

#virus

Data Science High Frequency Indicators Update Maybe Too Soon

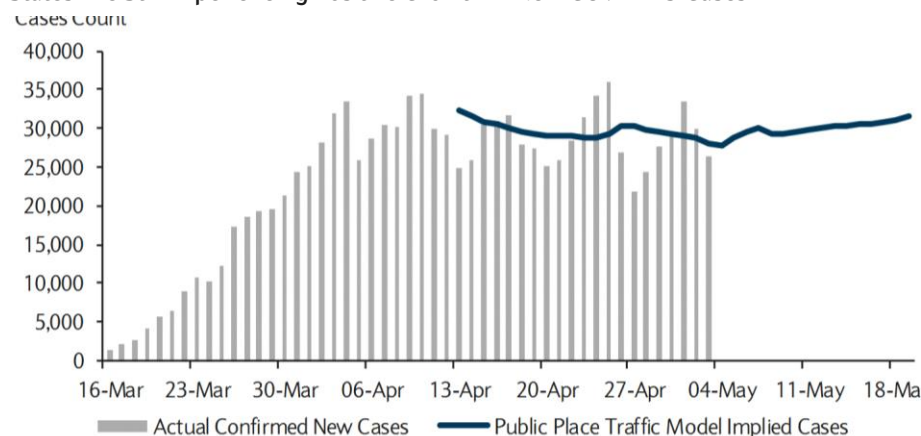
Even before the effects of official reopening policies can be seen in the data, our model of the relationship between social distancing and COVID-19 case growth suggests that US case growth could swing back into positive territory. And there is room for reopening to accelerate that swing if social interactions increase.

Revisiting our model of the relationship between foot traffic in public places and COVID-19 growth suggests that social distancing has already decreased enough since mid-April to swing national case growth from slightly negative to slightly positive. If reopening policies increase traffic, and there are not enough reductions from mask use and a higher share of interactions happening outdoors, we could see growth pick up (which could in turn result in renewed social distancing policies).

In our other high frequency data, New York City hospital visits are now at record lows for the history available, suggesting that its time as the epicenter of COVID-19 is now behind it. Jobless claims appear poised to decline, but remain in the territory of several million, showing continued economic stress. And while we continue to see declines in information-seeking series like visits to the CDC website, we are not yet seeing a meaningful revival in air travel or staffing in S&P 500 HQs. Next week will likely be the first where datapoints reflect reopening policies now rolling out, so that may change.

FIGURE 1

Road Traffic Has Increased from Trough Levels in All States, but More Than Half Of States Are Still Experiencing Positive Growth in New COVID-19 Cases



Source: NYC Open Data, State Government Websites, Barclays Research

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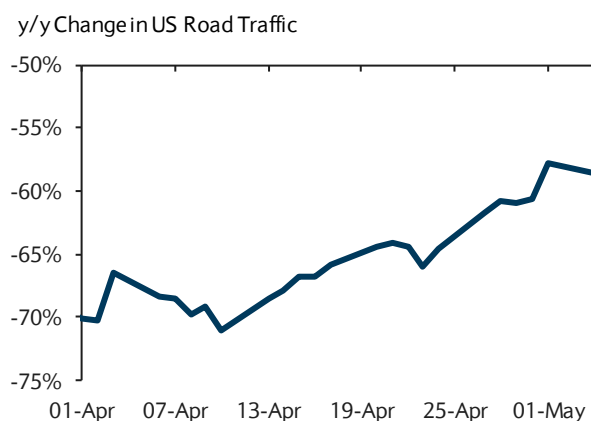
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The Retreat of Social Distancing May Have Arrived Too Soon

The majority of recent headlines about COVID-19 have been focused on the arrival of relaxation in social distancing, with rules being relaxed at least slightly in many states starting at the beginning of May.¹

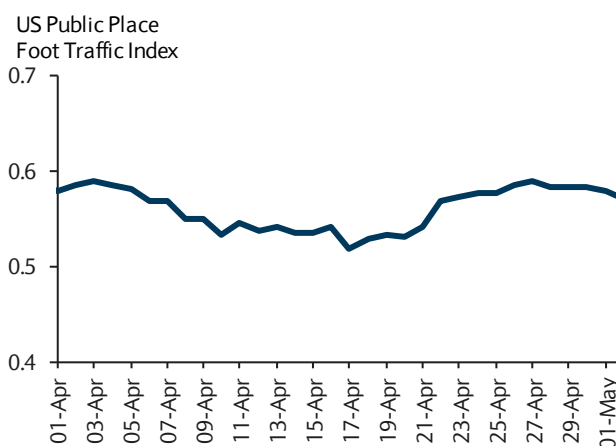
But even before the official arrival of less strict policies, data suggested that distancing was retreating in many places. According to TomTom, the y/y change in US road traffic rose by about 10pp from the beginning of April to the beginning of May (Figure 2). Similarly, our measure of foot traffic in more than 2mn public places increased after the middle of April.

