

Capital Investments, LLC



Making futures possible

Background

Capital Investments, LLC is looking to stay ahead of the market trends and stay competitive in hopes of bringing in new clientele. One of the trends that is being evaluated is cryptocurrency, Bitcoin in particular. The objective of this project is to analyze and to determine the following:

- Does Bitcoin have a correlation with SPHQ, OIL, or GOLD?
- Is Bitcoin a viable short or long term investment?
- What is the best investment option for a long term portfolio?

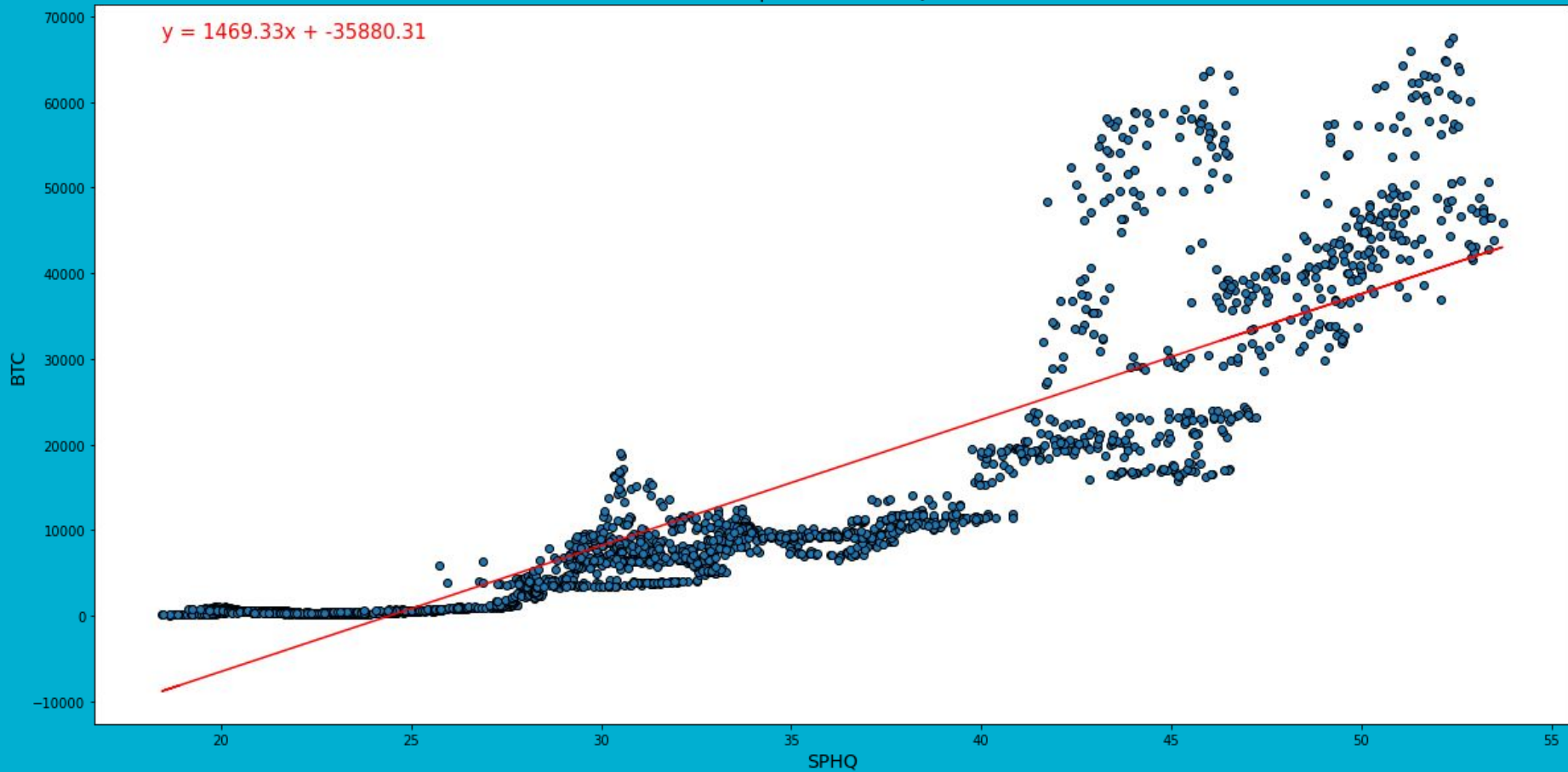
Collecting Data

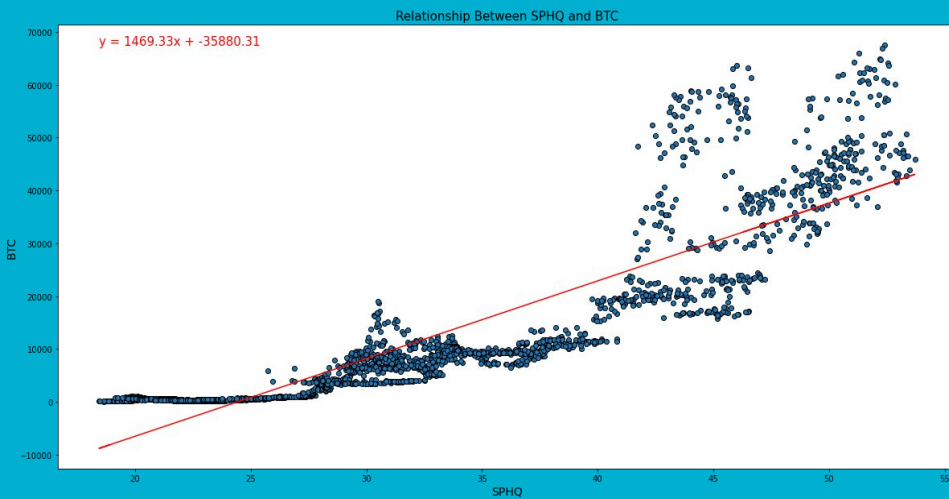
- Kaggle
(<https://www.kaggle.com/datasets/sourabhkumarburnwal/bitcoin-and-stock-market-dataset>)
- API (<https://www.alphavantage.co/>)
- Created data frames and saved as CSV files
- GOLD is Barrick Mining Company
- SPHQ(Invesco S&P 500 Quality) is an ETF of SP500 rebalanced semi-annually

Does Bitcoin
have a
correlation with
SPHQ, OIL, or
GOLD?



