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Fall 2019 Cheif Editor: Michael Li

An Attack on Saudi Oil Facilities or the Global Oil Supplies?

By Muhammad Abdullah Saif, Market Research Analyst

What Happened Fed's Second Rate?

After a series of drone strikes to the world's largest oil processing facilities at Abqaiq and the Khurais oil field on the morning of September 14, Saudi Arabia was forced to shut down 50 percent of its oil production bringing its daily production from 9.8 million barrels a day to 4.1 million barrels a day [1]. According to Saudi Aramco, the attacks will impact almost 5.7 million barrels of crude oil production a day with 4.5 million coming from the Abqaiq processing plant and 1.2 million from the Khurais oil field. The affected production is almost 5% of the daily global oil production. The oil markets saw up to 19.5% increase in Brent Crude* futures prices in a single day when they opened on September 16, which is the highest ever increase in prices in a single day in the past decade. As per the Saudi energy minister, the attacks had forced the country's supply of ethane and natural gas liquids to shrink 50%.

The attack was shortly claimed by Yemen's Houthi rebels; however, U.S. laid its blame on Iran for the attacks. Following their blames, U.S placed terror-related sanctions on the Iranian Central Bank and Iran's sovereign wealth fund to suppress Iran's remaining trade with most of Europe and Asia [2].



Crude Oil's historical CFDs chart. The red arrow is the point of opening of the market on 16th September 2019, the first opening day after the attacks (Source:TradingView)

After the strikes, Saudi Arabia's pledge to fulfill all commitments to oil buyers relies heavily on its inventories until production capacity is restored. According to the energy minister, Saudi Aramco "will be able to meet all its commitments to customers this month by drawing on its crude oil reserves". In order to maintain exports Saudi Arabia has had to cut deliveries to its own processing plants. The attacks would also shift the country's balance towards heavier grades at the expense of lighter supplies which are processed at Abqaiq and onshore. In order to meet the export requirements, Saudi Aramco removed almost 10 million barrels of oil from various storage facilities across the country in the 2 days following the attacks.

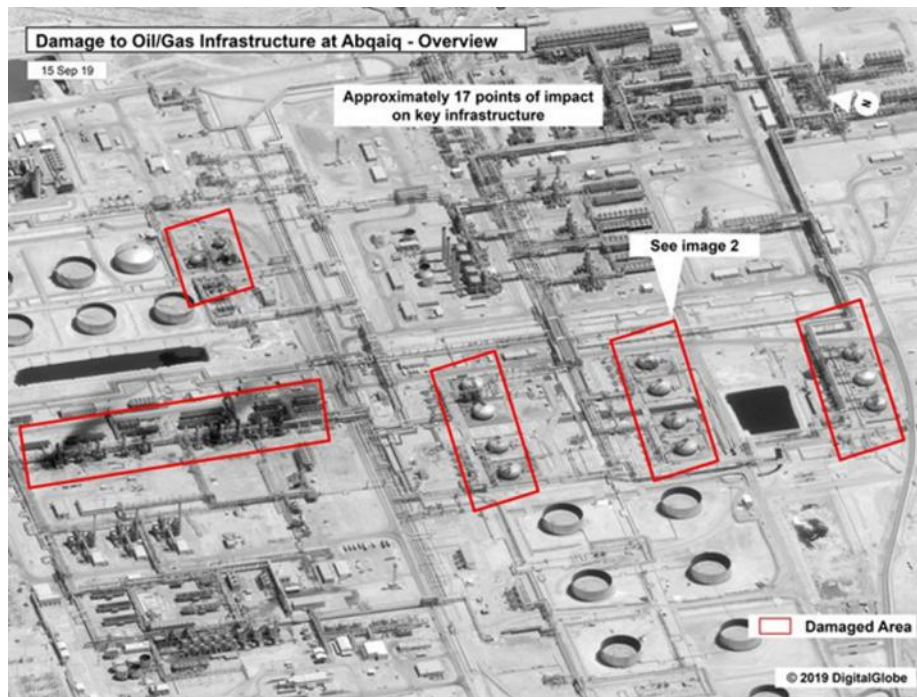
Long Term Implications:

The event has been labelled as a possible one-off by Brian Barish, chief investment officer Cambiar Investors LLC, who said "I certainly would not run out and make any major decisions based on this. The energy market remains generally oversupplied so it's short-term relief, but I don't see this changing the larger picture." Another analyst added that there might be opportunities in the currency market as the energy-producing nations would fair better and the consumer nations would struggle. Oil-reliant economies like Japan, China, South Korea and India are likely to get hurt most said Margaret Yang of CMC Markets Singapore. This may be an opportunity for gold as well as it maintains its bullish march towards \$1,600 an ounce [3].

The attacks on the Saudi oil installations have led to a rotation of interests of investors and traders out of stocks and safe-havens as per Jeffrey Halley, Analyst at OANDA. There was a 1% spike in Gold prices following the September 14 attack which is considered a safe-haven bullion. Halley further added that with the escalating tensions in the Middle East the next target for gold will be \$1,530. Gold has become the choice of alternate investment during times of financial and political uncertainty for people trying to avert risk. The markets observed a spike in prices in other precious metals as well which includes a 3% spike in silver prices and 0.7% spike in platinum prices [4].

Being the largest producer of oil, Saudi Arabia has been the greatest stabilizer of the global oil markets. The kingdom has been viewed as the undisputed guardian of the global oil markets and the attacks might have done an irreplaceable damage to that image. During the times of global oil crisis, Saudi Arabia has used its spare production capacity as a shock-absorber, keeping a lid on prices. However, the series of drone strikes made a dent into this image as the traders and analysts were alarmed by how easy it was to attack the oil facilities. Riyadh will need to think over the possibility that the world would not have the same degree of faith in its role as a guardian of the global oil markets [5].

