

## COVID-19 Impact on Hiring

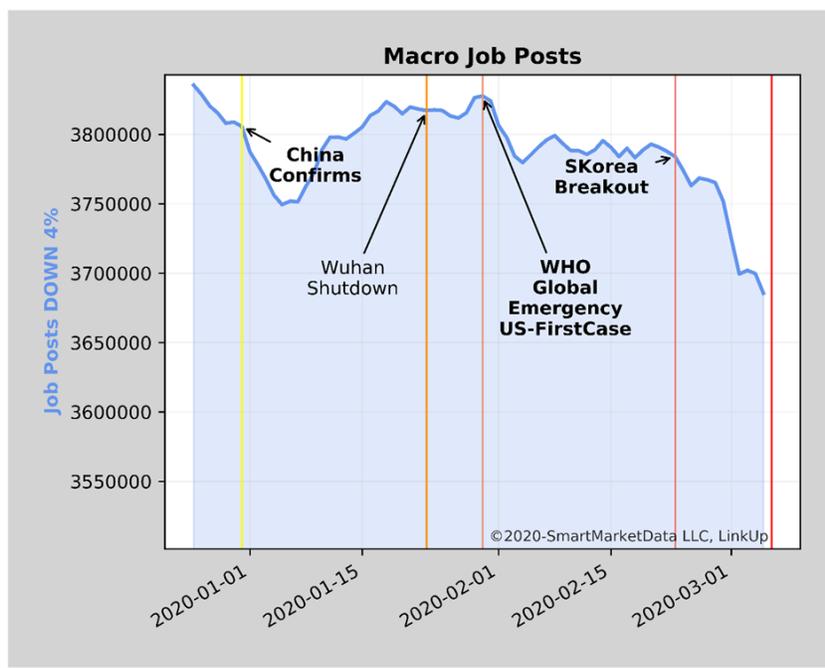
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**Considering the fast world-wide spread of the Corona Virus, and the potential for the World Health Organization (WHO) to assign pandemic status at any moment, we thought it would be useful to analyze the world's most insightful forward looking jobs data set from LinkUp®<sup>1</sup> for a look into the virus' impact on hiring.**

With the premise that a company's job postings are **objective** evidence of a company management team's expected future business outlook, we wanted to look at the immediate term impact of COVID-19 on expected future hiring; specifically for companies most directly affected by the prospect/reality of a global pandemic.

This research will look at some major Travel and Leisure players. We will look at the change in job posts since China's first announced COVID-19 patient. We will also add near-term job post change correlation with each company's stock price.

**USE CASE - Macro.** It is clear from the data, at a macro level we will see declines in hiring in the monthly jobs data. Total job posts are down from roughly 3.82M to 3.65M, and continue to decline. This suggests business slow down in coming months.



**Figure 1.**

<sup>1</sup> **LinkUp® RAW** is the world's broadest and deepest job post data set, with over 50,000 public, private, government, and not-for profit companies representing over 200 countries. The data set consists of job post data captured from company career portals. The data has > 12 years of daily data, and covers every sector in the economy.



**USE CASE – Job posts typically are a leading indicator of future business activity and performance.** Because the COVID-19 pandemic is a temporal shock (vs. a structural shock), you would expect any given company to “respond” to the shock, reducing risk by lowering expenses by reducing hiring plans until the shock abates (in either reality, perception, or both). It is interesting that some companies appear to have reduced hiring, and risk, ahead of others – either by chance, or purposefully based on COV-19. The reason is unknown. If this passes quickly, then this may be an over reaction. If not, they prudently saved money. More information is needed, so until it is available, it appears the companies in this (and other) sectors think it better to “not” hire, as shown in our real time job post data research.

Industries that are at most risk from a global pandemic (travel leading the way), need to manage expenses in response, and employees are a large expense. We would not expect jobs data (or really any data -unless related to virus spread, government stimulus, or vaccine efficacy) to be a leading indicator in this type of shock - all else equal, especially on the way down. **But jobs data can give valuable information about a company’s positioning overall and relative to competitors with respect to COVID-19.** For instance some companies may buck the trend and continue hiring (SAVE) while others may implement a complete hiring freeze (UAL). In this case each have slightly different markets with different routes, but still both are at risk of an abrupt travel slowdown. One keeps hiring, the other a hiring freeze.

**USE CASE – Job posts are typically a leading indicator coming out of a downturn or recession, at the micro and macro level.** With respect to a COVID-19 recovery, job posts could, and likely will be a leading indicator on the way up as companies gain information. Because job posts are an objective measure of a management teams future expectations, we would expect posts to move upward ahead of stock prices as companies look for competitive advantage in the pending upturn. The smartest companies will certainly be ahead of the curve vs. published public information, and will likely start to move before less sophisticated companies.

Today we want to set a baseline to show the impact of the COVID-19 impending pandemic on jobs. We will do a follow up once this shock subsides to see if job posts are indeed a leading indicator on the way up. We have done a flash analysis of 32 companies. In **Table 1 Sample Companies, % CHG and Correlation** below, we list each, and rank in terms of % job post decline since any recent peak this year. We also show the same change for the stock price over the same period, and the weekly % change correlation between the jobs and stock price changes for the period. Finally, for perspective, we have added indicators of the following major COVID-19 milestones in each chart:

1. China Confirms first Case in **yellow**
2. Wuhan is quarantined in **orange**
3. WHO declares a Global Emergency, and the US First Case in **brown**
4. South Korea Breakout in **light red**
5. Italy Quarantine in **red**



Some items of note. Most of the sample show large declines in both jobs and stock price, which as you would suspect are positively correlated. Specifically Qantas and United show large job post declines of 80 and 78% respectively. See the charts in (Figure 1. United Air and Qantas - The Worst Off) below.