Relationship Between SPHQ and BTC

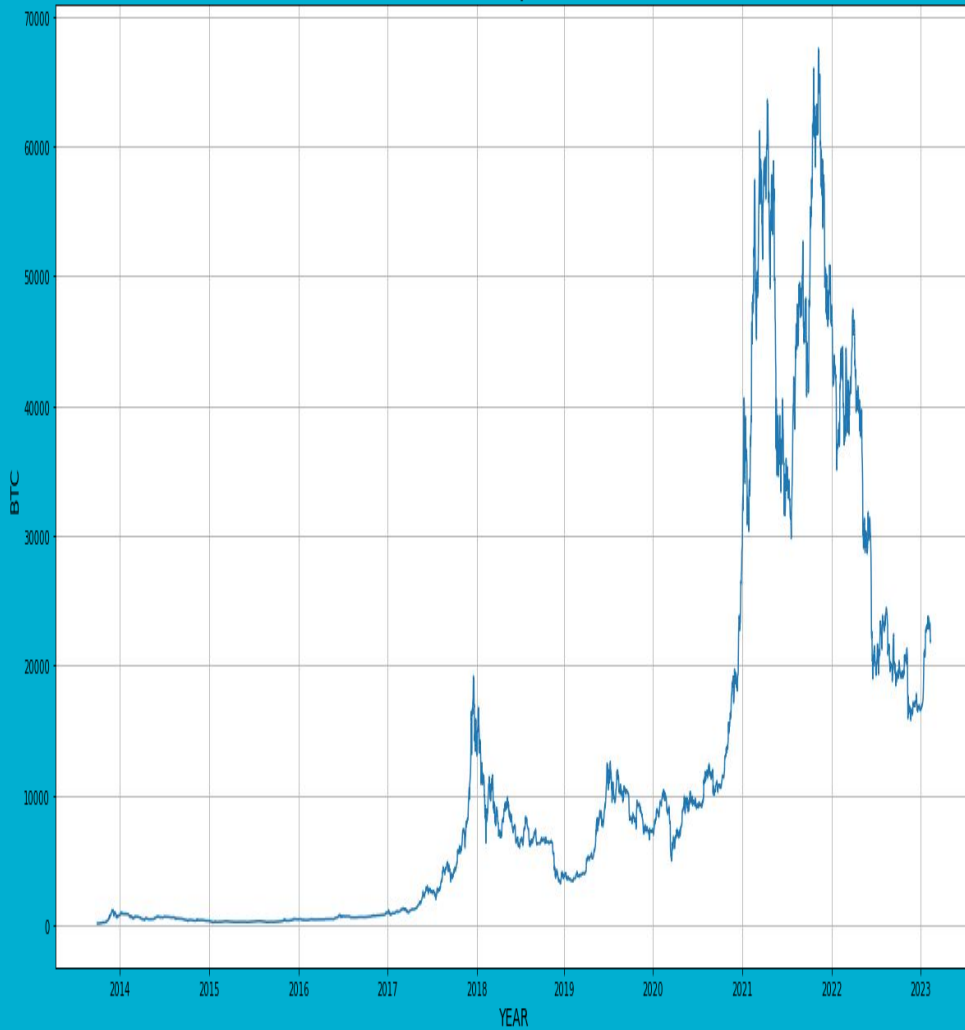




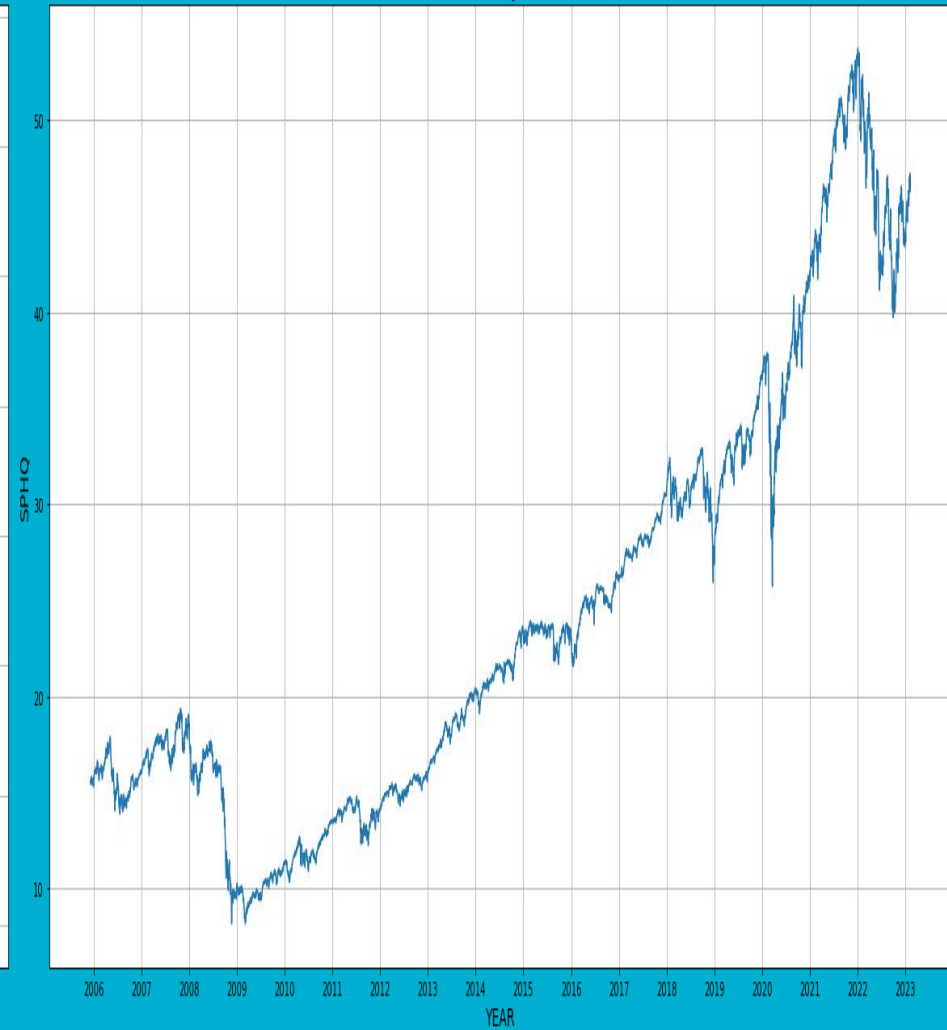
SPHQ and BTC

- Entire historical data for BTC and SPHQ
- The r squared value is .88
- Strong correlation
- Recently correlated when market is unstable
- Only last few years similar trends

