



Finding The Holy Grail

Or How To Make Money Mining Crypto Currency

Things I Learned...

Assume You're Doing It Wrong

- Things change quickly and what worked yesterday may not work today.
- The crypto currency community is full of immature players. Be prepared for some to fail.

This Is A Speculative Market

- If you can't afford to loose your investment, this isn't for you.
- If you need to go into massive debt to do this, this isn't for you.

There Are Huge Upsides

- The technology solves fundamental problems.
- The market is sorting out efficiency and effectiveness



Things I Learned...

Simplify Your Build

- More than 3 mining rigs is a problem if your configuration isn't standardized.
- Try to reduce the number variations and build for long term reliability.

An Example Build

- Windows 10 Home
- A local account with no password
- Remove all network services except IPv4
- Remove all software except Awesome Miner and its dependencies
- Isolate mining to a separate network with a good firewall



Things I Learned...

Don't Set Your Rig On Fire

- Avoid PCI-E Bridges SATA power connections.
- Put no more than two PCIE Bridges on a power lead.
- Put no more than one GPU on a power lead.
- Use every power lead possible from your power supply to balance load.

An Example Build

- Asrock H110 Pro BTC+ Motherboard w/G4400 CPU
- EVGA 1000w Power Supply
- 6x Asus Dual GTX 1060-03G GPUs
- Total Power Budget 660w



Things I Learned...

Manage Your Power

- Use a Monitoring Power Distribution Unit
- 210v Power is slightly more efficient ($\pm 5\%$).
- Derate 20% off the top from your stated capacity.
- Derate 15% for constant load.
- Assume 80°F and 12AWG Cable in a Single Conduit



An Example

- A 210v 20amp circuit is derated to 13amps
That yields 2.73 kVA
- A 110v 20amp circuit is derated to 13amps
That yields 1.43 kVA

Things I Learned...

Use a Mining Manager

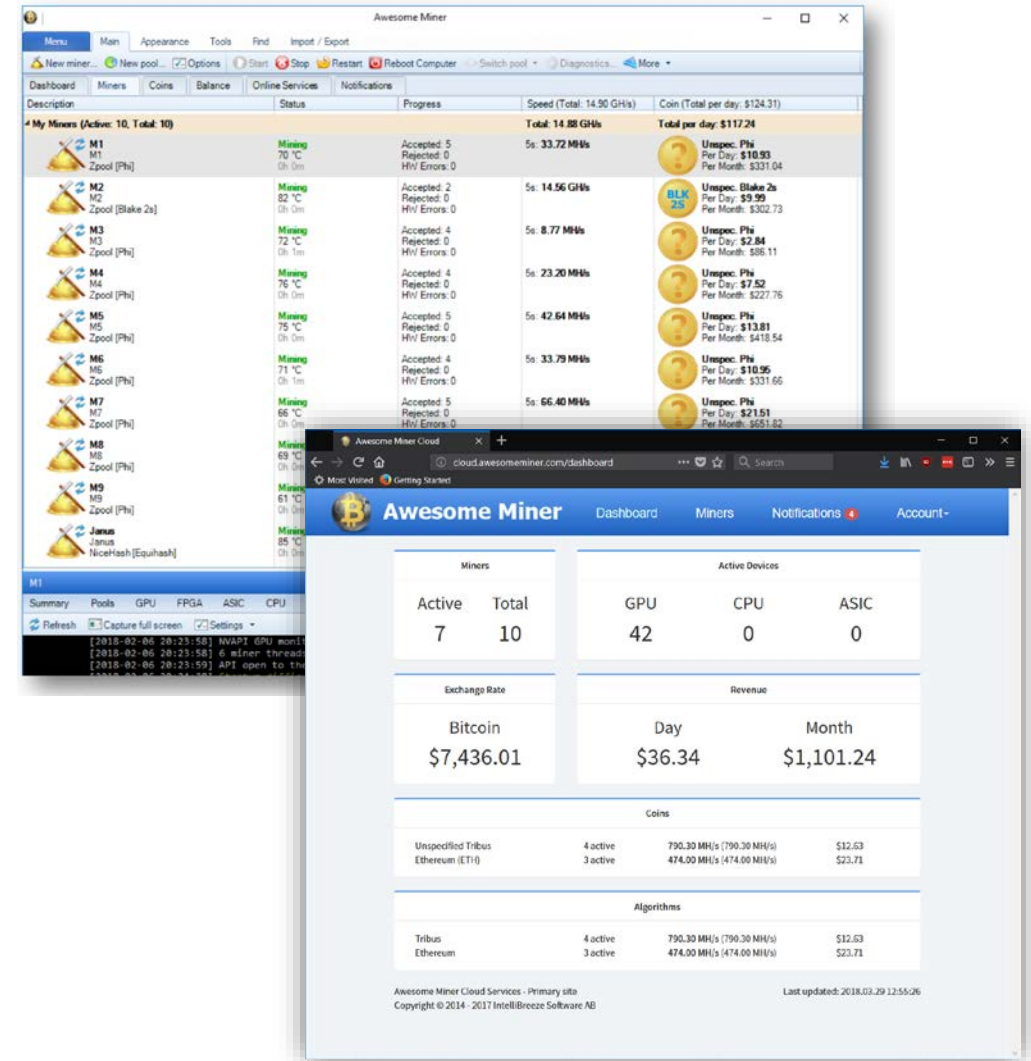
- Miners do unexpected things.
You can watch your miners, or hire a manager.

