Hamilton Lane

COVID-19 Market Update

Back at It

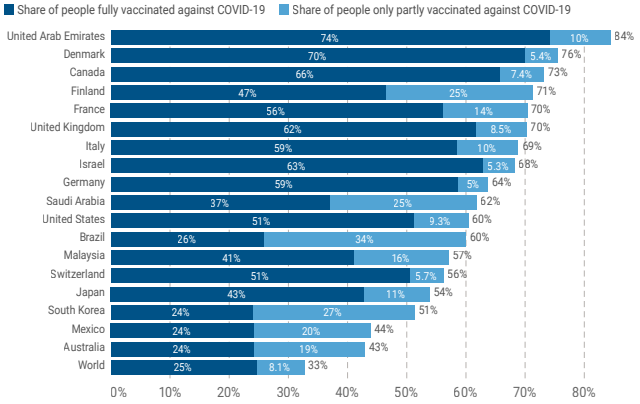
August 30, 2021 | Mario Giannini, CEO

KEY TAKEAWAYS

- We will begin to see COVID-19 as a disease that is generally among us, but for which we periodically vaccinate and about which we focus on those whom are seriously ill. Those who are vaccinated are unlikely to be among the seriously ill. We're not there yet, but we are on that path. Page 5
- My own view is that we won't be talking about inflation in a year…When I look at the 10-year U.S. Treasuries chart, I'm hard pressed to say the market is particularly worried about inflation or the Fed raising rates. Page 6
- Mega deals are back and so are the club deals. Is this where we say we have seen this part of the cycle before and it doesn't end well? There are some things that might be different… Page 8
- We know of one manager who is quietly cutting the size of their flagship fund and will raise that money through private wealth channels (it's easier and quicker in almost every way). Is it simply a bull market phenomena or something that institutional investors will need to consider as the industry evolves? Page 8
- What does the bipartisan infrastructure bill that passed the U.S. Senate mean for private infrastructure investment opportunities? Page 10

This chart provides a comparative view of first and second dose levels among the countries outlined in my table. (Chinese data is unavailable.) You can see that some countries, such as Finland and Saudi Arabia, have prioritized initial doses over second doses, a strategy the UK employed. It has been successful at keeping cases lower than countries that have prioritized second doses.

Share of People Vaccinated Against COVID-19, Aug 23, 2021



Source: Official data collated by Our World in Data. This data is only available for countries which report the breakdown of doses administered by first and second doses in absolute numbers.

There are two dominant COVID-19 stories over the last few weeks: (1) The Delta variant and (2) rising case counts and vaccination.

The Delta Variant

What is the Delta variant? If you listen to the news and study social media, you might believe that it is

a different virus than the COVID-19 virus. Let's start with some basic facts.

Is it a new virus?

No, it is not a new virus. It is one in a long line of viral mutations that we have seen this virus undergo. That's what viruses do, constantly. Recall, at the outset of the pandemic, there were two lines of the virus, one from China and one from Europe (let's not worry about the fact that the European line undoubtedly originated from the China line). Fairly quickly, the European variant became the dominant virus throughout the world, largely because it was more contagious. Then, we hadn't developed the speed with which we can now identify variants and the media hadn't figured out that naming a variant provided a more eye-catching way to worry people than the dreary, repetitive "COVID-19 virus" moniker.

Is it a deadlier variant?

It is *not* a deadlier variant. While many stories and half-baked studies claim the Delta variant is deadlier than prior versions of COVID-19, there's no real evidence that is true. There's plenty of evidence that it's NOT true. The Delta variant appears to have no greater or lesser impact on morbidity and death than other variants. (Let me deal here with a common refrain you hear about the Delta variant. Those that have it have a higher viral load than with other variants and, therefore, are—take your pick—sicker, more contagious, more prone to death, etc. We have seen, over and over with COVID-19, that higher viral loads do not seem to translate into more or less of anything. That data point, in and of itself, is meaningless. When you read something that proves its point with a reference to "higher viral load," go find something else to read.)

Is it more immune to current vaccines?

While there is a great deal of concern that the Delta variant can evade current vaccines, evidence thus far suggests that the Delta variant is not more immune or, if it is, not enough to warrant panic. There is some indication that the Pfizer vaccine may (and I stress, may) be marginally less effective, but there's plenty of evidence that it is equally effective. The Moderna, Astra-Zeneca and J&J vaccines appear to be equally effective against the Delta variant. If you are vaccinated, you shouldn't worry that the Delta variant has any magical power to evade your antibodies.