Even though S&P Global affirmed Saudi Arabia's rating at A- which is on par with Malaysia and Malta and four levels above junk, Fitch Ratings downgraded Saudi Arabia for a third time since 2016 from A+ to A that is five levels above junk. "Saudi Arabia is vulnerable to escalating geopolitical tensions. Although oil production was restored fully by end-September, we believe that there is a risk of further attacks on Saudi Arabia, which could result in economic damage," Fitch Ratings said. The downgrade might particularly be costly as Saudi Arabia is considering selling a dollar-denominated bond whose price is slightly down after Fitch's decision [6]. According to S&P, Saudi Arabia's real GDP will contract by almost 0.4% this year due to fall in oil productions tied to OPEC deal and the attacks. The International Monetary Fund has issued a warning that Saudi Arabia should have a stringer fiscal policy to safeguard its budget from possible decline in oil prices.



Wide angle view showing damage to 17 different points of impact at the Abqaiq complex Source: U.S. Government/Digital Globe via AP Photo

What it means for the Saudi Aramco IPO

Before the strikes, Saudi Aramco was on its way to initiate its much-awaited initial public offering. The targeted valuation is currently at least \$2 trillion which is more than double that of Apple Inc. The company plans to announce its intention to around October 20. The strikes to the oil producing facilities were thought to have affected the timeline of Aramco's listing on the Saudi stock exchange however; with capacity back to over 11 million barrels a day, the IPO seems on track. A \$2 trillion valuation would make Saudi Aramco the most valuable firm across the globe.

As per Richard Segal, senior emerging market analyst at Manulife Asset Management, “Aramco seems to be making all efforts to restore full production as soon as possible, both to reassure its clients that it is a reliable supplier and to avoid any IPO delays.” People with knowledge of the situation have reported that Aramco has restored production at Abqaiq processing facility and Khurais oil field to levels before the drone strikes on the facilities [7].

[1] <https://www.cnn.com/2019/09/14/saudi-arabia-is-shutting-down-half-of-its-oil-production-after-drone-attack-wsj-says.html>

[2] <https://www.bloomberg.com/news/articles/2019-09-20/trump-says-u-s-sanctioned-iran-s-national-bank-for-attack>

[3] <https://www.bloomberg.com/news/articles/2019-09-16/oil-jolt-may-have-short-term-impact-for-markets-elsewhere>

[4] <https://www.cnn.com/2019/09/16/gold-markets-attacks-on-saudi-oil-plants-in-focus.html>

[5] <https://www.bloomberg.com/news/articles/2019-09-18/saudi-oil-attack-damages-kingdom-s-role-as-guardian-of-market>

[6] <https://www.bloomberg.com/news/articles/2019-09-30/saudi-arabia-rating-cut-at-fitch-on-gulf-geopolitical-risks>

[7] <https://www.bloomberg.com/news/articles/2019-09-25/aramco-is-said-set-to-formally-announce-listing-plan-next-month-k0z1wxab>

What Happened to WeWork?

By Diga Ye & Michael Zheng, Market Research Analysts

On August 14th, 2019, WeWork announced that they were going public with an initial public offering (IPO) valuation of 47 billion dollars. After Uber, WeWork had the second highest valuation in 2019, beating out companies such as Lyft, Pinterest and Slack. More than one month later, their CEO and other key employees have stepped, and their valuation has tanked as low as 10 billion dollars. On September 30th, WeWork announced that it would withdraw their IPO, and will likely postpone their offering until 2020 [1]. The big question is, what happened leading up to their withdrawal?

WeWork was founded in 2010 by Adam Neuman, Rebekah Neumann and Miguel McKelvey. The real estate company specializes in renting out office space, transforming it into an enticing,

modern space, and rents it out to individuals and businesses for significantly more. Currently, their pricing model consists of three levels: private offices, desk space and on-demand access. Private offices have a set price, with the company paying rent every month on a flexible plan. Desk spaces are guaranteed, comfortable areas for individuals to work in, which is also a set price every month. Finally, on-demand access allows members to rent out office space whenever they want, as well as enjoy the benefits that the other options have, such as networking opportunities, or amenities such as cafes, fitness centres or a game room.

What Happened in the Past Month?

Since publicly announcing their IPO last month, WeWork has faced nothing but trouble. With a public announcement of an IPO, WeWork also must publicly release their financials and other important information in the form of a S-1 form [2]. Earlier this year, WeWork announced that their revenues were more than doubled, from \$886 million in 2017 to \$1.8 billion in 2018. The figure below is their consolidated statement of operations, which includes their revenues, expenses and net gain (loss). Although WeWork's statement is true, the more concerning factor is the fact that their expenses also nearly doubled from 2017 to 2018; from \$1.8 billion to \$3.5 billion dollars. This leads to their net loss also doubling, from 900 million to just over 1.9 billion

dollars. Since the release, investors and stockholders have continuously opted out, and with that, the valuation started to rapidly diminish in value. It currently sits at around 10 billion dollars, a nearly 80% difference from what it was a month ago.

The information presented below should be read in conjunction with the information under "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes appearing elsewhere in this prospectus.