FIGURE 2
Road Traffic Volumes Increased About 10pp in April



Source: TomTom, Barclays Research

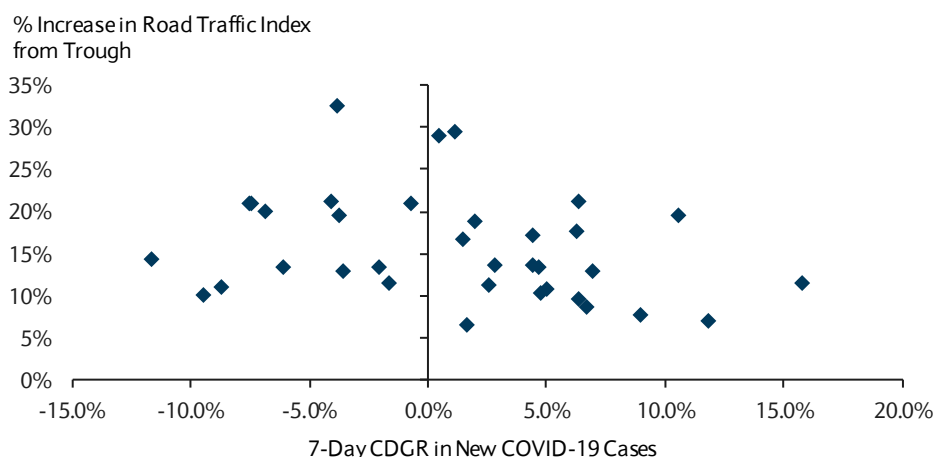
FIGURE 3
Public Place Foot Traffic Also Increased After Mid-April



Source: Complementics, Pitney Bowes, Barclays Research

Unfortunately, the increase of social contact is only loosely aligned to successful reduction in the growth of COVID-19 cases. Across the US, we see a similar increase in traffic between places that have negative and positive case growth (Figure 4).

FIGURE 4
Road Traffic Has Rebounded in States With Both Negative and Positive COVID-19 New Case Growth



Source: TomTom, The COVID Tracking Project

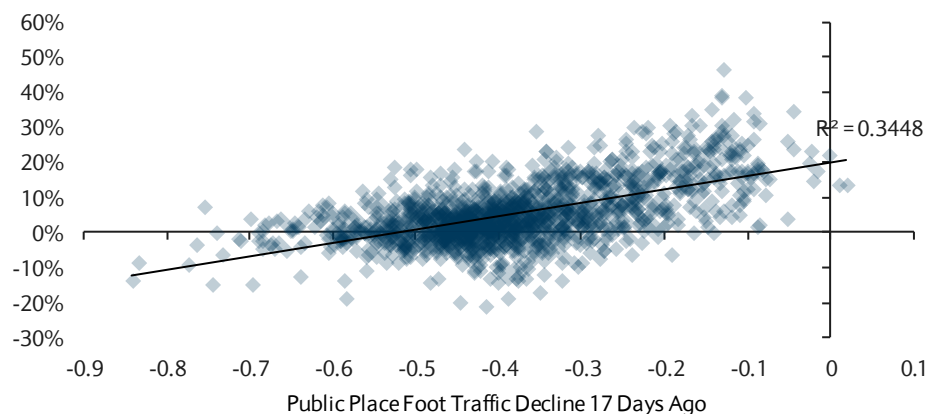
¹ Relaxed Rules and Warm Weather Test States, New York Times, May 2, 2020

In April, we published a model that suggested social distancing as measured by traffic in public places had a clear relationship with COVID-19 case growth (*Social Distancing Is Almost Everywhere, and Working...Slowly*, April 13, 2020). Although this relationship should change if COVID-19 infections reach a level where herd immunity is more meaningful (from “finite population effects”), the relationship appears to be stable for the moment (Figure 5).

