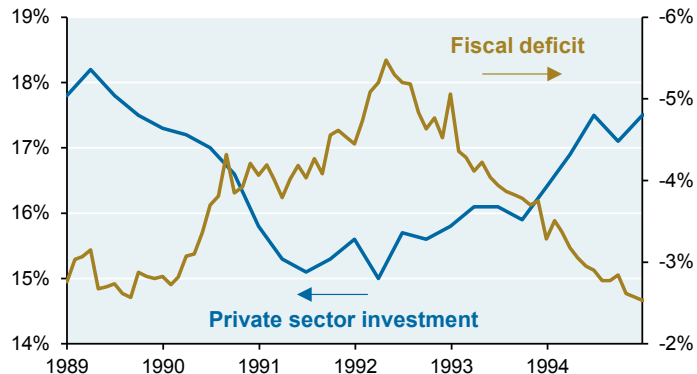




Topics: Biden goes for broke; the Value recovery; COVID herd immunity, the path to normalcy and rising concerns about thrombosis risks from vector vaccines

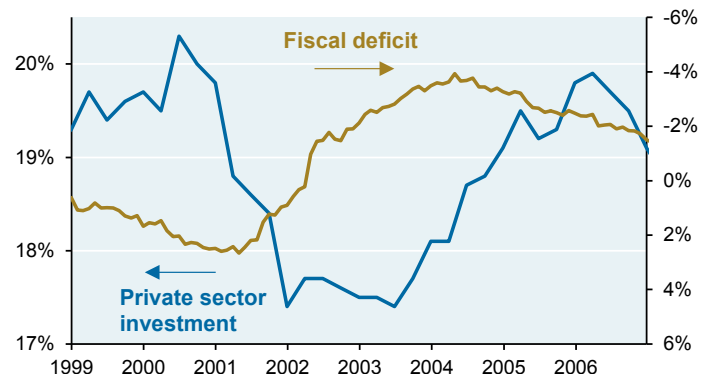
See the four charts below: one of these things is not like the other¹. Usually, the government steps in with higher fiscal deficits to offset a shortfall in private sector demand. In 1991, 2000 and 2008, that’s how it worked; these two series moved in opposite directions. But in 2021, **both lines are moving in the same direction: massive fiscal stimulus just as private sector demand is recovering.** Biden’s policy to “go for broke on growth” is getting a lot of traction in equity markets: over the past five months, global equity funds have seen nearly \$570 billion of inflows, which is more than the past 12 years *combined* (\$450 billion).

Private sector investment vs fiscal deficit: 1991
 % of GDP (Private sector investment), % of GDP, 12 month avg (inverted) (Fiscal deficit)



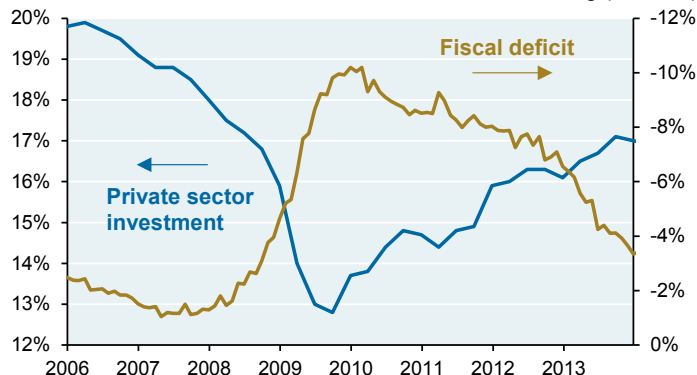
Source: BEA. 2021.

Private sector investment vs fiscal deficit: 2000
 % of GDP (Private sector investment), % of GDP, 12 month avg (inverted) (Fiscal deficit)



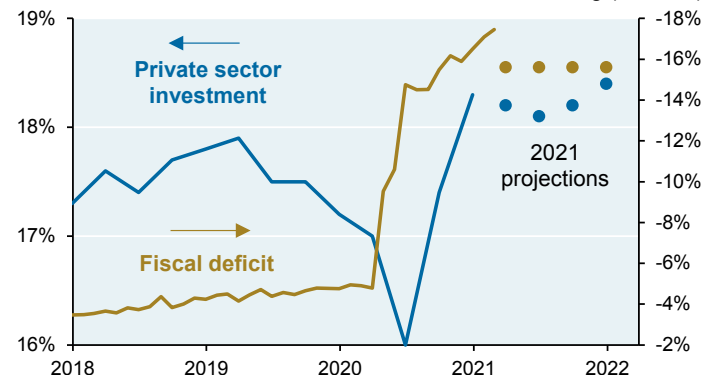
Source: BEA. 2021.