(Amounts in thousands, except share and per share data)	Year Ended December 31,			Six Months Ended June 30,	
	2016	2017	2018	2018	2019
Consolidated statement of operations information:					
Revenue	\$ 436,099	\$ 886,004	\$ 1,821,751	\$ 763,771	\$ 1,535,420
Expenses:					
Location operating expenses (1)	433,167	814,782	1,521,129	635,968	1,232,941
Other operating expenses (1)	—	1,677	106,788	42,024	81,189
Pre-opening location expenses	115,749	131,324	357,831	156,983	255,133
Sales and marketing expenses	43,428	143,424	378,729	139,889	320,046
Growth and new market development expenses	35,731	109,719	477,273	174,091	369,727
General and administrative expenses (2)	115,346	454,020	357,486	155,257	389,910
Depreciation and amortization	88,952	162,892	313,514	137,418	255,924
Total expenses	832,373	1,817,838	3,512,750	1,441,630	2,904,870
Loss from operations	(396,274)	(931,834)	(1,690,999)	(677,859)	(1,369,450)
Interest and other income (expense), net	(33,400)	(7,387)	(237,270)	(46,406)	469,915
Pre-tax loss	(429,674)	(939,221)	(1,928,269)	(724,265)	(899,535)
Income tax benefit (provision)	(16)	5,727	850	1,373	(5,117)
Net loss	(429,690)	(933,494)	(1,927,419)	(722,892)	(904,652)
Net loss attributable to noncontrolling interests	—	49,500	316,627	94,762	214,976
Net loss attributable to WeWork Companies Inc.	\$ (429,690)	\$ (883,994)	\$ (1,610,792)	\$ (628,130)	\$ (689,676)
Net loss per share attributable to Class A and Class B common stockholders: (3)					
Basic	\$ (2.66)	\$ (5.54)	\$ (9.87)	\$ (3.87)	\$ (4.15)
Diluted	\$ (2.66)	\$ (5.54)	\$ (9.87)	\$ (3.87)	\$ (4.15)
Weighted-average shares used to compute net loss per share attributable to Class A and Class B common stockholders, basic and diluted	161,324,940	159,689,116	163,148,918	162,482,366	166,301,575
Pro forma net loss per share attributable to Class A and Class B common stockholders: (3)					
Basic			\$ (4.41)		\$ (3.20)
Diluted			\$ (4.41)		\$ (3.20)
Weighted-average shares used to compute pro forma net loss per share attributable to Class A and Class B common stockholders, basic and diluted			338,368,587		365,154,863

(1) Exclusive of depreciation and amortization shown separately on the depreciation and amortization line.

(2) Includes stock-based compensation expense of \$17.4 million, \$260.7 million and \$18.0 million for the years ended December 31, 2016, 2017 and 2018, respectively, and includes stock-based compensation expense of \$10.5 million and \$111.2 million for the six months ended June 30, 2018 and 2019, respectively.

(3) See Note 22 to the audited annual consolidated financial statements and Note 24 to the unaudited interim condensed consolidated financial statements, each included elsewhere in this prospectus, for a description of how we compute basic and diluted net loss per share attributable to.

WeWork's released consolidated statement of operations information (Source: SecGov)

The main problem with how WeWork operates is their fundamentally flawed business model. They operate as a middleman; paying rent to the office space owner, renovating it into a modern office space, then renting it out to companies at a higher price. Unfortunately, with all the location operating expenses they must pay – with the rent, construction of the office space, and maintenance – they are barely profitable in the end. The figure below shows the comparison between their member & service revenue and location operating costs. Although it seems like WeWork is still making a profit in the last two years, this only takes into account their location operating costs, and does not include any other expenses, such as sales and marketing, or administrative. This also does not include depreciation, which is a huge factor in the real estate industry [3].



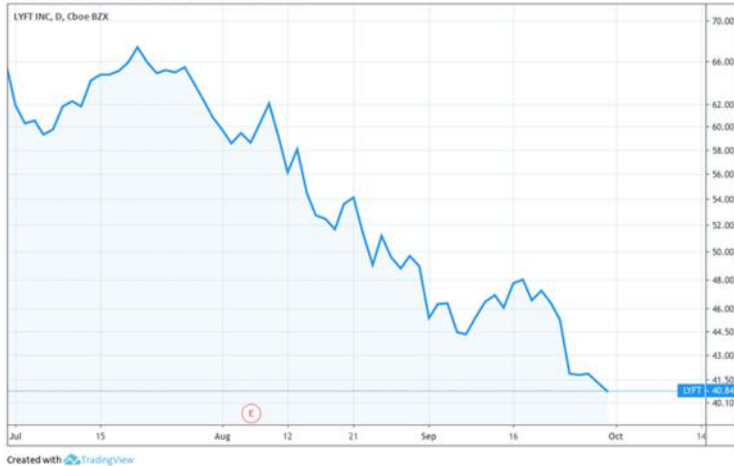
Graph illustrating revenue vs locating operating costs (Source: Bloomberg)

Dragging back from the investors, it seems that WeWork is at the tough times of the broad market. Starting from 2000, the dot-com bubble has emerged. Supported by the investment banks, more and more tech ventures went to the public and received vast amounts of investors' cash. Looking into the 2019, the overall market seems to boom as the stock index like S&P has wandered to the highest in the past five years. Furthermore, Bloomberg analysis has found that unprofitable companies that worth more than 100 million have raised more cash in 2019 through IPO than any other year since at least 2000 [4]. The positive trend gives private companies incentives to go public before the market turns down. However, startups failed to keep going as planned: the recent stock price of Uber dropped around 30% below its IPO price and Lyft is even 40% down from where its own. The declining stocks price relieved investors are starting to be defensive. Also, comparing with renaissance IPO index to S&P, the IPOs was underperforming by more than 10%. The relentless responses from the market underscored investors were getting nervous, which have extended to those that haven't gone public such as WeWork. The growing investors' concern comes from the global market. WeWork have been blocked by investors' wall of worry, including US-China Trade War, slow-down economic growth and rumor of coming recession. The excess volatility in market has waned investors' confidence, playing a significant role in pushing WeWork IPO back.