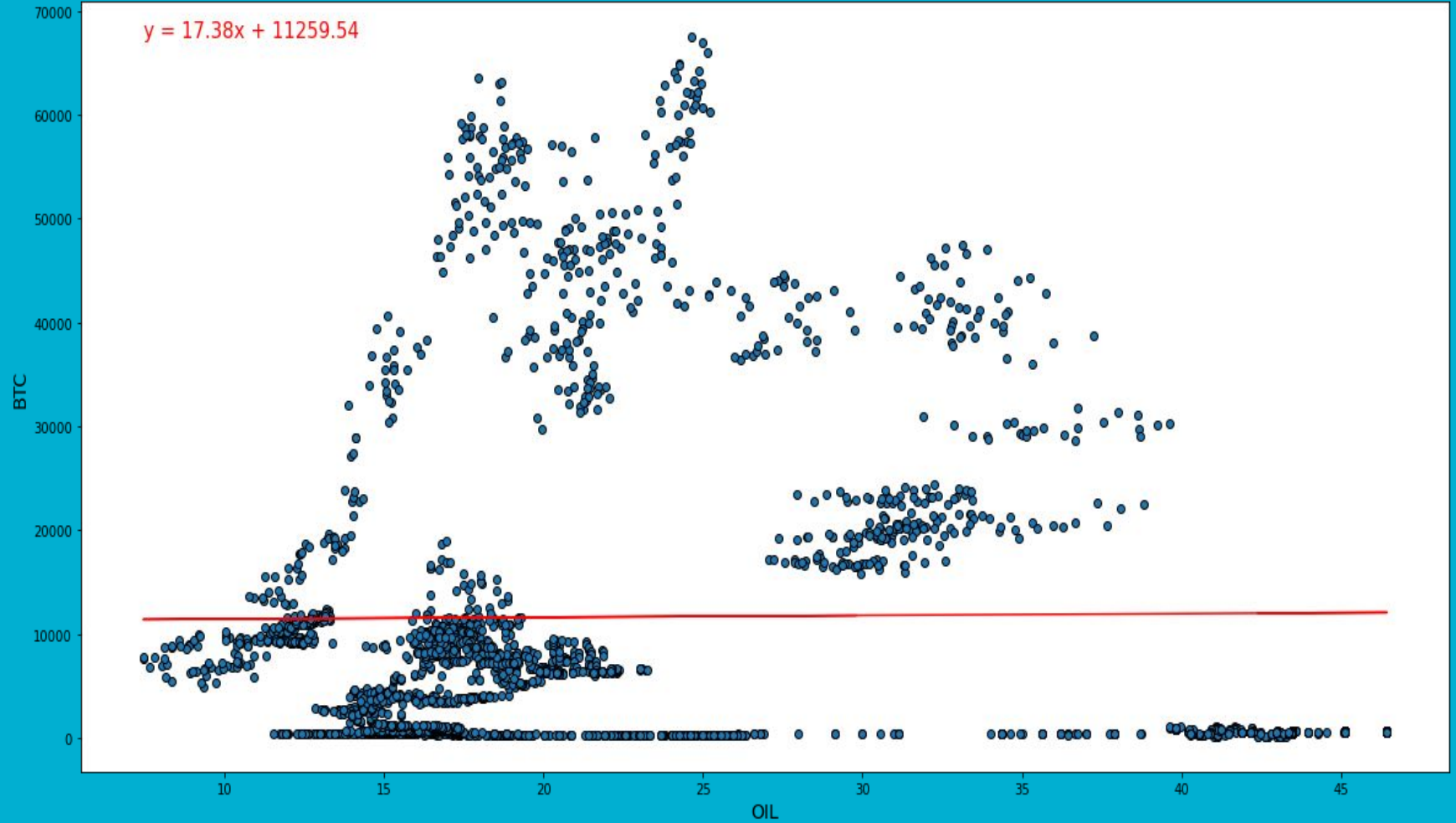
BTC Yearly Chart



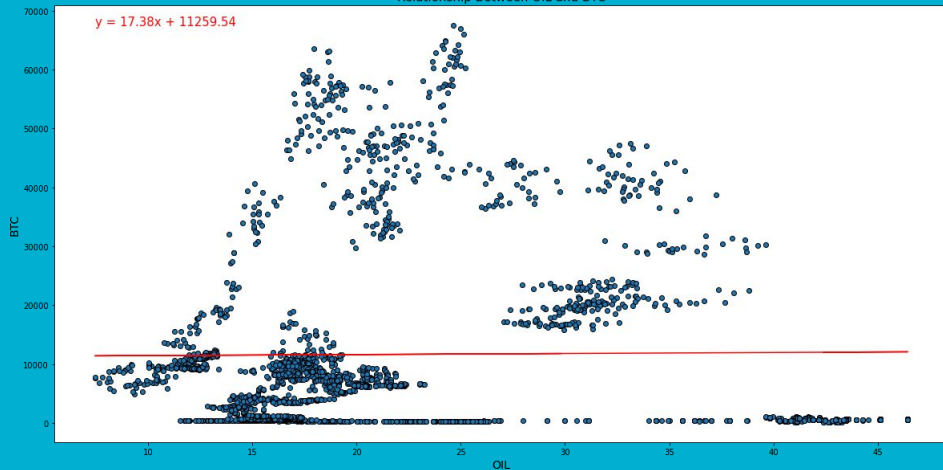
SPHQ Yearly Chart



Relationship Between OIL and BTC