Figure 1. United Air and Qantas - The Worst Off

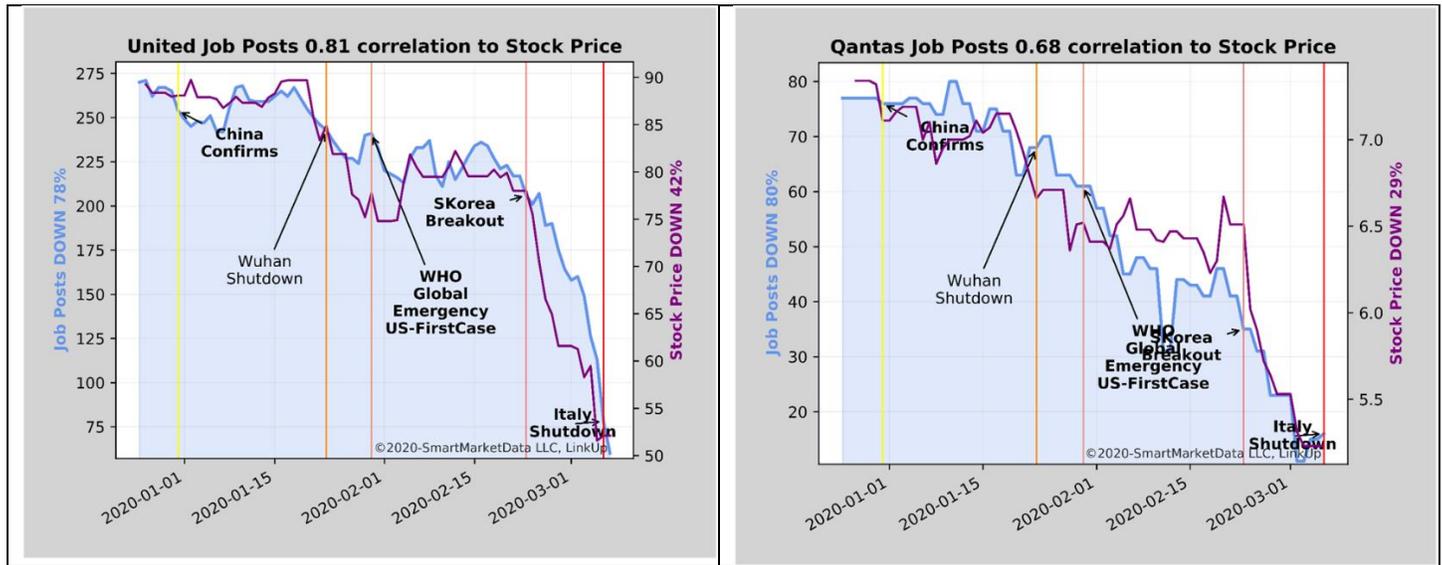


Table 1 Sample Companies, % CHG and Correlation

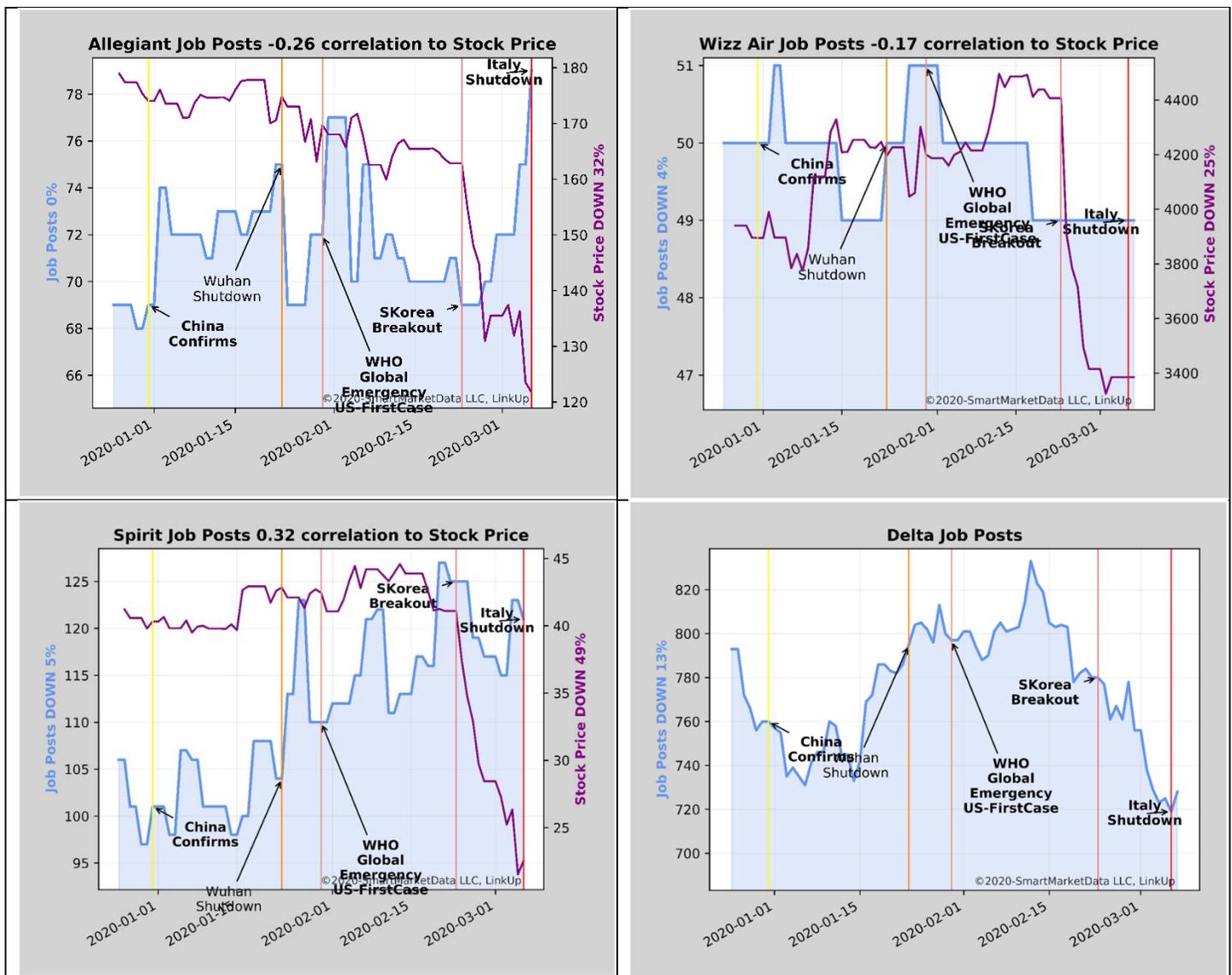
company	ticker	jobs_change	stock_change	corr
International Air Group	ICAG.L	-0.95		
Qantas	QAN.AX	-0.8	-0.29	0.68
United	UAL.OQ	-0.78	-0.42	0.81
Easyjet	EZJ.L	-0.77	-0.31	0.53
Lufthansa	LHAG.DE	-0.68	-0.09	-0.94
Expedia	EXPE.OQ	-0.58	-0.25	0.49
Norwegian	NCLH.N	-0.52	-0.55	0.32
Alaska	ALK.N	-0.46	-0.35	0.46
Southwest	LUV.N	-0.45	-0.22	0.22
Hilton	HLT.N	-0.39	-0.21	0.37
Air France KLM	AIRF.PA	-0.31		
Carnival	CCL.N	-0.3	-0.48	-0.26
Marriott	MAR.OQ	-0.29	-0.28	0.22
Singapore Air	SIAL.SI	-0.25	-0.11	0.37
Hyatt	H.N	-0.23	-0.25	0.5
MSG	MSG.N	-0.21	-0.2	0.04
Hawaiian	HA.OQ	-0.21	-0.42	0.29
American	AAL.OQ	-0.18	-0.48	-0.36
JetBlue	JBLU.OQ	-0.17	-0.36	0.38
Intercontinental	IHG.L	-0.16		
WaltDisney	DIS.N	-0.15	-0.22	0.02
Booking	BKNG.OQ	-0.14	-0.23	0.37



