Osher Lifelong Learning Institute, Summer 2025
Cryptocurrencies

Northwestern University

Host: Joan Nix
Professor of Economics, Queens College (CUNY)

Available NEED Topics Include:

- US Economy
- Healthcare Economics
- Climate Change
- Economic Inequality
- Economic Mobility
- Trade and Globalization
- Minimum Wages
- Immigration Economics
- Housing Policy
- Federal Budgets
- Federal Debt
- Black-White Wealth Gap
- Autonomous Vehicles
- US Social Policy

Course Outline

- **The Economics of Public Policy Issues**
  - Week 1 (7/8): Economic Update (including tariffs) (Geoffrey Woglom, Amherst College)
  - Week 2 (7/15): Climate Change Economics (Sarah Jacobson, Williams College)
  - Week 3 (7/22) The Economics of the Minimum Wage (Veronika Dolar Pace University)
  - **Week 4 (7/29): Cryptocurrencies (Joan Nix Queens College (CUNY))**
  - Week 5 (8/5): Saving Social Security (Jon Haveman, Exec Director, NEED)
  - Week 6 (8/12): Federal Debt and Deficits (Geoffrey Woglom, Amherst College)

Submitting Questions

- **Submit questions in the chat. I will try to address questions as they come up.**
- **We will do a verbal Q&A once the material has been presented.**
- **Slides will be available from the NEED website tonight https://needecon.org/delivered_presentations.php.**

Today's Agenda

- Part 1: Why It Matters (The "Why")
- Part 2: How It Works (The "How")
- Part 3: Opportunities & Risks (The Good & The Bad)
- Part 4: The Bigger Picture (What's Next?)
- *(… followed by Q&A)*

Part 1 Why Crypto Matters To You

Problem with Moving Money

- "Sending money home shouldn't cost a fortune." Global remittances are slow and expensive – e.g. the average cost to send $200 is 6.62% (over $13 lost), more than double the 3% target set by the G20.
- Traditional banks are the priciest, charging ~13.6% (over $27 lost on $200). Even newer digital remittance services still average ~4.95% fees. These high fees act as a hidden tax on workers, siphoning money meant for food, education, and healthcare.

Billion Adults Have No Access to a Bank

The Problem of Financial Exclusion

- 1.4 billion adults worldwide are “unbanked” – they have no access to a bank account or formal financial services. This isn’t just inconvenient; it’s a fundamental barrier to economic progress.
- Without bank access, it’s extremely difficult to save securely, get credit, obtain insurance, or even receive payments safely. Financial inclusion is recognized as key to reducing poverty.
- A major hurdle is lack of formal ID documents, which locks millions out of the banking system (especially in regions like Sub-Saharan Africa).
- How crypto can help: Anyone with internet and a basic smartphone can download a crypto wallet app. In minutes, they can send, receive, and store value globally – no traditional bank, physical address, or government ID required. Cryptocurrency offers a potential pathway to the global economy for those left behind by the traditional system.

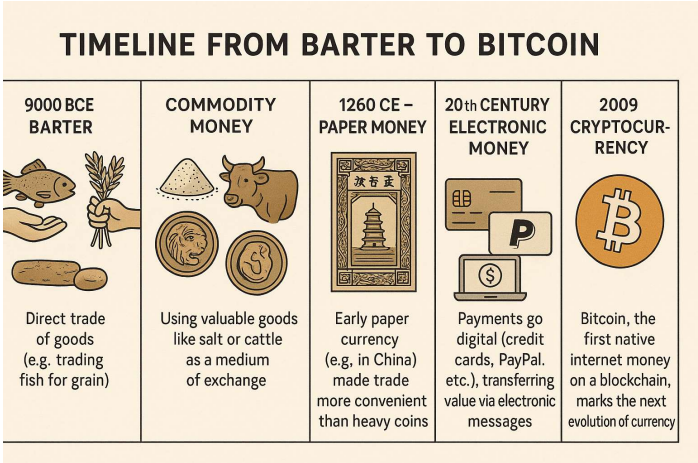
Unstable Economies

The Problem of Unstable Economies

- Many people face the “silent theft” of inflation – in countries with unstable economies, life savings can be erased in months by hyperinflation.
- Recent examples (2024–25): Argentina’s annual inflation is ~39.4%, Venezuela’s ~180%, Zimbabwe’s >95%. In such environments, holding the local currency guarantees loss of purchasing power – your money buys less every day.
- This forces people into a desperate search for a stable store of value. For some, even Bitcoin’s ups and downs are preferable to their national currency’s certain collapse. (In countries like Argentina, we see some of the world’s highest crypto adoption out of necessity – not speculation, but using USD-pegged stablecoins or Bitcoin as a financial lifeline.)