Private sector investment vs fiscal deficit: 2008
 % of GDP (Private sector investment), % of GDP, 12 month avg (inverted) (Fiscal deficit)



Source: BEA. 2021.

Private sector investment vs fiscal deficit: 2020
 % of GDP (Private sector investment), % of GDP, 12 month avg (inverted) (Fiscal deficit)



Source: BEA, CRFB, JP Morgan Economic Research. 2021.

As a result, some coincident and leading indicators are at or close to all-time highs. Many are good omens while others are not (federal debt and deficits, equity valuations, margin debt and supply shortages). A large rebound in pre-tax earnings would ordinarily be a powerful bullish signal but this time it’s partially offset by rising inflation expectations, rising input costs and rising corporate taxes (discussed at length in our April 1st note). The **recent rollover in cyclical, low quality and small cap stocks** is a sign that good omens are partially priced in. The S&P is up 11% already this year, driven by surging value stocks (see pages 3-5); I can imagine a slow grind higher in the months ahead with the biggest risk being another rise in inflation expectations.

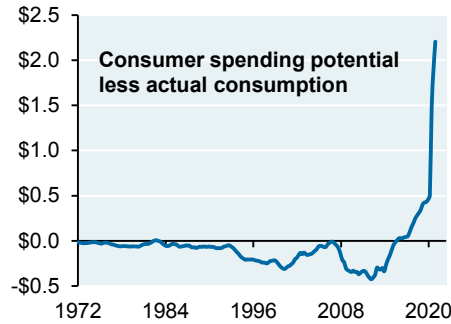
¹ **Ernie** from Sesame Street has been known to sing this song. In 2012, Legal analyst Dahlia Lithwick categorized Ernie as a “**chaos muppet**”, acting solely on impulse and emotion. Lithwick also included Supreme Court Justices Breyer and Scalia in this category. She described “**order muppets**” such as Bert, Kermit and Justice John Roberts as slightly neurotic, highly regimented and averse to surprises.



CHARTS: AT OR CLOSE TO ALL-TIME HIGHS

Excess spending potential

\$tn, rolling 4 quarters



Source: Fed, BEA, JPMAM. Q4 2020.

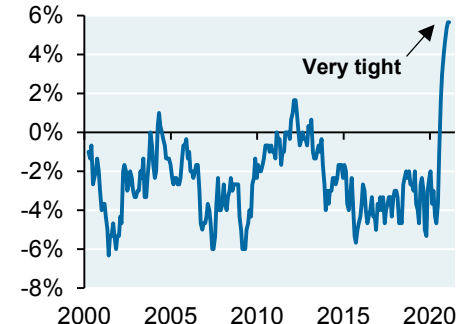
Home sales

Monthly sales / inventory



Source: National Association of Realtors. Mar. '21.

Business inventories, % inventories too low - too high



Source: NFIB. February 2021.

Global services survey

Index, 50+ = expansion



Source: Bloomberg. March 2021.

Global manufacturing survey

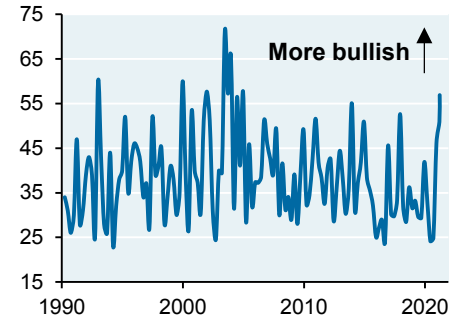
Index, 50+ = expansion



Source: Bloomberg. March 2021.

Bullish investor sentiment

Index, sentiment over next 6 months



Source: AAI, Bloomberg. April 8, 2021.