Choose Your Tools

- ASICs will always outperform GPUs
- General Purpose GPUs will hold more value than specialized ASIC hardware

An Example

- Awesome Miner can manage ASIC, static GPU miners, and automated profit GPU miners.



Is It Profitable?

Capital Investments

- 6x 1st Generation Mining Rigs
 $\$2,100 \times 6 = \$12,600$
- 3x 2nd Generation Mining Rigs
 $\$3,800 \times 3 = \$11,400$
- Electrical Improvements (\$2,000)
- 24m – 40% Salvage on Hardware
No Cost of Money
- **Total CapEx per Month - \$683**

Operational Costs

- Electricity
 $7.1\text{kw} \times 7\text{¢ per kwh} \times 720\text{h per month} = \358
- Cooling 20'x20'x14' Room with a 30° Change
18,340 BTU or 5.345kw of power
 $5.345\text{kw} \times 7\text{¢ per kwh} \times 720\text{h per month} = \270
- **Total OpEx per Month - \$628**

Total Cost per Month - \$1,311



Where Does That Leave Us?



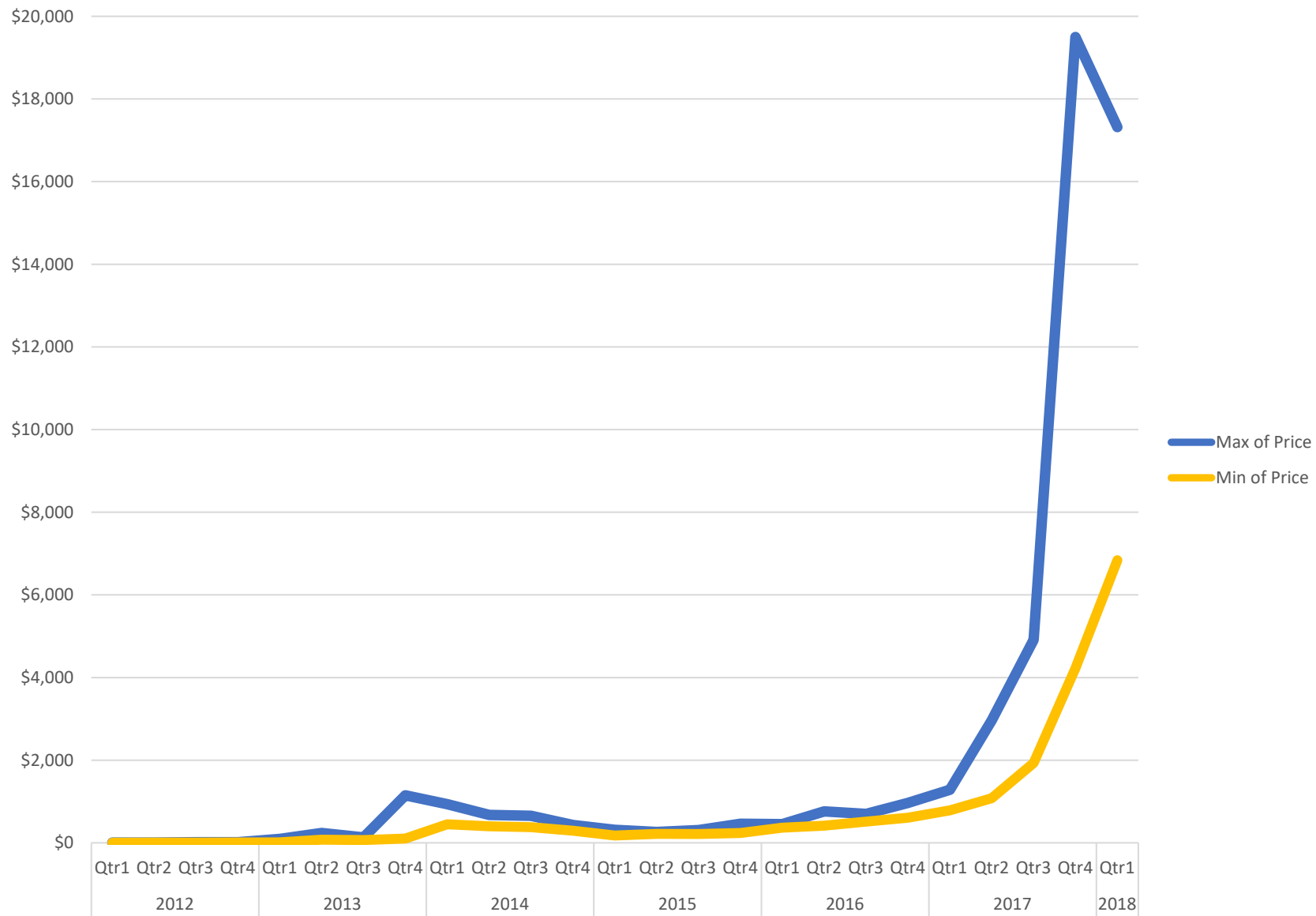
Choose Your Crypto Coin and
Answer These Questions Three

Where Does That Leave Us?



Is this a store of value?

