

Cryptocurrency Risks

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Association of Credit Union Internal Auditors

WIPFLI

Your Presenter



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What we'll cover today

- Cryptocurrency

- ▶ What is cryptocurrency? How does it work? What's a blockchain?
- ▶ What do we need to be worried about?
- ▶ Is my credit union missing the boat if we're not on board already?
- ▶ How enthusiastic should we be?
- ▶ How terrified should we be?

Poll question

How much do you know about cryptocurrency?

- Almost nothing, though I've heard of bitcoin
- Enough to be excited about it
- Enough to be terrified of it
- I'm really interested to see the impact of Ethereum moving from a proof of work model to a proof of stake model.

Cryptocurrency



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What is cryptocurrency?

- Simply put, it's electronic currency. Using it is just like using money in your bank account, except there is no physical cash equivalent. You cannot hold a bitcoin in your hand. It also is much harder to use as actual currency, though there are a number of places online that accept bitcoin as payment.
- The “crypto” prefix refers to the cryptography/encryption that is used to keep each individual's currency safe, but it is also unfortunately associated with cryptic, hidden, criminal activity

What is cryptocurrency?

- Cryptocurrency is built on blockchain technology. The blockchain is an *immutable, distributed* ledger.
 - ▶ **Immutable** means that nodes on the network are permitted to read the blockchain and to write new records, but no records can be altered or deleted once they have been written.
 - ▶ **Distributed** means that every node on the network has a complete copy of the entire blockchain

HOW DOES BLOCKCHAIN WORK?

One party requests a transaction.



Requested transactions are funneled into a P2P network and broadcast to each individual computer (or node).



Individual nodes receive the request and validate the transaction using an algorithm.



Once the block is added to an existing chain, transactions are complete and permanent.



Approved transactions are represented as blocks and added to a public ledger.

Where does it come from?















- Most cryptocurrency is created by what is called mining.
 - ▶ Generally this process involves using computing power to solve complicated math problems. Once a solution is reached, all the nodes on the network check the math and if they agree, a new coin is produced. This is often called “proof of work.”
- So it's free money?!
 - ▶ Not even close. In 2010, sure. In 2022 it involves expensive hardware and ***lots*** of electricity.

How else can I get it?

- You can buy it with dollars.
 - ▶ You can trade directly with an individual, but you need to know what you're doing
 - ▶ Most people buy cryptocurrency on an exchange
 - The exchange works like a stock broker; they take your money and convert it to crypto, and skim a fee off the top.

Cryptocurrencies

- OK so when we say cryptocurrency we mean Bitcoin, right?
 - ▶ All Bitcoin is cryptocurrency, but not all cryptocurrency is Bitcoin
 - ▶ Coinbase lists 124 tradeable assets and tracks the value of more than 7,000

 Bitcoin BTC	\$59,888.08	 Alchemix ALCX	\$410.38
 Wrapped Bitcoin WBTC	\$59,881.12	 QuickSwap QUICK	\$374.08
 yearn.finance YFI	\$33,283.90	 Compound COMP	\$317.47
 Ethereum ETH	\$4,281.79	 Aave AAVE	\$285.23
 DFI.Money YFII	\$4,261.42	 Quant QNT	\$249.12
 Maker MKR	\$2,780.46	 Litecoin LTC	\$221.42
 Bitcoin Cash BCH	\$589.86	 Solana SOL	\$216.61

Can I spend it?

- In a few places, yes. Some retailers are set up to accept bitcoin as payment.
- Bitcoin transactions settle every 10 minutes (when the blockchain is appended)
 - ▶ Compared to a POS terminal, this is an eternity
 - ▶ Compared to an international wire transfer, this is a blink of an eye
- Most retailers do not for a number of reasons, but the biggest is volatility, which leads us into what we need to worry about first

Bitcoin value over time



My Bitcoin story begins in May of 2017



Did it end in 2021?



NOPE. It ended in late 2018. I made a \$9.00 profit.



Poll question

Did I make a wise investment?

- Obviously not
- No, but at least you didn't lose money
- No, but you were wise enough not to sell it when your wife told you not to sell it

So what are the risks?

- The dollar value of that currency is anyone's guess
 - ▶ Many younger people are putting their money in crypto instead of a savings account
 - ▶ From an investment standpoint, it's incredibly risky. It's the stock market in 1928.
 - ▶ As long as people keep buying it, it will continue to be more valuable.

So what are the risks?

- Your actual currency is very safe.
 - ▶ Because of the blockchain, it is impossible to steal cryptocurrency.

