

CRYPTOCURRENCY 101

Barbara Hudgins, AAP, APRP
Director Payments Education

Ask ePay - We Are Here For You!



We Engage

- Member-based not-for-profit payments association
- Advocacy and national representation



We Educate

- Payments Answerline™
- Training and conferences
- Publications and toolkits



We Empower

- Our mission is to empower our members to be informed, compliant, and competitive in payments.

Disclaimers

This presentation and applicable materials are intended for general education purposes and nothing in this presentation should be considered legal, accounting, or tax advice

You should contact your own attorney, accountant, or tax professional with any specific questions you might have related to this presentation that are of a legal, accounting, or tax nature

Opinions expressed are those of the presenter / trainer and not necessarily those of ePayResources





2 minutes ago

but, finp2p is a great solution, I didnt think that this would happen this fast so bravo



2 minutes ago

Most importantly this is a peer-to-peer network, not centralised so fees etc will find their level based on the services that competing institutions can offer.



2 minutes ago

Many are moving now in 2021. But the financial institutions are slower. Do not wait for them



a minute ago

I think for US, a centralized system will be more accepted, but thats just my personal opinion, we all know that the US is a little slower in accepting these new technologies, but in the end will probably withstand the longest because it will be the safest



a few seconds ago

Just drop the banks from that equation!



a few seconds ago

Just drop the banks from that equation!

FinP2P

- Plan to launch institutional digital securities network for private capital markets
- Case study:
 - Acme Corp wants to raise capital
 - Their investment bank, Sky's-the-Limit Bank registers Acme on their network and uploads their Know Your Asset (KYA) docs, and authorizes other network institutions to allow investments
 - Another Corp logs into the dashboard of their bank, Invest Now Bank, looking for investment opportunities and sees the listing for Acme Corp
 - Another Corp decides to invest in Acme Corp
 - Transaction is verified by Sky's-the-Limit Bank and settled immediately

Terms

- Byzantine Fault Tolerance
 - System will function correctly if 2/3 of network reaches consensus
- Coin vs Token
 - Coins are mostly used as money
 - Tokens built on top of another blockchain to be used on a dApp
- dApp
 - Decentralized application
 - Peer-to-peer network (blockchain)
 - Secure, transparent, resistant to censorship
 - Popular uses: Trading crypto, social media (Steemit), Gaming, Entertainment (Dtube)

Terms

- DeFi
 - Decentralized finance
 - Build decentralized financial applications with no central authority or censorship
 - Trust the code vs trust the people
- Gas
 - Computing power needed to validate a transaction on Ethereum
 - Anywhere else is called “network fees”

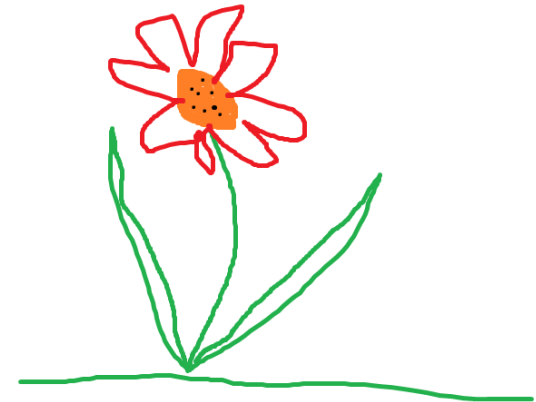
Terms

- Proof of Stake (PoS)
 - Block validation locked in by validator
 - Ethereum 2.0
- Proof of Work (PoW)
 - Block validation via mathematical hashing
 - Bitcoin
 - Ethereum
- Wallets
 - Hot
 - Cold

1wYTeEWrht7aStCRWV1WycqniiPupAsK5

NFT (Non-Fungible Token)

- Digital
- Unique
- Own worth
 - Opposite: All \$10 bills are worth the same
- Created on blockchain
- Buy or sell ownership to digital items
 - Most common
 - Artwork
 - GIF
 - Photo



Cryptocurrency

- Decentralized networks
 - Immune to government interference or manipulation
- Bitcoin – first blockchain-based cryptocurrency
- August 2021
 - 10,000+ different currencies being traded publicly
 - Value \$1.9 trillion
- June 2020 – June 2021
 - 13%: Americans trading cryptocurrencies
 - 24%: Americans investing in stocks

Bitcoin vs Ethereum

Bitcoin

- Launched 2009
- Created as alternative to national currencies
 - No central authority
- Medium of exchange
- Store of value

Ethereum

- Launched 2015
- Open-ended decentralized software platform
 - Immutable
 - Smart contracts
 - Decentralize application (dApp) platform
- Not intended as alternative monetary system