Bitcoin as a Store of Value



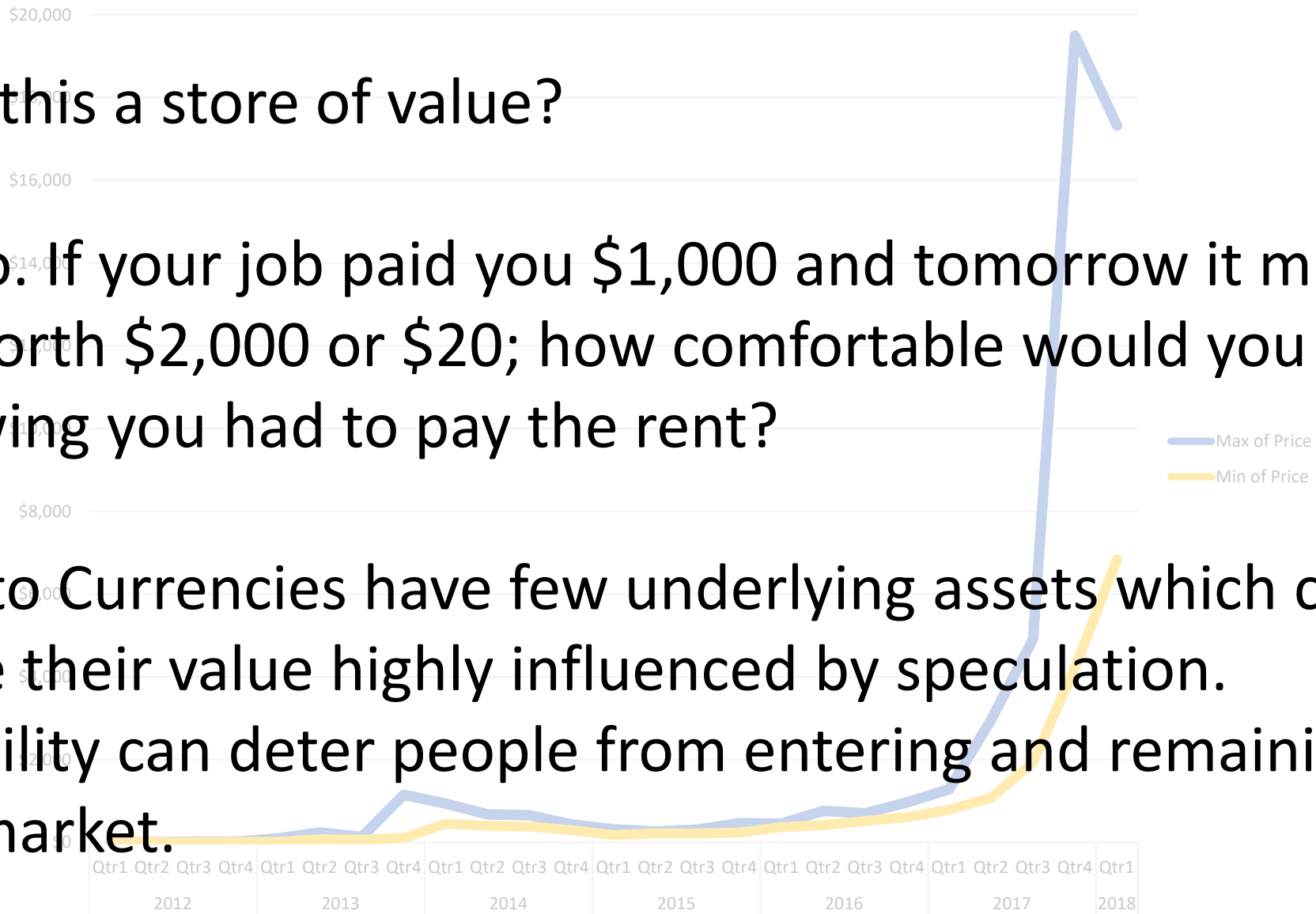
Bitcoin as a Store of Value

Q: Is this a store of value?

A: No. If your job paid you \$1,000 and tomorrow it might be worth \$2,000 or \$20; how comfortable would you be knowing you had to pay the rent?

Crypto Currencies have few underlying assets which can make their value highly influenced by speculation.

Volatility can deter people from entering and remaining in the market.