A New Possibility: Digital Money

PART 2: How It Works (Without the Jargon)
The Evolution of Money



The Evolution of Money

- 9000 BCE – Barter: Direct trade of goods (e.g. trading fish for grain).
- Commodity Money: Using valuable goods like salt or cattle as a medium of exchange.
- ~600 BCE – Minted Coins: First standardized coins (e.g. in Lydia) introduced durable, portable money.
- 1260 CE – Paper Money: Early paper currency (e.g. in China) made trade more convenient than heavy coins.
- 20th Century – Electronic Money: Payments go digital (credit cards, PayPal, etc.), transferring value via electronic messages.
- 2009 – Cryptocurrency: Bitcoin, the first native internet money on a blockchain, marks the next evolution of currency.

Origin Story:

- **The Mysterious Satoshi Nakamoto:**
  - Lehman Brothers Bankruptcy, 9/2008
  - Halloween 2008: a white paper is published on the Internet laying out the idea and design for Bitcoin. The author (or authors) used Satoshi Nakamoto as a pseudonym.
  - **January 2009:** Satoshi releases the first version of the Bitcoin software.
  - 2009-2010: Satoshi releases new versions of the software and is actively involved in internet chatter about Bitcoin.
  - April 2011: Satoshi ceases all known and/or verified communications.
- **To this date the identity or identities of Satoshi are unknown.**

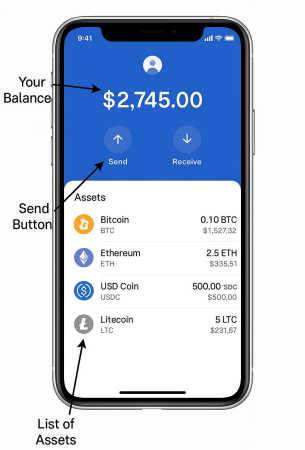
A Simple Definition

- **"Internet money that no single company, bank, or government controls."**

The Digital Gold Analogy

Property	Gold	Bitcoin
Scarcity	Naturally Scarce	Digitally Scarce (Fixed Supply)
Durability	Physically Durable	Digitally Durable (Lives on the Internet)
Counterfeit-Proof	Hard to Counterfeit	Impossible to Counterfeit
Recognizability	Globally Recognized	Globally Accessible

What A Crypto Wallet Looks Like



Question: The Digital Shift

Who here has used Venmo, PayPal, or another digital payment app in the last week?

Corporate Adoption Is Growing

Direct Acceptance

Microsoft

amc THEATRES

MULLEN AUTOMOTIVE

norwegian

Accepted via Payment Partners

THE HOME DEPOT

AT&T

BEST BUY

Expedia

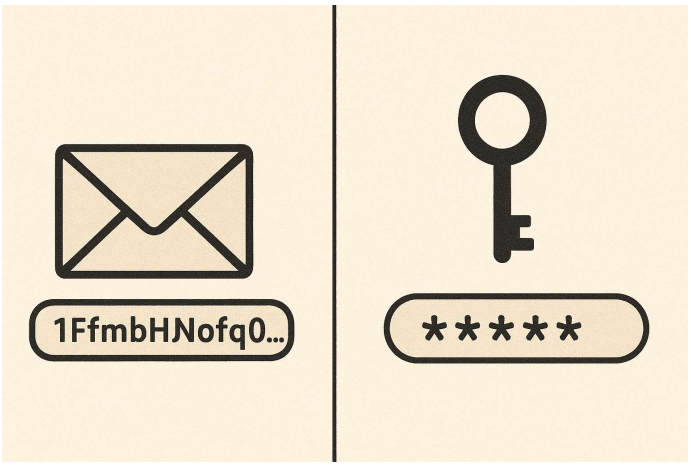
National Adoption: A Bold Experiment

Grassroots Adoption

Part 2

"Now that we understand WHY people use cryptocurrency, let's look at HOW it actually works... and I promise, no complex math!"

The Two Keys to Your Crypto



Keys to Your Crypto

- Public Address (your “account number”): This is like your bank account number or email address. It’s a long string of letters/numbers you share freely to receive funds.
- Private Key (your password/signature): This is the secret key to your digital safe. It proves you own the funds in the wallet and allows you to spend them. Never share it with anyone!

Public vs. Private Keys: A Deeper Look

- Purpose: Public key is for receiving funds; Private key is for sending/spending funds.
- Sharing: Public address can be shared freely (post it on your website if you want); Private key must be kept absolutely secret.
- Analogy: Public = your mailbox address (anyone can send mail to it); Private = the key to open your mailbox (only you can open and take contents).
- Recovery: Your public address can be regenerated from your private key. But if you lose your private key, your funds are lost forever – no bank or support line can recover them.

