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Partners Capital Covid-19 Update #13 (12 June 2020) – Starting to Sense a Pattern

Over the past three weeks, the strong recovery in equity markets has led us to systematically rebalance many client portfolios. This protected clients from being "over-risked" going into last Thursday's -5% correction, the worst day for equity markets since March.

We are largely back to "investing as usual" – rigorously rebalancing towards target risk levels, upgrading managers to those which we expect to thrive in this market environment, and committing to thematic opportunities arising from the Covid-19 turmoil including dislocations and distress in credit, and the acceleration of technological disruption.

However, there remains considerable uncertainty regarding (i) how the Covid-19 pandemic continues to play out across the world (ii) how governments, businesses and consumers will respond (iii) the resulting impact on economies, and (iv) the resulting impact on markets. The mechanism and impact of each one of these categories on the next remains highly complex, rapidly changing and difficult to analyse. Nevertheless, we address four questions that we thought you would have on your minds.

Q1. How bad are the recent Coronavirus outbreaks in the US that spooked markets last Thursday?

Q2. How do we reconcile equity market price levels with the status of the coronavirus and its economic impact?

Q3. What are the investment implications of the latest US Federal Reserve announcement that they expect to hold rates near zero for next three years?

Q4. What ever happened to the Google/Apple contact tracing application?

Of course, these are not the only macro issues that we are watching closely. The impending US elections are likely to create significant domestic and international volatility, while increasing geopolitical tensions with China (not just with the United States) will continue to strain international cooperation and trade. Finally, mass demonstrations in the wake of George Floyd's death in late May have now spread to over 140 cities across the United States (with the National Guard mobilized in 21 cities) and over 60 countries on every continent.

As always, we welcome any feedback and data you think we may benefit from. We hope you enjoy this weekend wherever you may be sheltering.

Market Overview

Government Bond markets (as of 12 June 2020)

	Yields
US 10-year Treasury	0.70%
UK 10-year Gilt	0.21%
German 10-year Bund	-0.44%

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Equity markets as of Thursday (as of 11 June 2020)

	MSCI World	S&P 500	China A-shares
11-Jun-20	-5.0%	-5.9%	-1.1%
WTD (8-11 June)	-5.2%	-6.0%	-0.1%
MTD	-0.3%	-1.3%	3.3%
YTD	-7.4%	-6.2%	-2.5%
From Peak	-11.3%	-10.8%	-5.0%
From low	31.5%	34.8%	13.2%

Credit markets as of Thursday (as of 11 June 2020)

	Spread over Treasuries			Yield to Worst		
	11 Jun 2020	Change MTD	Change YTD	11 Jun 2020	Change MTD	Change YTD
Global High Yield	6.6%	-40 bps	235 bps	7.0%	-1 bps	133 bps
US Corp High Yield	6.2%	-122 bps	284 bps	6.8%	110 bps	165 bps
US Corp High Yield ex-energy	5.6%	-77 bps	265 bps	6.3%	-13 bps	149 bps

Q1. How bad are the recent Coronavirus outbreaks in the US that spooked markets last Thursday and what do we learn about the virus' likely future spread with economic opening?

We have been logging all second waves we hear about and these are summarized below. Most would say that this far better than expected at this point in time, with the greatest concern being in the US.

