

Discussion Starter

- What do you want to know about cryptocurrency and NTFs (non-fungible tokens)?



Students, write your response!

GRADE 9-12, HIGHER EDUCATION, UPCOMING WEBINAR

AP Micro: The Economic Way of Thinking

📅 January 30 | ⌚ 5:00-6:00pm ET | ⏱ Time: 60 mins, Updated: January 19 2023, Presenter: [Tawni Ferrarini](#)

 **TEACHER VERSION**

Presented by Tawni Hunt Ferrarini, PhD
Jan 30, 2023
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Agenda

- Highlight key objectives
- Link to national and state standards
- Connect students to the crypto craze, a current event, or their life with a link to an AP Micro topic
- State the 6 core principles and apply to purchases/wages
- Relate the topic of speculative cryptocurrencies and other emerging digital assets to building a well-diversified portfolio of investments
- Provide a “Once Over Lightly” Review

Objectives

1. Define the economic way of thinking.
2. Explore the 6 core principles that define it.
3. Apply those 6 core principles to money, wages, and assets.
4. Investigate how to use them to investigate the role of stable money and cryptocurrencies in today's society.

National Standards

K-12 STANDARDS



STANDARD 11: MONEY AND INFLATION.....

Money makes it easier to trade, borrow, save, invest, and compare the value of goods and services. The amount of money in the economy affects the overall price level. Inflation is an increase in the overall price level that reduces the value of money.

State Standards

TEACHER VERSION

Objective Standards Description

Objective

Webinar teachers will be able to:

define the economic way of thinking.

explore the 6 core principles that define it.

Apply those 6 core principles in fun and engaging ways to leave students with the ability to do the same.

Webinar Details

Jan 30 | 5:00-6:00pm ET

Presenter: [Tawni Ferrarini](#)

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Standards

State Standards

Concepts

Incentives, Opportunity Cost, Scarcity

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Standards

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6 Core Principles

1. Choose: Everyone chooses.

People Choose. We always want more than we can get and productive resources (human, natural, capital) are always limited. Therefore, because of this major economic problem of scarcity, we usually choose the alternative that provides the most benefits with the least cost.

6 Core Principles

1. Choose
2. **Cost: Every choice involves a cost.**

All Choices Involve Costs. The opportunity cost is the next best alternative you give up when you make a choice. When we choose one thing, we refuse something else at the same time.

6 Core Principles

1. Choose
2. Cost
3. Incentives

People Respond to Incentives in Predictable Ways.

Incentives are actions, awards, rewards, or consequences that determine the choices people make. Incentives can be positive or negative. When incentives change, people change their behaviors in predictable ways.

6 Core Principles

1. Choose
2. Cost
3. Incentives
4. **Rules/systems/institutions**

Economic Systems Influence Individual Choices and Incentives.

People cooperate and govern their actions through both written and unwritten rules that determine methods of allocating scarce resources. These rules determine what is produced, how it is produced, and for whom it is produced. As the rules change, so do individual choices, incentives, and behavior.

6 Core Principles

1. Choose
2. Cost
3. Incentives and motivations
4. Rules and other institutions
5. **Voluntary exchange and wealth**

Voluntary Exchange Creates Wealth. People specialize in the production of certain goods and services, expecting to gain. People trade with others thinking they gain more than what is sacrificed. Some benefits of voluntary trade include human flourishing, higher living standards, and broader choices for diverse and inclusive groups.

1. Choose **6 Core Principles**

2. Cost
3. Incentives and motivations
4. Rules and other institutions
5. Voluntary exchange and wealth
- 6. Future consequences**

The Consequences of Choices Lie in the Future. Economists point out that the cost and benefits of today's decisions appear in the future. Since we can only influence the future consider the intended and unintended consequences.

Application

- Apply those 6 core principles to money, wages, and assets.

Three Functions of Sound Money in Modern Society



1. Medium of exchange



2. Store of value



3. Unit of account

Sound money
backed by
limited
government
supports:

Specialization,
division of labor,
and operation
on basis of
comparative
advantage.