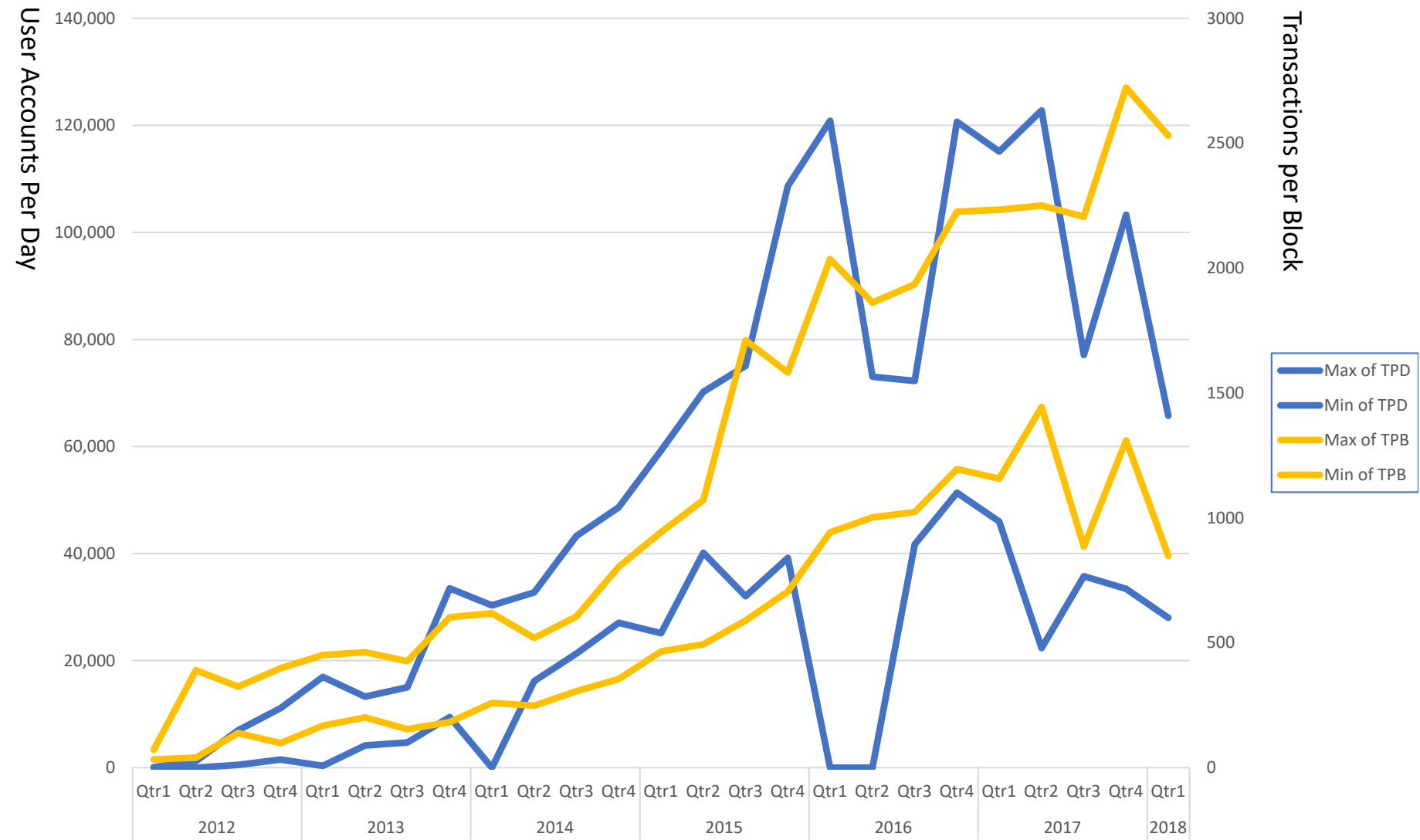
Where Does That Leave Us?



Is this a fungible currency?