Exhibit 1: Log of Second Waves of the Coronavirus around the world

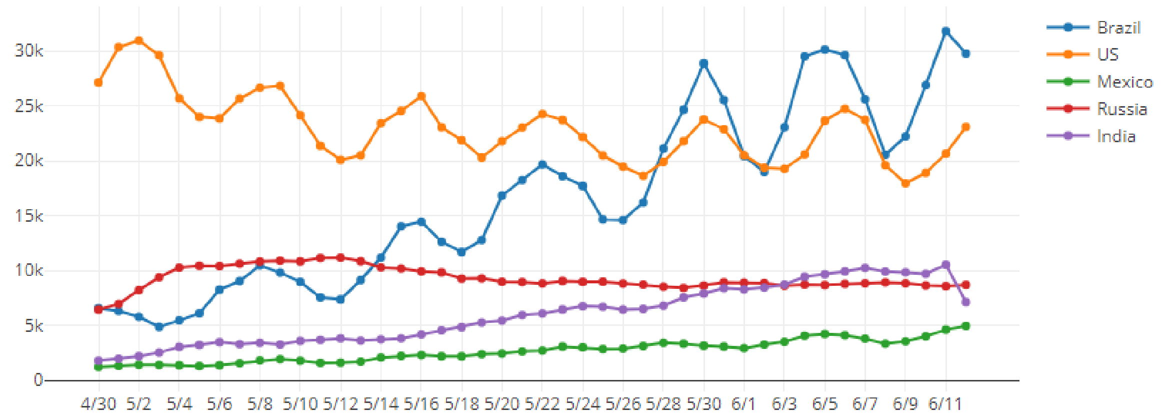
Date	Second Wave	Source	Impact	Cause
04-Apr	**Singapore**	Chinese and Malaysian migrant worker dorms	23 deaths	border breach
06-May	**South Korea**	29-yr old super spreader visited 5 Itaewon nightclubs	250 cases; no deaths	breach of quarantine
15-May	**Iran**	Mid-April restrictions eased, broad based second wave	from 1000 cases back to 3000/day	premature lockdown opening
19-May	**China**	Shulan City received migrant Chinese workers back from Russia	40 cases reported (expect it was far more)	border breach
20-May	**Germany**	Abattoirs and food processing plants in 4 cities across Germany	800 cases, 2 deaths	latent infected in spreading environment
26-May	**South Korea**	Coupang Co e-commerce distribution center in Bucheon, near Seoul	70 cases, no deaths	breach of quarantine
28-May	**Alaska**	Anchorage care home outbreak, attributed to staff	17 cases, no deaths	care home staff
02-Jun	**Hong Kong**	Lek Yuen public housing estate in Sha Tin; tested HK nationals returned from Bangladesh	9 cases, no deaths	border breach
02-Jun	**Tokyo**	Musashino Central Hospital and spread to nearby neighbourhood	34 cases, no deaths	infected hospital employee
06-Jun	**South Florida**	Premature opening as this is broad based across several counties	from 500 to 1600 cases/day, 20 to 47 deaths	premature lockdown opening
13-Jun	**Beijing**	Traces of COVID-19 were found on a salmon chopping board in Xinfadi market	45 of 517 tested proved positive, no symptoms	unclear

The clear lesson from these clustered outbreaks is that border security and screening would appear to be crucial to preventing new outbreaks. The one area where we have truly seen a second wave is in Iran. Iran looked to have brought the virus under control by late April via its lockdown. However, an easing of restrictions, outbreaks occurring in neighbouring countries, low level adherence to social distancing rules and an almost non existing test, track and trace system has led to a second wave of cases. Iran's second wave appears to have originated in the oil border province of Khuzestan. The town is subject to a lot of international arrivals as it is an oil hub and on the border with Iraq. Iraq's case levels were only beginning to rise as Iran started to ease restrictions.

The good news is that European countries early to experience the virus have been able to open up without serious increases in virus cases. Fears that lifting of lockdowns in Italy, France and Spain would result in a second wave have not materialised.

The number of new cases in the US, as shown in the yellow line below, points to a "bumpy flattening" which reflects the continued challenges of containing the pandemic. Meanwhile, it is clear that the pandemic continues to rage outside of the US, especially in emerging markets. Brazil has surpassed the US in new case count. India and Mexico are still seeing rapid growth with no effective containment. Russia appears to have flattened the curve, as testing increases to over 100,000 per day.

Exhibit 2: Countries with largest new case growth (3-day average of daily new cases)



Within the US, the total number of cases have declined by 15% over the last five weeks from the end of April to the 11th of June, although the number of cases will be inflated by increased testing. Encouragingly, nationwide deaths are down 61%. However, it is clear that the US statistics reflect both states such as New York and New Jersey, which were the worst hit and showing no signs of a second wave at present, and states which are beginning to see an acceleration in both cases and deaths.

Cases are rising in 21 US states with the worst being California, Florida, Texas and Arizona. Increased testing will partially explain the increased number of cases. However, the number of daily deaths is still increasing in nearly a dozen states, albeit off a low starting point, with Florida at double the number of daily deaths compared to April. Arizona deaths are up 58% while Texas and California are experiencing a persistent, but not increasing, number of deaths.

It remains premature to be discussing a second wave when half the country has not yet even fully dealt with the first wave. States such as New York who have survived the first wave have only just begun to open their economies (e.g., New York City only began reopening on 8th June), so it is also too early to tell what the effect of opening will be on new cases. Also, it will be critical to track the potential escalation in cases in the coming weeks arising from the mass demonstrations across the country.