Relationship Between OIL and BTC



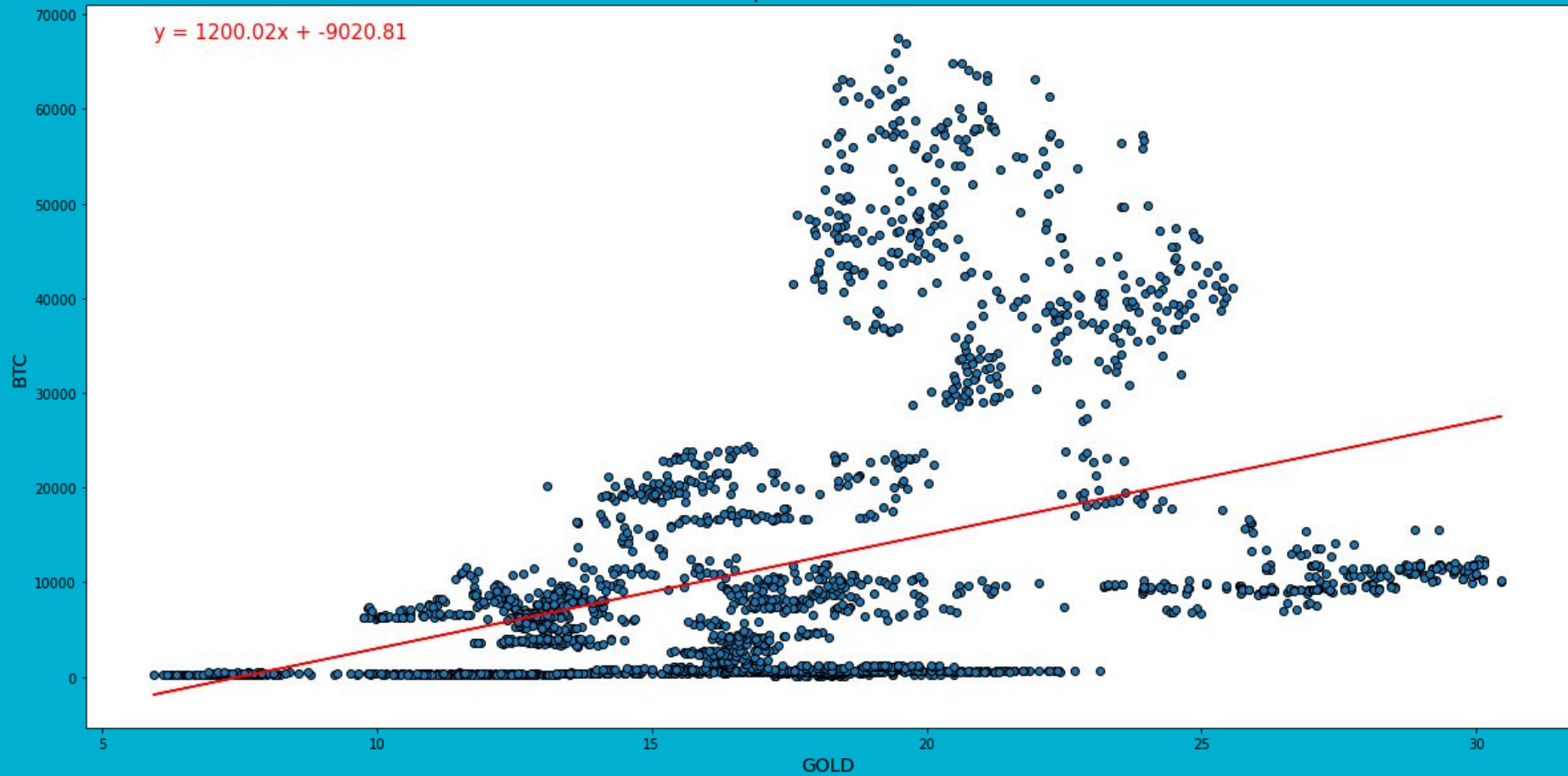
BTC and OIL

- R squared value is .001
- No correlation between Bitcoil and OIL
- Each are independent of each other

