



Comparing Cryptos

How Cryptocurrencies Fit with the Global Economy

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Crypto Crew



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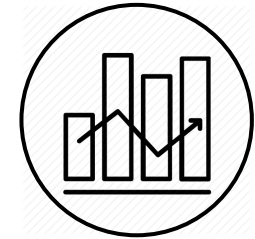
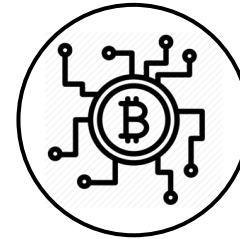
**BA Economics
BS Statistics**



Project Objective and Proposed Hypothesis

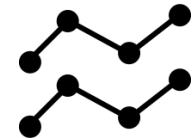
Project objective

To **assess** the **credibility** of cryptocurrencies via using statistical methods to investigate potential **relationships** and **correlations** between select **economic indicators**.



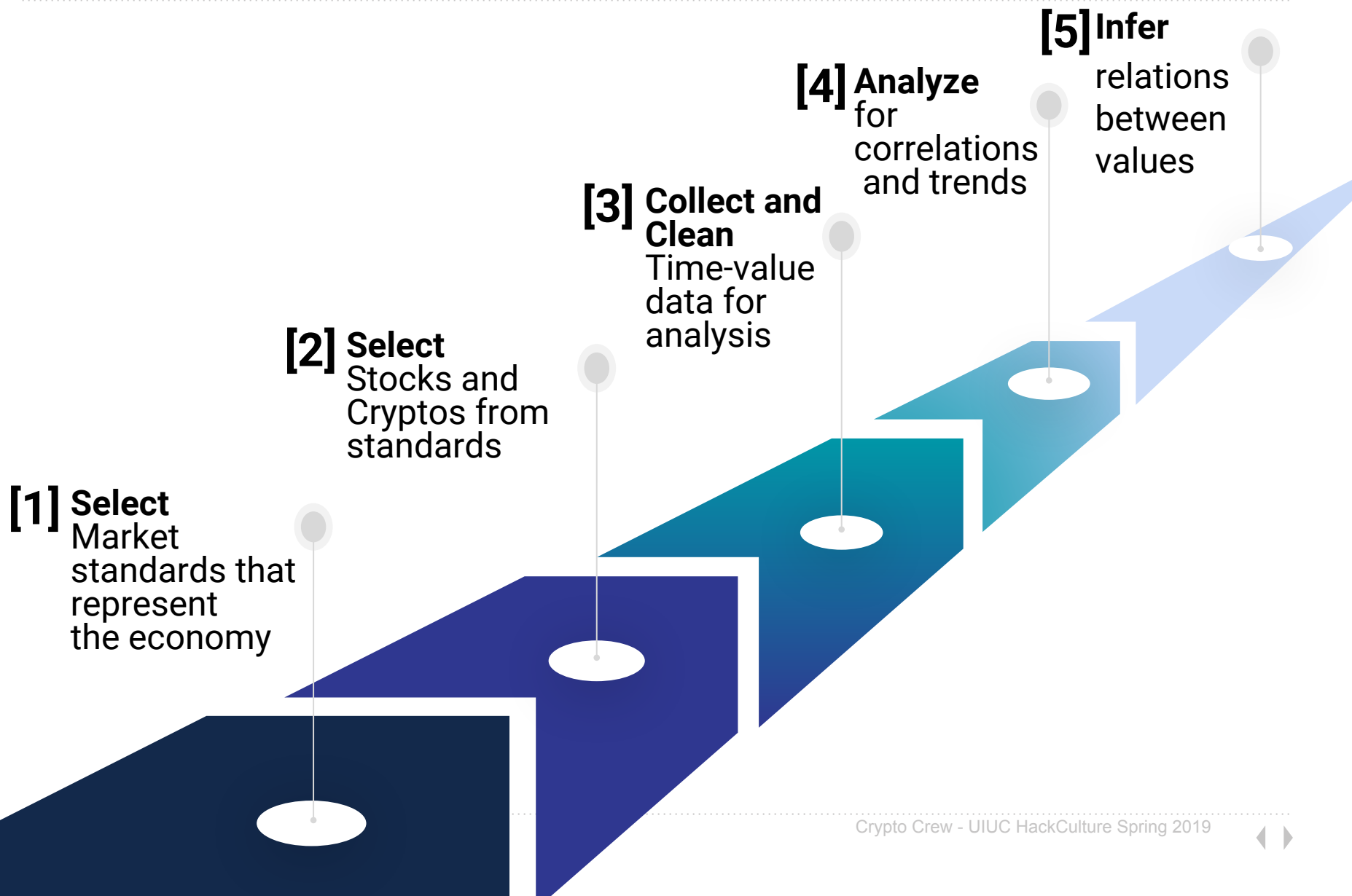
Proposed hypothesis

A currency's credibility can be scored by **how well its' value correlates with select economic indicators**. The degree of correlation can be used to determine its' possible **use case** and **financial strength** in the global economy.



Do cryptocurrency values correlate with the global economy?

Process: Compare Cryptocurrencies to Economic Indicators I

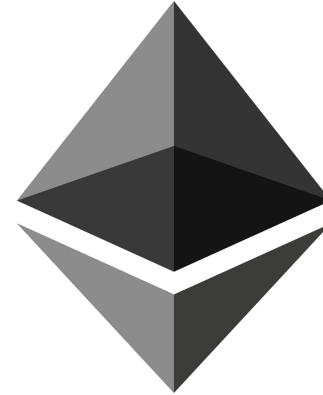


Cryptocurrency Selection