Chinese shipping rates

Index



Source: Bloomberg. April 9, 2021.

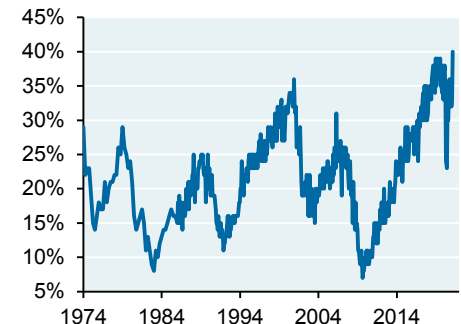
US job openings

% of adult labor force



Source: BLS. February 2021.

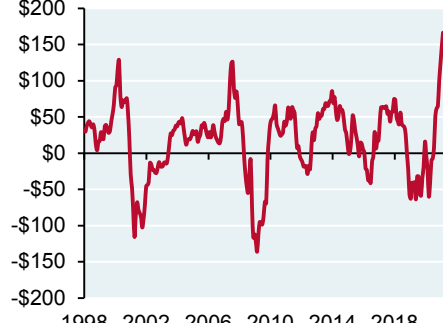
Small businesses with "hard to fill" job openings, % of respondents



Source: NFIB, Bloomberg. March 2021.

Debit balances in margin accounts

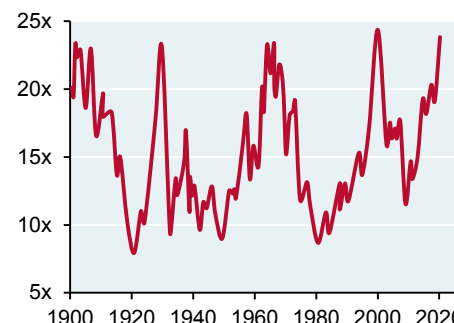
Billions of 1998 US\$, y/y change



Source: FINRA, Bloomberg. February 2021.

Enterprise value to cash flow

Ratio

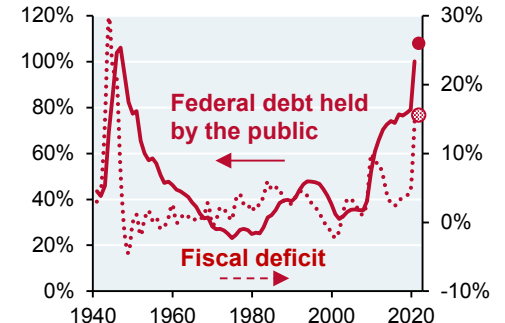


Source: Bridgewater. March 2021.

Debt and deficits

% of US GDP

% of US GDP



Source: CBO, CRFB. 2020. Dots = 2021 estimate



Absolute Value: After a huge rally, where do value stocks stand? It depends on who's asking and why

Value stocks have experienced a sharp rebound both in US and non-US markets². Value benchmarks are now above pre-COVID levels and are pricing in a lot of the good news on the prior page. P/E ratios for US value stocks were 15 in Dec 2019, fell to 11.5 in April 2020 during the COVID selloff and have recovered to 17. Even so, the value rally has been uneven: around 50% of financial, energy and industrial stock prices in the All Country World Index are still below pre-COVID levels.

US value performance

Total return index, December 1996 = 100



Source: MSCI, Bloomberg. April 13, 2021.

All Country World ex-US value performance

Total return index, December 1996 = 100



Source: MSCI, Bloomberg. April 13, 2021.

Have value stocks recovered any of their underperformance vs growth stocks?

While value stocks have rallied sharply since last summer, they have recaptured little of the *underperformance* they experienced vs growth stocks over the last decade. The simplest way to illustrate this is with a ratio of value and growth index performance. These charts are a tale of two eras: value stocks outperformed from 2000 to 2007, and growth stocks outperformed from 2008 to 2020.

US value vs growth performance

Value index / growth index



Source: MSCI, Bloomberg. April 13, 2021.

All Country World ex-US value vs growth performance

Value index / growth index



Source: MSCI, Bloomberg. April 13, 2021.