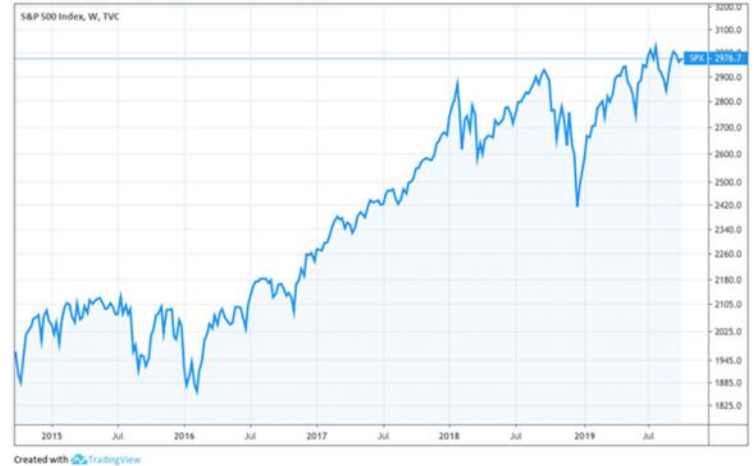
Uber Stock Price from debut (Source: TradingView)

Figures published on TradingView.com, September 30, 2019 20:32:53 UTC
 BATS:LYFT, D 40.84 ▼ -0.31 (-1.23%) O:41.41 H:41.39 L:40.56 C:40.84

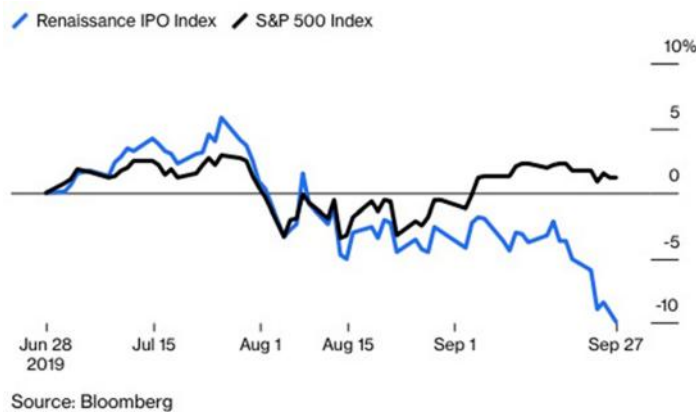


Lyft Stock Price from debut (Source: TradingView)

Figures published on TradingView.com, September 30, 2019 20:34:08 UTC
 TVCSPX, W 2976.7 ▲ +14.9 (+0.3%) O:2967.1 H:2983.9 L:2967.1 C:2976.7



S&P Index in the past five years (Source: TradingView)



Source: Bloomberg

Comparison between IPO Index and S&P Index (Source: Bloomberg)

The difference of more than 35 billion dollars in the WeWork's IPO valuation between public and private market has brought a cacophony of criticism to investment bankers. One of the great deals for investment bank is the initial public offering– not only making a quick money, but also getting a chance to requite the top clients and encouraging trading activity. When providing underwriting to Peloton to raise \$1.16 billion, the investment bank is expected to get \$60 [5] millions as remuneration. It is clear that the huge underwriting fee has been a dominate incentive for bankers to fast speed the offerings of unicorns bringing along by the incorrect valuation.

The overvaluation was also a sign of investment bankers' optimism of the network effect – where things increase its value when more people are known about it. As such, they have been encouraging tech venture to launch IPO and hoping these companies can be one of winners among those big Tech companies. However, the fact is that most tech startups in the past ten years has consumed enormous cash, but little progress in making profit. Snap Inc, for instance, who overtook

50% [6] of its IPO price back in early 2018, has still failed to be profitable nowadays – encountered a loss of 372 million [7] for this year's second quarter. Rather than having the over enthusiasm such as Softbank who invested billions of dollars in WeWork, it may be the time for bankers to cool down and logically rethink about the market.

Generally speaking, the external impact has contributed to the list of events happened to WeWork in the past weeks. Apart from WeWork's flawed business model and unhealthy financial, the unfavorable market conditions rushed WeWork a blow harshly.

Future Steps for WeWork

Internally, WeWork needs to carefully examine their business model and reevaluate it into a more sustainable, profitable format. The real estate industry will only rise in price, and to continue renting out spaces in sought out, urban markets will only continue to make location operating expenses higher and higher. WeWork could consider trying to buy real estate spaces under their own name, but that would be a lengthy process, and would also add into the depreciation costs. They could also consider forming partnership deals with landlords, who would bear a significant share of the build-out costs while the flexible-space operator received a fee for running the space. While such arrangements give far less revenue to the flexible-space company, they don't load the company with big lease obligations that can become overwhelming in a downturn [8].

