

Crypto News?

Politics and Regulation

Recall from last week

- Who owns cryptocurrency?
 - Regular people, Criminals, Early Adopters, Governments, Exchanges, Businesses
- Why would the government be interested in these entities?
 - Prevent money from crossing borders unnoticed
 - Prevent money laundering
 - Prevent “dirty” money from entering the regular economy (or vice versa)
 - Let’s look at how the U.S. government treats crypto, and then explore other areas of the world

Who owns cryptocurrency?

- Regular individual's perspective
 - Anyone can convert USD to cryptocurrency
 - Usually done via an exchange such as Coinbase, GDAX, or Bitstamp
 - Cryptocurrency is considered property by the U.S. Government
 - As such, it is taxed like property, and each cryptocurrency trade you make is taxable
 - The government does not protect your cryptocurrency
 - If your house burns down, and \$10,000 in cash is burned with it, the U.S. Mint will give you back your \$10,000 dollars
 - If you are defrauded, and pay for some goods you never received, your bank will likely reimburse you for that payment
 - FDIC guarantees the money in your bank account up to \$250,000
 - What happens with lost/scammed cryptocurrency?
 - Other countries?
 - Cryptocurrency can be more stable/secure than their government's currency

Who owns cryptocurrency?

- Governments

- Often times, governments will seize cryptocurrency from criminals
 - For example, we talked about Silk Road last week
 - 144,336 BTC were seized when Silk Road finally went down
- Auction off
 - The cryptocurrency seized by the government was immediately auctioned off
 - For most businesses and governments, cryptocurrency is immediately sold off once they receive it
- Allow citizens to pay taxes via cryptocurrency
 - Arizona Senate recently passed a bill allowing citizens to pay their taxes in cryptocurrency — it is currently being considered by their House of Representatives
 - Georgia is also in the process of considering allowing their citizens to pay in cryptocurrency
 - Both states will immediately sell off cryptocurrency as they receive it

Who owns cryptocurrency?

- Exchanges

- Exchanges own massive amounts of cryptocurrency in hot and cold storage
- Collect user data for account balances and potential government audit
- Pretty much only way to convert your cryptocurrencies back and forth — but leaves your funds vulnerable
- \$10,000 rule
 - In the U.S., any business who handles more than \$10,000 in one payment or a series of payments from or between customers must report this transaction to the IRS
 - How might exchanges or other businesses use the properties of crypto to try and get around reporting rules?
- Make money by charging small fees for every trade
 - Binance has its own coin (Binance Coin — BNB) for this to incentivize customers
 - Trade fees are lower if you buy BNB and pay fees with that

Why would regular people be interested in crypto?

- (Relatively) anonymous — recall last week
- Quick — depending on type of payment
 - Local — Bitcoin can be slower or faster than using fiat
 - International — Bitcoin can be much faster than using fiat
 - All depends on what you're trying to pay for and where the merchant is located
 - Some cryptos (like Stellar) are near instantaneous
- Easy international transactions
 - Don't have to pay for currency conversion fees
 - Money can be spent regardless of government restriction
- Low fees (ideally)
- Investing
 - Cryptocurrency investors try to make profit by trading as currency prices changes
- Illegal activity

Why would governments be interested in crypto?

- Anti-money laundering
 - Can be difficult to trace cryptocurrency transactions, so individuals can lie about their earnings if they use cryptocurrency
 - Governments want to prevent this
- Threatens to upheave traditional fiat currency and forms of payment
 - Seeing as Bitcoin is a currency, and not a stock, it can be used to circumvent normal fiat payments and government restrictions
- Billions of dollars locked up in crypto, can have severe effect on normal economic health
 - Bitcoin's market cap is currently at 69.1 Billion — what if it all crashed tomorrow?

Why would businesses be interested in crypto?

- Avoid certain taxes
 - Property is taxed differently than income
- Accept international customers
 - Allow customers to purchase goods without having to worry about fiat conversions
- Avoid international bank fees
- Speed
 - Cryptocurrency is faster than many international bank conversions
- Accessibility
 - Accept wider range of payments — possible increased sales

Do these entities share common interests?

- New technology
 - Blockchain is proving to have many possible use cases
 - Cryptocurrency is being used as a platform for more than just payment
 - Powerful payment channels and smart contracts that fiat currencies don't necessarily have
- Globalization of economy
 - Cryptocurrency has the potential to be widely used global currency
 - What would cryptocurrency need in order to achieve this?
 - More widespread adoption by businesses and governments alike
 - Speed — right now only some currencies achieve this at a desired level
- Avoidance of Regulations
 - Countries may want to use Cryptocurrencies to avoid sanctions
 - People and businesses may want to avoid taxes

From the IRS:

The notice provides that virtual currency is treated as property for U.S. federal tax purposes. General tax principles that apply to property transactions apply to transactions using virtual currency. Among other things, this means that:

- Wages paid to employees using virtual currency are taxable to the employee, must be reported by an employer on a Form W-2, and are subject to federal income tax withholding and payroll taxes.
- Payments using virtual currency made to independent contractors and other service providers are taxable and self-employment tax rules generally apply. Normally, payers must issue Form 1099.
- The character of gain or loss from the sale or exchange of virtual currency depends on whether the virtual currency is a capital asset in the hands of the taxpayer.
- A payment made using virtual currency is subject to information reporting to the same extent as any other payment made in property.

Further details, including a set of 16 questions and answers, are in [Notice 2014-21](#), posted today on IRS.gov.

What is crypto considered to be by the government?

- Property

- The U.S. Government considers cryptocurrency to be an asset — just like a house or stocks — that can appreciate/depreciate in value
- If you buy 100 stock in January at \$10, and then the price goes to \$15 and you sell, you've just made \$500
- You have to pay taxes on that \$500 that you earned
- Likewise, if you bought at \$10, and it dropped to \$5, then you've just lost \$500
- You can count that lost \$500 as a deductible from your income so you pay less in taxes
- Pretty much the same rules apply to cryptocurrency
 - However, you are supposed to report and pay taxes on *each trade*, **not** just when you convert into and out of USD
- Tax rate differs depending on how long you've been holding your crypto (the longer you've held, the less you pay)

How do other countries' governments approach regulation?

- China

- China has a communist government, which treats its money much differently than in the U.S.
- China recently banned domestic ICOs and outlined a proposal to discourage bitcoin mining
 - Why would a ban on bitcoin mining specifically in China be a problem? Would it at all?
 - Recall the notion of mining difficulty
- China is currently in the works of creating its own national cryptocurrency
 - Obviously the currency will be centralized, but is this necessarily bad?

- Venezuela, Iran

- Working on creating their own national cryptocurrencies
- Both countries are the subject of heavy sanctions imposed by the U.S. federal government
- Creating their own cryptos could potentially help them circumvent these sanctions
 - Venezuela has outright admitted to this, Iran has remained silent

Summary

- Many different types of entities are interested in cryptocurrency
- Different entities have different motivations and methods for using cryptocurrency
- In the U.S., crypto is considered property, like stocks or land
- Other countries' governments impose their own rules on crypto that can affect the entire crypto community
- They can even use crypto to avoid sanctions from other countries

Midterm

- Midterm is Friday after spring break
- Topics will cover everything to date
- Study slides and quiz questions
- Midterm questions will be T/F, multiple choice, and short answer
- You will **NOT** be required to write any code by hand on the midterm
- You will not have to understand the math behind any cryptography algorithms, but you should know the difference between the ones we've talked about so far (such as SHA-256 vs. ECDSA)

Questions?
