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Checklist for Analyzing Crypto:

BTC vs ETH

What You Will Learn

- How to use the checklist to analyze crypto?
- What are the different things you should research?
- How can we apply concepts from this course?
- How can we compare BTC and ETH?

All numbers are as of August 2017. These numbers may or may not be out of date depending on markets and time of viewing.

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The Checklist to Analyzing Crypto

- The checklist helps you structure analysis when looking at a new token
- This checklist is provided to you as a resource in this course
- We encourage you to follow along on the checklist since we will be performing the analysis of BTC vs ETH using this checklist

The checklist goes through supply, market cap, trading volume, liquidity, mining algorithm, technological underpinnings, usefulness, development team, community and governance. This lecture will be a bit long, but very detailed.

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Section 1: Objective Analysis Coin Statistics

The first section of the analysis is objective analysis. These are the facts that are publicly available around a token. Always gather all the facts yourself first before moving on to subjective analysis.

Item 1: Supply

- The first step is always to analyze the supply
  - Ultimately, a token's price is determined by supply and demand. Supply is always public.

Bitcoin Supply	
Capped or Uncapped	Yes. 21 Million
Current Supply	Around 16.50 Million
Emission/Inflation	50 BTC per block halving every 4 years
Fair Distribution	Yes. Unknown actor (Satoshi) has ~1 Million

Ethereum Supply	
Capped or Uncapped	No
Current Supply	Around 93.88 Million
Emission/Inflation	Fixed issuance per block (currently 5 ETH)
Fair Distribution	Token sale for initial distribution

Item 2: Market Cap, Trading Volume, Liquidity

- Market Cap gives you estimated valuation
- Trading Volumes lets you estimate buy/sell interest
- Liquidity lets you determine how easy it is to buy/sell
  - You will have to look at order books on exchanges for this

Bitcoin Cap, Volume, Liquidity Analysis	
Market Capitalization	$60.3 Billion
Trading Volume	Around $2 Billion
Current Price	$3654
Volume vs Market Cap Ratio	~1/30 or ~.033

Ethereum Cap, Volume, Liquidity Analysis	
Market Capitalization	$29.0 Billion
Trading Volume	Around $1 Billion
Current Price	$309
Volume vs Market Cap Ratio	~1/29 or ~.034

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Item 3: Mining Algorithm

- Proof of Work/Proof of Stake/Something else?
- Block Time/Confirmations - how long payments
- ASIC Hardware/Resistance?
  - Application-Specific Integrated Circuit
  - ASIC hardware is specialized equipment designed only to mine a coin. Creates higher barriers to entry for mining

Bitcoin Mining Algorithm Analysis	
Mining Algorithm	Proof of Work - SHA256
Block Time	10 Minutes
Algorithm Changes?	Segwit + Block size increases
ASIC Resistance	No. SHA256 has specialized hardware and is not efficient to mine on ordinary hardware due to amount of ASIC hardware

Ethereum Mining Algorithm Analysis	
Mining Algorithm	Proof of Work - Ethash
Block Time	20 Seconds
Algorithm Changes?	Possible future proof of stake + lowered emission
ASIC Resistance	Yes. Possibility of transitioning to Proof of Stake has prevented ASIC hardware. Efficient to mine on ordinary hardware.

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Section 2: Subjective Analysis Coin Quality Analysis

Subjective analysis is very important because it is hard to know a token's future on the facts alone. A coin could have very similar factual figures to another coin, but be far less attractive from a subjective analysis point of view.

Item 1: Technological Underpinnings

- Evaluate the technology behind the coin
  - How strong is the technology?
  - Are there any bugs, network issues or vulnerabilities?
  - How good is the codebase?

Bitcoin Technological Analysis

Bitcoin was largely written by an individual (or group of individuals) that go by the name of Satoshi Nakamoto. Bitcoin proved to the world that blockchain based currencies were not only viable, but inevitable. The protocol has gone through some upgrades through BIP (Bitcoin Improvement Proposals), but has largely remained the same due to strong underpinnings of the technology. The technology is a bit out of date compared to more recent projects, but is still rock solid and reliable.

Ethereum Technological Analysis

Ethereum was the first universal smart contracts platform featuring a huge deal of technical innovation that has changed the blockchain space. Ethereum has been notorious for the huge fortunes that have been made, but also for the fortunes lost in various smart contract hacks, most notably the DAO where over $150m in ETH was drained leading to the ETH/ETC split. Ethereum, however, has been extremely resilient and has shown its ability to grow and evolve in the face of it all.

Item 2: Usefulness

- Does the token solve a problem?
- Does the token do something better than something else?
- Is there demand for what the token does?
  - At the end of the day, if the token isn't useful and/or there is no demand for it then it will not grow

Bitcoin Usefulness

Bitcoin, as we have discussed in previous lectures, is looking to improve money. It is decentralized, a store of value, easy to transmit and doesn't require the use of trusted parties to transfer. Before Bitcoin, the only equivalent was gold or equivalent commodities. Bitcoin's continued growth has shown that there is a massive demand for currency not controlled by any central party. Bitcoin has also demonstrated the viability of the entire blockchain space and has been adopted by many merchants for payments.

Ethereum Usefulness

Ethereum also solves all the problems that Bitcoin solves with improvements that we discussed in the previous lecture. Ethereum offers more than just a currency, however, and offers the ability to run decentralized applications. Ethereum is not only better than Bitcoin, but also offers additional functionality not offered within the Bitcoin ecosystem. Ethereum's massive use case has been through issuing tokens and creating decentralizing applications. Ethereum has garnered massive demand which is only growing.

Item 3: Development Team

- Does the token have a dedicated development team?
- How strong are their credentials? Commit history?
- How are they getting funded?
  - Both Bitcoin and Ethereum are massively decentralized with worldwide teams working on them

Bitcoin Development Team	
Dedicated Team	Anyone can work on Bitcoin. Lots of development
Credentials	Some of the top minds in CS are working on BTC
Commit History	Mostly only relevant to smaller projects
Funding	Companies such as Blockstream encourage development of Bitcoin Core as well as additional infrastructure for the ecosystem. Bitcoin also is open source and anyone can contribute

Ethereum Development Team	
Dedicated Team	Ethereum Foundation
Credentials	Blockchain veterans with Ethereum track record
Commit History	Mostly only relevant to smaller projects
Funding	Ethereum foundation was funded through initial token offering. Ether has also grown considerably in value.. Additionally, the Ethereum enterprise alliance is showing significant commercial interest.

Item 4: Community

- Is there a passionate community behind the project?
- Is the community active in improving the token?
- Are they friendly and helpful to newcomers?

These questions are mostly only relevant to smaller projects. Community support, however, is how many projects get off the ground. Without the support of the community, Ethereum would not exist.

Item 5: Governance

- How is the project run?
- Open source?
- Company/VC/Foundation backing?
- Voting? Community sway?
  - There are many different governance structures

Bitcoin Governance	
How is project run?	“1 CPU, 1 Vote” - Hashpower votes on upgrades
Open Source?	Yes
Backing?	No official backing.
Voting/Community Sway	Anyone can submit improvement proposals and anyone can fork the coin. It is all a matter of support and how much people support initiatives.

Ethereum Governance	
How is project run?	Development/Release Roadmap
Open Source?	Yes
Backing?	Ethereum Foundation + Enterprise Alliance
Voting/Community Sway	Largely developer driven. Community has shown, however, that it has a voice through the Ethereum Classic split.

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Always do your own research!

All investment decisions are your own. Never invest more than you are willing to lose. The crypto space is very volatile and it is important to always do your own research and due diligence into projects.

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BTC vs ETH