FIGURE 5

Less Foot Traffic in Public Places has Coincided with Slower Growth in COVID-19 Cases

Case5d CDGR

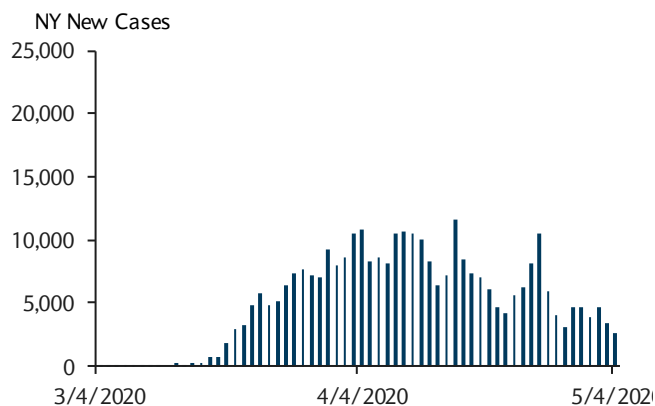


Source: Complementics, Pitney Bowes, The COVID Tracking Project, Barclays Research

In mid-April, the relationship suggested that there was enough social distancing to make case growth negative in almost every state, but that differences in when distancing took effect would mean that as early-distancing states like New York saw case growth decline, later-starting states would add enough new cases to partially offset gains. The data suggest that something very much like that has happened so far (Figures 6 and 7).

FIGURE 6

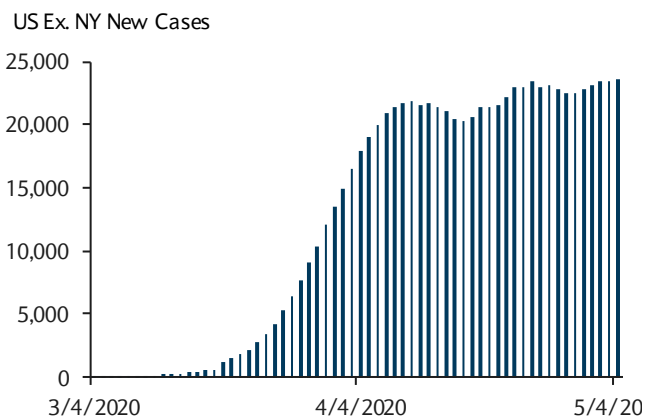
Case Growth Has Declined in New York...



Source: The COVID Tracking Project, Barclays Research

FIGURE 7

...But Continued to Rise Modestly in the Rest of the US



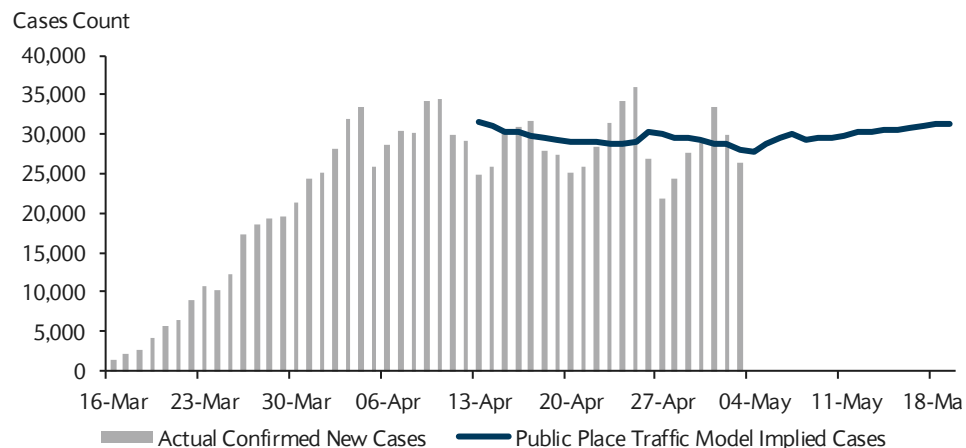
Source: Johns Hopkins, The COVID Tracking Project, Barclays Research

Although it saw a slower decline in cases than we might have hoped, our mid-April model suggested that growth would decline steadily. Revisiting that model today suggests a different path: even the modest (and mostly unofficial) loosening of social distancing in data through beginning of May might already be enough to push US national case growth positive (Figure 8). And if reopening in many places reduces distancing even more, that

path could end up being worse. That could, in turn, then require another round of tightened distancing rules (and increased economic risk) in the medium term.

FIGURE 8

The Recent Decline in Social Distancing Already Implies a Potential Acceleration in New Cases, Even Before the Effect of Relaxed Distancing Rules Appear in the Data



Source: Complementics, Pitney Bowes, The COVID Tracking Project, Barclays Research

Of course, these dynamics could change for other reasons. There is evidence from Taiwan that universal mask use could reduce transmission by 90%+.² It may be that if most of the increase in social interactions happens outdoors, there will be a lower risk of transmission because of more space and more sunlight.³ That said, we have not seen those effects clearly help with case growth data yet, so it seems risky to depend on them until we see them actually produce results.