Is it more contagious than other variants?

Yes, it is indisputably true that the Delta variant is far more contagious than other variants. The estimates range from 30% more contagious to figures that are as high as 300% greater. This is the problem with the Delta variant. It might appear to be deadlier, but that is an illusion created by the simple fact that more people will get sick faster than with other variants. If I'm a virus and I infect 100 people in half the time my lazy cousin virus does, then I'm also going to hospitalize people faster, even if the underlying hospitalization rate is equal to that of my lazy cousin COVID. The Delta variant is problematic solely because of this faster rate of transmission. COVID-19 will be far more prevalent than it would otherwise have been.

Breakthrough cases, boosters and immunity, oh my…

There's a lot to cover. Where to start?

Vaccination

First, the good news. The vaccines, particularly Pfizer, Moderna and Astra-Zeneca, have proven remarkably effective. The issue has not been with effectiveness, but with supply and with the number of people willing, or able, to take the vaccine.

Supply

There have been two supply-related issues. One is the speed with which supply has been delivered. I have outlined the issues the EU had initially, but those have largely resolved in those countries that had ordered sufficient supplies. Countries such as Canada and most of the EU now have adequate supplies to vaccinate most of the eligible population. Other countries simply didn't order enough vaccines and are now in the odd position of being unable to

prevent outbreaks without restrictions, some fairly draconian. This applies to places like Australia, South Korea and Japan. Finally, there are largely third-world countries where there simply isn't enough supply, regardless of the government's or population's willingness to vaccinate. Until supply rises to allow global vaccination, something that won't occur until later in 2022, it is likely that COVID-19 continues to ebb and flow as people travel and come in contact with the virus in areas where there are large numbers of unvaccinated people.

Demand

The goal for any vaccination program is to reach that state of herd immunity, the point at which enough people are vaccinated or have contracted the virus and it no longer spreads through a vulnerable population. With the speed at which the Delta variant can transmit, estimates are that roughly 90% of the population needs to be vaccinated or infected. Given that children under the age of 12 cannot yet be vaccinated, reaching 90% is difficult unless nearly 100% of the eligible population receives a vaccine. In many of the countries where vaccines are available, that is impossible because sizable chunks of the population refuse to be vaccinated. In the U.S., for example, almost 30% of the eligible population says, in polls, that they will not get vaccinated. Large numbers in other countries such as Israel and France (where the government is now mandating vaccination) are also refusing. This refusal by such large numbers ensures that COVID-19 will continue to spread.

Small numbers of people have medical or religious reasons to avoid the vaccine, but it is the rest of those who refuse a vaccine that are problematic. They all appear to have their reasons to refuse the vaccine. They may be doing it in good faith, they may be doing it for political reasons, they may be doing it for what they view as sound scientific reasons, they may be doing it because they believe they know better or they may be doing it because they are stubborn. The reasons don't really matter because, in the end, it is quite simple. The large number of people who refuse to be vaccinated put everyone at greater risk. What reason is good enough for that outcome?

There is an economic theory called "the tragedy of the commons" in which individuals take actions independently and based on their own self-interest that are contrary to the common good and cause harm. While not generally used in reference to vaccinations, the theory is equally applicable in this context. It is also nothing new. The history of the smallpox vaccine is eye-opening. Anti-vaxxers in the UK, the U.S. and Canada violently objected to smallpox vaccine mandates. Consider that for a moment: People risked mass smallpox outbreaks in the belief that they either knew better or shouldn't be required to take a smallpox vaccine because their freedom of choice was more important than their neighbor's right to be alive. We shake our heads at that behavior now and then repeat it.

Breakthrough infections

There is a narrative that breakthrough infections — of vaccinated people who contract COVID-19 — are proof that vaccinations don't work. Umm, no, they prove the opposite. Vaccines were never 100% effective at preventing infections. Their efficacy rate was anywhere from 75% to 94%, depending on the vaccine and the study. That means, out of 100 vaccinated people, there were always going to be somewhere from 6 to 25 breakthrough cases. The remarkable fact is that there have been so few breakthrough cases. Data on the number of positive cases broken down by vaccinated compared to unvaccinated indicates that the efficacy is probably much higher than the studies would have indicated. That doesn't mean the vaccines are more effective than thought as it is likely that vaccinated individuals are probably also more careful about contact and risking infection.