[1] <https://www.bloomberg.com/news/articles/2019-09-30/wework-withdraws-ipo-prospectus-as-new-co-ceos-delay-offering>

[2] <https://www.sec.gov/Archives/edgar/data/1533523/000119312519220499/d781982ds1.htm#toc>

[3] <https://www.bloomberg.com/opinion/articles/2019-09-13/wework-ipo-governance-changes-don-t-fix-flawed-business-model>

[4] <https://www.bloomberg.com/graphics/2019-unprofitable-ipo-record-uber-wework-peloton/>

[5]

<https://www.bloomberg.com/news/articles/2019-09-26/peloton-s-dud-gives-bankers-on-marquee-ipos-another-black-eye>

[6] <https://www.cnbc.com/2017/03/01/snapchat-ipo-pricing.html>

[7] <https://www.marketwatch.com/investing/stock/snap/financials>

[8] <https://www.nytimes.com/2019/08/29/business/wework-ipo.html>

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Fed's Second Rate Cut

By Ethan Chan, Market Research Analyst

On Wednesday, September 18, after a two-day policy meeting, the federal reserve approved a much-awaited 25 basis point cut to the interest rate. With its economic assessment being that household spending is “rising at a strong pace” while “business fixed investment and exports have weakened” [1]. What the basis cut means, is that they have taken down the overnight lending rate to a range of 1.75% to 2% from 2% to 2.25%, resulting in lowered borrowing cost. The cut comes nearly two months after the Federal Marketing Committee made its first rate cut in almost 11 years. They had also cut the interest it pays on excess reserves by 30 basis points [1]. Nonetheless, this decision was spiked with disagreement and turmoil with three regional presidents detested the cut (Esther George of Kansas City, Eric Rosengren of Boston and James Bullard of St. Louis), and two others (George and Rosengren) believed they should have kept it the same. While James Bullard said no to the cut because he thought it should have been cut even more to 50 basis points [2]. The decrease was the most backlash for a Fed decision since December 2014. It is complicated for the committee to determine the current economy, which is why they are assessing it meeting by meeting [3]

US Feds Fund Rate



SOURCE: TRADINGECONOMICS.COM | FEDERAL RESERVE

Why did the Fed Cut Happen?

Currently, the US economy is in a troubled and uncertain state with real-time data looking healthy, but the economic outlook remains stale. Heightened fears for recession following the inverted yield curve, U.S.-China Trade Wars, waning data in the manufacturing industry, and most importantly a somewhat progressively rocky global economy [1]. They decided to utilize a monetary policy tool otherwise known as Fed's Cut to attain Fed's goals which is price stability and economic growth. With both of them slumping with the US inflation rate in August 2019, falling to 1.7 previously from 1.6 in July 2019 [4]. Furthermore, the GDP growth rate dropping from 3.1% in late June 2019 to 1.8% in late September 2019 [5]. From this, it seems that the Fed's believed these drops were significant enough to warrant a cut in interest rates. Which they hope, would lead to stimulating economic growth, through lower financing costs to encourage borrowing and investing, and reducing the money supply. With all this in mind, they made a move to keep the economy active rather than allow it to fall into a potential recession.

Market Reaction:

Generally, a Fed Cut is positive for the economy, as aforementioned, it makes borrowing money cheaper, so consumers and businesses alike are pushed to spend their money. Thus, increasing the circular flow of income in the economy, raising its economy and triggering economic growth. According to Peter Tchir, head of Macro Strategy at Academy Securities believed that the 10-year US treasury note could hit 2% in coming weeks. Due to the fact, the Fed's remained more hawkish than what the markets expected following the cut [6]. Moreover, the President of the United States has voiced his displeasure over the cut saying in a tweet "Jay Powell and the Federal Reserve Fail Again. No "guts," no sense, no vision! A terrible communicator!" [7]. The US president wanted Fed Cuts to be even deeper to either 0% or even negative to match with several foreign European Banks. However, that idea was rejected by Jerome Powell, chair of the Federal Reserve. He is attributing to the fact that the plan was declined during the height of the 2008 market crash.

Before they have to cut interest rates into the negatives, they would instead turn to a bond-buying program to provide the stimulus [3]. Moreover, JJ Kinahan, a chief market analyst for TD Ameritrade, said this about the cuts "The economy grew nearly 3% last year and is running at around a 2% clip now. That's not outstanding, but it's not anything that would necessarily get people worrying about the recession, either. Inflation, too, sent some signals last week, with both core producer and core consumer prices rising more than many analysts had expected. Inflation can be a sign of economic strength." [8]. He would instead have kept the Fed's fund rate at its original 2 to 2.25% range, as the cuts are already ultra-low. By doing so, they would have more ammunition to stimulate growth when times get even more stringent.

The Dow Jones index, which is known as the bellwether of the US economy fell 150 points when the Fed Cut was released. However, rounded out that day in the positive by ending slightly higher, and as of September 26, 2019, the index fell 247 points which is about 0.92% [9]. All in all, the general market reaction is strong dissatisfaction with the cut, as they were expecting a more significant reduction due to the current world affairs.

Future Outlook:

The Feds want to keep their options open in the near future for the economy by going meeting by meeting about the economic policies. However, many of them are expecting another cut to happen sometime in October [2]. With many of them believing that the US economic growth is slowly coming to a halt. From the trade uncertainty that remains elevated, the manufacturing industry heading into a recession, and probabilities of a recession rising from a low to moderate chance. Also, after the cut committee members decided on keeping the long run-expectations of the fund's rate at 2.5%. The members predicted the GDP to rise at a pace of 2.2% in comparison to 2.1% in June, but longer-run expectations persist at 1.9%. Together with, the inflation projections being unchanged for 2019 and longer run at 1.8% and 2.5% respectively [1]. In conclusion, the future of the US is less than favourable, but they can overturn the bump in the road and continue their recent economic success through the right policies.

[1]<https://www.cnbc.com/2019/09/18/fed-decision-interest-rates-cut.html>

[2]<https://www.nytimes.com/2019/09/20/business/fed-rate-cut.html>

[3]<https://www.nytimes.com/2019/09/18/business/economy/fed-interest-rate-cut.html>

[4]<https://tradingeconomics.com/united-states/inflation-cpi>

[5]<https://tradingeconomics.com/united-states/gdp-growth>

[6]<https://www.ft.com/content/7416987a-da38-11e9-8f9b-77216ebe1f17>

[7]<https://www.cnn.com/2019/09/18/economy/federal-reserve-rate-jerome-powell/index.html>

[8]<https://www.forbes.com/sites/jjkinahan/2019/09/18/another-slice-fed-cuts-rates-again-but-stays-cloudy-on-next-steps-disappointing-market/#21660f2c3278>

[9]<https://finance.yahoo.com/quote/%5EDJI/>

Is There a Recession Around the Corner?

