



Cryptocurrency

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CRYPTOCURRENCY

Cryptocurrency is a digital or virtual currency that employs cryptography for secure, decentralized transactions and operates on blockchain technology.

Features of Crypto

- Virtual money secured by cryptography
- Direct peer-to-peer transactions, eliminating the need for banks
- Entries recorded in a public ledger, not as physical cash
- Encrypted; advanced coding methods ensure high-level security
- Decentralised; not controlled by any government

Legal Status: Cryptocurrency

- Declared Legal:** El Salvador (2021) and Central African Republic (2022); first and second countries to recognise Bitcoin as legal tender
 - Other Countries where Bitcoin is legal: US, UK, European Union, Canada, Australia, Japan, Switzerland
 - Declared Illegal:** China, Pakistan, Saudi Arabia, Tunisia, and Bolivia
- Status in India:**
- Not a legal tender but not banned either
 - Taxation:** 30% tax on profits & 1% TDS on transfers (Budget 2022-23)
 - RBI launched its **CBDC - Digital Rupee** in 2022

Types of Cryptocurrency (Utility-based)

- Utility Token:** Used to access services or features within a blockchain platform (Eg. Ethereum (ETH) & Ripple (XRP))
- Transactional:** Tokens used for payments (Eg. Bitcoin (BTC))
- Voting Token:** Tokens that provide voting rights on a blockchain (Eg. Uniswap)
- Platform Based:** Tokens for utilizing a proof-of-stake mechanism to enable smart contracts (Eg. Solana)
- Security:** Tokens representing asset ownership (Eg. Millennium Sapphire)
- Stablecoins:** Created to reduce the volatility which is common in many cryptocurrencies

How Does It Work?

- Mining:** Solves equations with computer power to validate transactions & earn rewards
- Security:** Cryptography prevents manipulation
- Blockchain:** Transactions are recorded on a distributed public ledger
- Decentralization:** Verified & maintained by a global network of computers
- Digital Wallet:** Stores keys for sending & receiving cryptocurrency

Benefits

- Decentralization
- Lower transaction fees
- Fast Transactions
- Security through cryptography
- Transparency
- Generates high returns

Challenges

- Pseudonymous transactions
- Price volatility
- Regulatory uncertainty
- Potential for criminal use
- Scalability Issues
- High energy use in mining



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