We hear about more breakthrough infections for one reason: There are too many unvaccinated people contracting COVID-19 and that increases the chances of a vaccinated person being infected. Take this example: A town has 100 people and 90 get vaccinated. That means about nine of those

people would be expected to get infected despite vaccination. But the odds of meeting one of the 10 unvaccinated people with COVID-19 is reasonably low. However, if only 60 get vaccinated (and so you'd expect six of those to get infected), the odds of them meeting one of the 40 unvaccinated, infected people are much higher. You'd certainly expect more breakthrough cases, particularly if the more contagious Delta variant is floating through the population. That is where we find ourselves in many parts of the world right now.

Waning Immunity and Boosters

There is a great deal of discussion that vaccine immunity wanes after five to seven months and some countries are recommending booster shots for people after six months of their second dose. Is this science or politics?

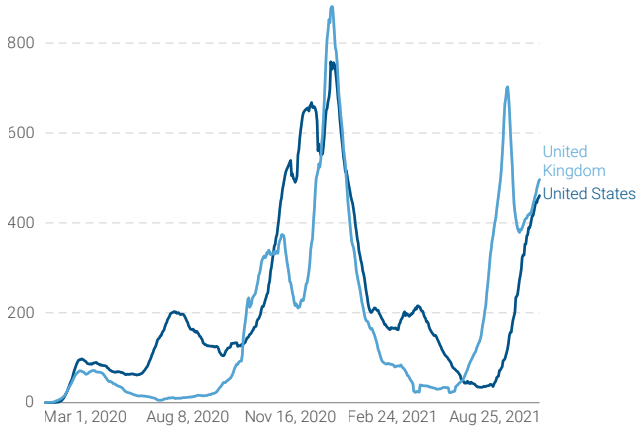
Data out of Israel suggested that the Pfizer vaccine's ability to prevent serious illness among older people declined over five or six months. The U.S. CDC recently released data consistent with the Israeli study indicating vaccine effectiveness among nursing home residents declined to around 60% after six months. Data from the Mayo Clinic also suggested that vaccines had reduced effectiveness against mild disease but the same effectiveness against serious disease. That U.S. CDC study I mentioned also showed that effectiveness against serious illness remained strong. Where does that leave us on the waning effectiveness and boosters?

- I believe the science remains inconclusive on waning effectiveness. I see these studies, but they rely both on smaller data sets and on a lower number of antibodies in the blood. I have mentioned in prior updates with other diseases that reduced antibodies are common and that they don't signal reduced immunity. I suspect we will discover the same with COVID-19.
- The recommendation for boosters, particularly among the more vulnerable groups is, I believe, both political and practical. Practical because we have seen how COVID-19 impacts certain groups and you want to over-protect. It's also practical because the virus continues to circulate so broadly and preventing as many breakthrough cases as possible is good. But it is political in the sense that the science behind the need for a booster after six months is unclear. It is also political because it can be argued that the hundreds of millions of booster shots that will be administered could better reduce COVID-19 globally by being deployed in countries that have not had access to the first dose.

The State of the Pandemic

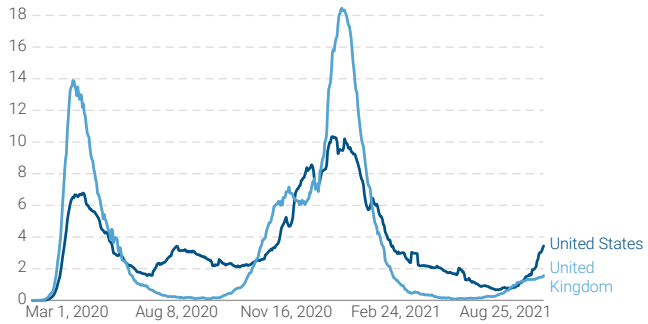
Where does that leave us? Let me use charts from "Our World in Data" to make a point. (Still the best site for charts on all sorts of data around COVID.) Let's look at the seven-day moving average of cases and deaths in the UK and the U.S.

Daily new confirmed COVID-19 cases per million people



Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing
Source: Johns Hopkins University CSSE COVID-19 Data.

Daily new confirmed COVID-19 deaths per million people



Shown is the rolling 7-day average. Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.
Source: Johns Hopkins University CSSE COVID-19 Data.