How Active is the Network

	TPM	TPD
Bitcoin	250	0.49m
Ethereum	938	1.35m
Visa	1,440,000	2,073.6m



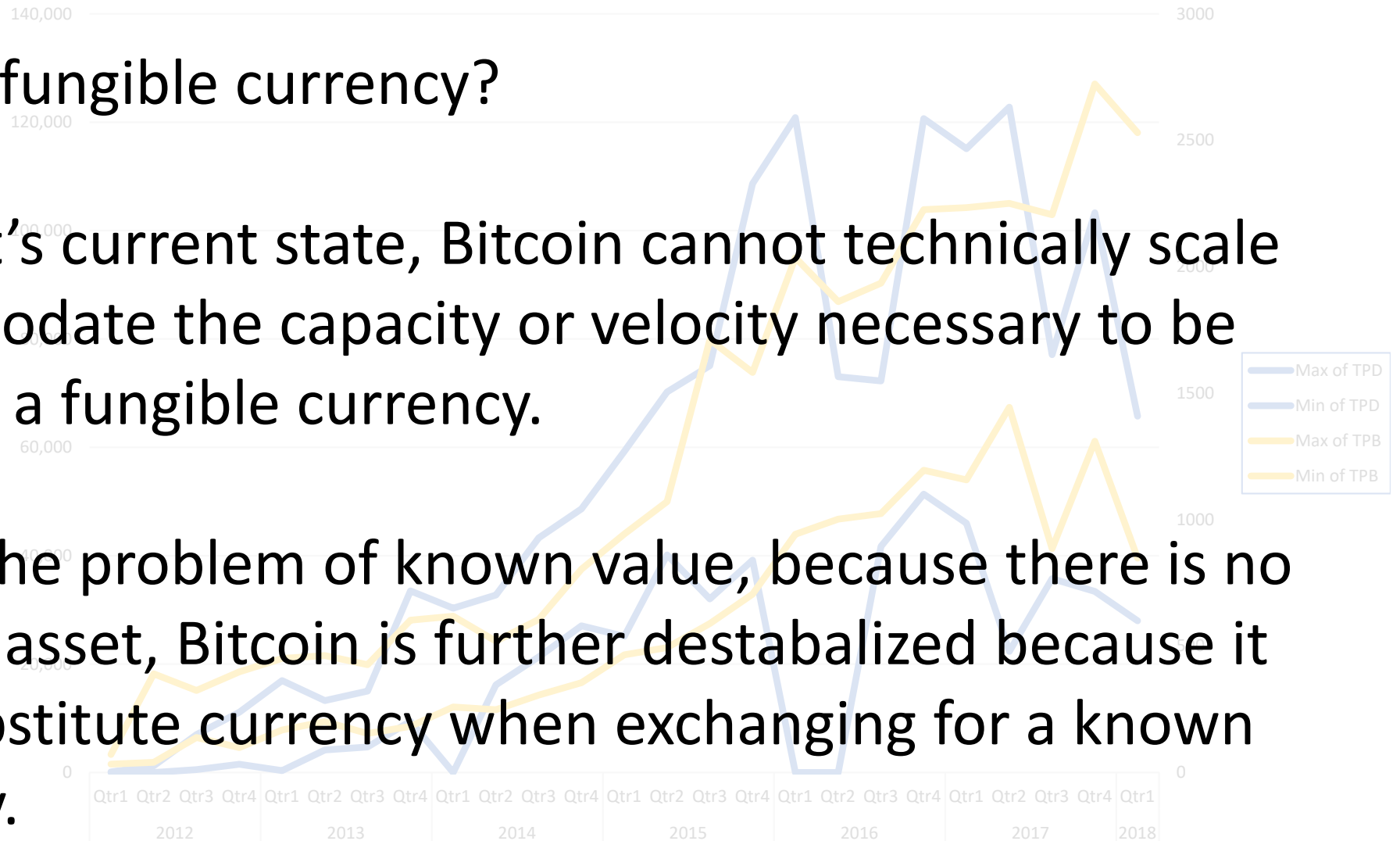
How Active is the Network

Q: Is this a fungible currency?

A: No. In it's current state, Bitcoin cannot technically scale to accommodate the capacity or velocity necessary to be considered a fungible currency.

	TPM	TPB
Bitcoin	250	0.49m
Ethereum	1,440	1.4m
Visa	1,440,000	2,073.6m

Similar to the problem of known value, because there is no underlying asset, Bitcoin is further destabilized because it is not a substitute currency when exchanging for a known commodity.