Selected Cryptocurrencies that represent the Financial Value of Crypto Market



BitCoin



Ethereum

- Accounts for the majority of the Cryptocurrency market in terms of **market capitalization** (BitCoin - 51.90%, Ethereum - 10.98%) - CoinMarketCap 3/1/19
- Have the **longest cryptocurrency market history**
- Top two cryptocurrencies with the **most practical use cases**

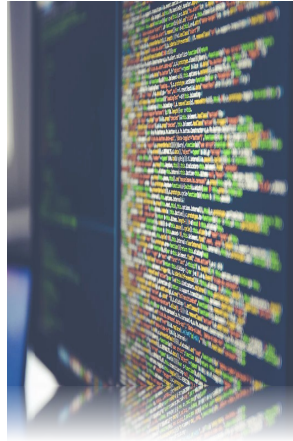
Stock Selection

Selected stocks that represent the Financial Value of the Global Economy



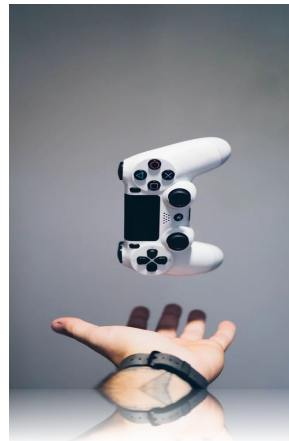
Banking

Bank stocks may indicate how cryptocurrency **financially impacts** the global economy



Tech

Tech companies are potentially **early adopters** of cryptocurrency



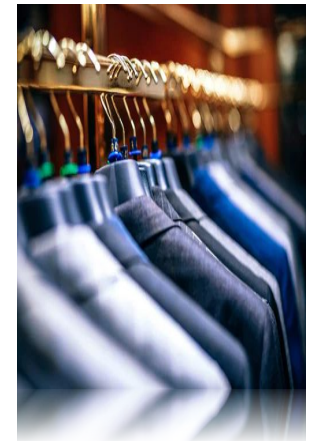
Game/Social Media

Similar to tech companies, game and social media companies may be **closely related** with the use of cryptocurrency money



Food

Food has **relatively low value elasticity**, which makes it an appropriate indicator of the influence by cryptocurrency



Apparel

Apparel, similar to food, is in daily demand, but has a **higher value elasticity**