² Virus Outbreak: Masks greatly limit spread: CECC, Taipei Times, May 4, 2020

³ The case for reopening America's parks, Vox, April 30, 2020

High Frequency Series Updates

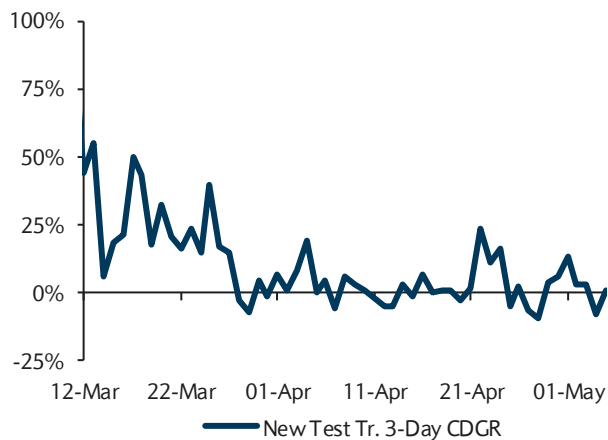
Tracking COVID-19 Confirmed Cases

There were 23,976 confirmed new cases of COVID-19 in the US yesterday, an increase of 1,641 from 22,335 new cases the day before. The cumulative total cases grew to 1,204,351 from 1,180,375 the day before. The 3-day trailing daily CDGR in cumulative cases was 2%.

There were 258,992 new tests administered for COVID-19 in the US yesterday, an increase of 27,201 from 231,791 new tests the day before. The positive test rate was 9%, down from 10% the day before.

FIGURE 9

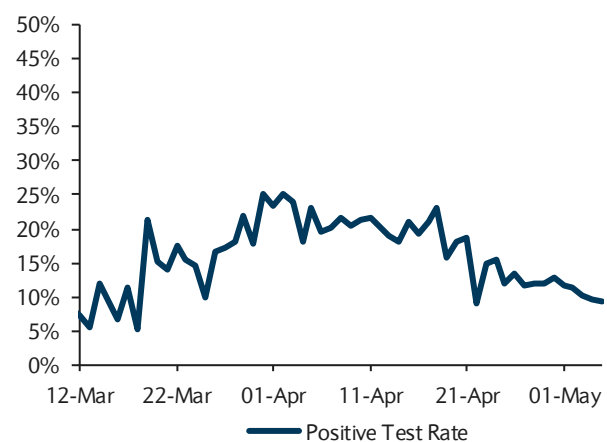
Growth in New Total Tests



Source: the COVID Tracking Project, Barclays Research

FIGURE 10

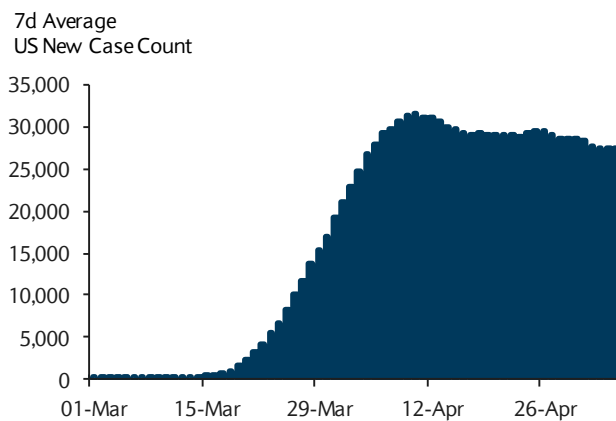
Positive Test Rate



Source: Johns Hopkins, the COVID Tracking Project, Barclays Research

FIGURE 11

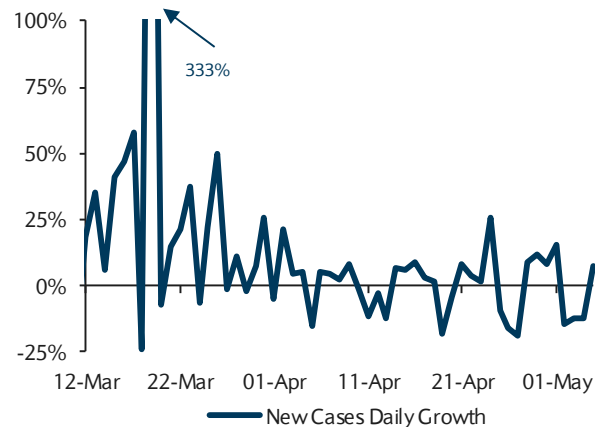
7d Trailing Average of New US Confirmed Cases