Exhibit 3: Current four worst states for rising cases (CA, TX, FL, AZ), compared to previous worst states (NY, NJ) – (3-day average of daily new cases)

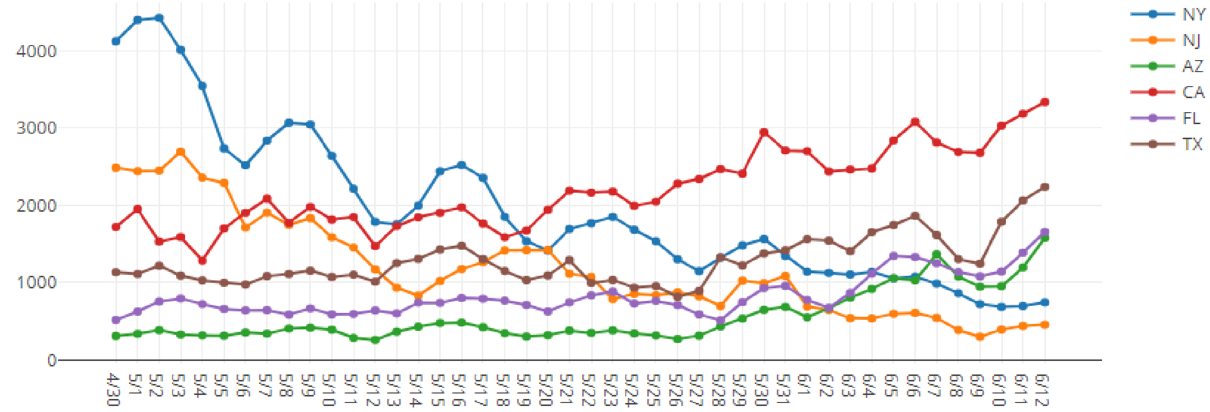
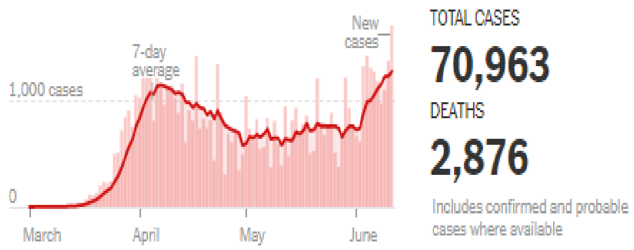


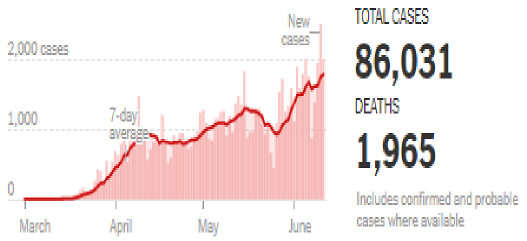
Exhibit 4: Trends for cases and deaths in 6 largest states and nationwide

State	% of US population	April 30th 7-day avg daily deaths	June 11th, 7-day avg daily deaths	Growth in Deaths	Apr 30 newly infected	11 Jun newly infected	Case Growth Rate	30 Apri - 9 Jun Testing Increase %	infection rate (R0)	Positve Test Rate %
New York	6%	373	58	-84%	4125	744	-82%	128%	0.79	1%
New Jersey	3%	257	68	-74%	2488	456	-82%	225%	0.85	2%
Florida	7%	20	47	135%	517	1657	221%	168%	1.07	4%
Texas	9%	28	22	-21%	1135	2239	97%	67%	1.09	8%
Arizona	2%	12	19	58%	310	1581	410%	308%	1.26	14%
California	12%	85	80	-6%	1721	3339	94%	143%	1.03	5%
6 States subtotals	39%	775	294	-62%	10296	10016	-3%			
Total US	100%	2259	886	-61%	27133	23095	-15%			
FL,TX, AZ + CA %	30%	6%	19%		14%	38%				

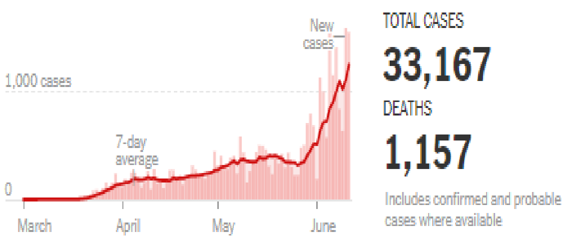
Florida



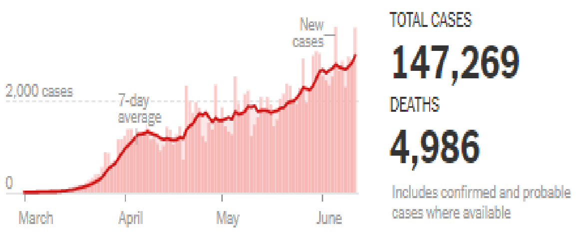
Texas



Arizona



California



In Florida, which is the clearly showing signs of a second wave, cases have tripled since late April to 1,657 a day with deaths more than doubling from 20 to 47 per day. Tests have increased by 167% since the end of April which will explain part, but not all, of the measured case increase. The state slowly began to reopen in

May. Now in June, most businesses across the state are open at limited capacity with social-distancing regulations in place.