Public Versus Private Keys

Feature	Public Key / Address	Private Key
Purpose	Receive Funds	Send/Spend Funds
Sharing	Share Freely	Keep Absolutely Secret
Analogy	Email Address / Mailbox	Password / Physical Key
Recovery	Can be regenerated from Private Key	If lost, funds are lost forever

Making It Easy: QR Codes

- **Just like you might scan a QR code at a restaurant to view a menu, you can scan a QR code to send or receive cryptocurrency.**
- **When you want to receive money, your wallet app can generate a unique QR code that represents your public address. The sender just opens their wallet, scans your code with their phone's camera, and your long address is instantly and perfectly filled in, with no typing. It's fast, easy, and eliminates human error. This makes transactions much more user-friendly – you don't need to worry about mistyping a 30-character string.**

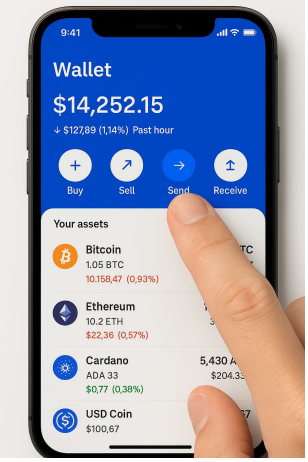
Creating a Wallet

- Open the app store and download a popular free wallet app (there are many options like Coinbase Wallet, Trust Wallet, etc.). After opening the app. The first thing you will see is a big button: “Create a New Wallet.” Tap that.
- Next, the wallet app is about to generate something extremely important: a “seed phrase” (also called a recovery phrase). This is essentially the master key to my entire wallet. The app now shows you a screen with a list of 12 random words. It’s instructing you to write these down and store them in a safe place. This isn’t just a friendly tip – it’s *critical* for security. You should physically write these 12 words on a piece of paper, as recommended.

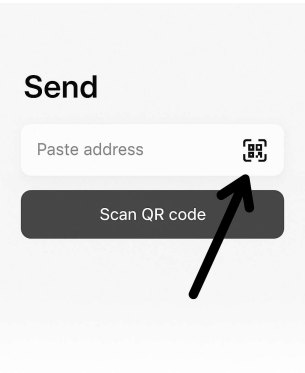
The All-Important Seed Phrase

- Your Seed Phrase = Your Master Key. A random list of 12–24 words that can restore your entire wallet (and all funds) on any device.
- Guard it with your life: Write it down and keep it offline in a secure place. ***Never store it digitally or share it!*** (If someone gets this phrase, they can control all your crypto.)

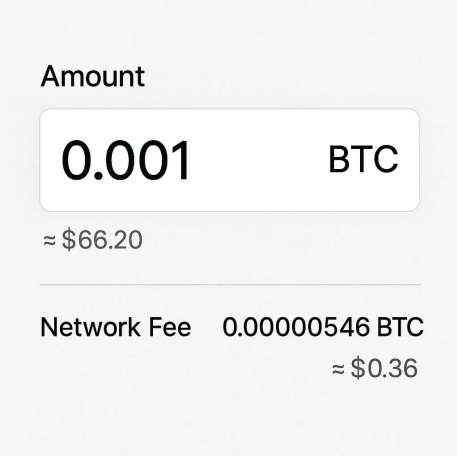
Step 1: Open Your Wallet App



Step 2: Enter the Recipient's Address (or Scan QR Code)

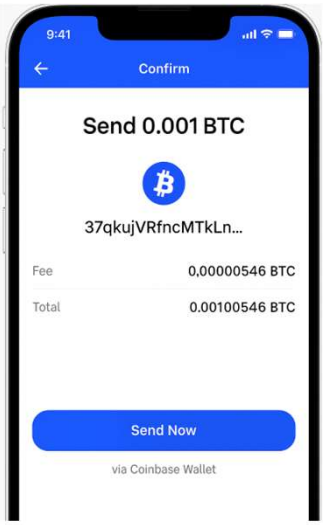


Step 3: Enter the Amount & Review the Fee"



NATIONAL ECONOMIC EDUCATION DELEGATION

Step 4: Confirm the Transaction



NATIONAL ECONOMIC EDUCATION DELEGATION

Last Transactions-Different Example

- 80e9ee6de0d2cba1ebc521867907296e0b8856131ed73df6dec67e587014207f
- Fri, 27 Jun 2025 20:55:15
- tb1qtqvm5nrdqqc5qc4ah58tsxvpyhjajvk9sv3aqt pending
- -0.0001
- 0.00000146 fee

Understanding the Last Transactions List in a Crypto Wallet

- TXID 80e9ee6de0d2cba1...7014207f – This is the unique reference ID for the transaction (our transaction's "receipt number" on the blockchain).
- Date/Time Fri, 27 Jun 2025 20:55:15 – At about 8:55 PM on June 27, 2025, we initiated this transaction.
- Address tb1qtqvm5nrdqqc5qc4ah58tsxvpyhjajvk9sv3aqt – This is the Bitcoin address of the recipient. The funds are being sent *to this address*. (Because it starts with "tb1", we know it's a testnet Bitcoin address, but functionally it represents the receiver's account in this example.)
- Status pending – The transaction has been broadcast but is not yet confirmed on the blockchain. It's waiting for inclusion in a block. Once miners include it and it gets enough confirmations, this status will update to confirmed and show a confirmation time.
- Amount -0.0001 BTC – We (the sender) are sending 0.0001 BTC. The negative sign indicates this amount is leaving our wallet. If this were incoming, it would show as +0.0001. So we're paying out 0.0001 BTC to someone.
- Fee 0.00000146 BTC – In order to send that 0.0001 BTC, we're also paying a network fee of 0.00000146 BTC to the miners. This ensures the transaction will be processed. It's a very small fee (a tiny fraction of a Bitcoin).