Cases have been on a pronounced uptrend in both countries, although the UK had a dramatic decline for a short period that no one can explain. This general uptrend in cases reflects, I believe, the fact that you need to reach much higher levels of vaccination and infection to prevent outbreaks. Encouragingly, neither the UK nor the U.S. has experienced anything close to the level of deaths that occurred when cases reached these levels before. That is likely because (a) the most vulnerable have been more effectively vaccinated and (b) the virus is most prevalent among younger and generally healthier parts of the population. These levels are still too high, but there is reason for hope as long as vaccination increases and the most vulnerable are protected.

I believe this will be the pattern in most of the world for some time: Slowly increasing vaccination levels with periodic outbreaks and fewer hospitalizations and deaths than experienced in prior outbreaks. That is not a great pattern over the next six-to-nine months, but there will be no magic point at which COVID-19 disappears. Singapore may provide the best example of where the world will be at some point in 2022. Singapore has said that they will no longer report COVID cases. They will only report COVID hospitalizations and deaths. They may have the right approach. We will begin to see COVID-19 as a disease that is generally among us, but for which we periodically vaccinate and about which we focus on those who are seriously ill. Those who are vaccinated are unlikely to be among the seriously ill. We are not there yet, but we are on that path. It's not where you wish you were given how effective vaccines are, but it is a good outcome given the number of people who refuse vaccination and the number of people globally who have yet to have the chance to receive a vaccine.

Ivermectin

Ivermectin is a drug that is used on livestock. It also can be used by humans but in much smaller doses. The drug is being tested (as are hundreds of other drugs) to see if it is effective against COVID-19. No test has shown any effectiveness. Why am I bringing up this obscure drug? Because it is an instructive case study in how misinformation and agendas drive behavior that prolongs COVID-19 outbreaks.

In Peru, Bolivia and parts of Brazil, the drug is being touted in news and social media (and even by some politicians) as a cure for COVID-19. Why? It's available is the best answer I can come up with now. But let's travel further North. Mississippi is a U.S. state with a vaccination rate of ~37%, the second lowest in the country. There is a great deal of skepticism about the vaccine and what it might do to your body. Part of that skepticism is fueled by some of the Fox News broadcasters who apparently double as doctors and scientists. Tucker Carlson, Sean Hannity and Laura Ingraham have all expressed, to varying degrees, the idea that you shouldn't be taking vaccines—they're risky, dangerous and, hey, how bad is a little bit of flu? On the other hand, all three have mentioned that Ivermectin could be an effective treatment for COVID-19. Why take an unproven vaccine when you can take a proven deworming medicine that is effective on horses and is being used in South America? The Mississippi Department of Health had to issue an alert last week warning people not to take the drug after noting that over 70% of calls to the State's poison control center were from people who had an adverse reaction after taking the drug. Over 85% of people who took Ivermectin to treat COVID-19 reported adverse symptoms.

The FDA sent this tweet: "You are not a horse. You are not a cow. Seriously, y'all. Stop it."

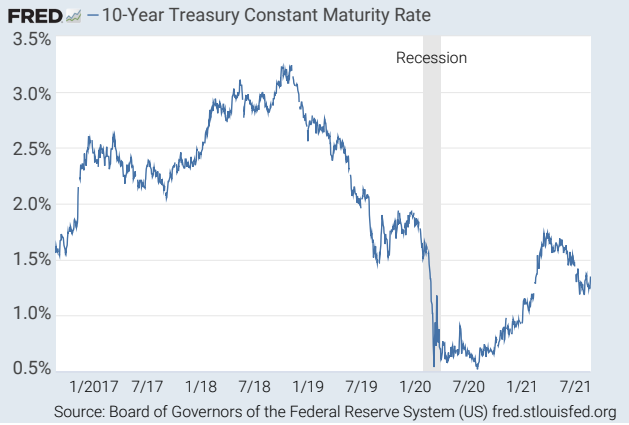
You keep thinking we're better than this, but maybe we aren't.

The Public Markets

1. In the public markets, the number one topic remains inflation. The question is really one around whether inflationary pressures will be strong enough to force the Fed to raise rates. My colleague Drew Schardt has written a great piece around this topic and the best I can do

here is direct you to [that article]. Well, I can do one more thing and tell you that the only faulty part of his writing is the juxtaposition of the words “Will Ferrell” and “comedic genius.”