Smart Contracts

- Run on the Ethereum Virtual Machine
- Computer programs that execute an action based on terms and conditions
- Recorded in a computer language instead of legal language, so not necessarily legally binding
- Each step can only be implemented after the execution of the immediate former step
- Once executed, the information is stored on a blockchain which cannot be altered
- Act as a foundation to build decentralized applications (DApps)

Think of an Onion

- 3 types of transactions
 - Multiple parties come together and use blockchain to record an announcement of the exchange of monetary value
 - Buy / sell cryptocurrency
 - Multiple parties use blockchain to record an important announcement
 - Doctor and patient agree to add to a prescription to patient's medical record
 - Single party announcing an important or significant event
 - Managing a supply chain
 - Grower of organic produce commits a record to blockchain that says they've planted a certain crop
 - Organic pesticide company come to treat that organic crop
 - Grower adds information about pesticide treatment to blockchain
 - Creates traceability for the end consumer

Smart Contract Features

- Accuracy
 - Replacing human intermediaries with executable code ensures the process will always be performed the same
- Cost savings
 - Replacing intermediaries often provides significant cost reduction
- Backup
 - Blockchain and smart contract deployed to it can provide a permanent record, allowing for auditing, insight, and traceability
- Autonomy
 - Can be developed by anyone, no need for intermediaries such as lawyers, brokers, or auditors

Volatility

- No inherent worth
- No central regulation
- Group psychology, up or down
- Media influence
 - Doge to the moon!
- Low liquidity (fewer participants)
 - Single large order can significantly impact prices

Stablecoin

- Tied to reserve assets
 - Fiat currency
 - Oil, precious metals, gold, silver
 - Cryptocurrencies (over-collateralized)
- Fills gap between fiat currencies and cryptocurrencies
 - Tether
 - TrueUSD

Platform Issue Digital Currency

- Example: Diem (previously Libra)
- Build loyalty
- Harvesting transaction data
- Seigniorage revenue
 - Difference between cost production and currency sales income
 - Traditionally reserved for sovereign nations
- Will issuer be able to influence monetary policy?

Central Bank Digital Currency (CBDC)

- Centralized
- Digital fiat currency
- Potential to bring unbanked into the financial system
- May erode privacy
- Many central banks have launched pilot programs or research
- 81 countries are pursuing development (as of July 2021)

CBDC Around the World

G7

Working on a common set of principles for central banks to issue currency

European countries choosing not to launch CBDC could be left out of cross-border payments loop

- CBDCD potential adoption

- China – Digital Currency Electronic Payment (DCEP)

Beta testing

- Nigeria – by EOY21
- Bahamas – Sand Dollar
- Russia – CryptoRuble
- Sweden – e-krona

- Bitcoin as legal tender adoption

- El Salvador – 9/7/2021
- Paraguay
- Panama
- Mexico
- Venezuela (Petro has stalled)
- Brazil
- Argentina

CBDC Concerns

- Could cannibalize commercial financial systems
 - Exodus of as much as 30% commercial banks' funding base
 - Heavy caps
 - \$2500 limit
 - Hypothetical conflict between central banks and commercial banks for consumer deposits could pose a risk in the development of CBDCs
 - Would hinder commercial banks' ability to offer loans and mortgages if consumers place all their funds in an account with the central bank

Regulations (US)

- FinCEN does not consider crypto legal tender
 - Exchanges are considered money transmitters
- IRS considers crypto taxable property
- Security and Exchange Commission (SEC) considers crypto securities
- Varies by state and federal authorities

FinCEN Guidance

Currency Participant	FinCEN Definition	MSB Registration Status
Users	User	Not Required
Miners	User	Not Required
Wallet Providers	N/A	Not Required
Exchanges	Exchanger	Required
ATM Manufacturers	N/A	Not Required
ATM Operators	Exchanger	Required
Payment Processors	Exchanger	Required

Money Services Business

- Exchanges
 - Allows transfer of fiat currency into crypto
 - Act as brokers attempting to match two offsetting transactions (buy and sell order)
 - Do not hold an inventory of crypto
- ATM operators
 - Own and operate ATMs as a business
 - Unlike an exchange, an ATM operator trades crypto for fiat currency
 - Must maintain an inventory of crypto (Bitcoin) and fiat currency
- Payment Processors
 - Enable businesses to accept crypto as payment for goods and services
 - Can pass crypto or fiat currency through to the business