By Jessica Liu, Market Research Analyst

On August 14th, the yield on the 10-year treasury fell below that on the 2-year treasury for the first time since 2007. During the past month, an inverted yield curve has occurred for several times. The bond market phenomenon and other so-called recession indicators are signaling a potential imminent recession in the U.S. economy. There are a couple of questions to be considered when examining this phenomenon. What is “inverted yield curve”? How does it indicate the recession? What are some other recession indicators?

What is an “inverted yield curve”?

In a healthy economy environment, bondholders typically expect to be paid more or receive a higher yield on a longer-term bond than a short-term bond. That's because people are usually required to lock their money up for a longer period of time, which will generate higher risk, and investors want to be compensated for that risk [1].

However, an “inverted yield curve” means investors are willing to pay more for a shorter-term bond, and the interest rates paid by short-term bonds are higher than the interest rates on long-term bonds. This means people are worried about the recent future economic situation so that they are more likely to invest in safer long-term bonds. This increased demand drives prices of long-term bonds to get higher, and accordingly, the yield rate is getting lower [2]. Inversely, lack of demand on the short-term bonds results in a lower price and higher yield.

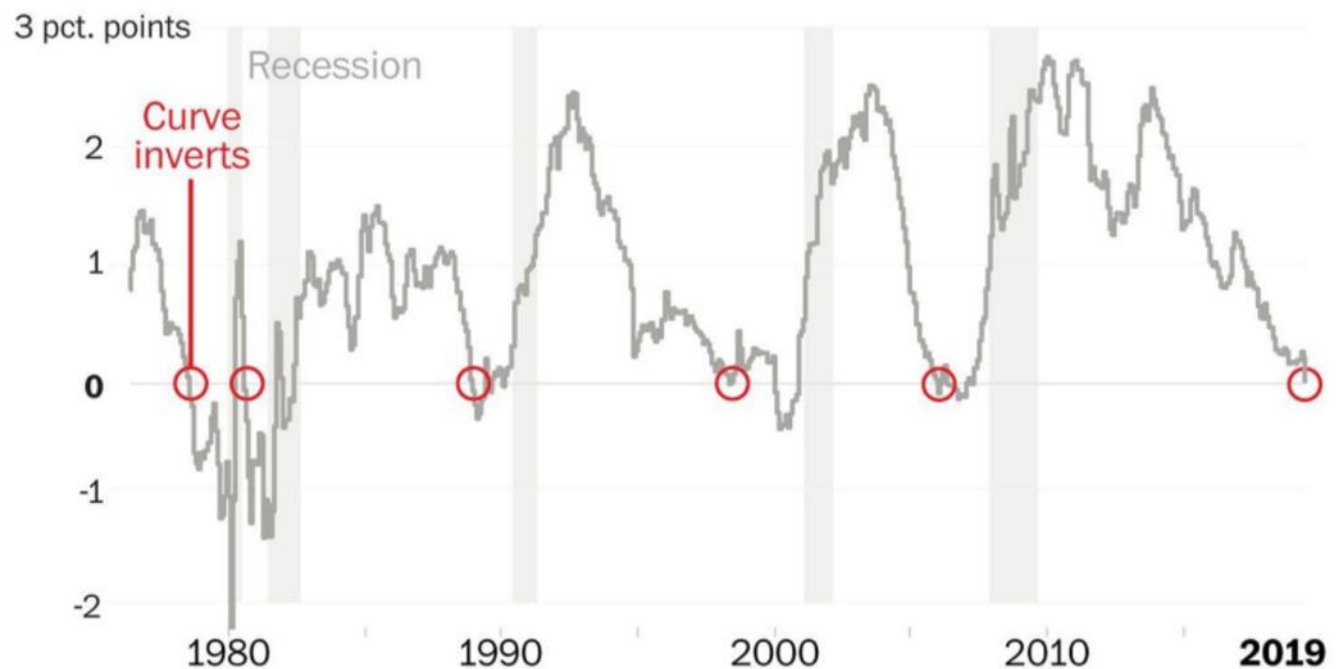
Besides the inversion on 10-year and 2-year yield curve, the 10-year and 3-month treasury has sustained an inversion since late May, and the 5-year to 3-month yield curve has been inverted since February [3].

Implications for the economy

An inverted yield curve on 10-year to 2-year is regarded as one of the strongest predictors of recession for the U.S. economy. The yield curve has inverted before every U.S. recession since 1950, although sometimes it happens months or years before the recession starts [2].

An inverted yield curve usually signals trouble

Historically, when the yield on 10-year Treasury bonds dips below the yield for 2-year bonds, a recession has followed.



Note: Only the first inversion preceding a recession is marked.

Source: St. Louis Federal Reserve, Wells Fargo Investment Institute

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The inverted yield curve also suggests that investors expect the Fed to keep cutting short-term interest rate to increase the demand for short-term bonds and stimulate the economy. In July, the Fed cut the benchmark interest rate by 0.25 percentage points, which was the first rate cut since December 2018. Last week, the Fed lowered their main interest rate for a second time with another 0.25 percentage. If the economy weakens further, the Fed may generate another rate cut [4].