Data Processing and Analysis Methods



Date	Open	High	Low	Close	Adj Close	Volume
9/12/18	6	6.93	5.35	6.6	6.6	66849000
9/13/18	6.62	12.69	6.52	11.6	11.6	158346500
9/14/18	12.66	13.8	9.22	9.9	9.9	172473600
9/17/18	9.61	9.75	8.5	8.5	8.5	56323900
9/18/18	8.73	9.1	7.67	7.68	7.68	41827600
9/19/18						48306500
9/20/18						40120600
9/21/18						15118500
9/24/18						16297900
9/25/18						18909300
9/26/18	7.59	7.76	7.5	7.5	7.5	11088300
9/27/18	7.55	7.55	7.01	7.01	7.01	16815600
9/28/18	6.97	7.28	6.68	6.98	6.98	21813600
10/1/18	7.06	7.08	6.6	6.6	6.6	16429100
10/2/18	6.6	6.6	5.87	5.93	5.93	19440000
10/3/18	6.12	6.55	6.12	6.3	6.3	13251200

Unnecessary columns present

Date	BitCoin	Ethereum
1 2013/10/01	3799.679	134.82251
2 2013/10/02	3772.936	131.66777
3 2013/10/03	3797.582	135.74342
4 2013/10/04	3819.865	138.03714
5 2013/10/05		
6 2013/10/06		
7 2013/10/07	3933.608	146.66580
8 2013/10/08	3889.758	142.86999
9 2013/10/09	3924.740	145.54825

Weekend dates present

Date	Closing Price (USD)
2019-02-28T22:59:59.000Z	134.822506
2019-02-27T23:00:00.000Z	131.667769
2019-02-26T22:59:59.000Z	135.743419
2019-02-25T22:59:59.000Z	138.037141
2019-02-24T22:59:59.000Z	137.763891
2019-02-23T22:59:59.000Z	157.047087
2019-02-22T22:59:59.000Z	146.665801
2019-02-21T23:00:00.000Z	142.869989
2019-02-20T22:59:59.000Z	145.548254

Non-relevant date format

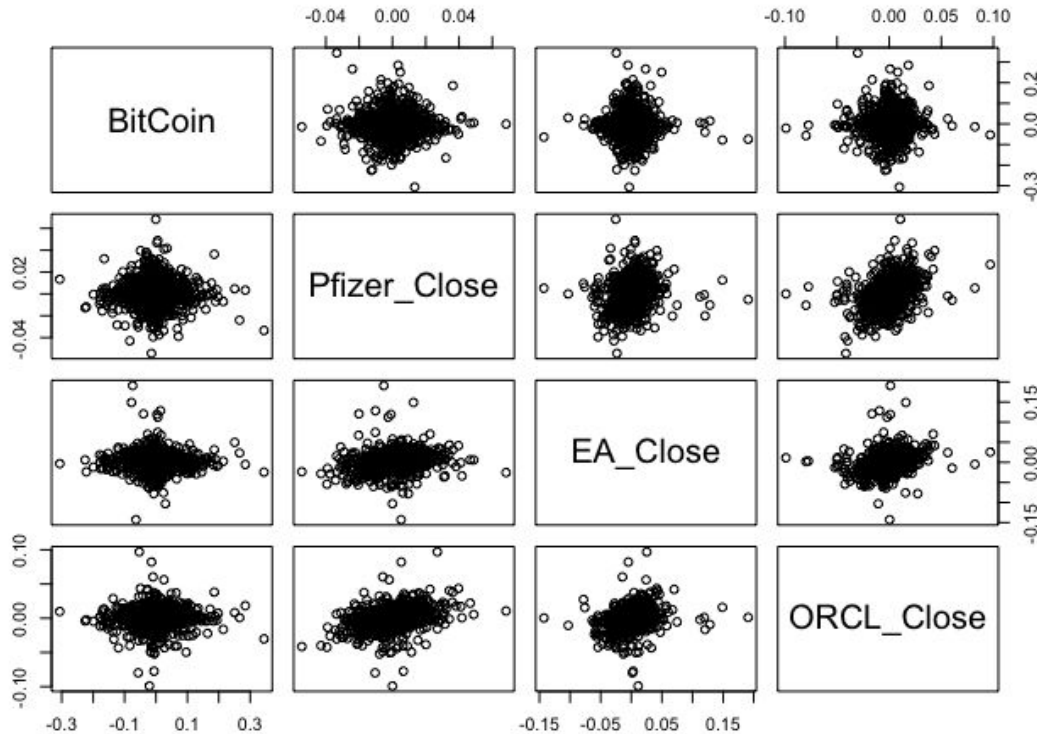
Date	BitCoin	Ethereum	Microsoft Cl
10/1/13	3799.6785	134.82251	29.427307
10/2/13	3772.9363	131.66777	29.725256
10/3/13	3797.5818	135.74342	29.672684
10/4/13	3819.8653	138.03714	29.690199
10/7/13		136.658	29.181934
10/8/13		138.6999	28.927794
10/9/13	3924.7398	145.54825	28.980375
10/10/13	3904.4829	144.16067	29.585045
10/11/13	3865.3182	142.618	29.909288
10/14/13	3566.2478	120.28506	30.18972