All of this
contributes to:

Growth in
production and
income through
voluntary trade
with others
without
increasing
resources

Three Functions of Sound Money in Modern Society



1. Medium of
exchange



2. Store of
value



3. Unit of
account

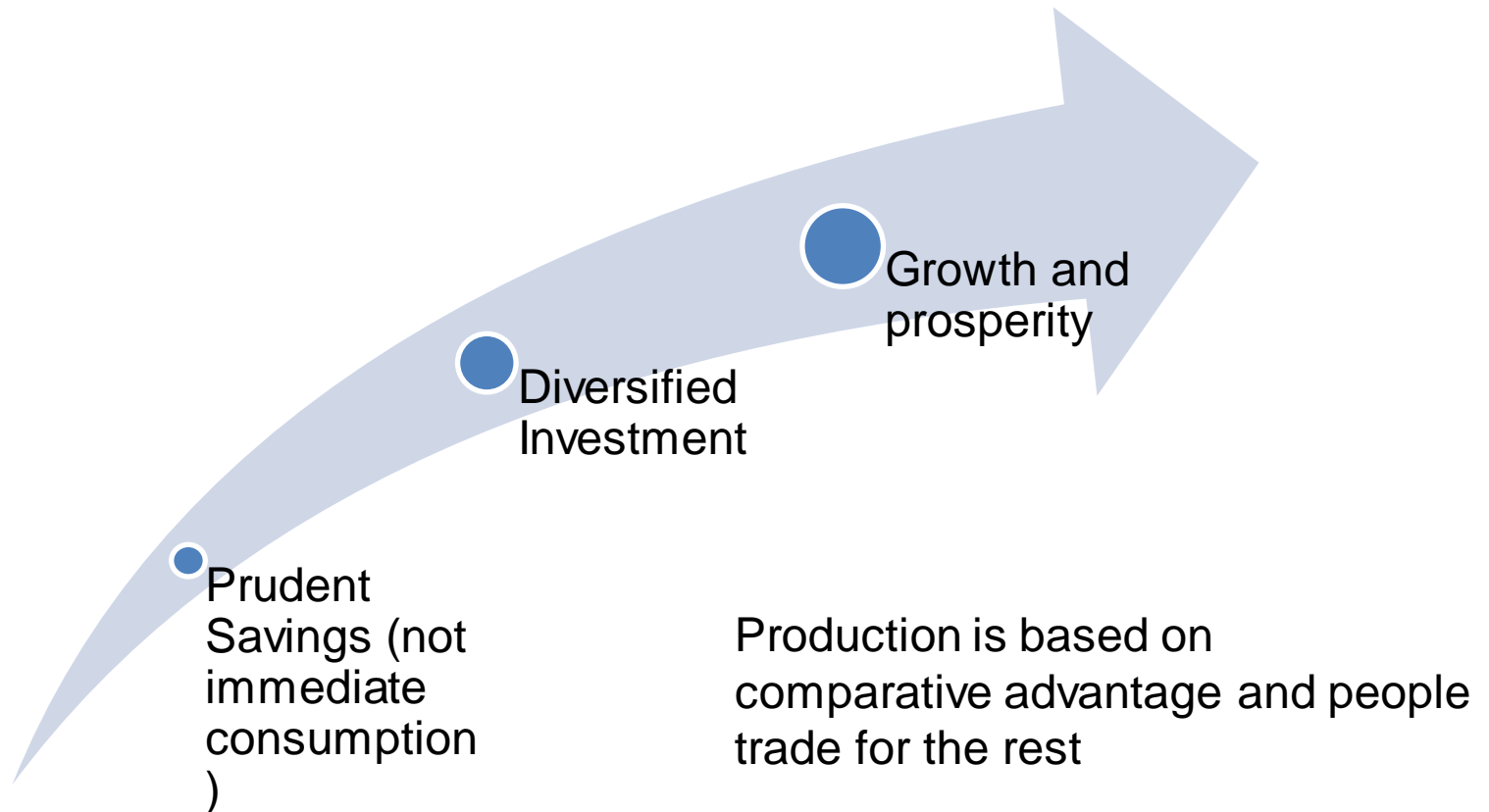
Assessment for Sound Money

1. **Thumbs UP**: if you have made a **purchase** using a cryptocurrency
2. **Thumbs UP**: if you have accepted payment in Bitcoin for work completed
3. **Thumbs UP**: if you are building up retirement using cryptocurrency