Source: Johns Hopkins, Barclays Research

FIGURE 12

US Daily Growth in New Cases



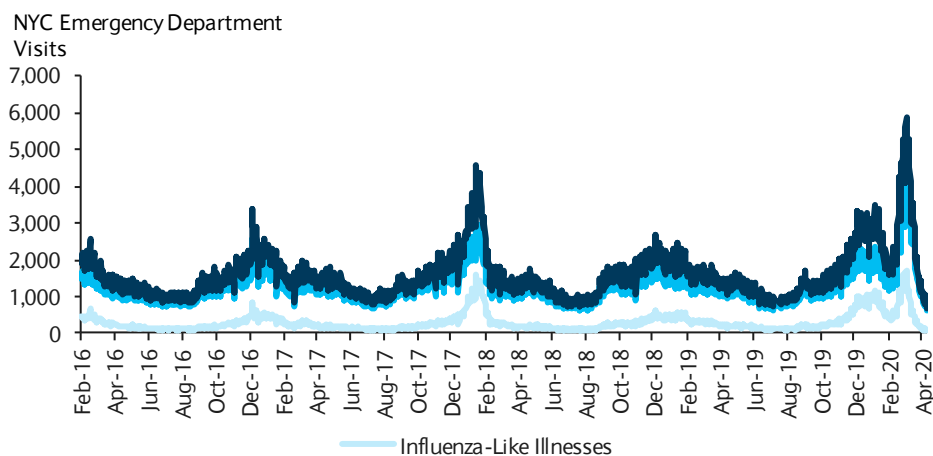
Note: Chart since the US crossed the 100-case threshold. Source: Johns Hopkins, Barclays Research

New York City Hospital Emergency Room Admissions

In New York City, the number of emergency room visits has now completed a full swing. Not only has it declined sharply from record highs, but on the most recent day reported, May 2nd, the number of combined visits for respiratory and influenza-like and respiratory illnesses fell to the *lowest* since at least 2015 (the earliest day data is available in the system).

FIGURE 13

NYC Hospital Emergency Room Visits for Combined Flu-like and Respiratory Illnesses Fell to the Lowest on Record



Source: New York City Department of Health, Barclays Research

For details about how we look at emergency room admissions, see [Data Science High Frequency Indicators: NYC Emergency Room Admissions Are Already at Peaks](#), March 16, 2020.

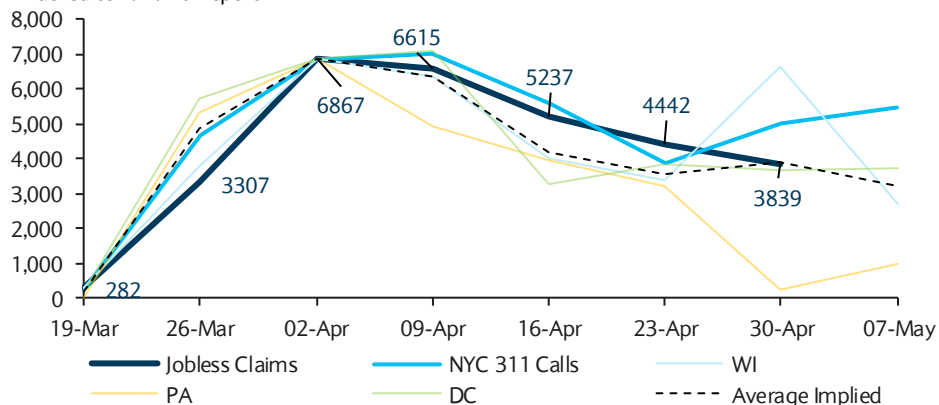
Jobless Claims

NYC 311 calls about unemployment have been quite useful in anticipating the jump in national initial jobless claims filings released every Thursday. After declining for most of April, 311 unemployment calls increased for the second week in a row. Other states' early claim filings are mixed, but averaging across sources suggests a further decline in jobless claims, but only to a level that remains in the multiple millions. Bloomberg is reporting a median Wall Street estimate of a drop to 3mn claims, which seems roughly in line with what is implied by high frequency sources.

FIGURE 14

The Jobless Claim Picture is Mixed Again, but is Consistent With a Further Decline in New Claims, Though Still Only to Levels That Imply Extreme Economic Stress

Different Estimators of New Jobless Claims
Indexed to 4/2/20 Report



Source: NYC Open Data, State Government Websites, Barclays Research

For details about how we look at the relationship between 311 unemployment calls and initial jobless claims, see [311 Calls About Unemployment Lead Weekly Jobless Claims](#), March 24, 2020.