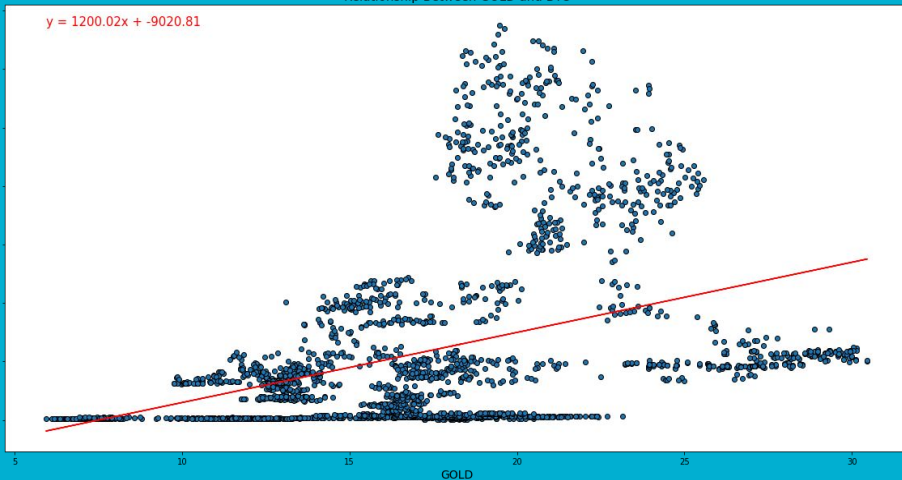
—

Relationship Between GOLD and BTC

$$y = 1200.02x + -9020.81$$



Relationship Between GOLD and BTC



Gold and BTC

- The r squared value is .39
 - This shows a weak positive correlation
 - BTC and GOLD are independent
-

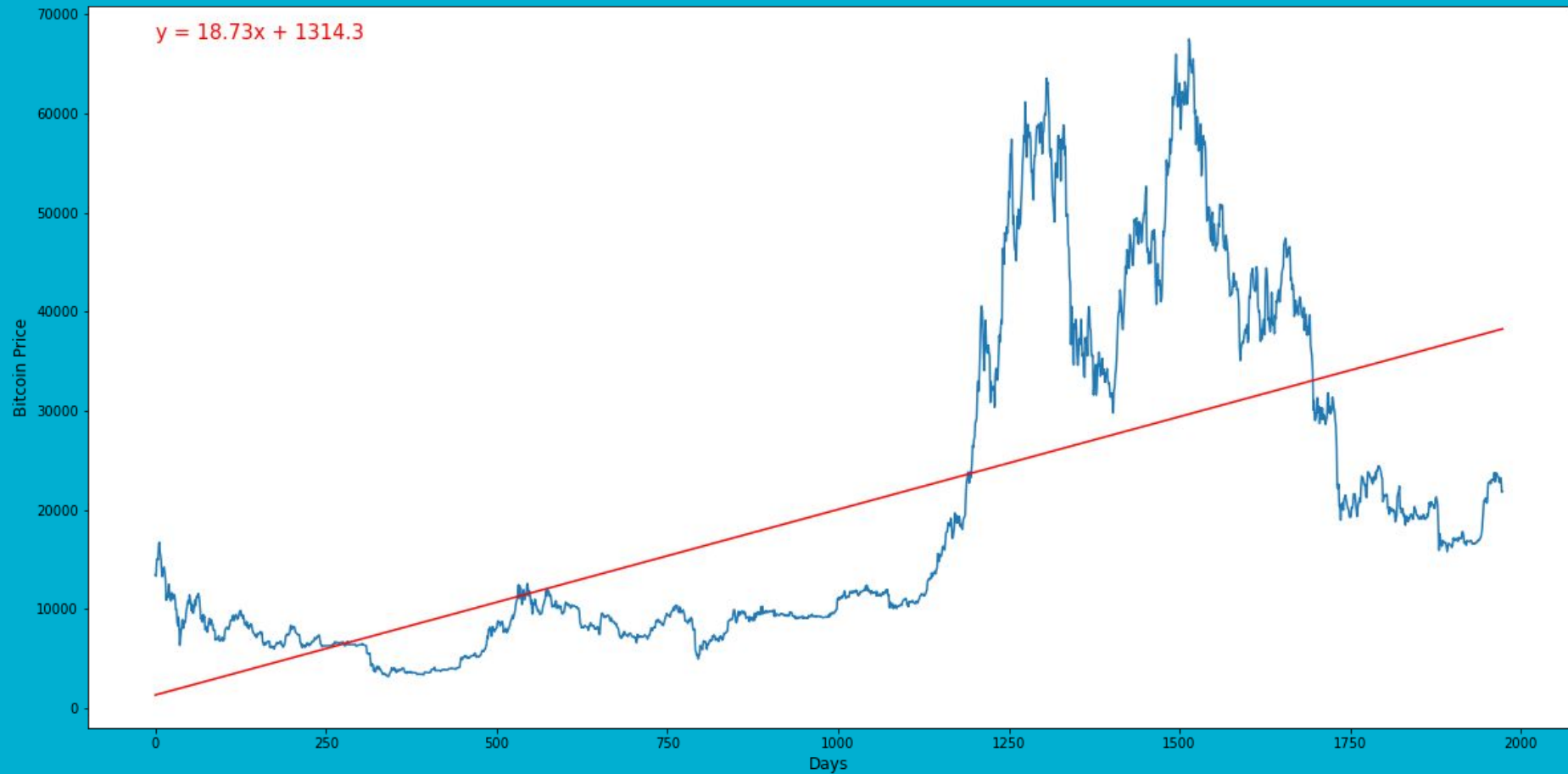
Analysis

- Stocks are not relational
- Cannot use to predict behaviors
- Bitcoin is independent

Is Bitcoin a good
short term or
long term
investment?