Cases in Texas have doubled to over 2,000 per day vs 1,000 per day in late April. Tests have increased 67% over the same period. About a quarter of the new cases are in counties with large prisons and meatpacking plants that were never forced to shut down. However, deaths appear to be stable for now. Texas has reported average daily deaths at 22, down from 28 in late April.

In Arizona, cases have increased by 400% since the end of April to 1,580 per day while the number of deaths has risen from 12 to 19 per day. A quarter of all cases in the state are on Indian reservations, which have especially high-risk populations. Arizona appears particularly ill equipped to deliver on testing and tracing, with only 100 contact tracers. With 1,580 new daily cases, Arizona may need over 20,000 contact tracing staff to trace all new cases in 48 hours, which is the critical window of containment before too many other people are infected.

California is now averaging nearly 3,000 new cases a day, up from 2,000 per day at the end of April. Deaths remain at around 80 per day, unchanged from late April. The infection is shifting to Southern California. Los Angeles County has recorded 48% of new cases in the last two weeks, while home to only a quarter of the state's population. Testing is increasing but is still below California's goal of averaging more than 60,000 tests per day.

What will have to happen for cases to get under control in places like Phoenix and Los Angeles? Few experts or politicians are advocating for herd immunity, given the poor outcome in Sweden relative to its neighbours, Denmark and Norway. With what are now believed to be highly accurate antibody tests, initial results suggest infection rates ranging from 5% to 15%, nowhere near the 60% required for herd immunity. Innate immunity needs to be very high to close this gap. Until we have an effective vaccine, there is therefore no alternative to social distancing, although the severity of this can be reduced where there are effective testing and tracing processes in place. The US and UK, in particular, are still struggling to implement these systems. As we can see from the Google Mobility data, whether governments are opening or not, people are voting with their feet and still staying home far more than would be required for a V-shaped economic recovery.

Exhibit 5: Google Mobility Reports showing 10th June level of return to normal activity (Jan 2020)

Country/Region	Retail & Recreation		Grocery & Pharma		Parks		Transit Stations		Workplaces	
	1 Month Ago	Current	1 Month Ago	Current	1 Month Ago	Current	1 Month Ago	Current	1 Month Ago	Current
US	-29	-20	-6	-2	6	34	-43	-34	-44	-36
NYC	-54	-44	-16	-8	-30	4	-65	-57	-55	-46
CA	-46	-36	-10	-5	-17	-10	-47	-42	-48	-40
UK	-69	-63	-22	-17	16	9	-62	-56	-63	-53
LON	-77	-71	-27	-20	16	-3	-74	-67	-71	-62
GER	-33	-20	-5	-2	49	21	-35	-32	-28	-26
FRA	-72	-26	-23	-1	-49	-7	-69	-37	-57	-33
ITA	-61	-28	-28	-10	-32	1	-58	-40	-46	-32
S Korea	-10	-6	9	10	48	37	-4	-2	-1	-2
HK	-21	-13	-2	3	-11	-17	-29	-19	-9	-8
Average	**-47.2**	**-32.7**	**-13.0**	**-5.2**	**-0.4**	**6.9**	**-48.6**	**-38.6**	**-42.2**	**-33.8**

There is still a lot that scientists do not know about the spread of the virus. But there is ample evidence that social distancing makes a difference, with some measurable relationship between the stringency of those actions and the resulting impact on deaths as shown in some recent regression analysis performed by research house, BCA.

The testing and tracing response shows a low correlation as most countries in this data base had little testing activity in place. The rest of these results are not overwhelmingly conclusive but do conform to common sense outcomes from specific actions. This leaves us believing that social activity will be constrained even after governments remove restrictions as the fatality rates are unlikely to fall to levels which give people sufficient confidence to move about freely unless testing and tracking programs do the job they can do.