Uber	UBER.N	-0.14		
MGM	MGM.N	-0.14	-0.41	0.84
Delta	DAL.N	-0.13		
Royal Caribbean	RCL.N	-0.09	-0.52	0.23
Spirit	SAVE.N	-0.05	-0.49	0.32
Hertz	HTZ.N	-0.05	-0.56	-0.21
Wizz Air	WIZZ.L	-0.04	-0.25	-0.17
Macro	.SPX	-0.04		
LiveNation	LYV.N	0	-0.3	0.07
Allegiant	ALGT.OQ	0	-0.32	-0.26
Lyft	LYFT.OQ	0	-0.33	0.15

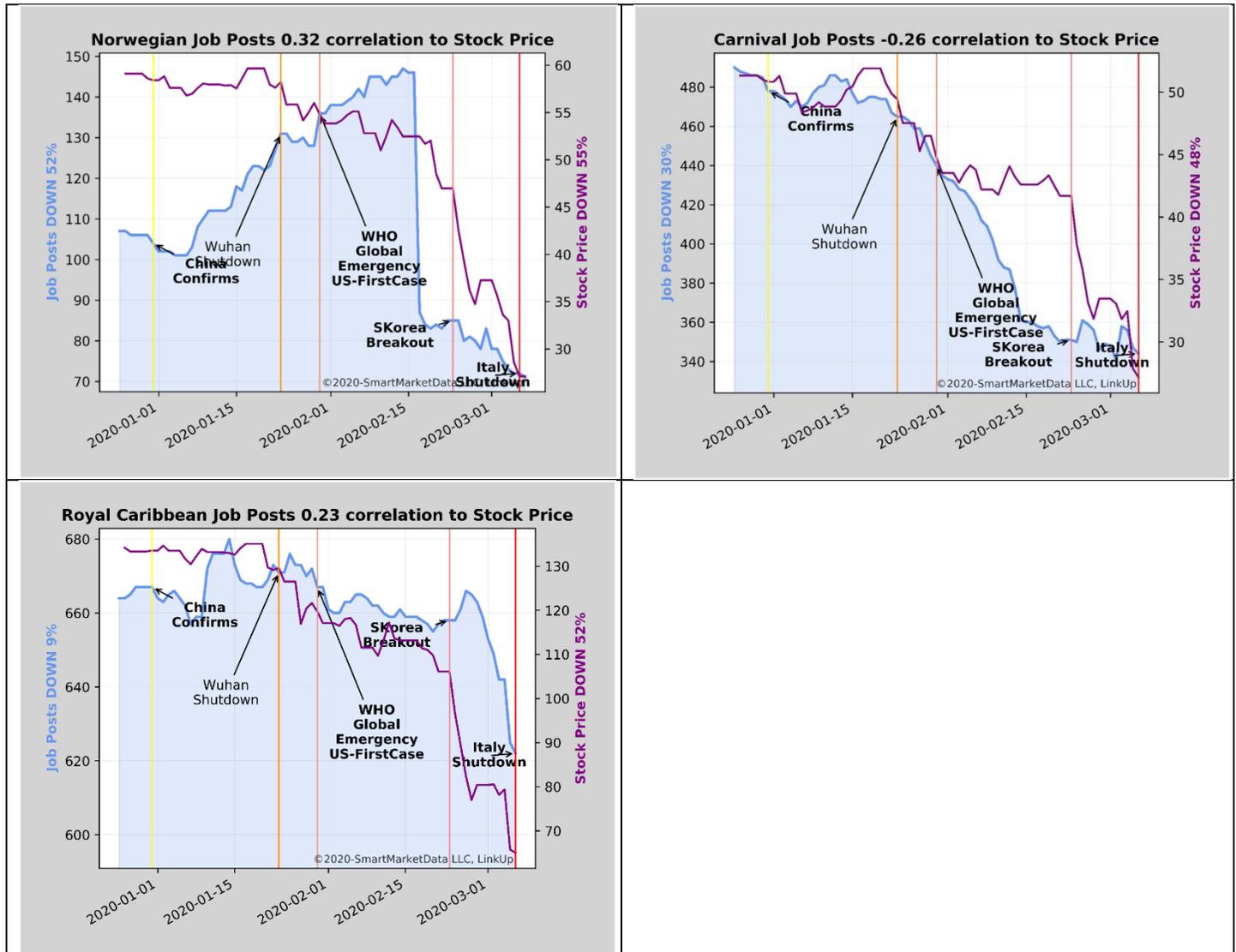
On the other hand, Allegiant, Wizz Air, Spirit and Delta have somewhat bucked the trend, with Allegiant actually growing jobs - although it's stock has lost 32% (Figure 2. Airlines bucking the job post loss trend)