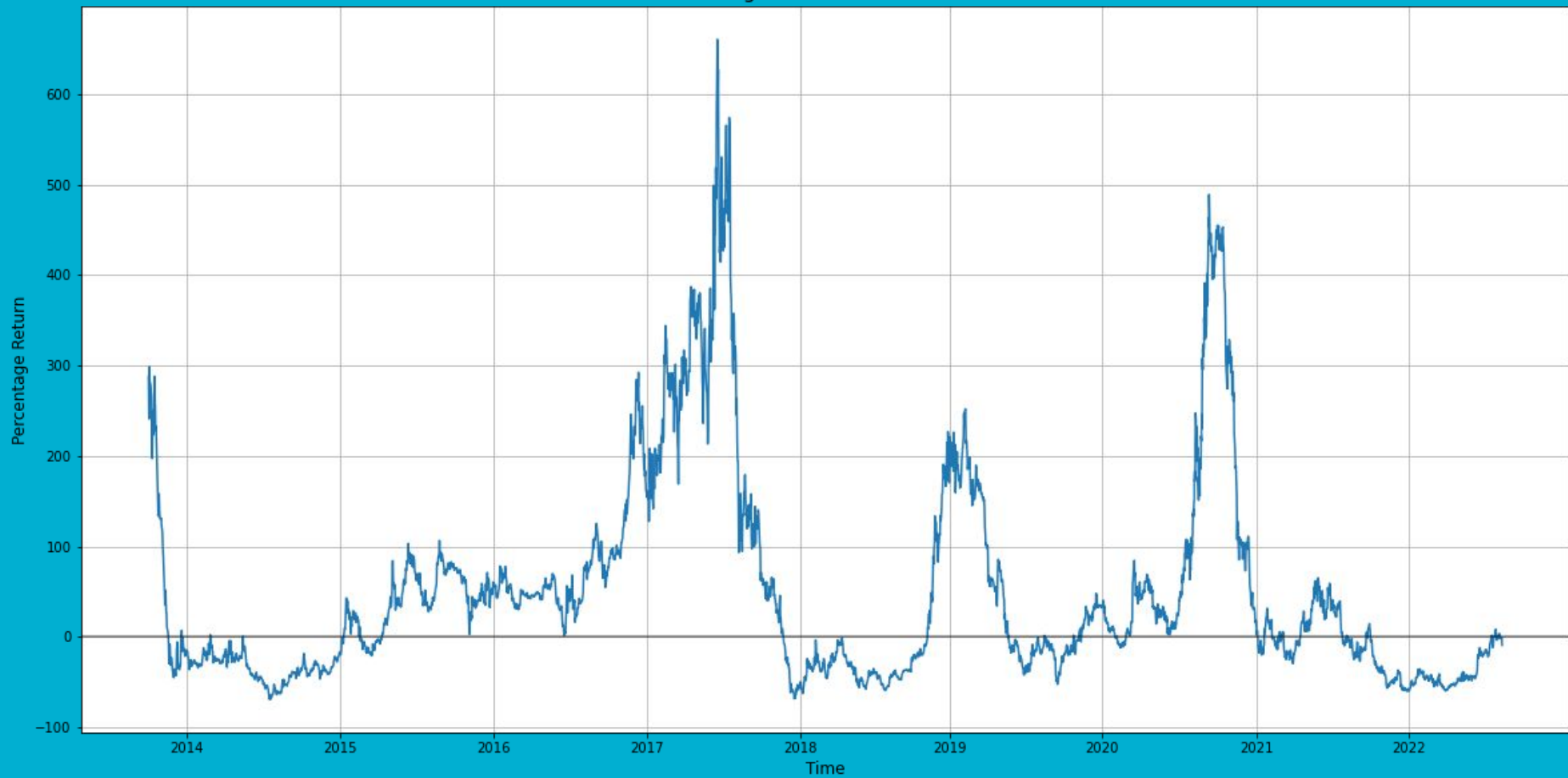
Bitcoin Price Over 5 Years



	date	six_months_dif (%)
0	2013-10-01	288.31
1	2013-10-02	241.06
2	2013-10-03	298.76
3	2013-10-04	282.45
4	2013-10-05	281.12
...
3338	2022-08-06	-0.09
3339	2022-08-07	-1.78
3340	2022-08-08	-2.39
3341	2022-08-09	-0.81
3342	2022-08-10	-9.01

- Daily change average is .11% increase for the last 5 years
- 62% increase profit from 2018 to 2023