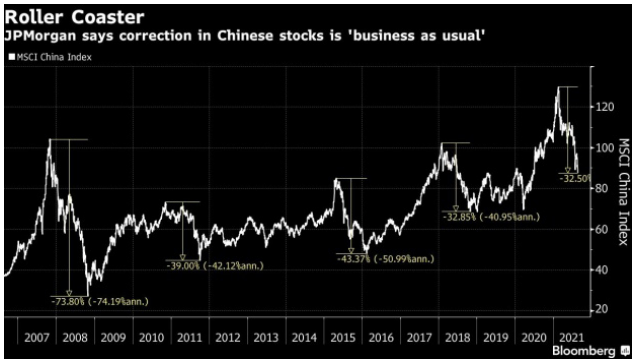
My own view is that we won’t be talking about inflation in a year. Drew gives the reasons better than I can, but I keep looking at the chart of 10-year U.S. Treasuries.



While I know we all know better than “the market,” that collective group of investors that we know as the market generally gets it right more often than any one of us. When I look at that 10-year chart, I’m hard pressed to say the market is particularly worried about inflation or the Fed raising rates. Yes, I’ve heard that the 10-year is distorted by accommodative Fed policies, but I’d still prefer to listen to that chart over someone explaining to me why all those investors are wrong.

2. We all know stock prices can’t go down, don’t we? Look at the S&P 500 chart over the last 10 years. (Try to remember how many times during that period you heard that prices are too high.) As I’ve said over the entire course of these updates, I have no idea whether the next 10 years will look similar to this or not. Neither does anyone else. But, I’ll mention two things. One is that the time to worry is when no one thinks you need to worry. I actually don’t think we are at that point yet, but that’s just an opinion.

The second point is not an opinion. It is that stock market performance is not solely a function of growth and that stocks can go down as often as they go up. Take a look at China’s stock performance over the last 15 years. China’s growth has easily exceeded that in the U.S. Its stocks have had nowhere near the run U.S. stocks have had over the last 10 years. Increasingly, as we think about where markets are headed, political policy matters.



3. I get asked a lot about cryptocurrency. I don’t know as much about them as I should. What I do know is that so many of the people that are passionate about climate change are also investing in Bitcoin. We’ve all seen the comments that Bitcoin mining consumes a lot of energy. How much? Bank of America Research provided some interesting data as we consider ESG in our investment decisions.

    - No other human activity has a higher carbon footprint.

- Bitcoin energy consumption has grown 200% over the last two years.
- Mining the currency consumes more energy than many countries, such as Greece, Czech Republic and Malaysia (which has ~32 million people).
- Bitcoin mining emissions in a year are more than American Airlines'.
- $1 billion in Bitcoin purchases is equal to the CO2 emissions of 1.2 million cars driven for a year or the annual energy usage of 632,000 homes.

The Private Markets

Investment Pacing

Everyone is back to market and if they are not, they are planning to launch in the next few days. If you invested your fund in 2.5 years, LPs think this is good as many GPs are in market off the back of a 2020 vintage fund. If you are venture/growth, ok, this is somewhat consistent with prior pacing, but lots of buyout GPs are accelerating their pacing and we have seen this movie before. What's really interesting is that everyone looks the same while thinking they are differentiated. In buyout land, here's what we see regularly: A 30%-50% net IRR (more if a heavy user of revolvers) in their last two funds; significant capital returned, with a couple 5-10x multiple deals which they just sold. A 5x exit does not get anyone excited anymore unless it was generated with an 18-month hold (IRR is all that matters after all). This is what "slightly above median" means today. We have to ask what kind of dynamics and behavior this kind of performance will drive on both the GP and LP side if this continues.

You've seen lots of Hamilton Lane research indicating faster investment pacing and shorter periods between fund raises is one of the more important indicators of a market that is getting frothy. My colleague John Stake presented an interesting comparison of a fund in a hot sector from 20 years ago and a fund in a hot sector today and the annual pace of deployment.

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Capital Calls	4%	3%	2%	5%	5%	7%	11%	44%	10%	8%

This fund had stellar returns prior to '07 and deteriorating returns after that period. Faster deployment was not the sole factor for that deterioration, but it's hard to argue that it wasn't at least an important factor. Here's the investment pacing of a fund in a currently fashionable part of the market. I know we have been assured that this time it's different and I have no doubt it is, but that's quite a ramp.

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Capital Calls	3%	3%	6%	9%	8%	5%	7%	14%	17%	27%

I have often used the cliché that history doesn't repeat, but it certainly rhymes.