Otherwise **Thumbs Down**



Growth through Savings and Investment



Saving/Dissaving

COUNTRY STORE LEDGERS PROVIDE AN INTIMATE LOOK AT LIVES FROM THE PAST

May 8, 2018 Mike Aday



Long before the rise and decline of Piggly Wiggly and the A&P, before electronic cash registers and barcode scanners, and before the cash and carry business model, the country store was where people in Southern Appalachia bought their dry goods and sundries. Customers brought in their "greenbacks" (if they had them) and traded with the proprietor for needed items.

If they didn't have ready cash, they were often given credit and allowed to take what they needed. At some date in the future, the customer would pay off the debt with currency or goods the proprietor could sell to other customers: eggs, butter, bacon, mutton, firewood or whiskey. These transactions were usually recorded in the store keeper's ledger book. Sometimes arranged by name, the entries recorded the date of the transaction, items purchased and their cost, and whether the payment was received in cash, credit or kind. Not only did the store ledger serve as the store keeper's accounting system, but surviving volumes also provide a fascinating glimpse into the everyday lives of ordinary people.

This ledger is one of 17 we have here in the archives at the Collections Preservation Center. It belonged

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Word from the Smokies: Retired Biology Professor Dan Pittillo Soil Digs Research



Mountain Time: Rock of Ages



An aerial view of a large outdoor market at night, filled with numerous colorful tents in various colors like red, blue, yellow, and green. The tents are arranged in rows, creating a vibrant and busy scene. The text is overlaid in the center of the image.

From the local store to
installment credit to small
loans to credit cards to
cryptocurrency

What is cryptocurrency?

Cryptocurrency is a peer-to-peer electronic cash system.

- Provides an alternative to the current system of money
- Do not have to go through the central banking system, a financial institution, or electronic payment system such as Paypal



What is blockchain technology?

- Blockchain describes the computerized networks that allow peer-to-peer transactions without central planners, government, banks, or financial intermediaries of any type.
- It is maintained by a network of computer “geeks” or “geniuses” known as miners. They are paid cryptocurrency for their work.

References:

- [Explainer: What is a blockchain?](#) - MIT Technology Review, June 14, 2021
- [Bitcoin and Beyond: The Possibilities and Pitfalls of Virtual Currencies](#) – Federal Reserve Bank of St. Louis, October 21, 2014

Three traits of cryptocurrency in a blockchain

(a decades old computerized network)



Transparent



Authenticated



Can be
audited



Who uses it?

- Peer-to-peer exchanges
- A few retailers like Overstock, Expedia, Dish, subway, and Microsoft
- Mt. Gox (2010-14), the largest Bitcoin exchange which was based in Tokyo, Japan



Above is my list from 2018 of retailers accepting Bitcoin.

Little has changed in three years. See:

<https://www.buybitcoinworldwide.com/who-accepts-bitcoin/>

It is...

- Different than “fiat” money
- A part of a decentralized system subject to no government regulation or insurances
- Network is supported by the transactions by consumers, savers, producers, and investors through blockchain technology

At this time, it is not...

- A widely utilized medium of exchange
- Unit of account
- Store of value

Choose one to feed your family.



- \$1000 in Bitcoin
- \$1000 USD



You're a small business owner in need of specialized computer skills.

Who do you hire?



- \$1000 in labor services paid only in Bitcoin

- \$1000 in labor services paid in US Dollars.



The following falls from the sky. You can pick up one. Choose.