BUT

- You are responsible for keeping your keys secure.
 - ▶ If you buy through an exchange, you're only as safe as the exchange's security. If the exchange gets hacked, your money can be stolen.
 - ▶ Physical digital wallets
 - ▶ Paper

So what are the risks?

- In addition to volatility, a quick Google search of “Cryptocurrency risks” returns a multitude of topics
 - ▶ Tax considerations
 - ▶ Scammers and hackers
 - ▶ Custody of keys
 - ▶ Liquidity risks
 - ▶ Environmental concerns


Google

cryptocurrency risks

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About 47,300,000 results (0.55 seconds)

The risks of trading cryptocurrencies are **mainly related to its volatility**. They are high-risk and speculative, and it is important that you understand the risks before you start trading. They are volatile: unexpected changes in market sentiment can lead to sharp and sudden moves in price.



<https://www.cmcmarkets.com/learn-cryptocurrencies>

What are the risks of trading cryptocurrencies? - CMC Markets

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People also ask

What is the biggest risk with cryptocurrency?

The threat of regulation

Unsurprisingly, perhaps the single largest risk facing Bitcoin, and cryptocurrencies more generally, is the threat of tighter regulation. In 2021, China, the world's second-biggest economy, effectively made it illegal for citizens to mine or hold any cryptocurrency.

May 11, 2022

<https://www.fool.com/investing/2022/05/11/here-are...>

Here Are Bitcoin's 3 Biggest Risks | The Motley Fool

Search for: **What is the biggest risk with cryptocurrency?**

Is crypto high-risk?

What are some risks with cryptocurrency?

Is cryptocurrency a safe investment?

To summarize, **investing in cryptocurrency isn't necessarily safe**. Plenty of things could go wrong to decrease the value of the token you buy. Investors of all experience levels need to recognize this. However, this doesn't mean that investors should avoid cryptocurrency entirely.

Jul 6, 2022

<https://www.fool.com/investing/2022/07/06/is-invest...>

Is Investing in Cryptocurrency Really Safe Right Now? - The Motley Fool

So what are the risks?

- Regulations – both in the US and internationally – have a huge effect on the cryptocurrency market
 - ▶ China decided the risks were too great and banned mining or owning cryptocurrency in 2021.
 - ▶ India taxes all cryptocurrency transactions at 30%
 - ▶ El Salvador and the Central African Republic have both made Bitcoin legal currency

Are we missing the boat if we're not in on this already?

- The short answer is No. You have time.
 - ▶ You're not missing the boat yet. It is in the harbor, though, and they're getting ready to fuel it up.
- What can credit unions actually do with cryptocurrency?
 - ▶ The NCUA issued guidance in May stating that credit unions are permitted to use distributed ledger technology (DLT), but the guidance does not offer specifics. In contrast, the OCC has stated that it will allow national banks to act as “custodians” of digital currency, and the state of Wyoming allows banks there to hold cryptocurrency as a deposit account (with a lot of caveats)

Are we missing the boat if we're not in on this already?

- Some challenges:
 - ▶ Many people immediately go to KYM/BSA/AML issues. This only makes sense for 10 seconds; you're not going to establish a relationship with someone you don't trust
 - Once you connect the individual to their keys, they are no longer anonymous
 - ▶ The NCUA has not stated this requirement at this time, but banks that act as an exchange have to have *cash on hand equivalent to the value of the cryptocurrency held*, which could be tough to come up with as values rapidly climb and drop.

Poll question

Do you own any cryptocurrency?

- Yes!
- I've never owned any
- I used to but I got rid of it

Next Steps

- Educate yourselves
 - ▶ This is an evolving service and an evolving technology. Learn as much as you can.
- Talk with your regulators
 - ▶ The NCUA guidance is likely vague to allow for innovation, but this can be tricky if you get out ahead of their comfort level.

Next Steps

- Be honest with your Boards
 - ▶ We've gone down this road with lots of tech before, but this is different; this is not a “we can do everything those big banks can do” scenario. The Board may just be too uncomfortable to get on board.
 - ▶ The guidance is clear that any involvement with DLT needs to have input from the Board and that management should conduct a thorough risk assessment.

Next Steps

- Try it for yourself!
 - ▶ Your organization may not be ready for this, but you can try it for yourself.
 - ▶ Unlike dollars, which go to 2 decimal points, most cryptocurrencies go to 8 decimal points. Most of us don't have the means to buy a single bitcoin for \$20,131.61 (as of 8:33PM CDT on 8/31), but what about 0.01 BTC for \$201.32? Or 0.001BTC for \$20.13? Surely you can swing 0.0001BTC for \$2.01.
 - ▶ (you also don't have to buy these kinds of even amounts, you can buy \$100 worth or whatever you're comfortable with)



Questions and Comments