Roses are red
Violets are blue
"This time it's different"
May not be so true

Here's a cautionary postscript: With everyone fundraising or planning to fundraise shortly, there's some bad news. While hot funds will continue to raise quickly, fundraising will take a long time for most funds. New investors are not arriving because they are so busy with re-ups. Existing consultants are showing up with asks 20-30% below their last fund commitments. We will soon enter a period where a number of general partners will make concessions to meet their targets.

Q2 Numbers

June numbers continue the private markets' incredible string of strong quarters. Recall in a prior update I mentioned a manager whose portfolio was up 80% or $8 billion for 2020 (and this wasn't a mega manager). They added another $5 billion of value this year. (Sadly, only up a little over 30%. Hopefully, they'll do better next quarter.) We thought their 2011 vintage fund, at something over 20% IRR, was doing well.

Now, we wonder what went wrong back then because their last two funds are over 40% IRR (and, yes, with high multiples and capital returned).

In that age-old debate about large versus small, the mega managers are not faring well in this cycle compared to some of these large growth managers and middle market buyout groups.

Mega deals are back and so are the club deals. Is this where we say we have seen this part of the cycle before and it doesn't end well? Here are some things that might be different:

- With the pandemic, are all bets off and we are in uncharted waters?
- Have GPs become better at playing nice together in the sand box?
- The club deals during the financial crisis didn't fail because they were club deals but because they had too much debt. GPs unable to agree or act quickly enough was a secondary problem.

On this one, I'm voting not to worry much.

Riding the Retail Wave

I've discussed the advent of retail money and what that might mean for the industry. Here is an interesting tidbit. We know of one manager who is quietly cutting the size of their flagship fund and will raise that money through private wealth channels (it's easier and quicker in almost every way). Is it simply a bull market phenomena or something that institutional investors will need to consider as the industry evolves?

And speaking of the wisdom of the Reddit crowds (we weren't actually speaking of anything like that, but it's always a good opening line). Let's talk about Hertz for a moment. Shortly after Hertz filed for bankruptcy in May of last year, retail traders pushed the price back to $5 a share. Recall Hertz was even considering a public offering to raise cash until the SEC shut that down. Everyone was saying how dumb that money was to provide any value for a worthless company. Uh, turns out the crowd was right.

Creditors were repaid and shareholders got about $8 a share. This has to be one of the best recoveries for a Chapter 11 filing. In the first offer, back in April, shareholders would have received NOTHING. But then some distressed for control/value investors from private equity land got into a bidding war. Was that seeing an opportunity or having nowhere else to put a lot of dry powder raised for distressed assets? We'll never know. Maybe they had some Reddit traders as advisors and recognized the value.

I know this bull market will not end because they never do, right? But, let's just wander into the world of fantasy and pretend it could end. I am indebted to my colleague Christian Kallen for his look at what might break this current valuation and deal frenzy. He says it won't be because of unrealistic revenue growth assumptions, but profitability. Revenue growth will continue to be healthy and may even accelerate with pent-up demand in industries that were left behind during the pandemic. Companies cannot get their products/services to clients fast enough and order books are at all-time highs. However, he notes that talk of cost increases is accelerating (no one in the private markets calls it inflation) and will probably be the main topic for the rest of the year for GPs. If you can find employees, they are expensive, with significant turnover in low-wage jobs, prices for raw materials are peaking, logistic/distributions expenses are through the roof, and supply chain challenges from overseas remain. Sound terrible? Not right now because everyone is pushing through price increases, all the way to the consumer (ironically, fueling more revenue growth, although not particularly profitable growth). GPs are more than willing to sacrifice EBITDA margin for growth because everyone is maniacally focused on growth (EBITDA is easy to adjust, revenue not so much so it is an easy give). Some GPs are dealing with this through add-ons that integrate vertically to reduce costs. But at one point we will be reminded of the price elasticity of demand and around that same point, or soon thereafter, lenders will put the hammer down as cash reserves continue to melt away. Cash will finally be king again.

I know. Will never happen.

But there are some signs that these factors will come into play. With respect to wages, for example, many GPs do not think that this is driven by the "unemployment benefits/stimulus checks" but a broader shortage of labor. That implies it is a trend that will stay. Difficulties in hiring at the low-end wage spectrum (i.e., restaurants, deliveries, etc.) are not because of the stimulus checks but because these are very poorly paid jobs in a currently hazardous environment with COVID exposure. You have to pay more for that risk and higher pay tends not to return to lower pay any time soon.