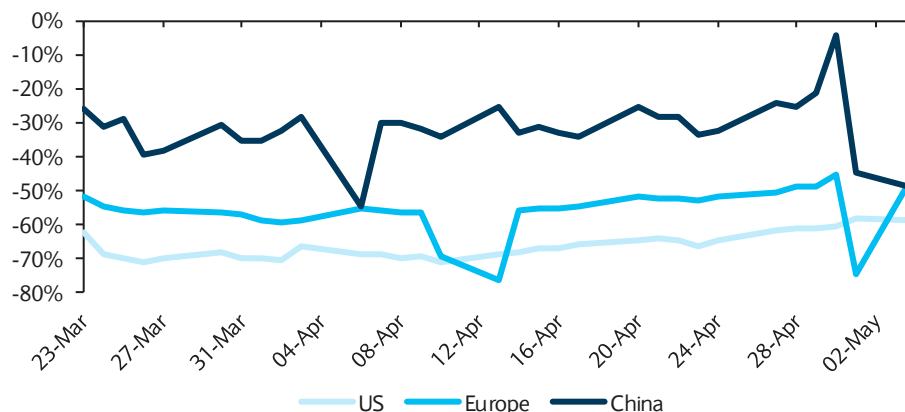
Road Traffic

Road traffic data are reported by TomTom for more than 400 cities globally and are one of the rare high frequency indicators that can be applied equally to many countries. Here, the past week has finally shown clear signals of increased activity across each of the US, Europe, and China, though May and Labor Day holidays in many countries added some noise to the data.

FIGURE 15

Road Traffic is Now Rising Distinctly in the US, Europe, and China (Distortions from May Day Holidays Not Withstanding)

y/y Change in Road Traffic



Source: TomTom, Barclays Research

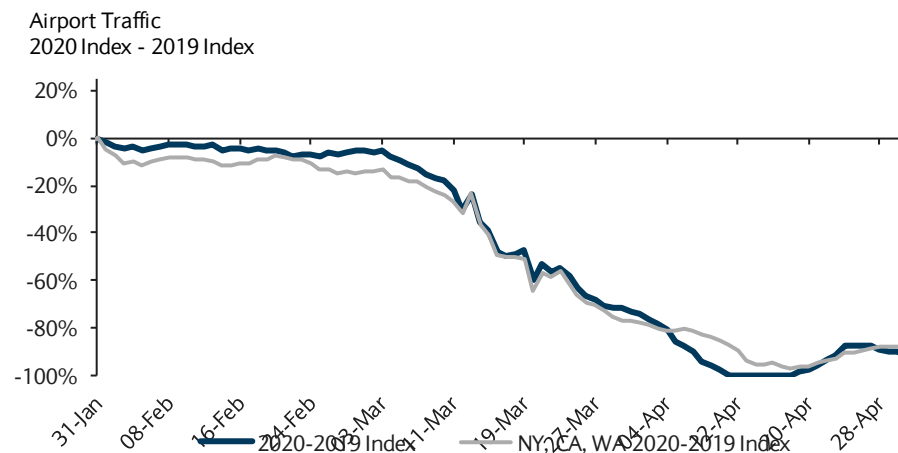
For details about how we look at road traffic, see [Data Science High Frequency Indicators: TomTom congestion data show impact of global lockdowns](#), April 9, 2020.

Airports

Nationally, airport traffic remains higher than the recent trough, but is extremely suppressed relative to normal.

FIGURE 16

Traffic at Airports across the US Remain Off Troughs, but Deeply Suppressed



Source: Complementics, Barclays Research

For details about how we look at airport traffic, see [Data Science High Frequency Indicators: US Airport Traffic Is Down and Falling](#), March 12, 2020.

NYC Subways

Subway ridership appears to remain at the now-flattened steady rate of down >90% (Figure 10-11).

For details about how we look at subway ridership, see [Data Science High Frequency Indicators: NYC Subway Ridership Is Declining](#), March 10, 2020.

S&P 500 Headquarters

S&P 500 company headquarters staffing remains near zero. The median company has reduced headquarters staffing by almost 95%, which has now been essentially steady for several weeks.