In Plain English

- *On June 27, 2025, a transaction (ID beginning 80e9ee6d...) was created to send 0.0001 BTC to the address tb1qtqvm5...sv3aqt. The transaction is currently pending (not yet confirmed on the blockchain) and included a network fee of 0.00000146 BTC.* Once this transaction gets confirmed (with enough block confirmations), it will no longer be pending, and the recipient will officially have the 0.0001 BTC.

What's Happening Behind the Scenes?

- When you hit send, your transaction is broadcast to a global network of computers.
- Miners (network participants) collect pending transactions into a block and add it to the blockchain – a permanent, shared digital ledger of all transactions. Once added to a block, a transaction cannot be altered.

The “Digital Lottery” (Mining)

- New bitcoins are created through mining – it’s like a global lottery where powerful computers compete to solve a math puzzle every ~10 minutes. The winner gets to add the next block to the blockchain *and* is rewarded with a set amount of brand-new Bitcoin.

Wait, Why Does It Take 10 Minutes?

- On the Bitcoin network, each new block averages ~10 minutes. This delay is a security feature, allowing time for the network to confirm and agree on transactions.
- In those ~10 minutes, miners are working to secure the block. Once your transaction is in a confirmed block, the whole network agrees it’s valid and permanent. *(Note: Some newer cryptocurrencies have much faster confirmations, but Bitcoin chooses security over speed.)*

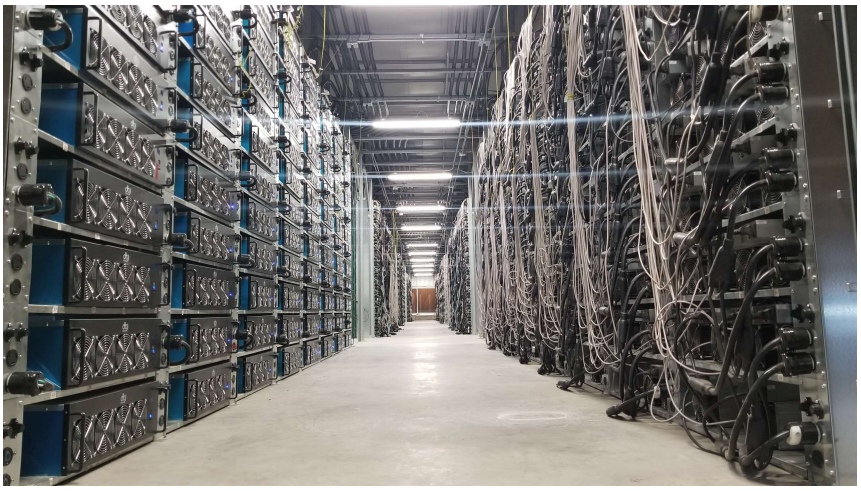
A Fixed and Finite Supply

- There will only ever be 21 million Bitcoin. This hard cap is encoded in Bitcoin's core software and enforced by the network.
- Unlike traditional currencies which governments can print indefinitely, Bitcoin's supply is fixed and predictable. Everyone knows the total number of coins that can ever exist, which makes it a scarce digital asset.

Proof of work: Bitcoin "mining"

- The incentive for miners is that the winner of the competition to solve the puzzle gets rewarded with NEW bitcoins and transaction fees.
- However, the miner will not get the reward unless other miners agree that the puzzle was solved and add the winner's block to the blockchain.
- In this way, transactions are added to the chain via a proof of work "consensus" of miners.

Bitcoin mine



Solo Bitcoin Miner Wins $373,000 Block Reward (July 26, 2025)

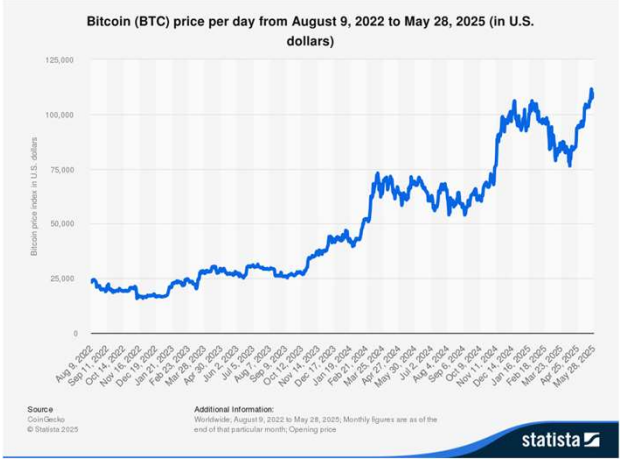
- The solo miner on July 26, 2025 had a reported hashing power of only about 48 terahashes per second (TH/s), which is extremely modest by today's standards. (For context, top mining pools operate with *exahashes* per second, i.e. millions of terahashes, so a 48 TH/s rig is like a drop in the ocean.) With such a small share of the network power, the probability of this miner finding a valid block was "statistically improbable – like hitting the lottery"