Relevant Date Format

- Removed data columns irrelevant for data analyses
- Revised date format and removed weekend trading
- Converted data to optimize excel analyses
- Concatenated data into a single data frame
- Separated volume and closing data

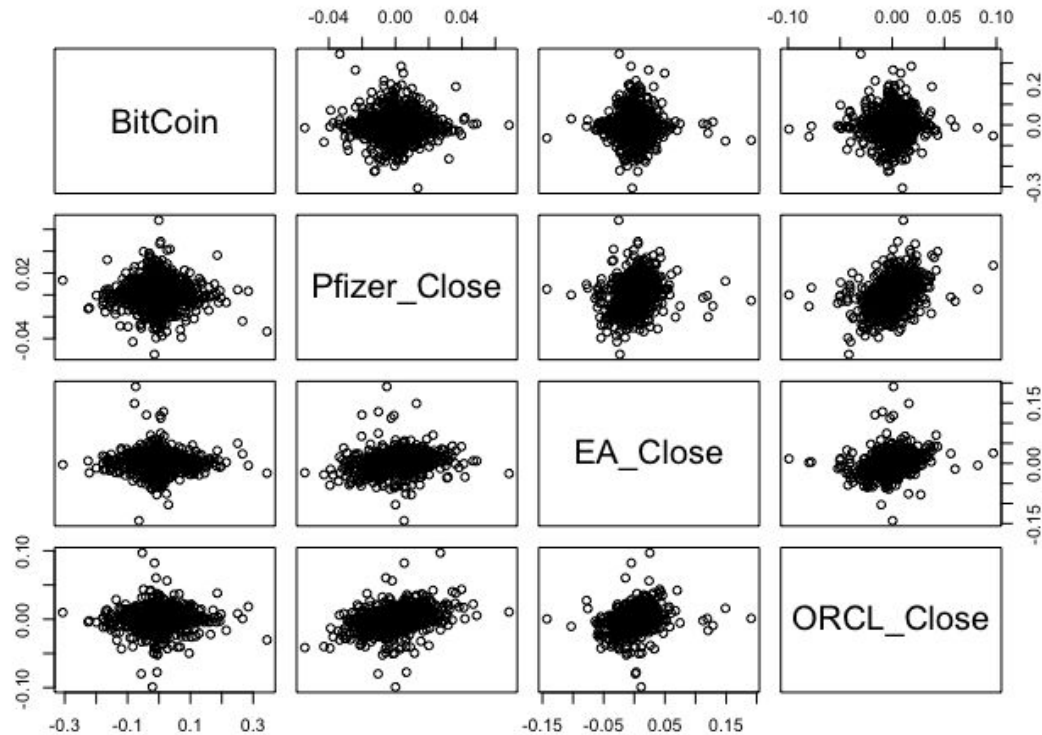
Data: Statistical Relations and Key Findings

	BitCoin	Pfizer_Close	EA_Close	ORCL_Close
BitCoin	1.00000000	-0.005455226	-0.005177748	0.03123847
Pfizer_Close	-0.005455226	1.00000000	0.219039257	0.37537684
EA_Close	-0.005177748	0.219039257	1.00000000	0.30313272
ORCL_Close	0.031238466	0.375376844	0.303132716	1.00000000



Data: Statistical Relations and Key Findings

	BitCoin	Apple_Close	JPM_Close	WMT_Close
BitCoin	1.00000000	0.00711338	0.01673768	-0.0342685
Apple_Close	0.00711338	1.00000000	0.39680880	0.2314003
JPM_Close	0.01673768	0.39680880	1.00000000	0.2790506
WMT_Close	-0.03426850	0.23140027	0.27905056	1.00000000