FIGURE 17

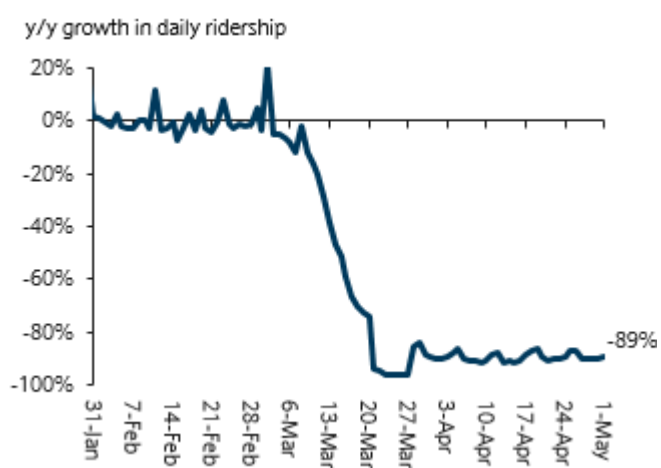
NYC Subway Ridership Remains Near Zero...



Source: MTA, Barclays Research

FIGURE 18

...Whether Measured Daily or Weekly

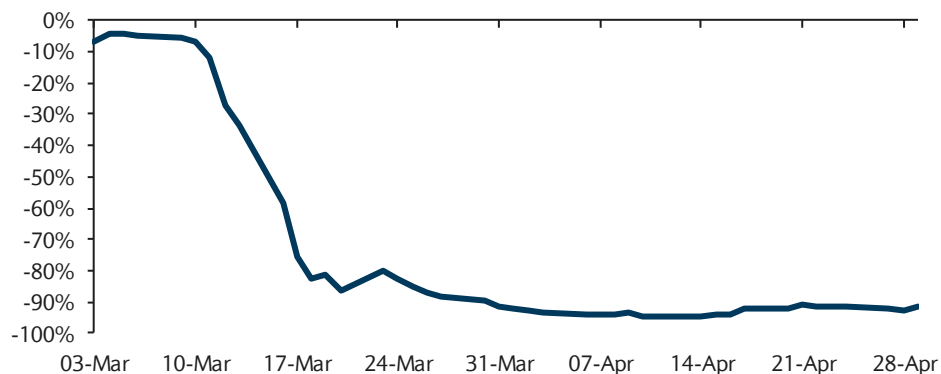


Source: MTA, Barclays Research

FIGURE 19

S&P 500 Company HQ Staffing Is Holding Steady at Very Reduced Levels

Median Reduction in HQ Staff
vs. Baseline (5d Trailing)



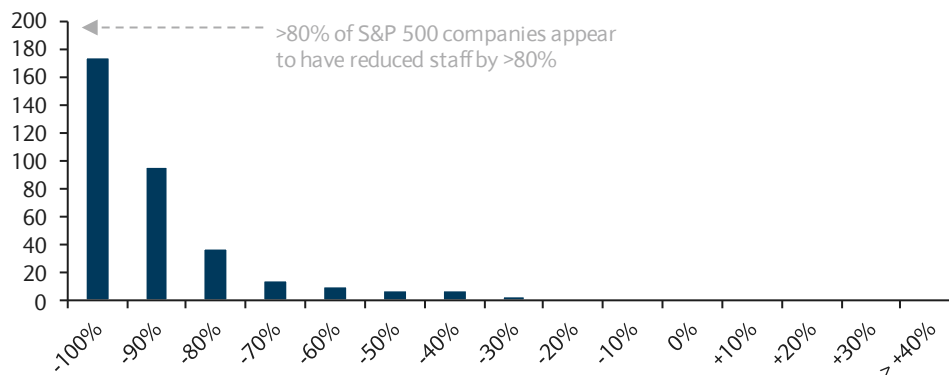
Source: Complementics, Barclays Research

And 80% of S&P 500 constituents have cut staffing by more than 80% (Figure 15), a figure that has been constant for several weeks.

FIGURE 20

More Than 80% of S&P 500 Companies Have Reduced Headquarters Staff by 80% or More, Essentially Unchanged from Last Week

Count of Number of Companies Reducing
HQ Staff by % Reduction vs. Baseline (March 13)