PART 3: Opportunities & Risks

The Benefit of a 24/7 Global Market

- Traditional finance runs on business hours (e.g. 9–5 weekdays), with weekends and holidays off. Crypto markets never sleep: transactions can occur 24 hours a day, 7 days a week, 365 days a year, across borders.
- This always-on nature means you can send value or execute trades at any time, and funds can arrive in minutes. It's a major leap in efficiency and convenience for a globalized economy where money doesn't need to "stop" on weekends.

Price Volatility



The Crypto Rollercoaster: Price Volatility

- **Extreme ups and downs: Bitcoin's price, for example, dropped 40% in a single day in March 2020 (COVID crash), then surged by hundreds of percent in 2020–21 (bull run), crashed again in 2022 (–64%, e.g. after a major exchange collapse), then hit new highs in 2024 (after US ETF approvals).**
- **This level of volatility can create opportunities for massive gains, but equally the potential for devastating losses, sometimes in short time spans. It's not for the faint of heart, and it remains one of the biggest risks in crypto.**

Question – please answer in chat

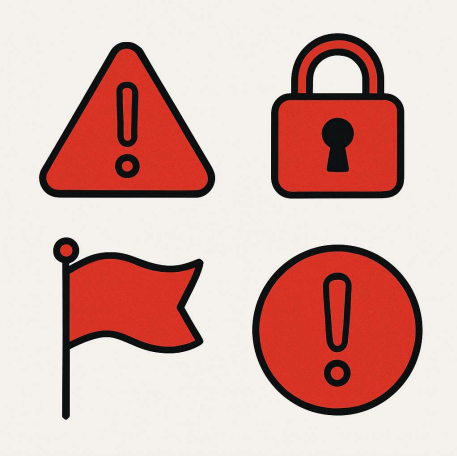
Bitcoin is considered by some an asset that will store value because:

a) people are easily deceived.
b) its supply is under the control of monetary authorities.
c) its supply is independently determined by code.
d) it is not volatile.

Retirement Savings Are Opening to Crypto

- Crypto has already made its way into American retirement systems :
- Since 2022, some 401(k) plans have allowed investments in crypto.
- Several state pension funds now have exposure to crypto through ETFs or investments in crypto-related companies.
- States like New Hampshire are even creating state-level crypto reserves with taxpayer funds.

Buyer Beware!



Scams and Security: Stay Vigilant

- **Magnet for Scammers: The crypto space, with its hype and rapid wealth stories, attracts fraudsters. Beware of anything "guaranteed" or offering huge returns with no risk. If it sounds too good to be true, it is – without exception.**
- **Red Flags: Be deeply skeptical of anyone pressing you to act fast ("limited time opportunity!") or who promises safe, high profits. Never share your private keys or seed phrase – no legitimate investment requires those.**
- **Trust Code, Not Personalities: In this world, trust should be placed in transparent, open-source code and verifiable data on the blockchain – *not* in charismatic individuals or influencers. Scammers often rely on hype and personal trust. Your skepticism is your shield – use it diligently.**

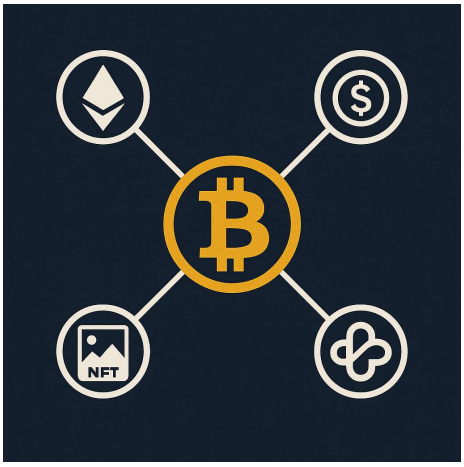
The Hidden Costs of Crypto Mining

- To generate new coins, "crypto mines" use massive amounts of energy. Many states and utility companies give these multimillion-dollar operations huge discounts on electricity. As a result, households end up subsidizing their energy use. In Texas, crypto mining has raised residential electricity costs by an estimated $1.8 billion per year and brought the state's power grid "perilously close" to failure.