Figure 2. Airlines bucking the job post loss trend



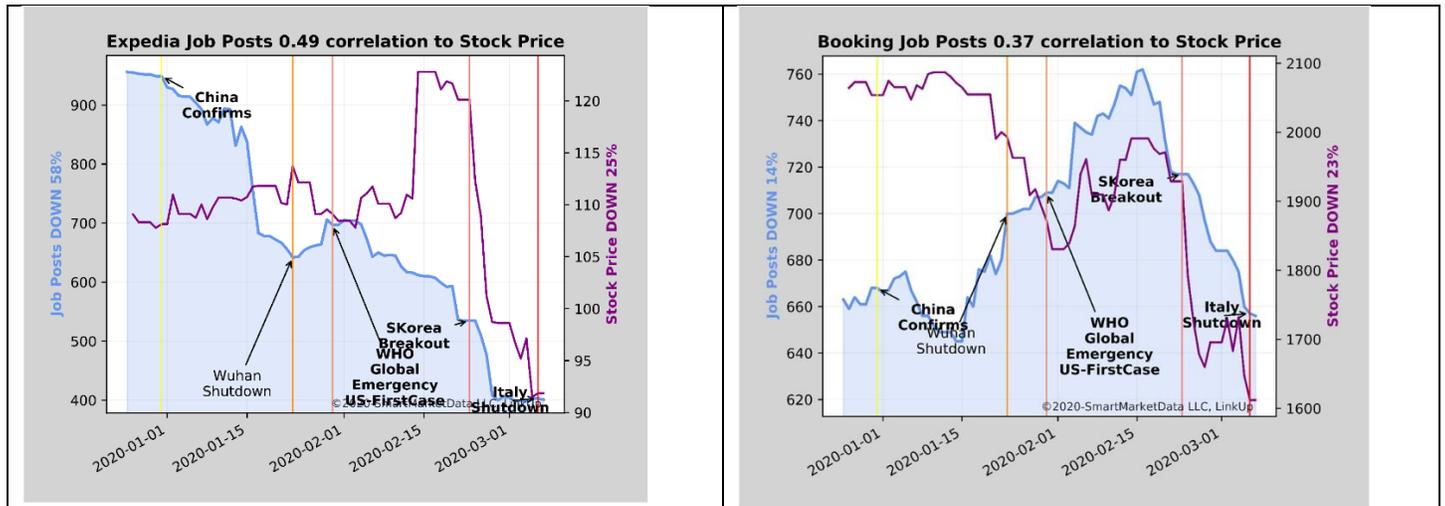
The cruise lines also have not fared well as you would expect. Both Norwegian and Carnival are down 52% and 30% respectively. Somewhat bucking the trend is Royal Caribbean with only a 9% decline in job posts. All have substantial stock losses. (Figure 3. Cruise Lines)

Figure 3. Cruise Lines



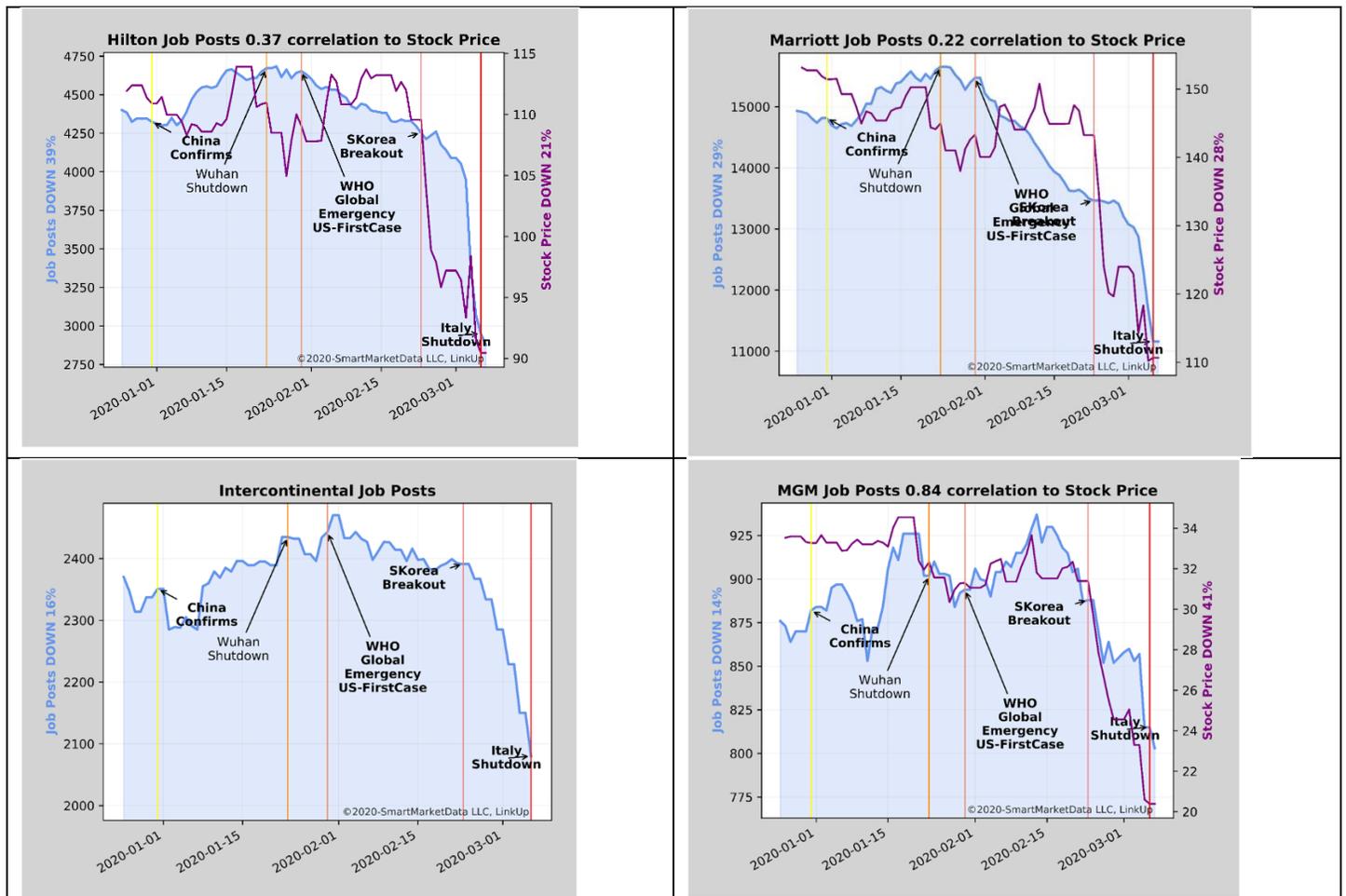
Online travel sites Expedia and Booking also down 25% in stock price, with Expedia dropping almost 60% of its job postings vs. only 14% for Booking. (Figure 4. Online Travel)

