to as **tokens**, or simply as "crypto."

People engage in DeFi through "**wallets,**" which are apps or devices that let them hold and control their digital assets. A wallet operates like email in that it allows users to communicate with a blockchain. The wallet has a "public key" that is the publicly-shared address to which assets can be sent. It also has a "private key," like an email password, that only the owner knows and uses to approve transactions. People can also use a hardware wallet—like a secure USB stick—to store their private key offline.

Front-ends refer to websites or applications that allow people to communicate transactions or interactions to underlying software. All web or mobile applications have front ends: they provide a user-friendly visual display of information that is translated to more technical inputs to communicate with back-end software. In **Web2**, the back-end software is proprietary and owned by a company (centralized, e.g., Facebook or Venmo); in **Web3**, the back-end software connects to a permissionless blockchain (decentralized, not owned or controlled by any single entity) (See DEF Front-End Explainer).

Smart contracts are a specialized type of software application that functions automatically—based on user instructions—when pre-determined conditions are met. A smart contract is like a vending machine: the vending machine automatically releases a bag of chips on the condition that it receives $2.

DeFi Protocols refer to a set of rules or procedures for a system of smart contracts to work together on a blockchain. A DeFi protocol allows a user to communicate various forms of financial transactions on the underlying blockchain — *e.g.*, exchange one digital asset for another (see "DEX" below), borrow one digital asset against another (see "Lending Protocol"), etc. These protocols are sometimes referred to as **decentralized applications, or dApps**.

Decentralized Exchanges (DEXs) are a type of DeFi protocol where a user can trade or exchange one digital asset for another. An **automated market maker (AMM)** is a type of DEX—instead of buyers and sellers being matched in real time, people trade using software known as a **"pool,"** which is a smart contract where **liquidity providers** commit digital assets according to a pre-set formula that automatically determines the price of the digital assets. These liquidity providers (also called **"LPs**") earn a share of the fees paid by people transacting on the AMM. The fees are paid programmatically to the LPs by the AMM software.

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Borrowing Protocols are a type of DeFi protocol where a user can supply or commit one digital asset as collateral to borrow another. All borrow transactions must be over-collateralized; this is a proxy for creditworthiness because these protocols allow users to interact and transact independently and autonomously.

"Oracles" are smart contract-based protocols that act like messengers to provide real-world information (*e.g.*, prices, exchange rates, interest rates) to DeFi protocols.

THE PROMISE OF DEFI: INCLUSION, TRANSPARENCY, INNOVATION

- **DeFi expands efficient and open access** to financial services by eliminating traditional barriers and gatekeepers that can restrict access, including on subjective bases like political affiliation or religion.
- **DeFi reduces extractive fees and transaction costs**, allowing users to get better prices for various transactions and transact globally without high fees.
- **DeFi improves markets** by providing better liquidity and price discovery for users. Transaction settlement is instant and concrete, service is efficient, resilient, and available globally 24/7—not limited to weekdays from 9 to 5.

AMERICANS ARE INTERESTED IN IMPROVING THE U.S. FINANCIAL SYSTEM

TRUST IN EXISTING FINANCIAL INSTITUTIONS IS LUKEWARM

Complete trust in traditional finance is low across the board, and data reveals significant variations and areas of skepticism across the financial landscape. Fees are a particular point of friction.

- **Less than one-in-ten Americans say they "completely trust" large national banks (9%) or regional or community banks (8%).***
- **Only 23% of Americans believe that "banks and other financial institutions charge reasonable fees for their services."**

CONSUMERS WANT TO TAKE BACK CONTROL OF THEIR FINANCES

Survey respondents are interested in having "control over my money at all times" – and many are looking for ways to send or receive money without a middleman.

- **Almost 1 in 5 Americans (18%) have owned or used crypto.***
- **More than half (56%) of Americans want full personal control over their money.***

AMERICANS ARE CURIOUS ABOUT DEFI, EVEN THOUGH IT'S EARLY

Desire for stronger security and lower fees are among the top reasons that Americans are interested in DeFi's impact and DeFi's ability to alleviate some friction points in finance today.

- **40% of Americans would likely try out DeFi if it was available to them.***
- **Almost half of Americans (42%) said that if proposed legislation was passed into law, they would be likely to try out DeFi.***

**Statistics* *from national study conducted with Ipsos on KnowledgePanel and supplemented by in-depth interviews in the Bronx and Queens (August 18-27, 2025) for DeFi Education Fund.*

For more information, a DeFi Demo, or to learn more about DEF, please reach out to info@defieducationfund.org.

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Traditional Finance (TradFi)

A financial system of established institutions that serve as **intermediaries** in financial transactions and services.

Centralized control over system rules, operations, and access; maintains custody of customer assets/data.

TLDR – *Traditional finance institutions facilitate customer transactions and services in fiat currency.*

PARTICIPANTS

Banks | National Securities Exchanges | Broker-Dealers | Payment Providers

NYSE

J.P.Morgan

AMERICAN EXPRESS

Centralized Crypto Finance (CeFi)

A financial system for digital assets where a single entity or group of entities under common control maintain custody and control over user assets and facilitate user transactions.

May exercise **centralized** control over systems, rules, operations, and access; maintains custody of customer assets/data.

TLDR – *Centralized companies facilitate users' digital asset transactions.*

PARTICIPANTS

Crypto Exchanges | Crypto Custodians | Crypto Lenders| Fiat-Backed Stablecoin Issuers

kraken

CIRCLE

coinbase

Decentralized Finance (DeFi)

A financial system built on public blockchains that enables users to engage in self-directed, peer-to-peer digital asset transactions without relying on intermediaries and while maintaining custody and control over their own funds.

Control is **decentralized** (distributed among many independent entities or individuals).

TLDR – *Individuals use DeFi software to engage in self-directed financial services.*

PARTICIPANTS

Software Developers | DeFi Users | DAO Participants

AAVE

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