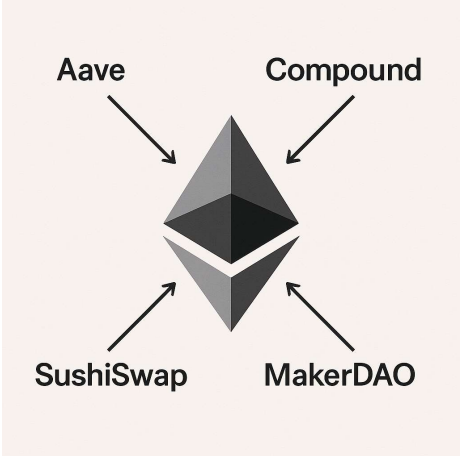
A Threat to Public Health and Quality of Life

- Communities hosting crypto mines suffer from the consequences. Residents near facilities in Texas, Arkansas, and North Dakota report constant, disruptive noise pollution that causes sleep loss and stress. Many have reported health issues they link to the mines, including hypertension, hearing loss, and migraines. The mines also raise alarms about water usage and potential contamination.

PART 4: The Bigger Picture (What's Next?)



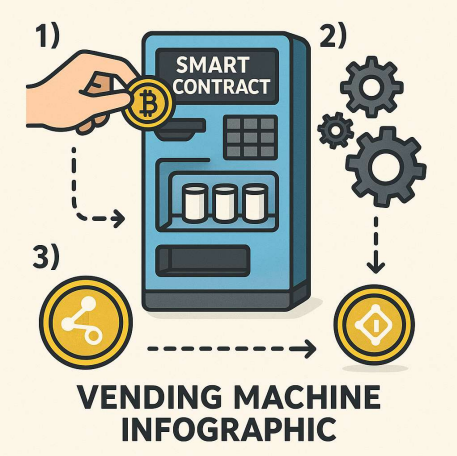
Ethereum: The World Computer



Ethereum

- Ethereum is a global, decentralized platform for building and running applications. It's like a programmable blockchain-computer.
- The core innovation of Ethereum is the smart contract – code that lives on the blockchain and automatically executes agreements when conditions are met.

Smart Contracts on the Ethereum Blockchain



Analogy: The Smart Contract Vending Machine

- A smart contract is like a digital vending machine. It's a self-executing agreement with rules directly written in code. If you meet the conditions (e.g. insert money + select item), then it automatically delivers the result (dispenses the item) – no middleman required.

Ethereum vs. Bitcoin: Energy Efficiency

- Ethereum now uses ~1% of the energy that Bitcoin does.
- Reason: Ethereum transitioned to proof-of-stake (PoS) in 2022 ('The Merge').
- Bitcoin still uses proof-of-work (PoW), which is energy-intensive.
- This makes Ethereum significantly more environmentally sustainable.

StableCoins: Crypto without the Volatility

Stablecoins

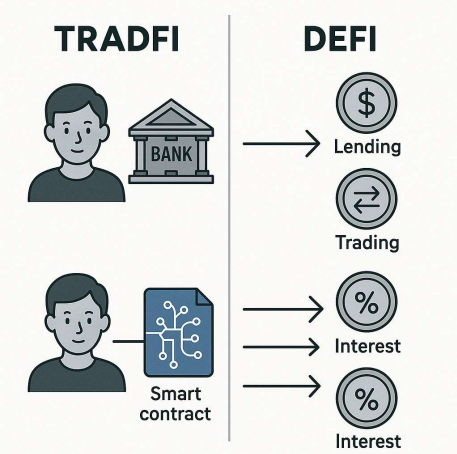
- Stablecoins are cryptocurrencies designed to hold a stable value. Most are pegged 1:1 to a real-world asset like the U.S. dollar.
- They offer the benefits of crypto (fast, low-cost, global transactions) without the wild price swings. For example, 1 USDC is intended to always be worth $1. Companies achieve this by backing each token with real reserves (cash or equivalents).

NFTs-Non-Fungible Tokens

NFTs: Unique Digital Ownership

- NFT stands for Non-Fungible Token. “Non-fungible” means unique – it can’t be replaced by another of the same kind.
- An NFT is essentially a *digital certificate of ownership* for a specific asset, recorded on the blockchain. It can represent digital items (art, music, in-game items) or even physical assets. Each NFT is one-of-a-kind, unlike cryptocurrencies or dollars which are interchangeable.

DeFi-Decentralized Finance



DeFi: Banking Without Banks

- Decentralized Finance (DeFi) uses smart contracts to offer financial services without traditional intermediaries.
- On DeFi platforms, people can lend, borrow, trade, and earn interest directly with each other, governed by code. For example: lend your crypto and earn interest, or swap tokens on a decentralized exchange – all without banks or brokers involved.