² Value rallies are supposed to be great news for **European equities** given its higher allocation to value sectors. However, the region has managed to snatch defeat from the jaws of victory yet again, at least so far: the MSCI Europe index is underperforming the US in 2021 in both local currency terms and in dollar terms.



Why did value underperform growth for so long and has anything changed?

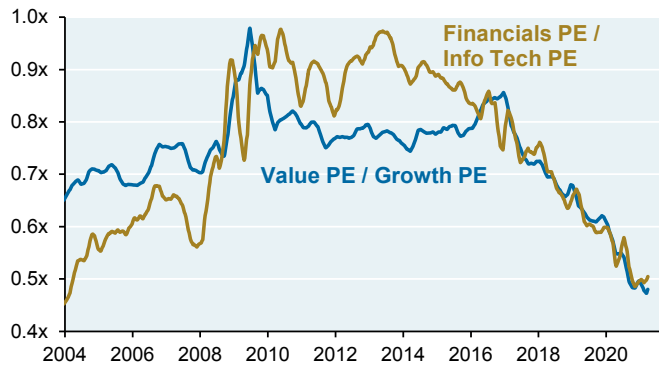
Value first underperformed growth due to slower earnings growth, and then due to a surge in growth stock multiples. The relative P/E multiples of value stocks are still at their lowest levels for this cycle. We illustrate this dynamic in the next two charts which compare P/E ratios for value and growth.

From 2010 to 2017, relative P/E multiples were stable even as growth outperformed value. This reflects a growth stock rally that was driven by much faster earnings growth. In other words, **growth outperformed value for a good reason from 2010 to 2017: investors paid for faster earnings growth**. Then, relative multiples collapsed as investors discarded the discipline they had been imposing: since 2017, value multiples actually rose from 15.7 to 17.2 while growth multiples ballooned from 19.5 to a staggering 33.7.

Note that these charts are **heavily affected by relative performance of banks and tech stocks** which have high weights in US and non-US benchmarks. While tech companies have generated high profit margins and earnings growth, banks never recovered the valuations they commanded before the financial crisis, particularly in Europe. As for energy, we have discussed before how shale overexpansion resulted in the lowest oil & gas valuations relative to the market in 90 years. We made a bullish call on energy last June in our annual energy piece, but that was on an absolute basis and not a relative one. Since last June the S&P 500 energy sector is up 37%, roughly the same as the overall market. Energy is up 28% so far YTD compared to 11% for the S&P.

US value vs growth: P/E ratios

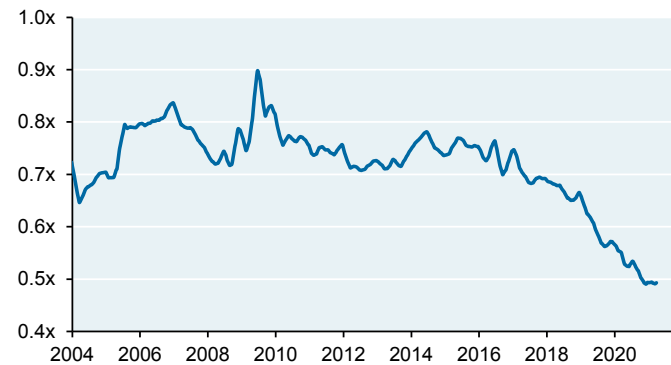
Relative 12 month forward P/E ratios



Source: MSCI, Datastream. April 7, 2021. 3 month smoothing.

All Country World ex-US value vs growth: P/E ratios

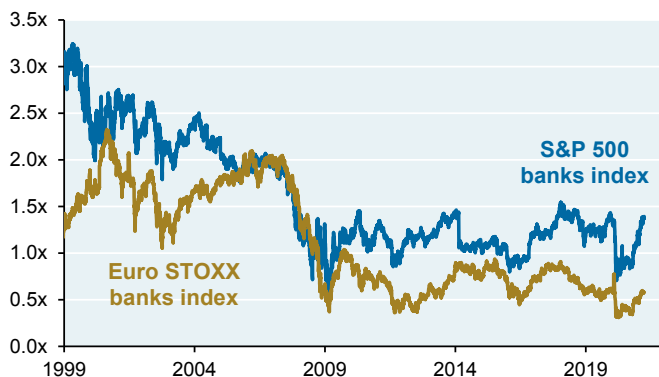
Relative 12 month forward P/E ratios, value / growth



Source: MSCI, Datastream. April 7, 2021. 3 month smoothing.