Figure 4. Online Travel



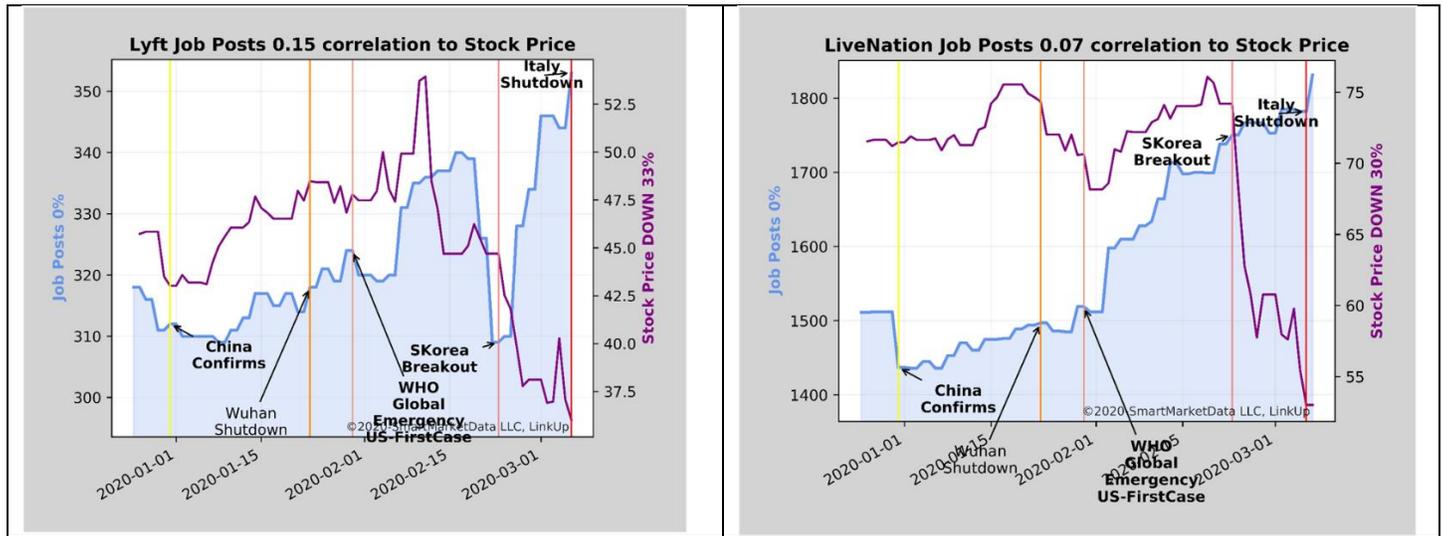
Hotels also are showing large declines in job posts with Hilton and Marriott leading the way at 39% and 29% declines respectively. MGM and Intercontinental at the lower side of job post declines at 14% and 16% respectively. (Figure 5. Hotels)

Figure 5. Hotels



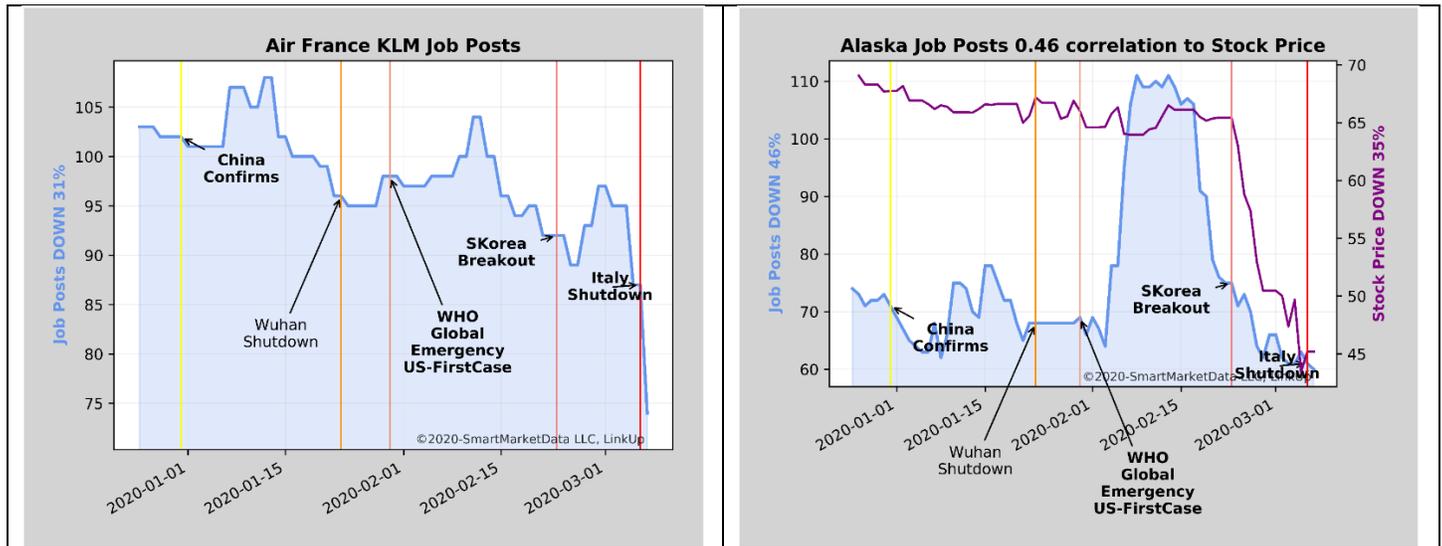
Finally, we can look at some additional outliers. **Lyft and LiveNation have both GROWN job posts over the period**, despite having lost 30%+ of their stock values. Interesting that LiveNation (Concert Venues) has bucked this trend, with all the speculation (and reality) of public sports and concert events being canceled. (Figure 6. Outliers)