Transition to Regulation

- *As this ecosystem has grown, governments have taken notice. Let's see how they're responding and what it means for you.*

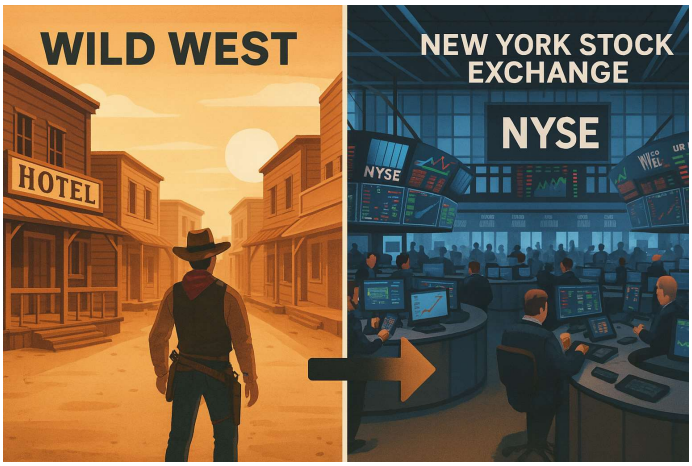
Trillion dollar question

- **So why do we trust banks and MMFs(money market funds) with the vast majority of our hard-earned money?**

Trust

- A regulatory framework that transforms risky deposits into safe assets- lender of last resort, FDIC deposit insurance.

The Shift from “Wild West” to Wall Street



The U.S. Regulatory Puzzle: SEC vs. CFTC

- **In the US, a big question has been "Who gets to regulate crypto?" The new technology doesn't fit neatly into existing legal categories. Two main agencies claim oversight, leading to a turf battle:**
  - **SEC (Securities and Exchange Commission):** The SEC regulates securities (like stocks). It argues many crypto tokens are securities (sold to raise money for projects) and has taken action against projects for not complying with securities laws.
  - **CFTC (Commodity Futures Trading Commission):** The CFTC regulates commodities (like gold, oil, wheat). It views established, decentralized cryptos (like Bitcoin, and perhaps others) as *commodities* rather than securities.
- **This jurisdiction conflict has created a lot of uncertainty. Companies operating in the US haven't been sure what rules apply, which makes it hard to move forward confidently.**

A Path to Clarity: The FIT21 & CLARITY Acts

- **Bipartisan legislation is being crafted to resolve the SEC vs CFTC puzzle. Notably, the proposed Financial Innovation and Technology for the 21st Century Act (FIT21) and its update, the CLARITY Act, aim to set clear rules.**
- **These bills would create a framework based on decentralization: If a crypto project is still centrally controlled (like a company raising money from the public), its token is treated as a security under the SEC. But if a project becomes sufficiently decentralized (no single entity in control, community-run), its token can be classified as a digital commodity under the CFTC.**
- **This gives projects a *clear pathway*: start under stricter oversight if centralized, and later, when truly decentralized, transition to lighter commodity regulation. It would bring much-needed clarity and predictability to the U.S. crypto market.**

U.S. Crypto Legislation: GENIUS vs. FIT21 & CLARITY Acts

- GENIUS Act focuses on regulating stablecoin issuers (reserves, charters).
- FIT21/CLARITY Acts define who regulates digital assets (SEC vs. CFTC).
- CLARITY Act uses 'decentralization' as a key criterion for classification.
- GENIUS addresses payments and consumer protection; CLARITY addresses market structure.

What is good regulation?

- The Principles Are Easy;
  1. Eliminate fraud, abuse and manipulation.
  2. Do not let markets be dominated by a small number of powerful firms.
  3. Allow startups with new innovations to displace incumbent firms.
  4. Minimize risk of a financial crisis.
- Legislation and Implementation: Hasn't Been Easy

Crypto Fraud Is Skyrocketing

- Outright fraud is rampant. In 2024 alone, the FBI received nearly 150,000 crypto-related complaints, totaling $9.3 billion in losses—a 66% increase from the previous year. Older Americans are a primary target, with those over 60 losing a collective $2.8 billion.

The Predatory Nature of Crypto ATMs

- Crypto ATMs, often marketed as tools for financial inclusion, are a growing site for fraud. They are frequently placed in lower-income and minority neighborhoods, where they charge excessive fees. In 2024, these machines were involved in scams totaling nearly $250 million in losses, with the elderly again being the primary victims.

Societal Harms and National Security

- Fueling Cybercrime: Crypto's Role in Ransomware
- Because it is difficult to trace, cryptocurrency is the preferred payment for cybercriminals. Ransomware attacks extorting hospitals, schools, and local governments have skyrocketed. These attacks disrupt critical infrastructure, from 911 emergency services to hospital operations, and are a direct threat to public safety.

A Tool for Illicit Markets

- Cryptocurrency is also a key facilitator in black markets, including the fentanyl crisis. Traffickers use crypto to launder money and evade law enforcement. Authorities in Arizona and California have traced crypto transactions to seize over five tons of fentanyl, and a single dark web operation serving all 50 states used Bitcoin for over $150 million in drug sales.

A Matter of National Security

- Adding another layer of risk, investigations have found that crypto mines in at least 12 states are owned or operated by entities with links to the Chinese government. Given the strategic importance of our energy infrastructure, this foreign control raises serious national security concerns about grid stability and potential surveillance.