Also interesting is that some sales processes are being pushed back due to margin pressure. It's a bet on lower future costs. For example, if your company is selling a product for which there is high demand, your revenue is at an all-time high. But let's assume your main raw materials are also priced higher. Your EBITDA will be down 20% from your projections based on those revenues because of the higher costs. Will a buyer pay for the "adjusted EBITDA" on the basis that prices for the raw material will be lower in a year? Some GPs are willing to wait a year to get paid on the full EBITDA. What if prices don't fall? What if demand deteriorates? What if interest rates rise?

I know. Will never happen.

Life in Creditville today

- Preferred equity is appearing more often, particularly in aggregator platform deals. With interest deduction caps based off EBIT now and other benefits for pass-through issuers, there's not much difference in using preferred versus debt. Plus, there are plenty of buyers for this paper. What's not to like? A 14-15% yielding piece of paper with some downside protection is very attractive from a risk/reward perspective right now.
- When someone wants to point out that credit markets are in a bubble, they mention the increase in covenant lite deals. Recall in a market overview far, far away, Hamilton Lane argued that covenant lite deals after the GFC performed better and had higher recoveries. Causation is unclear, but I'll give you one reason. GPs are better at workouts than lenders. There, we said it. Now, lenders don't really want the keys. Why do something as time consuming and expensive as a workout if you are not good at it? Let the GPs figure it out.
- Remember during COVID when GPs were focused on relationships with lenders, so they had certainty of closing? Those days are gone, and GPs are now chasing the last turn of leverage and the extra basis point of price saving. Tough market.
- Delayed draw term loans ("DDTL") are a hot topic. Equity GPs want them and credit GPs are less excited to give them but must to be competitive. The dynamic gets more frustrating for lenders when the equity GPs come back for a 6-to-12 month extension request on a one-year DDTL, locking up that capital for even longer.
- Remember all the negative prognostication on the credit markets last year—the pending wave of distress, an almost certain oncoming spike in default rates that would work its way into the system over the next 12 months. Shortly after the onset of the pandemic and even with the announced stimulus, most estimated the peak default rate this cycle would reach 10-14%+ in the public credit markets. Oops. The default rate peaked at around 5% in September of 2020. There were zero defaults in March of this year.
- A year ago there was about $5.6 billion of commercial real estate on the books of special servicers (a third party used by a CMBS issuer to monitor and collect interest payments from defaulted borrowers). Today, this number is about $31 billion, with most of it represented by retail and hospitality real estate. But dry powder aimed at distress is estimated at over $300 billion, meaning buyers have to source elsewhere. This is driving cap rates down.

U.S. Infrastructure Spend

What does the bipartisan infrastructure bill that passed the U.S. Senate mean for private infrastructure investment opportunities? My colleague Brent Burnett penned a great overview of the infrastructure opportunity called "For Whom The Road Tolls." (The title alone should drive you to read it and you can find it here). He lays out the chart that I am copying in this section that provides a snapshot of the targeted spending in the bipartisan deal and the resulting opportunities for private infrastructure investors across relevant sectors (assuming the bill passes as written today):

Sector	Types of Infrastructure Assets	Targeted Spending	Impact on Private Investment Opportunities	Commentary	Likely Beneficiaries
Transportation	• Highways • Roads • Road Safety • Bridges • Rail • Airports • Port and waterways	$269 billion	• Neutral to negative	• Largest component of this is focused on roads and highways, which have been a very small target for private infrastructure investors in the U.S. Deals that have been done have benefitted from fulfilling capital needs not funded by government sources. Likely effect on roads and bridges is to crowd out private investments. • Rail spending targeted at Amtrak and public transport which have not been targeted sectors in the U.S. given public ownership and operations. • Amount allocated to airports and port facilities is negligible.	• Services – heavy civil construction, design and engineering firms. • Equipment – Think CAT, Komatsu and John Deere. • Aggregates – concrete, asphalt, sand and gravel assets • Trucking – road investment may improve efficiency, but labor elements of the plan may work against trucking cos.