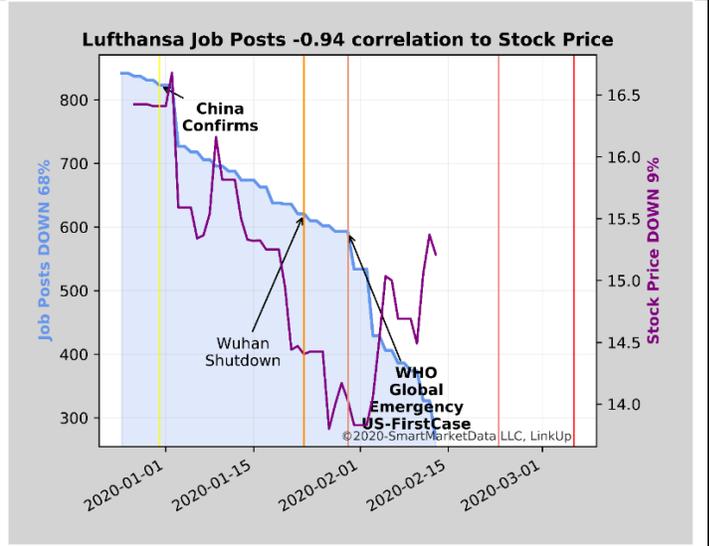
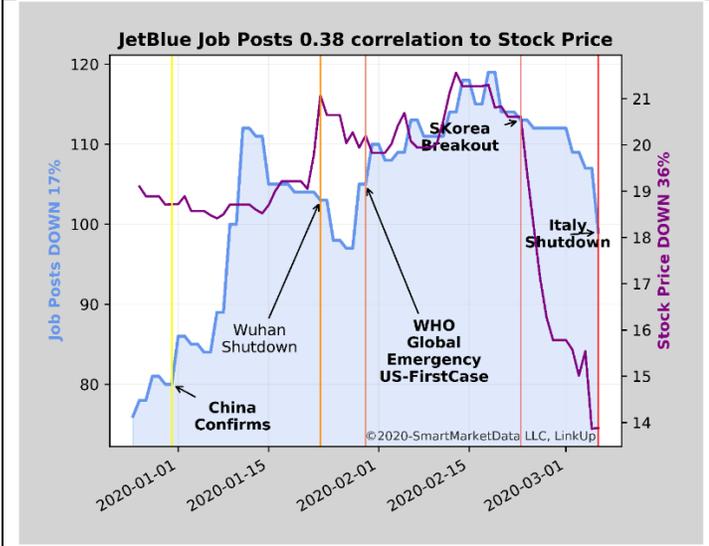
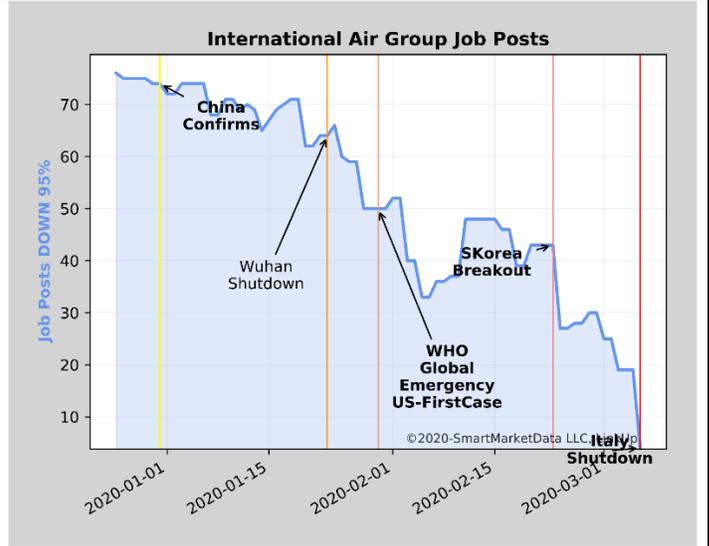
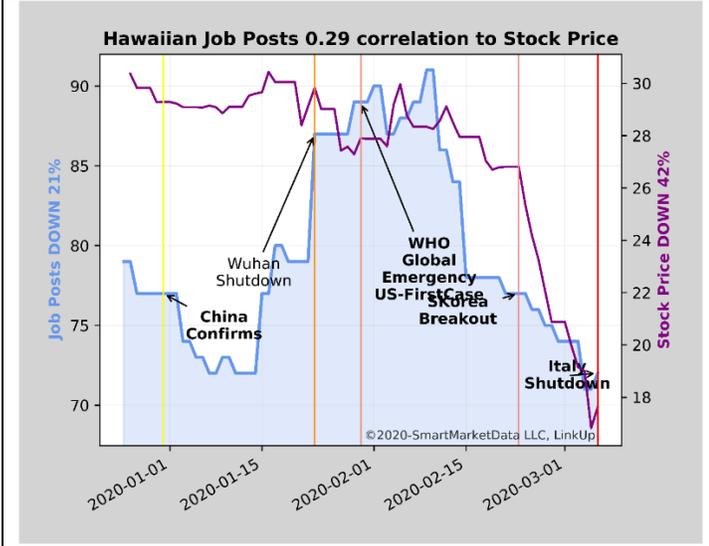
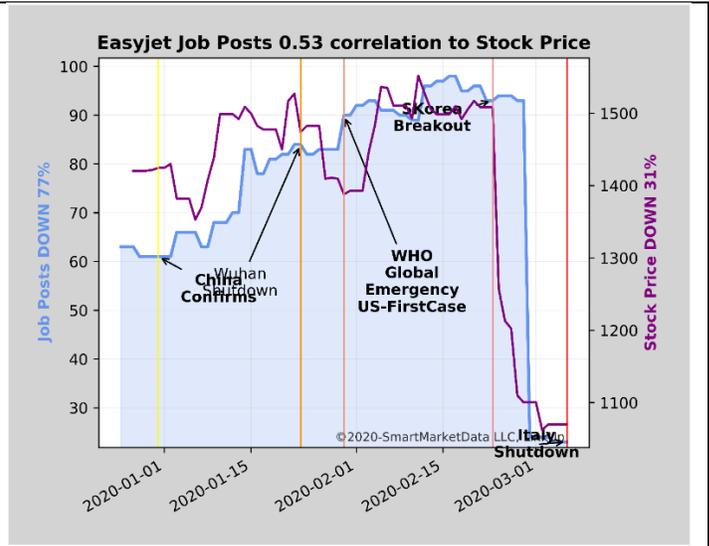
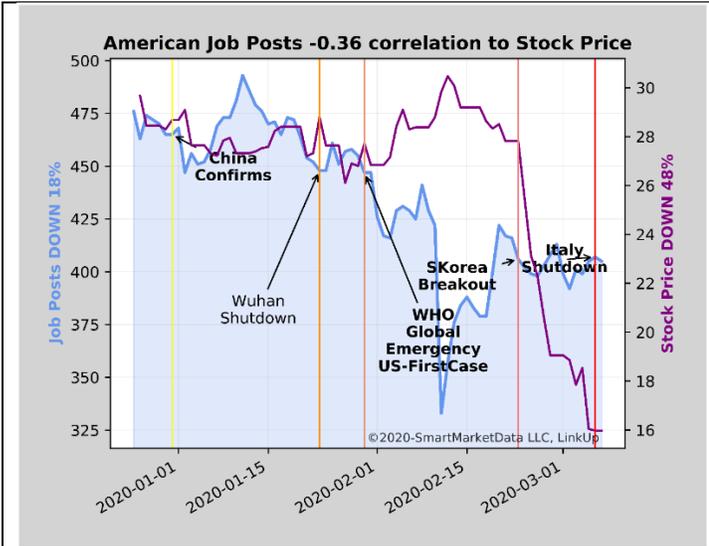
Figure 6. Outliers