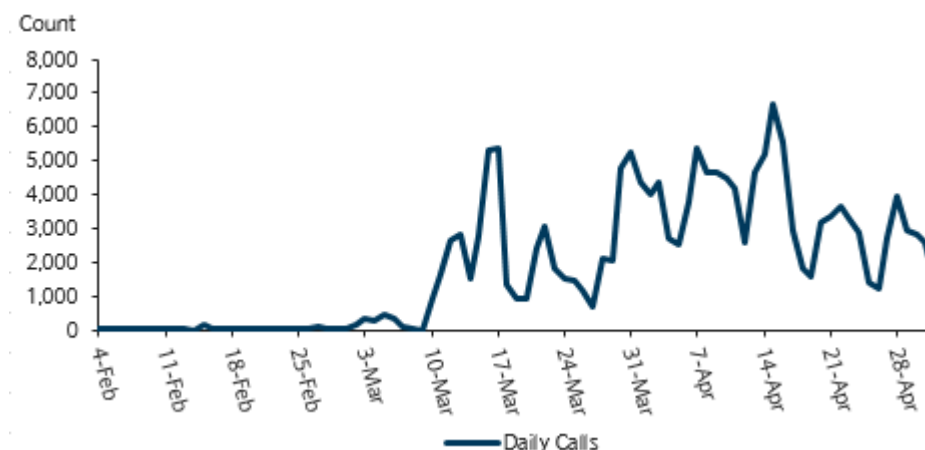
Source: Complementics, Barclays Research

For details about how we look at S&P HQ staffing, see [Data Science High Frequency Indicators: S&P Companies Have Committed to Social Distancing](#), March 16, 2020.

NYC 311 Calls for COVID-19 Information

311 calls for COVID-19 information are touching lower peaks, and lower troughs, suggesting waning attention in the city.

FIGURE 21

NYC 311 Calls Seeking Information about COVID-19 Are Waning

Source: NYC Open Data, Barclays Research

For details about how we look at 311 call volume, see [Data Science High Frequency Indicators: COVID-19 Calls to NYC's 311 Are Starting to Spike](#), March 13, 2020.

Visits to the CDC Website

Visits to the CDC website have continued their declines off mid-March peaks (Figure 17).

FIGURE 22

Visits to CDC Website Have Now Sustained a Multi-week Decline from Their Peak

Source: analytics.usa.gov, Barclays Research

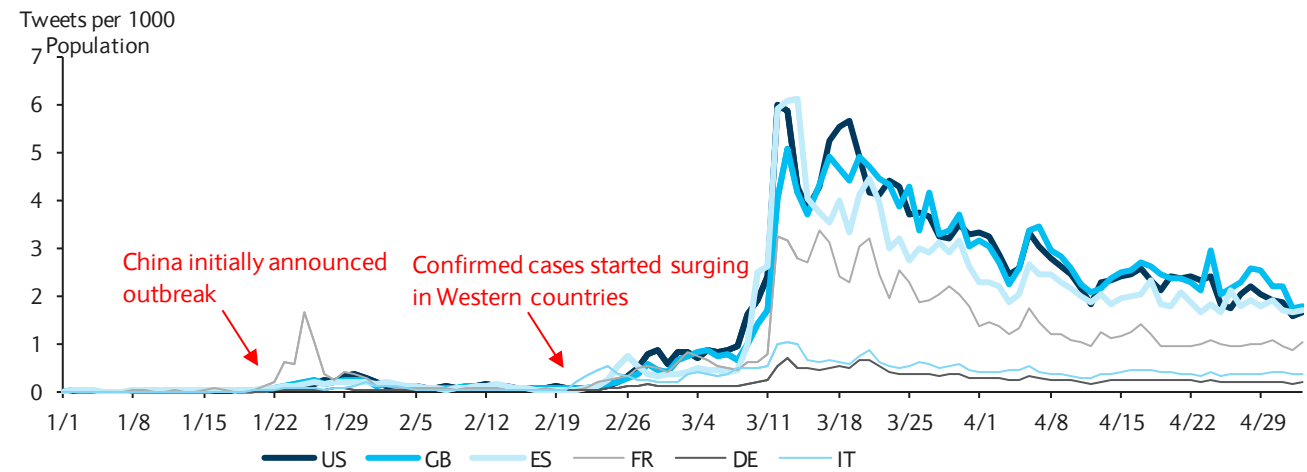
For details of how we look at CDC website traffic, see [Data Science High Frequency Indicators: Visits to CDC Websites Have Spiked](#), March 16, 2020.

Twitter

Tweets that are “virus” or “Covid” related have remained quite stable for several weeks with slight downward sloping. They remain about 50% of peaks, suggesting that the virus continues to be a topic of online conversations.

FIGURE 23

Population Normalized Count of “Virus” or “COVID” Related Tweets, by Country



Source: Twitter, United Nations, Barclays Research

For details about how we look at tweet volume, see [Data Science High Frequency Indicators: COVID-19 Tweet Surges Vary by Country](#), March 16, 2020.

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