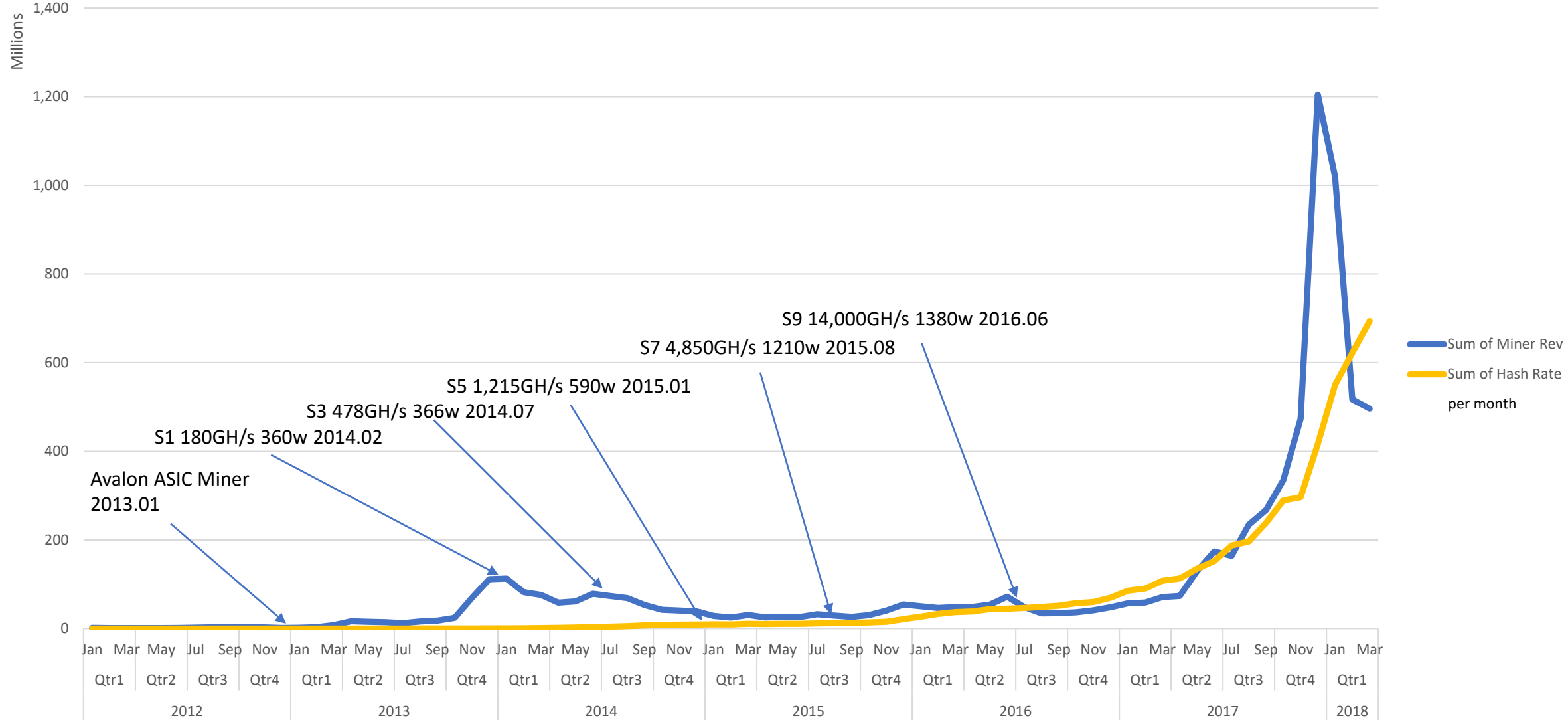


Where Does That Leave Us?



Is the underlying platform stable?