US and European bank price to book

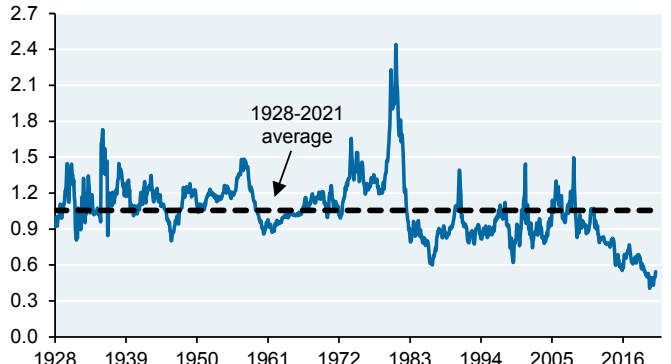
Ratio



Source: Bloomberg. April 13, 2021.

Energy sector valuations at all-time lows vs the market

Energy stocks price to book divided by market price to book



Source: Empirical Research Partners. February 2021. Equal weighted portfolio.



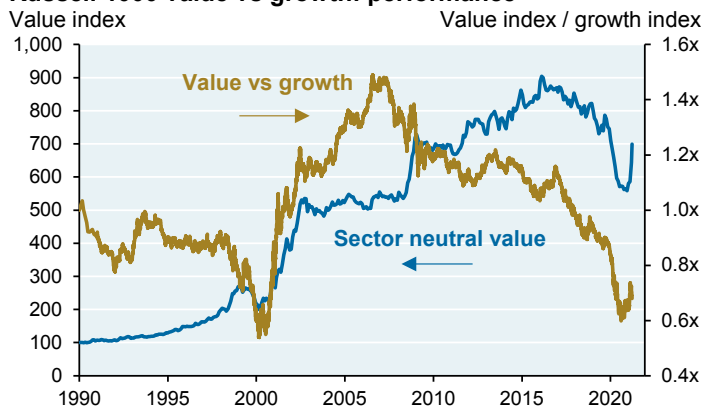
Value as a stock selection tool

“Technology outperformed banks and energy, and little of this outperformance has been reversed so far”

That is a blunt force conclusion that’s true primarily for **those choosing which sectors to invest in, which is how market cap weighted portfolios essentially work**. There’s another category of investor that’s worth focusing on: **portfolio managers using value as a stock selection tool**. In other words, *within* technology, healthcare, banks, energy and the other sectors, how beneficial has it been to use value measures such as price to book and price to cash flow to pick stocks? This is where it gets interesting:

- **Value as a stock selection tool has done better than you might think.** First, let’s examine the potential benefits from using value to pick stocks. Such models look at each sector separately, sort companies from top to bottom according to a given value measure and then construct a paper portfolio that owns the cheapest value stocks across all sectors and underweights the least attractive value stocks. Portfolio managers using these models to actually pick stocks typically invest in *all* sectors with small sector deviations vs the market. That’s why they are often referred to as using a **“sector-neutral”** approach (i.e., no sector biases), and also as “structured equity” managers
- **Sector-neutral value portfolios are represented by the blue lines below:** the one on the left is from JP Morgan Asset Management when applied to the Russell 1000 using price to free cash flow, and the one on the right is from Goldman when applied to the S&P 500. Methodologies and presentation measures differ, but the contours are very similar. The gold lines are the traditional “value vs growth” performance measures shown on the prior page. Note how performance of sector neutral value-driven portfolios can sharply diverge from performance of value stocks vs growth stocks. These are two very different things

Russell 1000 value vs growth: performance



Source: Bloomberg, JPMAM. April 13, 2021.

S&P 500 value vs growth: performance



Source: Bloomberg, GS. April 13, 2021.