Innovation in Crime-Detection Continues

- Bitcoin is pseudonymous, not anonymous – all transactions are public.
- Law enforcement uses blockchain forensics to track illicit activity.
- Criminals often caught when converting crypto to fiat (via KYC exchanges).
- Example: FBI has traced and seized billions in Bitcoin from criminal activity.
- Lesson: Blockchain transparency can help catch wrongdoers despite its perceived secrecy.

Institutional Adoption Continues

The Ultimate Sign of Legitimacy: Institutional Adoption

- A major milestone in crypto's mainstream acceptance was the approval of spot Bitcoin ETFs in the U.S. (January 2024). These exchange-traded funds hold actual Bitcoin and allow investors to buy BTC exposure through regular stock markets (via their brokerage accounts).
- Financial giants like BlackRock and Fidelity launching Bitcoin investment products marked a watershed moment. It provides a regulated, familiar bridge for pension funds, corporations, and other institutional players to enter the crypto market. This influx of institutional interest adds a new layer of legitimacy and is driving the industry's maturation.

Question-Do I Have To Pay Taxes?

YES.

The IRS treats cryptocurrency as property, not currency.

Question: Taxes?

- **Practical Question: Do I Have to Pay Taxes?**
- **Yes – crypto is taxed. In the U.S., the IRS considers cryptocurrency property (like stocks or real estate), *not* foreign currency. This means many crypto transactions are taxable events. Failing to report crypto gains or income can lead to audits or penalties.**

How Crypto is Taxed (Simplified)

- ***(Visual: Flowchart of crypto activities → taxable vs non-taxable)***
- **Taxable Events (Capital Gains):**
  - Selling cryptocurrency for fiat money (e.g. converting Bitcoin to USD)
  - Trading one crypto for another (e.g. swapping ETH for BTC)
  - Using crypto to pay for goods or services (spending crypto)
    (For each of these, you incur a capital gain or loss based on value change since you acquired the crypto. Long-term gains (held >1 year) often get lower tax rates than short-term.)
- **Taxable Events (Income):**
  - Receiving crypto as payment for work/services (treated like wages in USD)
  - Earning new coins through mining or staking (treated as income at the moment of receipt)
    (These are taxed as ordinary income at the fair market value at receipt. They also establish your cost basis for those coins going forward.)
- **Non-Taxable Events:**
  - Buying cryptocurrency with fiat (simply purchasing crypto and holding it)
  - Transferring crypto between your own wallets or accounts (no change in ownership)
  - Simply holding crypto (unrealized gains aren't taxed until you sell/trade).
  - *(Note: Gifting crypto under certain small thresholds may not be taxable to the giver or receiver, and moving crypto in a tax-advantaged account or charitable donations have their own rules.)*

Transition to Next Steps

- ***So, you've seen the why, the how, the good, the bad, and the bigger picture. What should you do next?***

A Closing Thought

"Blockchain is the tech. Bitcoin is merely the first mainstream manifestation of its potential." — Marc Kenigsberg

Summary: Key Takeaways

- It Solves Real Problems: Cryptocurrency isn't just hype; it was born to tackle real issues like expensive remittances, lack of banking access, and currency inflation. These real-world use cases are driving adoption – crypto is a technology responding to actual needs.
- You Are Your Own Bank: With crypto, you can truly control your own assets (no bank needed). This is empowering – but it also means *full responsibility* for securing your funds (remember: *not your keys, not your coins*). Self-custody gives freedom *and* demands diligence with security.
- High Risk, High Potential: The crypto space offers huge innovation and growth potential, but it comes with major risks. Prices swing wildly, scams and technical failures happen. Keep a balanced perspective – don't let excitement blind you to risks, or fear blind you to possibilities.
- Education is Key: Knowledge is your best tool in this new domain. The safest, most effective way to engage is to educate yourself and even experiment hands-on with small, affordable amounts. Continuous learning and cautious, step-by-step experience will serve you far better than any hot tip on social media.

Thank you!

Any Questions?

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Resources

- E Prasad, *The Future of Money* (https://youtu.be/o3NuHb7V1IA)
- N. Mehta, et.al. *Blockchain Bubble or Revolution*
- *Cryptoassets* – Chris Burniske & Jack Tatar
- *Digital Gold* – Nathaniel Popper

- Coinbase Learn: Simple, interactive lessons
- Binance Academy: Videos + quizzes, from beginner to advanced
- Coursera: "Crypto for Beginners" (U. of Michigan)
- MIT OCW: "Blockchain and Money" (advanced learners)

Resources

- Podcasts for On-the-Go Learning
- Unchained (Laura Shin): Interviews with experts
- Crypto Top Trading Signals: Market updates + education

Try It Yourself

- MetaMask Wallet (testnet version)
- Explore DeFi with Uniswap or Aave (no real money needed)