Exhibit 6: School closures, cancelling public events and international travel restrictions appear to explain lower fatalities

R-Squared Values: Stringency of Early Covid-19 Government Response vs the Magnitude of confirmed cases and fatalities

Government Response	R-squared to Magnitude of Fatalities
School Closing	33%
International Travel Restrictions	33%
Cancel Mass Public Events	28%
Domestic Travel Restrictions	17%
Public Information Campaign	17%
Workplace Closing	15%
Close Public Transport	13%
Stay at Home Requirements	13%
Restrictions on Gatherings	8%
Testing Policy	8%
Contact Tracing	2%

Source: Hale, Thomas, Sam Webster, Anna Petherick, Toby Phillips, and Beatriz Kira (2020). Oxford Covid-19 government response tracker, Blavatnik School of Government, The Center for Systems Science and Engineering at Johns Hopkins University, and BCA Research calculations. Data as of 3 June 2020. Above regressions exclude Belgium, Italy, the Netherlands, Spain and Switzerland, countries where the virus reached extreme levels before any containment actions were implemented.

Q2. How do we reconcile equity market price levels with the status of the coronavirus and its economic impact?

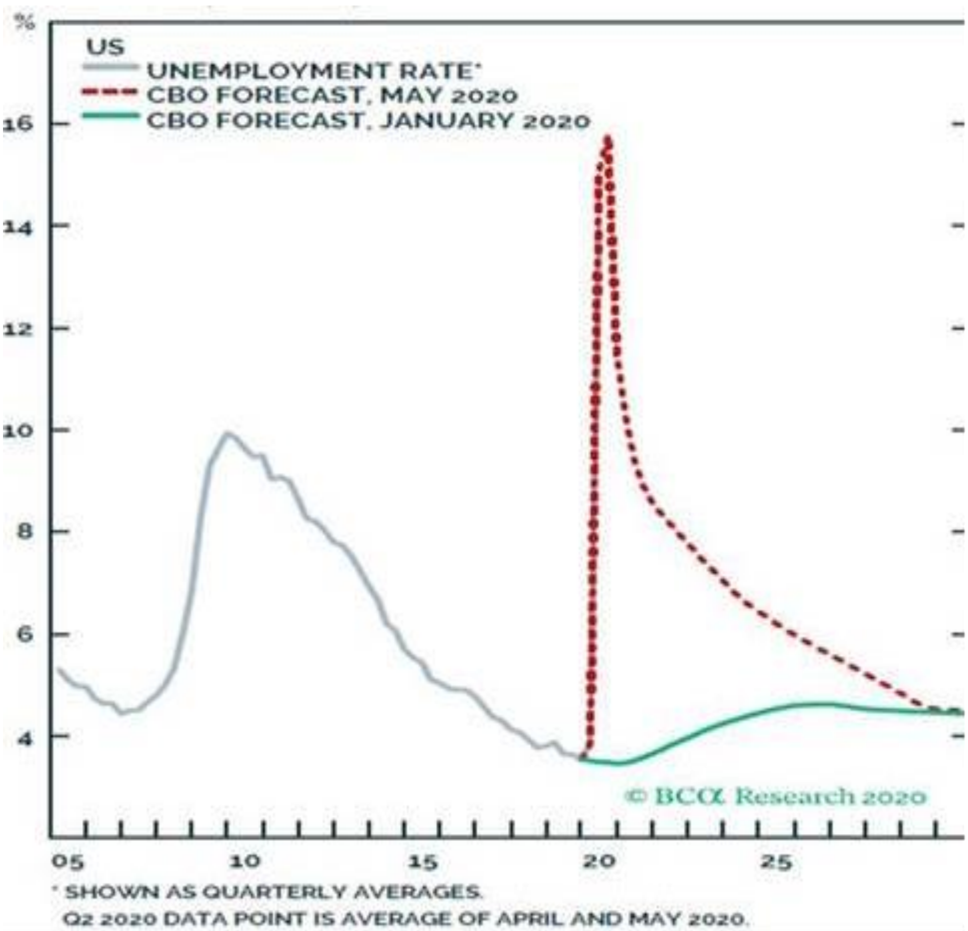
Incorporating Thursday's -5% fall in global equity markets, global equity markets are down -6% YTD through Friday and down -10% from the peak. How do we reconcile the negative economic and pandemic data with a nearly full recovery of equity markets to previous highs? We of course cannot be certain, but we believe that there are several factors explaining this.

First, the S&P 500 is a market cap weighted index of which ~25% is represented by the technology sector. If you include communications services (e.g., Google and Facebook) the broader definition of technology represents c. 36% of the index. While revenue growth in these sectors had been strong prior to Covid-19, the pandemic has merely accelerated trends which were already in place. Conversely, cyclical and value stocks were initially hit much harder and have only partially recovered, particularly energy companies (reduced energy demand) and banks (increased loan loss reserves).