The Future of Proof of Work



Revenue
(number of bitcoins mined per day
+ transaction fees) * market price

Market Cap for Bitcoin as of 2018.04.03 - \$125,349m @ \$7,393

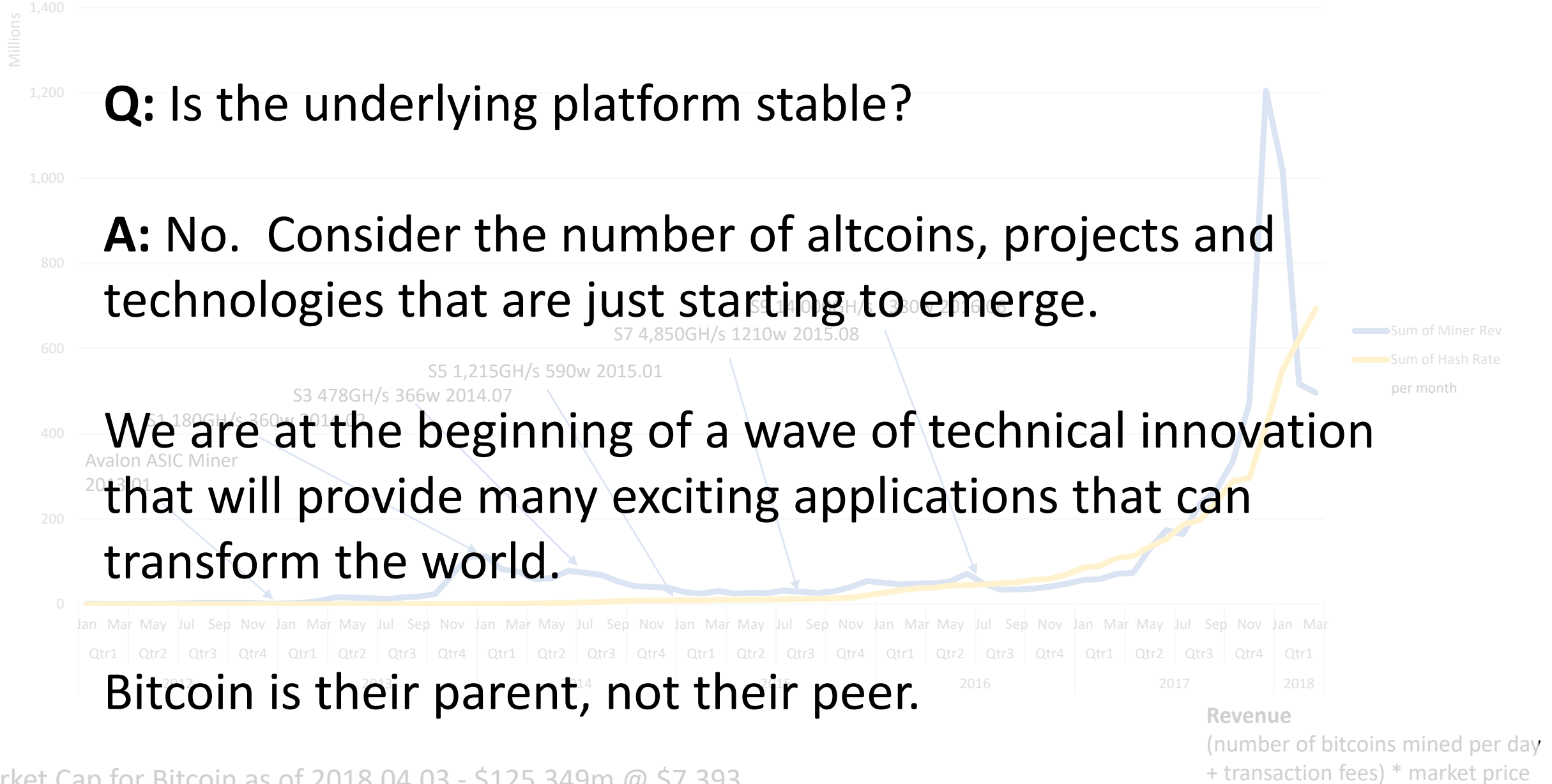
The Future of Proof of Work

Q: Is the underlying platform stable?

A: No. Consider the number of altcoins, projects and technologies that are just starting to emerge.

We are at the beginning of a wave of technical innovation that will provide many exciting applications that can transform the world.

Bitcoin is their parent, not their peer.



Should You HODL?

Think Short Term

- Is there any Technical Analysis that explains the financial model of market capitalization for Bitcoin / Altcoin?
- What are the sentiments that would drive speculative value?
- What is the cost to hold?

Think Long Term

- Look for technologies that meet these three tests
- Look for projects that create fundamental improvements in how we solve existing problems
- Look for applications that can't otherwise exist as effectively or efficiently without blockchain