Percentage Return After 6 Months



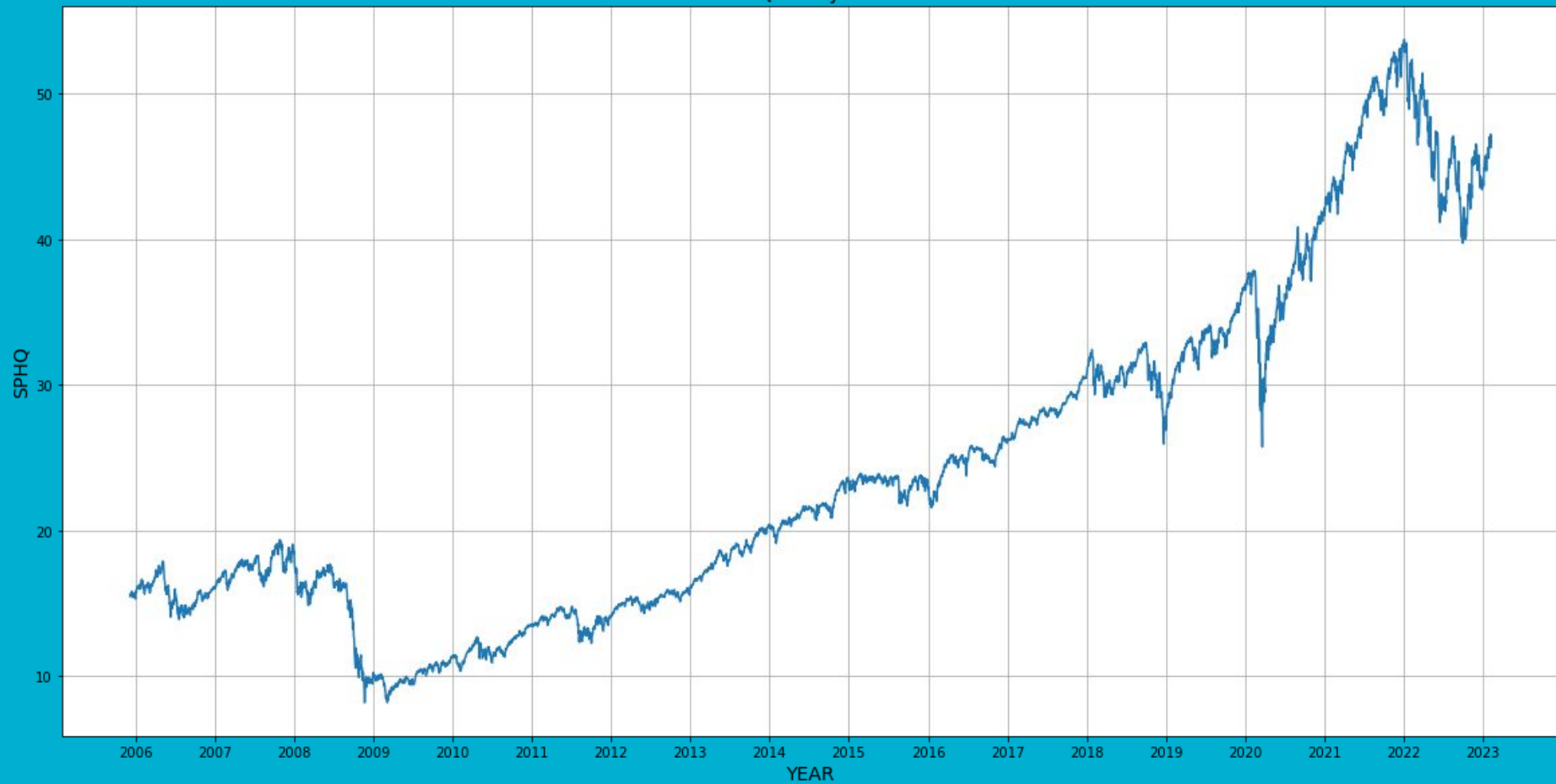
Analysis

- Short term is more likely to lose profit
- Timing is everything
- High risk
- Volatile

What is the best
investment
option for a long
term portfolio?



SPHQ Yearly Chart



SPHQ Percentage Return After 5 Years



Analysis

	date	5_year_dif (%)
0	2005-12-06	9.81
1	2005-12-07	11.85
2	2005-12-08	10.44
3	2005-12-09	10.66
4	2005-12-12	9.83
...
2490	2015-10-29	100.64
2491	2015-10-30	98.80
2492	2015-11-02	95.81
2493	2015-11-03	96.70
2494	2015-11-04	99.36

- Consistent growth
- Low volatility
- Balanced semi-annually
- Well balanced index
- High yield returns for 5 year returns