- **Value actually worked very well as a stock selection tool from 2002 to 2017/2018.** Then “value” fell apart, both on a traditional basis relative to growth and on a sector-neutral basis as growth-mania set in. While value stocks have only recovered a small amount of underperformance vs growth stocks, value as a stock selection tool recovered more rapidly in the last 3-4 months
- **Bottom line: in aggregate, value stocks have recovered in absolute terms and their P/E ratios now exceed pre-COVID levels.** I don’t have high conviction that banks and energy stocks will meaningfully close the performance gap with technology stocks. If so, value vs growth index performance comparisons may look cheap for a while longer. However, I do believe that asset managers using value as a stock selection tool in sector-neutral portfolios will continue to earn back a lot of what they lost since 2017



Herd immunity, a return to normalcy and thrombosis risks from vector vaccines

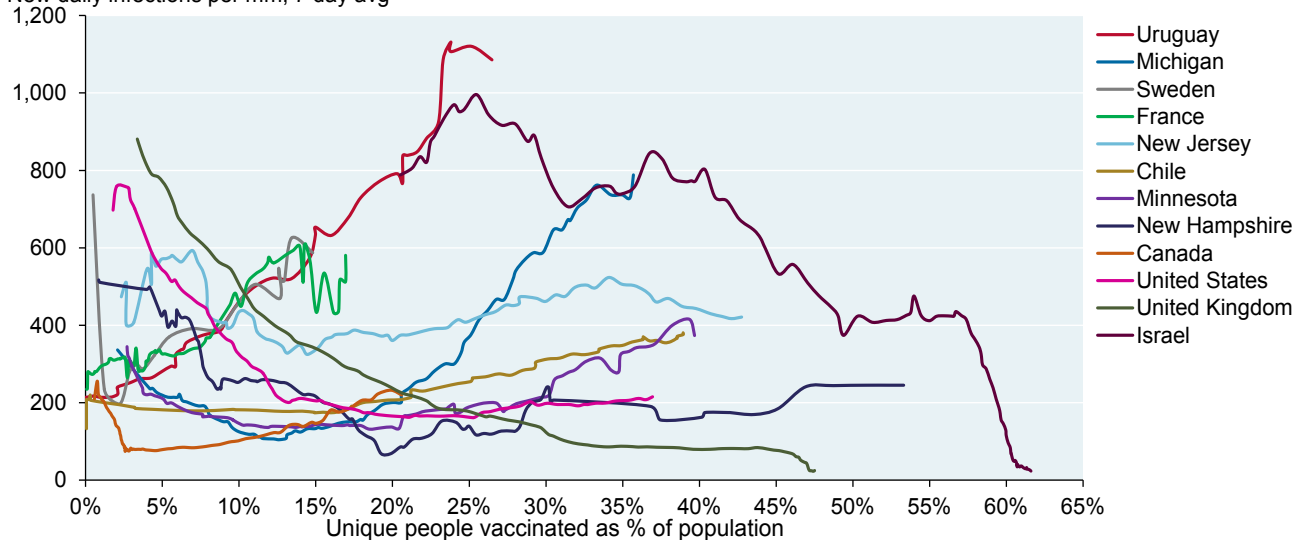
Let's start with the bad news: it's unlikely that prior exposure to COVID and COVID vaccinations will result in the textbook definition of sterilizing herd immunity (effective elimination of community spread). Vaccine hesitancy, emergence of new variants, reduced vaccine efficacy (i.e., vs South Africa & Brazil variants), delayed vaccinations for children, low vaccination rates in emerging countries and uncertainty on whether vaccines prevent asymptomatic spread all make textbook herd immunity a practically unreachable goal. It looks like COVID will become an endemic disease like the flu, and will need to be treated accordingly.

The good news: a return to normalcy can still be attained when/if seroprevalence (prior exposure + vaccines) drives infection, hospitalization and mortality down on a sustained basis. We're looking for signs of a "path to normalcy" and wanted to share the results so far. The challenge: most gov'ts are not conducting widespread antibody testing and do not publish a breakdown of vaccinations between previously infected and uninfected people. As a result, we cannot track total seroprevalence and can only plot COVID outcomes vs vaccination.