State Requirements

- Almost all states require money transmitters obtain a license
- Operating within a state does not necessarily mean that a business needs to have a physical presence in that state
- Most state regulatory bodies require any money transmitter that services or solicits a state's citizens obtain a money transmitter license
 - State requirements are not uniform
 - MSB with a physical presence in one state but with customers in other states will be required to obtain a license in every state that has licensing requirements

Business Account Opening

- Before opening an account with a crypto-related business, you should confirm whether the business is properly registered as an MSB
 - With FinCEN
 - With any states in which it operates
- Be aware of the unique KYC and CIP challenges crypto-related businesses may face
 - Exchanges and wallet providers typically operate in an electronic-only environment and do not offer any brick-and-mortar locations
 - ATM operators generally use the actual ATM to manage their KYC program and CIP
 - KYC procedures for crypto processors should include an underwriting process for any merchant account

Consumer Transactions

- Does your customer intend to engage in crypto-related transactions?
 - If the answer is no...move on, BUT if you happen to identify crypto-related transactions during ongoing account monitoring, you may want to follow-up about the activity
 - If the answer is yes, then you may want to determine which type of activity they are engaged in
 - Are they investing?
 - Are they mining or part of a mining group?

Taking the Plunge

- Onboard a crypto related MSB
 - Provide crypto custody services
 - Help start-up ventures raise capital via ICO rather than traditional capital markets
 - Help customers invest in blockchain-based investments
 - Provide crypto-enabled digital payments or transactions
- Offer Bitcoin rewards checking (Quontic Bank)
 - Debit card purchases pay 1.5% reward in bitcoin
 - Managed by third-party
 - U.S. dollars are FDIC insured
 - 2% fee to redeem back into U.S. dollars

Certificate of Completion

This certifies that

Print Name Above

has successfully completed the

Cryptocurrency 101 worth 1.5 APRP CREDITS

This program was conducted by the experts at ePayResources.

This certificate was awarded on **October 21, 2021**.

Print Date(s) Above



A handwritten signature in black ink that reads 'Wanda J. Downs'.

Wanda Downs, AAP, APRP, NCP

Connect With Me



- Barbara Hudgins, AAP, APRP
- Director, Payments Education
- 800-475-0585 x1106
- bhudgins@epayresources.org

Connect With Your Peers!

- Announcements
- Discussions
- Blogs
- Resource Library
- Mobile App

The screenshot displays the ePay CONNECTIONS COMMUNITY website. At the top, the logo features 'ePay' in blue with an orange starburst icon, followed by 'CONNECTIONS' and 'COMMUNITY' in blue. A navigation bar below the logo includes links for Home, Communities, Network, Events, Browse, Participate, and Help, along with a search bar. The main content area is divided into several sections. On the left, a 'WEBINARS' section shows a list of events: 'June 15 - Elder Abuse Awareness', 'June 16 - Mobile Remote Deposit: Risks, Rewards, and Deposits', 'June 17 - Disaster Preparedness: Understanding Excused Delay', and 'June 22 - Preparing for a Payments Audit'. Below this is a 'Latest Discussions' section with four entries, each featuring a user profile picture, a subject line (e.g., 'RE: Franklin Madison'), the author's name, the time since posting, and the community where it was posted. On the right, there is an 'Announcements' section titled 'Member Survey on Podcasts' by Michael Morrell, followed by a paragraph about a digital transformation survey and a 'Click here to take the survey!' link. Below the announcements is a 'View Archive' button. At the bottom right, an 'Upcoming Events' section lists two events: 'Elder Abuse Awareness' on June 15 from 9:00 AM to 10:00 AM (ET), and 'Fraud Reduction Meeting - Orlando & Tampa VIRTUAL' on June 15 from 12:00 PM to 1:30 PM (ET).

ePayAdvisors

Your Trusted Compliance Experts!

Audits and Risk Assessments for:

- ACH
- Wire
- Merchant and Mobile RDC

Payments Consulting, including:

- ACH Policies and Procedures
- Same Day ACH Readiness
- Payments Strategy Development
- and more!



*a wholly owned subsidiary of
ePayResources*

For a quote visit:
ePayAdvisors.com

800-475-0585
Option 5

Ask us about
Remote Services!

ePayU – New Member Benefit!

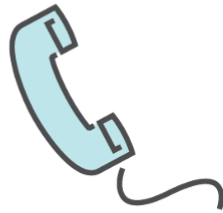
- 24/7/365 access to over \$15,000 in virtual payments education!
- 60+ courses, including RTP
- Convenient continuing education, included with your membership!



Questions?



Contact Us



Payments Answerline™
800-475-0585, Option 1



General Information
info@epayresources.org

Follow Us!

