

Have you noticed the price fluctuation recently?

Monitor the impact of the Trade War between China and the US via goods' price

It has been 16 months since the initial action of in the Section 301 investigation by the US Trade Representative, and we could feel the impact of the trade war between two **giant economic entity** not only in media, but also in our daily life via goods' price. Actually, economists usually measure our economy behavior using goods' price as well. To make it simple, economists often choose soybean, crude oil and iron's price as three indicators stands for agriculture, energy and metal, which consist of a country's lifeline.

Timetable

In order to monitor the price trend, to compare it against trade war timetable is not a bad idea. We could split the price trend into pieces using time spots to special issues.

So, I collected two lists of time. The first one contains time that there are some issues happen between China and the US. Not all time spots have negative issues; there are negotiations as well. The second one contains time spots all about tariff increases. Both the US and China has increased tariff three times, which sums as 6 times altogether, and the US always goes first. However, due to the lack of data, I just collected 5 time spots and the data of third increase by China is not available yet. Here are the lists:

The first list: all important time spots.

'Mar-17', 'Apr-17', 'Jul-17', 'Aug-17', 'Jan-18', 'Mar-18', 'Apr-18', 'Jun-18', 'Jul-18', 'Aug-18', 'Sept-18', 'Dec-18', 'Feb-19', 'May-19', 'Jun-19', 'Aug-19'

The second list: about tariff increases.

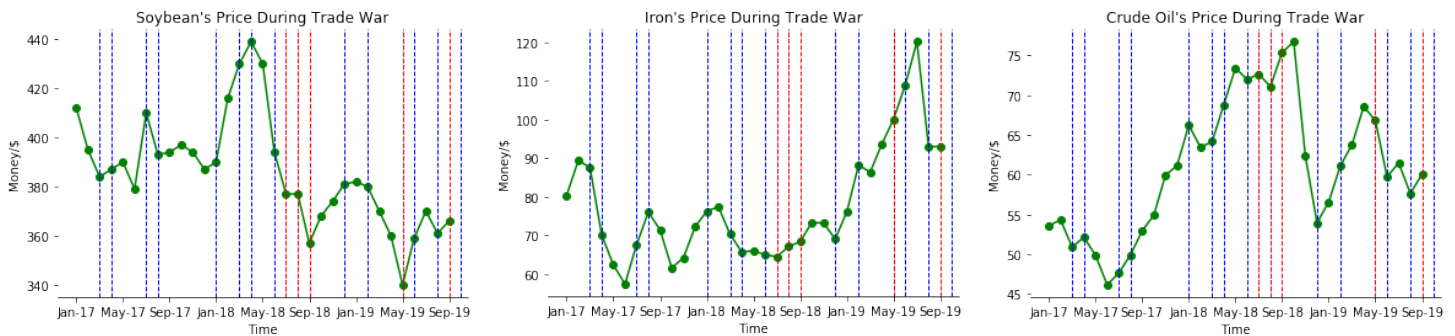
'Jul-18', 'Aug-18', 'Sep-18', 'May-19', 'Sep-19'

Price Trend

Then I drew three plots about price trend during Jan 2017 to Sep 2019. In each plot, I marked those time spots as well. **Blue lines** are general important time spots, and **red lines** are time spots when tariff increased, which are included by the former ones. Let's look at them separately.

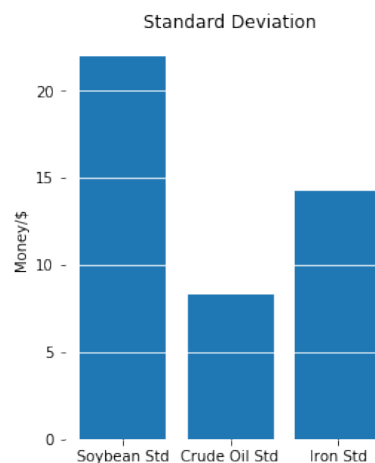
As for soybean, we can almost say that every time there is an issue, there is a price fluctuation. Especially in Sep 2018 and May 2019, there are two duties aim at soybean. Contrasting to the fluctuation of soybean's price, crude oil and iron's prices are less correlated to the duty however. That means there are much fluctuation without duty imposing, and duty matters not that much to their prices.

To look down from above, soybean is more expensive while crude oil and iron are less expensive. Those are not good signs. That means many farmers may suffer, while people in cities may pay more to afford transportation and housing.



The Standard Deviation of Three Goods

From the bar chart of standard deviation, we could easily find that soybean's price is most unstable: its standard deviation value is twice to that of crude oil price. Different to goods in energy of metal market, agricultural goods are essentially unstable because of many natural factors such as flood, drought and snowstorm.



What's Next?

Recently, Trump complained the negotiation was too slow. So what shall we expect next?

There is no doubt that neither side gains during this *the hugest trade war in history*. And we do hope this war will not last long. After doing this tiny survey, I would like to collect more data on different economic indicators and investigate further.