Let's start with vaccinations vs infection for select countries/states. Given the disparity in lockdowns, vaccines and variants, and the natural fall-off in respiratory infections in the spring, we are not drawing a lot of hard and fast conclusions from this data. That said, here's what we are seeing so far.

Infections vs vaccinations

New daily infections per mm, 7 day avg



Source: OWID, JPMAM. April 13, 2021.

- While **UK** infections started declining almost as soon as vaccinations began, the UK also had one of the more restrictive lockdowns in the world which makes it difficult to isolate the impact of vaccinations on infection
- **Israel** did not experience a sustained decline in infections until vaccinations hit 60%. We estimate that Israel had a COVID survivor population of ~10% before its vaccinations began, but we don't know how many of these people were then vaccinated or not. If we split the difference, herd immunity may have started to appear at around 65% total "seroprevalence" (antibodies from vaccines + unvaccinated survivors combined)
- At a ~35% vaccination level, infections in **Minnesota, Chile, New Hampshire and Michigan** are still rising. Let's take a closer look at **Michigan**. At the end of 2020, CDC sampling showed survivor antibodies of 18% in Michigan. If we assume that half of this population is still not vaccinated, **Michigan's rising levels of infection, hospitalization and mortality are occurring at seroprevalence levels of over 40%**
- Surging infections in **Uruguay** at 25% vaccination levels are also concerning and most likely reflect infections imported from Brazil



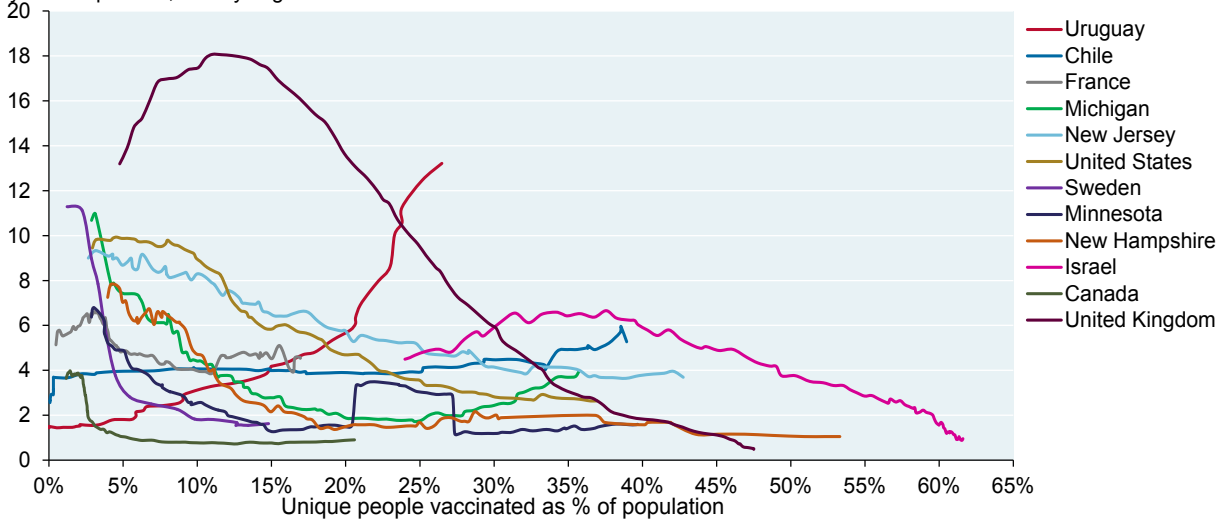
Vaccines have been more successful in reducing mortality and hospitalization in locations we’re tracking.

Both have declined by 70% in the US, a country with minimal mobility restrictions. Even so, there are exceptions: in Michigan, Minnesota and New Jersey, mortality and hospitalization are flat or rising after earlier declines. The same is true in Chile and Uruguay. Also: while mortality and hospitalizations are important metrics, so are infections given long term COVID survivor risks.