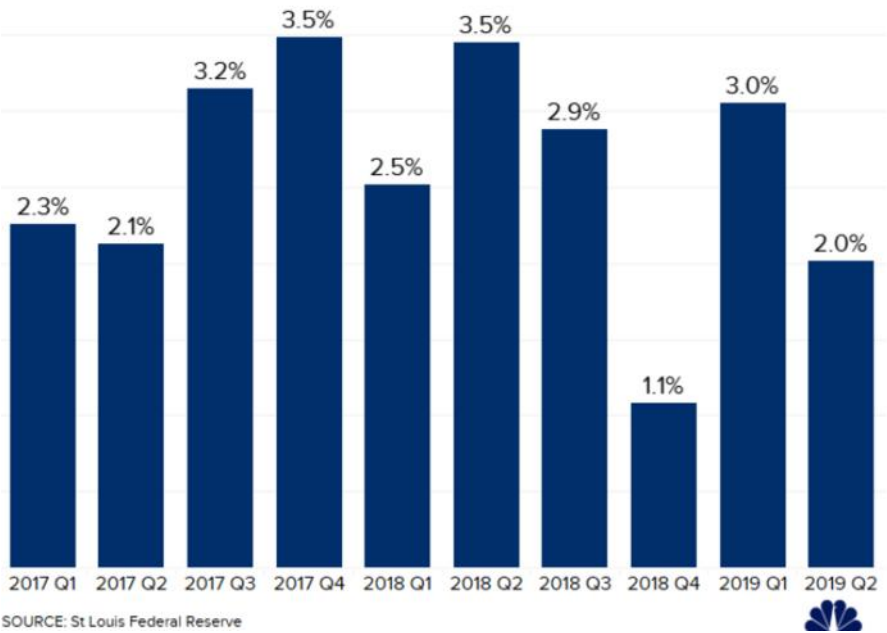
US recession forecasting

In addition to the yield curve inversion in the bond market, other recession indicators are signaling an economic slowdown due to slower growth abroad and the U.S.-China trade war.

GDP:

The Gross Domestic Product (GDP) in the U.S. is slowing. Only 2% of GDP is generated in the second quarter with a one percent decrease compared to the first three months of this year [5]. As stated by the analysts from the Federal Reserve Bank of San Francisco (FRBSF), the average GDP growth for the U.S. will be between 1.5% and 1.75%, far from the 2.4% average of the last 10 years [6].

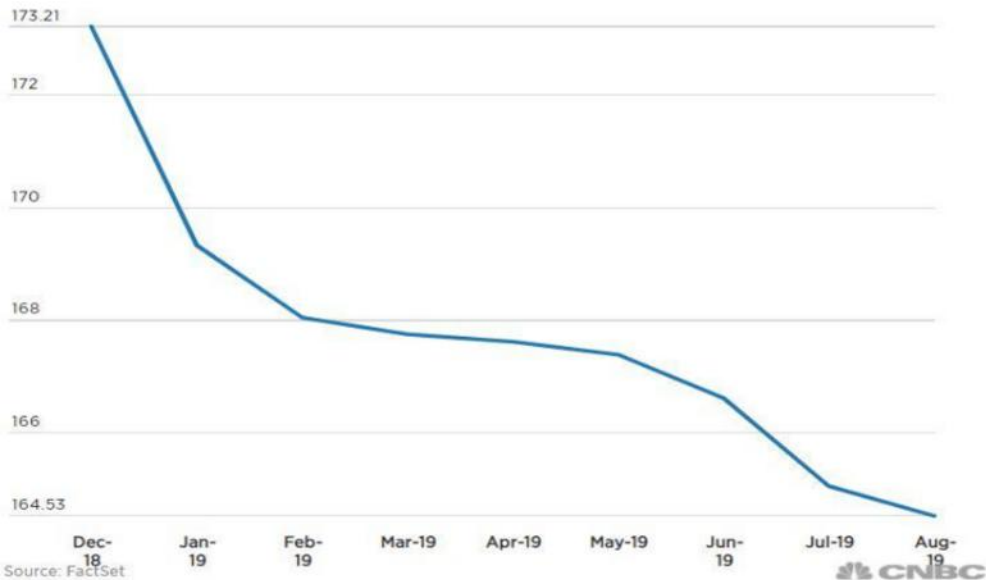
GDP growth



Corporate profits:

The Earnings growth estimates have decreased drastically this year. The S&P 500 earnings per share has come down from \$173.21 in last December to nearly \$164.53 in August this year. Last December, the estimation of S&P 500 earnings growth for this year was around 7.6%, but so far, the number is around 2.3% [6].