Second, fundamental data has been improving. While last week's payrolls data was a huge surprise at a gain of 2.5 million jobs vs expectations for a decline of -7.5 million, it only represents c. 10% of the jobs lost since the beginning of the crisis. However, as lockdown measures have been eased other high-frequency indicators have been improving faster than the official data. Auto sales have now fully recovered to pre-crisis levels and Chase consumer card spending data suggest broader consumer spending has risen from -60% below average to only -16% below average today. The positive momentum in the cyclical / value sectors has been further validated by CEO guidance. At the end of May, at the Bernstein Strategic Decisions Conference in New York, JP Morgan's CEO, Jamie Dimon, said that the consumer is in good shape and consumer spending in aggregate has improved from the trough levels of April.

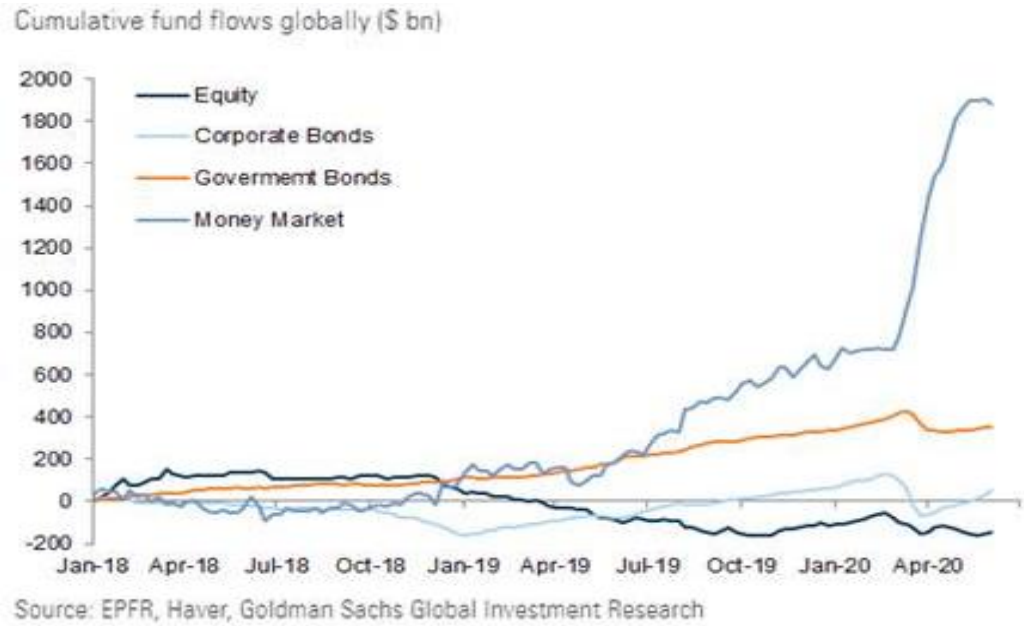
However, there are lingering questions about how long it will take for employment levels to recover. Although the most recent Federal Reserve projections in June see unemployment declining to 5.5% in 2022, and to 4.1% in 2023 and beyond, a slightly older (mid-May) estimate from the CBO forecasted a much slower rate of decline in the unemployment rate. Clearly, the trend in data has improved sharply since mid-May, but with about 12% of US workers employed in the hospitality, restaurant, and travel sectors, there is still much uncertainty around when activity in these sectors will recover.

Exhibit 7: CBO project the US unemployment rate will fall very gradually



Third, the wall of monetary liquidity created by the Fed has to go somewhere. The US Treasury is now holding $1.5 trillion in its cash account at the Fed, up from $400 billion prior to the pandemic. Money supply (M2) growth is now growing at the fastest rate ever (up over +17% yoy). Flows into money market funds have been huge, but with record low interest rates, equity earnings yields of c. 5% (inverse of forward P/E multiples of 20x) still look attractive. This gap may put a floor on equity markets with the big assumption that any second waves will not precipitate a return to mass lockdowns.

Exhibit 8: Money market inflows have been large, while equity fund flows turned positive only last week



In conclusion, equities are a long duration asset and investors look through temporary economic weakness, as long as it remains temporary. Clearly the wall of liquidity and stimulus that is being pumped into the economy also helps. But if fundamentals don't eventually pick up, none of this will help. Recall what happened in over the last ten years in Japan which, despite huge monetary and fiscal stimulus via all the Abe arrows, still experienced anaemic economic and equity market growth. Conversely, if economic activity picks up in the US and the rest of the world, then we won't really need any of this firepower.

