Rise of Cryptocurrency

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The views expressed are my own and do not necessarily reflect official positions of the Federal Reserve System.
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What is blockchain?
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What is blockchain?
Blockchain is the technology that supports cryptocurrencies as well as other types of information sharing.
BLOCKCHAIN IS A TECHNOLOGY

cryptocurrency

blockchain
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The two largest blockchains available today:

- **bitcoin** (exclusively bitcoin cryptocurrency)
- **ETHEREUM** (Ethereum cryptocurrency & other technologies)
What is cryptocurrency?
What is cryptocurrency?
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What is cryptocurrency?

1. Money is a store of value
2. Money is a unit of account
3. Money is medium of exchange
What is cryptocurrency?

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2. Money is a unit of account
3. Money is medium of exchange
What is cryptocurrency?
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crypto = electronic metal

gold = metal
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crypto = electronic metal

gold = metal

"ether"
WHAT ABOUT OTHER CRYPTOs?

There are over 4,000 cryptocurrencies in existence:
WHAT ABOUT OTHER CRYPTOs?

46 million Americans own bitcoin
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What is mining?

1. MAINTENANCE
2. GROWTH & CIRCULATION
What is mining?

1 MAINTENANCE

blockchain
What is mining?

1 MAINTENANCE

blockchain

traditional
What is mining?

MAINTENANCE

Crypto Miners:
• Verify blocks of crypto payments
• Approve transactions to the public ledger
• Calculate mathematical proof-of-work

blockchain
What is mining?

1 MAINTENANCE

blockchain

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blockchain

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What is mining?

GROWTH & CIRCULATION
What is mining?

6.25 bitcoins per block

= 6.25 \times $36,000 \text{ (price as of 6/7/21)} = $225,000
What is mining?

6.25 bitcoins per block

\[= 6.25 \times 36,000 \text{ (price as of 6/7/21)} = 225,000\]

approximately 144 blocks are mined each day

\[= 6.25 \times 144 \times 36,000 = 32,400,000\]
What is mining?

2 GROWTH & CIRCULATION

bitcoin = 21 million

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What is mining?
WHAT DOES IT COST TO MINE CRYPTO?

$7,000+
What are gas prices?

Gas Price

Transaction fee paid to miners for processing transactions on the blockchain.

https://bitinfocharts.com/comparison/ethereum-transactionfees.html#1y
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HOW DO YOU ACCESS CRYPTOCURRENCIES?

digital wallet = mobile bank account
HOW DO YOU ACCESS CRYPTOCURRENCIES?

digital wallet

mobile bank account
HOW DO YOU ACCESS CRYPTOCURRENCIES?

digital wallet

- authentication & security
- accessibility
- hosting
Money lost to blockchain hackers by hack target (2020)

- **Total**: $3,782,380,113
- **Wallet**: $3,027,108,209
- **ETH DApp**: $436,364,097
- **Exchange**: $300,149,169
- **Tron DApp**: $10,000,189
- **Blockchain**: $5,910,200
- **EOS DApp**: $2,848,249

Feds recover more than $2 million in ransomware payments from Colonial Pipeline hackers

The seizure of cryptocurrency paid by Colonial Pipeline to a Russian hacker ring marks a major milestone for the Department of Justice.
Lost Passwords Lock Millionaires Out of Their Bitcoin Fortunes

Bitcoin owners are getting rich because the cryptocurrency has soared. But what happens when you can’t tap that wealth because you forgot the password to your digital wallet?
What percentage of bitcoin is ‘lost forever’?

20% = $140b
DIGITAL WALLETS:

hosting

**hosted wallets:** a digital wallet facilitated by an intermediary who transmits and stores crypto assets on behalf of their customers

**unhosted wallets:** usually a software application that allows individuals to manage their own crypto assets (like physical cash in a wallet)
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RECAP

- Blockchain is the technology that supports cryptocurrency (and other applications)
- Cryptocurrencies are a means of digital exchange
- Mining allows for maintenance of the blockchain as well as growth and circulation of new coins
- Gas prices are transaction fees
- Digital wallets are the ‘on ramp’ to the crypto blockchain
Questions
RESOURCES

• News and Current Events
  • CoinDesk Newsletter
  • CoinTelegraph

• Education
  • 99Bitcoins
  • Blockgeeks
Connections In the Classroom: Rise of Cryptocurrency

Tamara Redic Cottrell | Economic Education Advisor
Connections In the Classroom: Embed

- **Draft an Argument:** Explore the relationship of risk and return as related to cryptocurrency.
  - Draft an argument for or against digital currency investments.
- **Make a Prediction:** Consider cryptocurrency as an investment strategy
  - Using current news reports and/or events to make a prediction about a cryptocurrency.
Connections In the Classroom: Extend

Extend –

Building Wealth Lesson 7: Risk & Return

• Building Wealth Lesson 7 - Teacher Procedures
• Building Wealth Lesson 7 - Presentation

Risk return relationship

Lower risk = Lower return
Greater risk = Greater return

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