- A claim to \$1000 worth of Bitcoin
- An envelope with \$1000 US Dollars



LET'S GO!

Bottom line...

- Proceed with caution and information. Invest what you can lose.
- Bitcoin is a speculative asset at this point.

Upside to Bitcoin

- It is transparent, authenticated, and can be audited.
- From the first chain forward, you can trace the origins of the chain and everything that makes it up.
- It is not directly subjected to government policy influences, political interests, and short-sightedness.
- It makes use of blockchain technology – an advancement in technology.

Blockchain Technology

- Used to track healthcare services by patients and their providers
- Mobilized in the supply chain to track everything from original extraction of natural resources to final consumer
- NTFs allow artists to create original art and sell it without the risk of copyright infringement
- In theory, it allows consumers and others to trace property – even intellectual property (NTF).

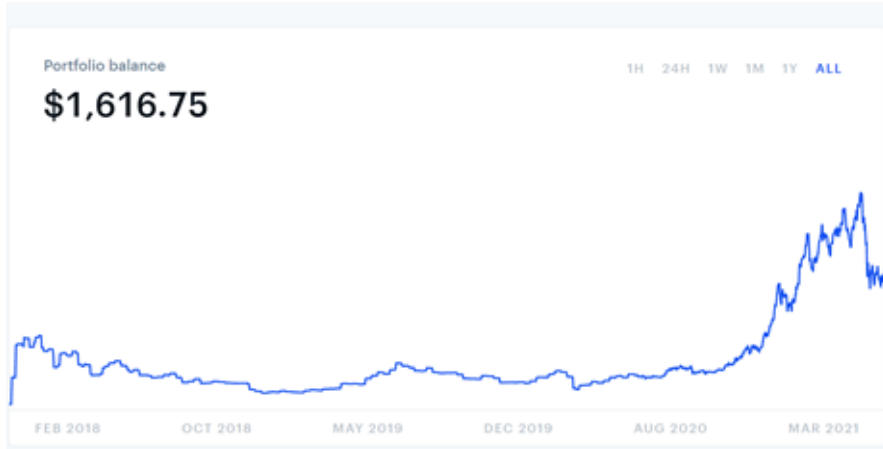
As an educator...







- It provides teachable moments for family members and students
- Educate others about blockchain technology, long-term investment practices, cryptocurrencies, and sound money
- Understand when “speculative” investments make sense

My “Bitcoin” Story

- Within a year, I lost 70 percent of the value of my cryptocurrency portfolio with an initial investment of \$841!!!
- Yikes! It was not a growing asset.
- Since December of 2017, “Bitcoin” has not used it to purchase anything, I haven’t been paid in Bitcoin, BUT....





 Bitcoin	\$1,086.46	0.02722069 BTC	 67.20%
 Ethereum	\$368.60	0.14489949 ETH	 22.80%
 Litecoin	\$161.69	0.93172493 LTC	 10.00%

My portfolio has grown in value...



I have \$250 USD what advice to you give?

1. Buy Bitcoin
2. Buy Ethereum
3. Buy Litecoin
4. Buy another crypto
5. Save it for a “rainy” day (withdrew \$\$ due to car problems)
6. Invest it in an index fund



References

- Böhme, Rainer, Nicolas Christin, Benjamin Edelman, and Tyler Moore. 2015. "Bitcoin: Economics, Technology, and Governance." *Journal of Economic Perspectives*, 29 (2): 213-38.
- Clark, J.R., M. Scott Niederjohn, and William C. Wood. 2018. "Understanding Bitcoin: Money, Asset, or Bubble?" Social Education.
- Lorne Lantz. 2016. Youtube video "[TED Talks: The Blockchain Explained Simply](#)." New Kids on the blockchain.
- Wolla, Scott. 2017. "Bitcoin: Money or Financial Investment? (*Page One Economics*)," *St. Louis Federal Reserve Bank*, https://files.stlouisfed.org/files/htdocs/publications/page1-econ/2018/03/01/bitcoin-money-or-financial-investment_SE.pdf.

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