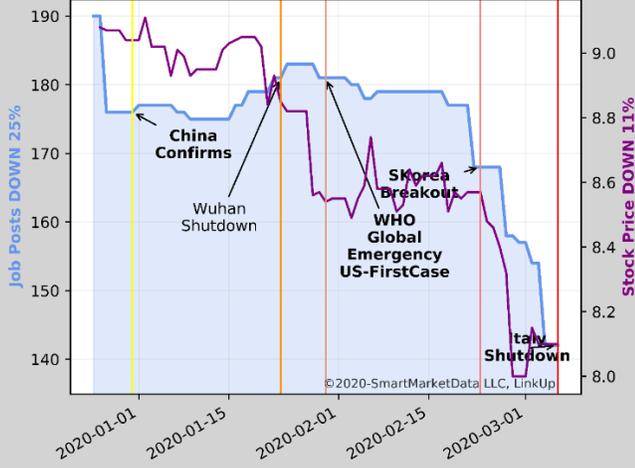
Below are charts of the remaining samples. All have reduced expected hiring since COVID-19. (Figure 7. Remaining Sample Charts)

Figure 7. Remaining Sample Charts

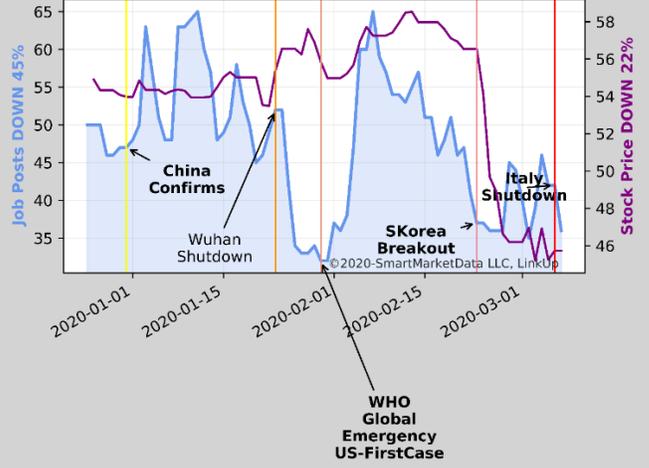




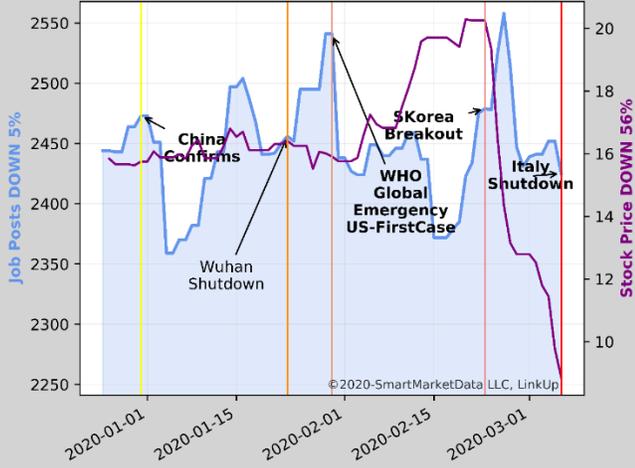
**Singapore Air Job Posts 0.37 correlation to Stock Price**