Q3. What are the investment implications of the latest US Federal Reserve announcement to hold rates near zero for next three years?

On Wednesday the Federal Reserve released its first Summary of Economic Projections (SEP) following the Covid-19 crisis. The most important takeaway was the expected path of interest rates. With remarkable unanimity, 15 members saw unchanged interest rates until the end of 2022, except for one member who expected one increase in 2022, and one member who expected four increases in 2022.

The median expectation for US GDP growth this year was -6.5%. However, experts have been noting upside risk to this based on May spending data. 2021 growth is expected to rebound by +5.0%. Interestingly, the longer-term (post 2022) growth, inflation and unemployment rates are all expected to revert close to 'normal' levels as shown in US Fed's estimate in the table below.

The clear message from these projections is that the Fed sees the economic impact from the pandemic as likely to be temporary as long as sufficient monetary and fiscal supports are provided and maintained. In his press conference, chair Powell reiterated his call to Congress to provide further fiscal stimulus. For its part, the Fed is crucially signalling to investors that it intends to keep monetary stimulus in place for an extended period of time, even if it believes growth will start to recover sharply in 2021.

Overall, this aligns with our view that growth, employment and inflation will be positive economic factors over the longer term, and more crucially that the Fed will likely err on the side of keeping rates lower for longer to ensure support the economic recovery.

Exhibit 9: US Federal Reserve GDP, Inflation and Interest Rate Forecasts

(%)	2020	2021	2022	Longer-Run (2023 onwards)
Real GDP				
June latest projections	-6.5	5	3.5	1.8
Dec '19 projections	2	1.9	1.8	1.9
Unemployment Rate				
June latest projections	9.3	6.5	5.5	4.1
Dec '19 projections	3.5	3.6	3.7	4.1
Core PCE Inflation				
June latest projections	0.8	1.6	1.7	2
Dec '19 projections	1.9	2	2	2
Fed Funds Rate				
June latest projections	0.1	0.1	0.1	2.5
Dec '19 projections	1.6	1.9	2.1	2.5

Investment Implications of Fed news: To the extent that interest rates are kept low through 2022, this will provide support both for economic growth and for risk assets, including both credit and equity markets. The key question is whether inflation will rise faster than expected in the context of fiscal and monetary stimulus, combined with a political drift towards greater protectionism. Normally, higher deficits and inflation would build an inflation or term premium into longer maturity bond yields, even if the Fed keeps short term interest rates low. However, the Fed has signalled it intends to use all its tools, including forward guidance and bond purchases (which will continue for the indefinite future) to keep bond yields down for as long as is needed.

On bond purchases, some have suggested that if the Fed were to use yield caps rather than pure QE, it would be less advantageous for risk assets (e.g., equities). With yield caps, the Fed would buy bonds only when yields exceeded certain target levels, whereas pure QE would inject liquidity into the market regardless of yield levels. The latter scenario of a liquidity deluge would push investors to allocate more capital into riskier assets. In any event, Powell has made it clear that at this stage all options are being considered, and policy tools would be decided upon depending on the path of economic growth.

Q4. What ever happened to the Google/Apple contact tracing application?

Testing and contact tracing is the key to re-opening economies. Contact tracing can be done entirely manually or with the help of digital contact tracing applications. Such apps have contributed to the success of Singapore and Australia as they have seen some of the highest adoption rates of a contact tracing app. They both used TraceTogether, which received strong adoption in part due to intense government marketing. South Korea has integrated its app into a multi-pronged, nationwide response that includes extensive testing and detailed data collection. China, meanwhile, has both a national app and a number of regional versions with disparate approaches to collecting data and privacy.