Sector	Types of Infrastructure Assets	Targeted Spending	Impact on Private Investment Opportunities	Commentary	Likely Beneficiaries
Water	• Utilities • Treatment • Sanitation • Efficiency	$55 billion	• Neutral to negative	• Again, this has been a small sector target in the U.S. The few projects that have been done have benefitted from having a lack of public capital available to fund projects. Public capital likely to crowd out private capital for opportunities. • Unclear how much of this will be direct spending vs. subsidies or tax credits.	• Water utilities will be the largest beneficiaries, followed by service and pipe manufacturers
Data/Telecom	• Fiber • Towers • Data Centers • Spectrum	$65 billion	• Neutral to Positive	• Data/telecom has been a large target for private infra investors. While this plan does not favor particular technologies, the minimum upload/ download speed requirements would encourage additional fiber spending. • The plan also supports rural broadband buildout and may prioritize networks that are not owned or managed by profit seeking enterprises. • The plan subsidizes broadband for low-income households which could spur additional demand.	• Rural broadband providers • Fiber line manufacturers

Sector	Types of Infrastructure Assets	Targeted Spending	Impact on Private Investment Opportunities	Commentary	Likely Beneficiaries
Electricity	• Transmission • Distribution • Charging • Low/No Carbon Buses and Ferries • Electric Vehicles	$88 billion	• Likely positive	• Grid resiliency and reliability is a major theme in this bipartisan proposal. • The proposal includes incremental funding to reduce outages, improve demand response, capture carbon and promote research in clean hydrogen, modular nuclear reactors and energy efficiency. • Many clean energy initiatives favored by the Biden administration may be taken up in a broader $3.5 billion budget proposal later in 2021.	• Grid and transmission operators • Integrated utilities and distributed power generators • Nuclear power operators • Hydroelectric operators • EV companies • Ferry and bus fleet operators
Resiliency and Water Storage	• Cybersecurity • Waste management • Flood mitigation • Wildfire, drought and coastal resiliency • Ecosystem restoration and weatherization	$50 billion	• Likely positive	• This is a broad category of investment to improve resiliency across a range of sub-sectors and industries. • Investment could benefit operating infrastructure businesses by investing in their physical plant and secure them from both environmental and cyber threats.	• Waste management businesses • Environmental services providers • Digital infrastructure and software providers • Ecosystem restoration specialists
Miscellaneous	• Clean up of R&D abandoned wells, mines and Superfund sites • Semiconductors	$21 billion	• Neutral	• Not a target for private infrastructure investment	• TBD

Conclusion

There's a common scene in the Wile E. Coyote and Road Runner cartoons where Wile E. has run out over the cliff and realizes the cliff isn't under him anymore and he is going to plunge. (Are people allowed to watch those anymore? Are they too violent?) There's a bit of that feeling we all have right now. This isn't where we were supposed to be. We had vaccines, we had turned the corner, we were going to be done with COVID and on our way to whatever a post-COVID life is like. We each had our view of what that would look like and now we each deal with the fact that the path we thought was under us isn't there. Some react with denial, some with zen, some with anxiety, some with worry, some with anger. We all deal with it differently, but something I've noticed is that too many of us tend to have one of two opposite views. We assume that those around us are reacting with the same feelings we have or we assume that no one can understand what we have to deal with in this environment. Both are wrong. Really wrong. The range of reactions and feelings people have today is vast. And no one has a monopoly on feeling pressure or anxiety. No one. We have learned a lot about those around us during the pandemic. Oddly, the remote environment we found ourselves in increased our personal connections. It did that because it tore out the boundaries we have between work and home. We put cameras into our homes and visited each other and called it work time. We watched kids and dogs and random strangers wander across and through our conversations. We heard lawn mowers, garbage disposals, trash trucks and barking while we talked about investment returns. How did we not learn how differently we react to change and stress and uncertainty? How did we not see that what we see might not be how others are seeing the same things, how they are reacting to the same conditions but not at all the way you are? The way I am? I have said this for a year and a half and I'll say it again: This is all hard because we've never gone through anything like this. It was one thing to be locked down, but we saw the vaccines and believed it was all going to be done in September. Now, we almost find ourselves singing that Green Day song, "Wake me up, when September ends." This is hard. Again. OK, we got through much harder. Every one of us. A year ago was much harder than today. A year from now will be much easier than today.

Here's my advice for this update. Spend a couple of moments thinking less about your own feelings, whatever they are, and spend a couple of moments in each conversation trying to understand what the other person is feeling. Just a few seconds, maybe five, don't go overboard here, then return to your regularly scheduled internal dialogue. You'll find it makes things easier for you and for those around you.

One other piece of advice: It might be hard to get your bearings at times and you might feel like Wile E. over that cliff. But he survived and went chasing after the Road Runner the next day and the day after that and then again the day after that. It's the chase that's fun. Roads come and go, scenery changes, but the pursuit is eternal.