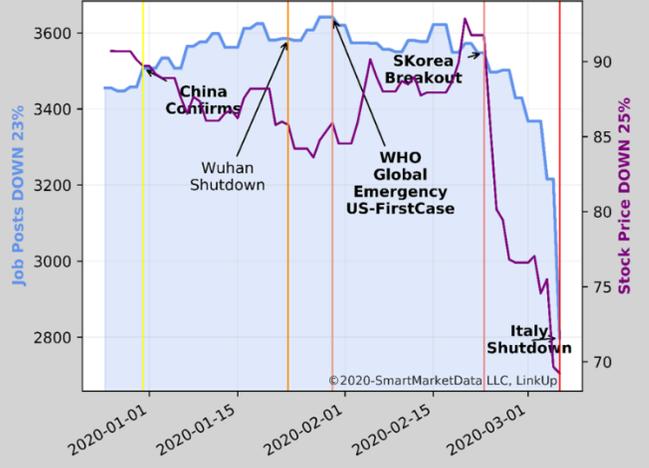
**Southwest Job Posts 0.22 correlation to Stock Price**



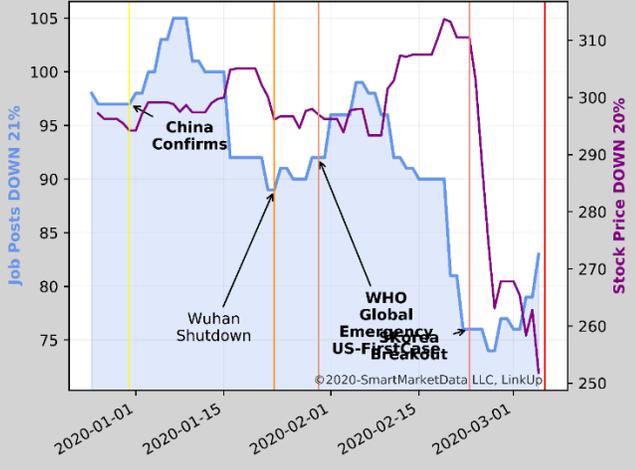
**Hertz Job Posts -0.21 correlation to Stock Price**



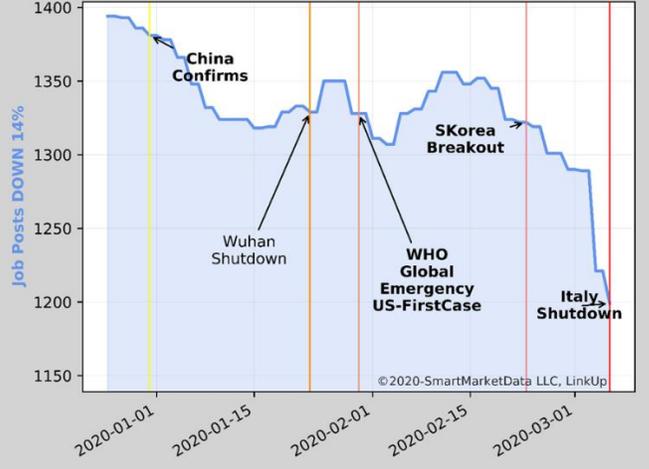
**Hyatt Job Posts 0.5 correlation to Stock Price**

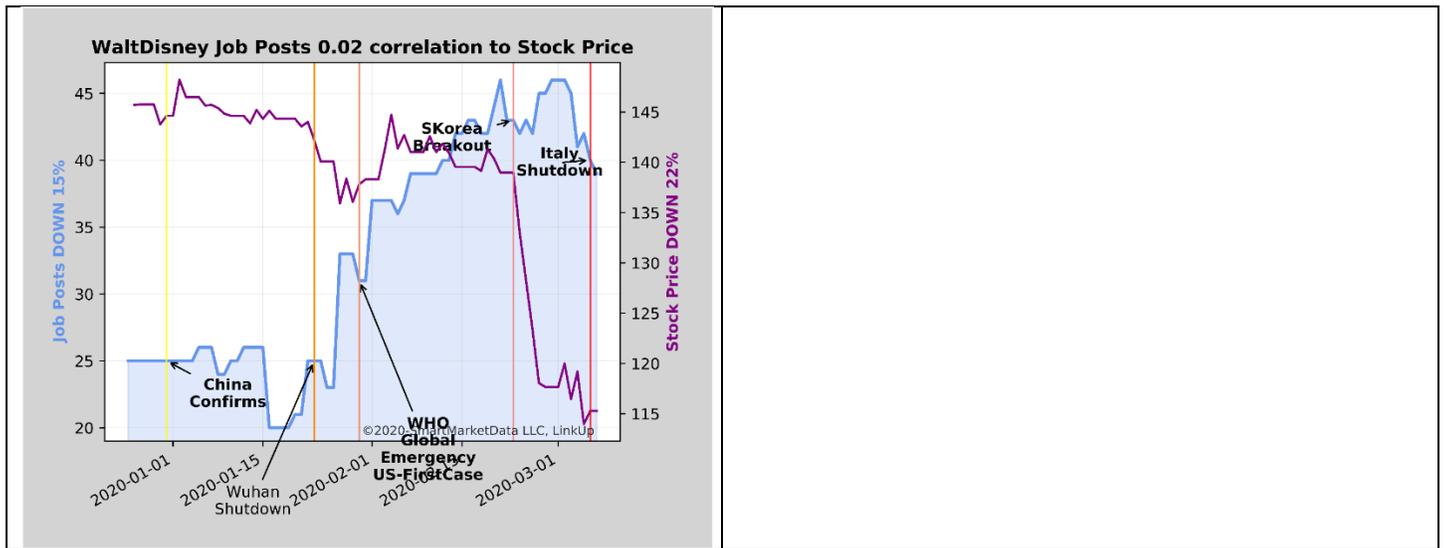


**MSG Job Posts 0.04 correlation to Stock Price**



**Uber Job Posts**





We expect the trend to continue until COVID-19's spread either loses momentum (like it has in China) or is threatened with a successful vaccine. As more tests are implemented, and more cases identified, the medical "risk" could accelerate or decelerate, and the perceived "psychological" risk will likely follow suit. I'll leave that up to the medical pros.

We will provide periodic updates on this piece as the event marches on. If you have any questions, please reach out directly. If you have any interest in the LinkUp Jobs Data, or any of our other alternative data sets, please drop us a line. We love chatting about potential projects with alternative data!



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