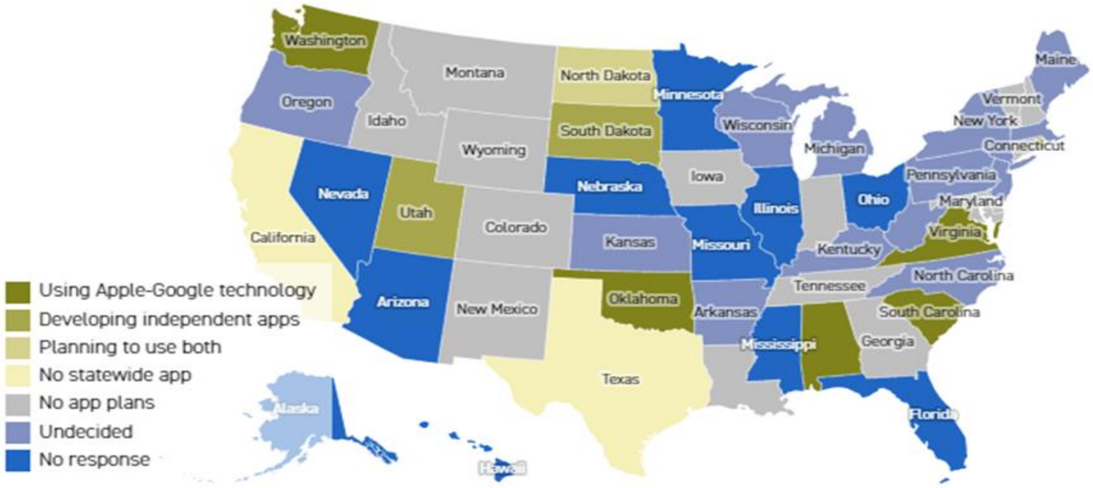
On 20th May, Apple and Google released their long-awaited smartphone technology to automatically notify people if they might have been exposed to the coronavirus. The technology from Apple and Google is not technically an application — rather, it is software that public-health authorities can use to build their own apps. The companies had said that 22 countries and several US states were already planning to build voluntary phone apps using their software.

That said, any app built on this platform would protect the identity of app users by encryption and anonymous identifier beacons that change frequently. The software will be downloadable on most

Androids and iPhone models. The Google-Apple rules assure users of privacy in that it only permits apps that store data on the user's phone by default, instead of automatically uploading it to a central database. Users have to consent to share data with authorities.

Public-health agencies in the US have been reluctant to adopt the technology, preferring technology that gives them the contact data. Business Insider magazine contacted officials in all 50 states and Washington, DC; only three states confirmed plans to use the technology from Apple and Google. Meanwhile, 16 states ruled out the possibility of building contact-tracing apps entirely. Georgia, Maine, and Indiana are among the states that said they planned to rely only on human contact tracers. The slow uptake casts doubt on the viability of containing the coronavirus with contact-tracing apps, which require the majority of people to participate in order for it to have the desired effect. It is looking like these tech giants might not play a major role in the coronavirus response after all.

Exhibit 10: State tracing app usage plans



Notes: California and Texas each have regional apps. New York City has its own system.
Map: Bob King/Politico • Source: POLITICO research | Updated: June 11, 2020 1PM

For smartphone-based contact tracing to work, experts say, at least 60% of a country's population have to adopt it. If there are multiple apps, they have to talk to each other. Three weeks after the Google/Apple technology was made available, it appears there may not be a single app solution in the US, and many US states and countries will be going down their own paths, just as Germany is with SAP and Deutsche Telecom. Purely manual tracing will have to suffice in the interim.

Overall Investment Implications of Recent Events

We remain sceptical of the ability of government authorities to build scalable testing and tracing programs, which is essential to enable economies to fully re-open in the absence of a vaccine. Equity markets appear to be looking through these challenges but are likely well supported by the ultra-accommodative stance of the Federal Reserve. This ultra-dovish outlook for monetary policy significantly reduces the risk of rising rates in the near-term, but with near-zero yields, we still struggle to allocate to fixed income, and will continue to hold gold and inflation linked bonds as our safety net assets. Despite the recovery in liquid credit in sympathy with equities (supported by the unprecedented buying of high yield bonds by the Federal Reserve), we believe that we are entering a distressed cycle and will see continued dislocations and an increasing opportunity set for distressed credit and rescue financing.

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The firm was founded in 2001 by investment professionals seeking an independent and conflict free adviser to provide portfolio construction advice and rigorous analysis of investment opportunities. From its initial focus as the "money managers to the money managers" with a base of 70 clients, Partners Capital has grown to become an adviser to endowments and foundations as well as prominent family offices and successful entrepreneurs across the U.S., U.K., Europe and Asia. Endowments have become a large proportion of the institutional client base, which now includes Oxford and Cambridge Colleges, and many of the most highly respected museums and charitable foundations located around the world.

Among Partners Capital services are bespoke outsourced investment solutions for endowments, foundations and tax-efficient and tax-deferred investment strategies for taxable private clients. Partners Capital predominantly advises on entire portfolios but also specialty strategies, such as Private Equity or Private Debt strategies.

Partners Capital deploys an investment philosophy that embraces many of the powerful diversification benefits of the "endowment model" of investing. However we apply a more dynamic approach to asset allocation, which seeks to clearly delineate between performance derived from market factors as opposed to the skill of individual managers.

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