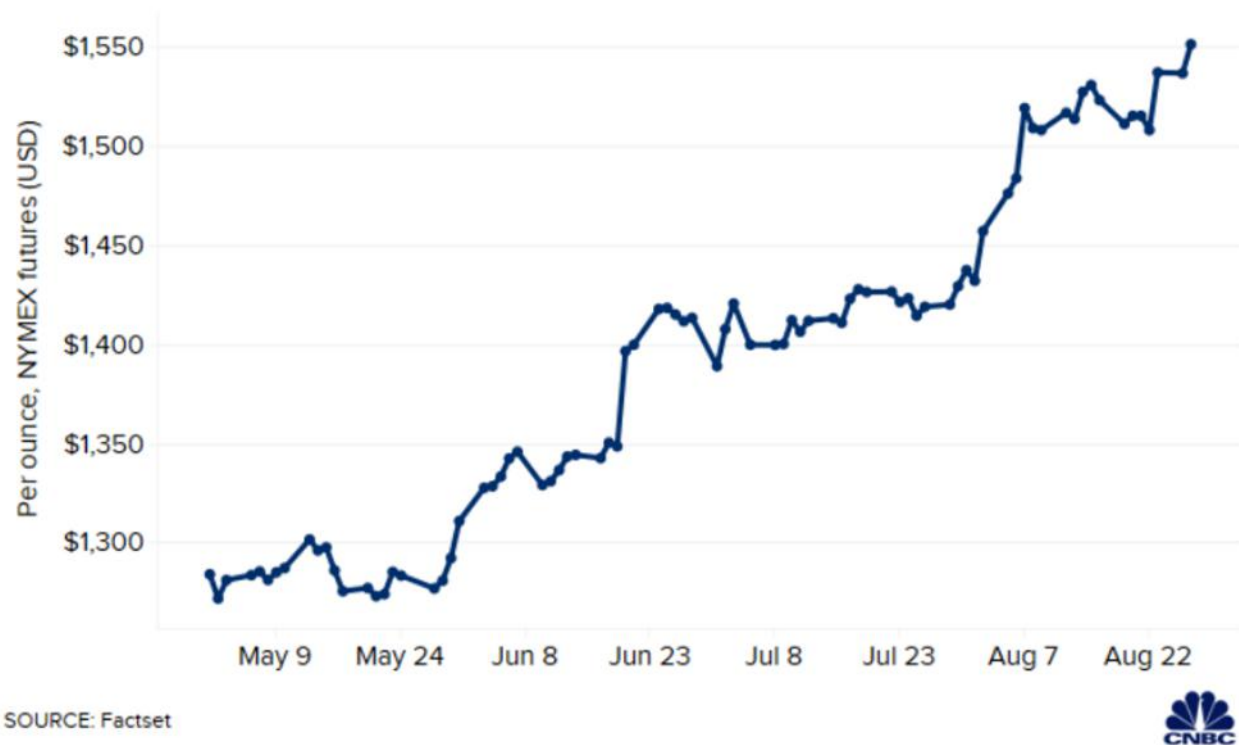
S&P 500 earnings per share estimates, 2019



Gold:

Gold prices have been increased more than 20% since May when the U.S. and China escalated their tariff fight. Similar to government bonds, gold is a safe haven trade in times of economic uncertainty. There is a negative relationship between the gold price and interest rate. That is, with an increase in gold price, a higher demand for gold and a lower demand for bonds is implied [7]. Since May, the price has been soared from around \$1325 to \$1550. What this means is people are believing the near-term future economy won't act as well as the past few months or even years.

Gold prices



Corporate America's chief financial officers have been more pessimistic about the business conditions during the past three months. The latest Duke CFO Magazine Global Business Outlook survey points out, the average CFO Optimism Index decreased from 71.1 to 62.2, which means many people are having a pessimistic view of the economy. Meanwhile, the survey states 53% of CFOs forecast a recession no later than the third quarter of year 2020, and 67% expect a recession to begin by the end of next year [8].

Nevertheless, there are reasons that the economy won't go into a recession. The unemployment rate is low, and the labor market is strong. Consumers are still willing to purchase commodities or services, which is boosting the economy.

Global Recession

In August, the Danish lender started offering home buyers 10-year mortgages at an interest rate of -0.5 percent, meaning borrowers will pay back less than the amount they borrowed after a decade. Central banks, including the US Federal Reserve and the European Central Bank, have recently announced interest cuts to boost the economy. According to Deutsche Bank Securities, 43% of bonds are trading in a negative interest rate, compared to around 20% late last year [9]. These are evidences that people are believing an economic slowdown is coming in the near-term future.

Weaker growth in both developing and advanced countries signals a possibility of global recession in 2020, the UN has warned [10]. Economic growth is slowing all over the world, in part driven by President Trump's trade war. Currency gyrations, the chance of a no-deal Brexit and long-term yield rate inversion are signaling a coming storm in global economy. As mentioned in the Unctad report, Global growth is predicted to fall from 3% in 2018 to 2.3% this year, which will be the lowest since the 1.7% contraction in 2009.

Given the inverted yield curve and other recession indicators, it seems that people are not so confident about the market, and a recession might come. It would be interesting to see how the market goes, and how the governments could react to the weak market.

[1] <https://www.washingtonpost.com/business/2019/08/14/recession-watch-what-is-an-inverted-yield-curve-why-does-it-matter/>

[2] <https://markets.businessinsider.com/news/stocks/yield-curve-inversion-explained-what-it-is-what-it-means-2019-8-1028482016#why-does-wall-street-care-so-much-3>

[3] <https://fortune.com/2019/09/09/recession-stock-inverted-yield-curve-market-great-what-is-economy-us/>

[4] <https://www.cnn.com/2019/09/18/economy/federal-reserve-rate-jerome-powell/index.html>

[5] <https://www.cnn.com/2019/09/02/heres-a-list-of-recession-signals-that-are-flashing-red.html>

[6] <https://www.forbes.com/sites/rauelizalde/2019/09/26/why-gdp-growth-is-slowing-and-why-neither-trump-nor-the-fed-can-fix-it/#e32bb2b6c9b3>

[7] <https://economictimes.indiatimes.com/wealth/invest/factors-that-affect-gold-price/articleshow/64464960.cms?from=mdr>

[8] <https://www.marketwatch.com/story/two-thirds-of-these-corporate-insiders-now-expect-a-us-recession-by-the-end-of-2020-2019-09-20>

[9] https://www.washingtonpost.com/business/economy/banks-are-paying-people-to-borrow-money-thats-alarming-news-for-the-global-economy/2019/08/13/8eb7b9ca-bada-11e9-a091-6a96e67d9cce_story.html

[10] <https://www.theguardian.com/business/2019/sep/25/global-recession-a-serious-danger-in-2020-says-un>