Data: Statistical Relations and Key Findings

Key Findings



Stocks for companies that **extensively use data** have the **highest** correlation with cryptocurrencies

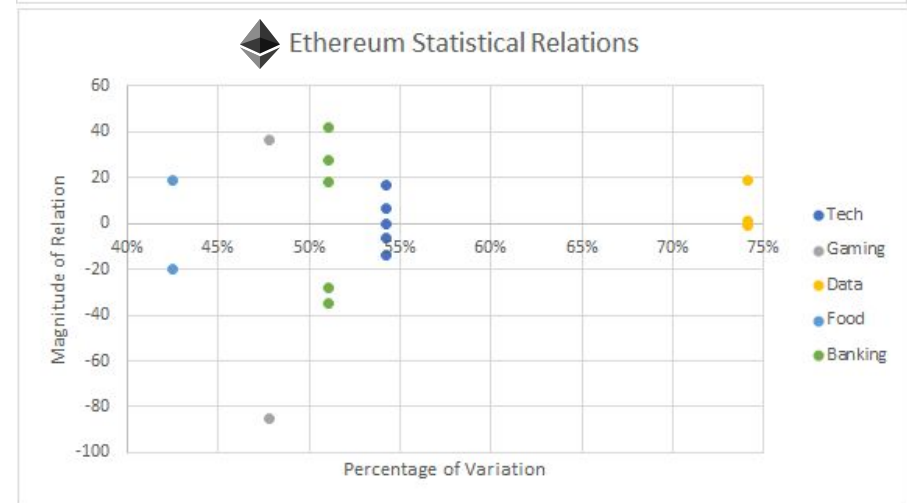
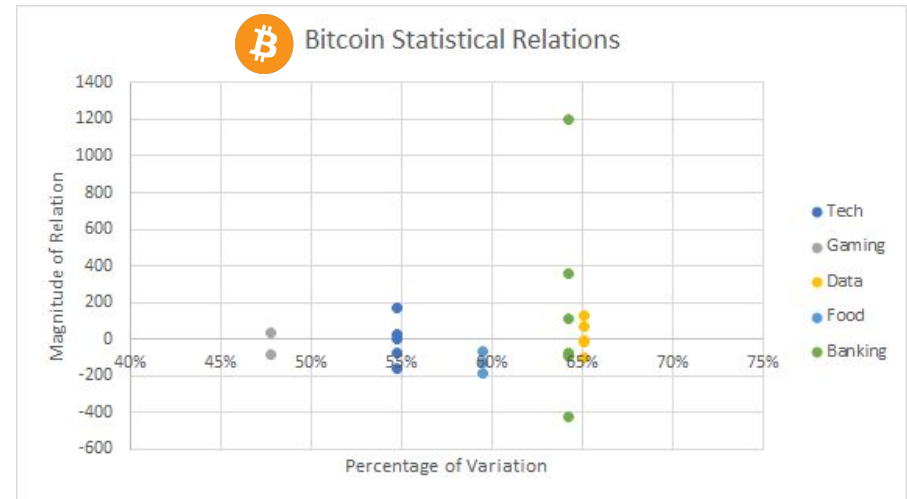


There are **no specific positive or negative correlations** to **Ethereum** for each sector of stocks



There are **no specific positive or negative correlations** to **BitCoin** for each sector of stocks, with the exception of **Food**

Stocks for companies that extensively use data:
AMZN, CAT, FDX, ORCL, SAP, SIEGY, UPS, WMT



Data: Statistical Relations for BitCoin



Key Findings



Data has a **strong regression** to BitCoin



Caterpillar and Walmart display the **strongest** correlations



There are no negative or positive bias



+125.06






+69.51



-103.17

Data: Statistical Relations for Ethereum

Key Findings

-  Data has a **strong regression** to Ethereum
-  Caterpillar and UPS display the **strongest** correlations
-  There are no negative or positive bias



+20.67



+18.70



-1.05[®]



Conclusion

Data-driven industries indicates strong correlation with cryptocurrencies, but no positive or negative bias are presented.





Thank you!

Any questions?



Data: Statistical Relations - BitCoin & Banking - Index Slide ^I

Bank of America 

+1200.20

Morgan Stanley

+355.51

JPMorganChase 

-420.75

