



# Ethos

The future is for **everyone.**

## Lecture 7: Checklist for Analyzing Crypto BTC vs ETH

Hello and welcome to your seventh lecture, the checklist for analyzing crypto, comparing Bitcoin and Ethereum.

In this lecture 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 August 2017. These numbers may or may not be out of date depending on markets and time of viewing.

The checklist to analyzing crypto is the primary focus of this lecture.

The checklist helps you structure analysis especially 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 checklist.

The checklist goes through supply, market cap, trading volume, liquidity, mining algorithm, technological underpinnings, usefulness, development team, community and governance. We will go through all of these factors to compare Bitcoin and Ethereum. This lecture will be a bit long, but will be very detailed.

The first section of this lecture will be objective analysis on coin statistics. All of these facts are publicly available about a token. You should always gather all the facts for yourself first before moving onto subjective analysis.

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

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

The second item is Market Cap, Trading Volume and Liquidity.

Market cap gives you a decent estimated valuation.

Trading volumes let 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 so we won't have the data here.

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

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

The third item is mining algorithm.

Check what the mining algorithm is for a coin. Is it proof of work, proof of stake or something else?

What is the block time or confirmation time. This is a measure of how long payments take.

Is there ASIC hardware resistance?

ASIC stands for Application-Specific Integrated Circuit.

ASIC hardware is specialized equipment design only to mine a specific coin. ASIC hardware creates higher barriers to entry.

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

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

The second section is about subjective analysis. We will be doing a variety of subjective coin quality analysis on Bitcoin and Ethereum. Subjective analysis is very important because it is hard to know a token's future based on only 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.

The first item in this section is technological underpinnings.

The first part of the subjective analysis is evaluating the technology behind the coin.

How strong is the technology?

Are there any bugs, network issues or vulnerabilities? This includes documented and theoretical 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.

The second item in the subjective analysis is usefulness.

Does the token actually solve a problem?

Does the token do something better than something else? This could be better than some other token or better than some centralized system.

Is there a real 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.

The fourth item is community.

Is there a passionate and supportive 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 early on, Ethereum wouldn't exist like it does today.

Item 5 is Governance.

How is the project run?

Is it open source?

Is there a company, VC or foundation backing it?

What sort of voting mechanisms are there? What sort of community sway is there?

There are many different governance structures and many of them have their pros and cons.

Bitcoin Governance	
<b>How is project run?</b>	"1 CPU, 1 Vote" - Hashpower votes on upgrades
<b>Open Source?</b>	Yes
<b>Backing?</b>	No official backing.
<b>Voting/Community Sway</b>	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	
<b>How is project run?</b>	Development/Release Roadmap
<b>Open Source?</b>	Yes
<b>Backing?</b>	Ethereum Foundation + Enterprise Alliance
<b>Voting/Community Sway</b>	Largely developer driven. Community has shown, however, that it has a voice through the Ethereum Classic split.

As 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.

And this concludes this lecture on using the checklist for analyzing crypto to compare Bitcoin and Ethereum. Thanks and we hope you found this lecture helpful!