Bottom line: the only country that might be close to COVID normalcy is Israel, and its total seroprevalence is probably 65%+. In contrast to wildly uninformed projections I saw last year³, herd immunity almost certainly does not occur at seroprevalence below 40%. If that’s the case, governments around the world will need to push harder to overcome existing pockets of vaccine resistance...**which may be a little more difficult given concerns about thrombosis risks from vector vaccines (see next page).**

Mortality vs vaccinations

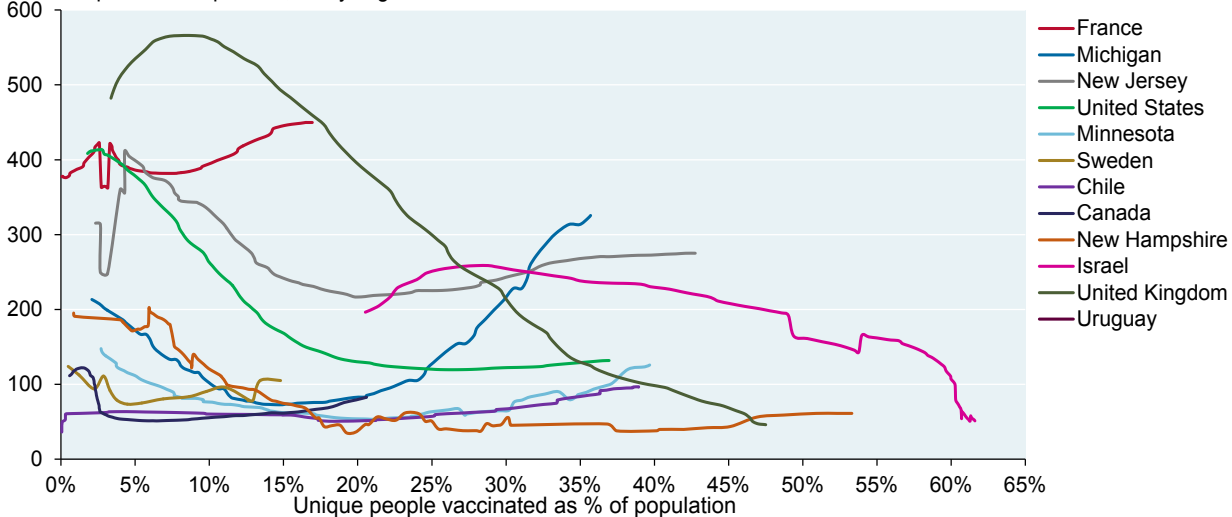
Daily deaths per mm, 14 day avg



Source: OWID, JPMAM. April 13, 2021.

Hospitalizations vs vaccinations

Current hospitalizations per mm, 7 day avg



Source: OWID, JPMAM. April 13, 2021.

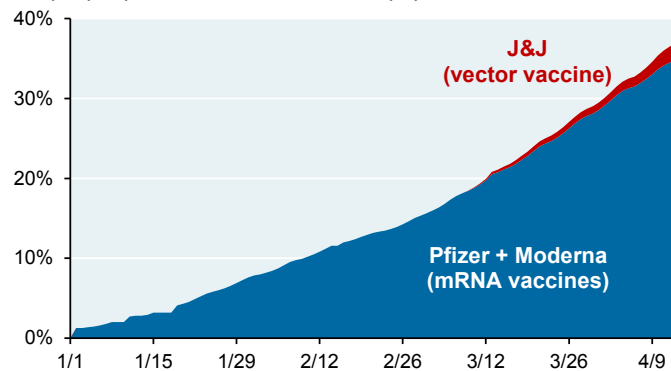
³ Last August I wrote about Fundstrat Research which based its 10%-20% herd immunity estimate on a former ophthalmologist whose COVID videos were pulled by social media, who has a “not medical advice” caveat on his Twitter profile, who has no known experience treating COVID-19, whose medical license expired in 2019 and who was part of the hydroxychloroquine misinformation chain. There’s a lot of really bad COVID stuff out there.



Thrombosis risks and COVID vector vaccines: what we know so far⁴

US vaccinations by type

Unique people vaccinated as % of US population



Source: OWID, JPMAM. April 13, 2021.

Impact of vector vaccine pauses and age restrictions

- 50% of pop. vaccination timelines broadly unchanged: US (mid May), UK (early May), Canada (late May) and Europe (July), Japan (Sept), Australia (Sept)
- Pfizer/Moderna were already expected to provide the bulk of the vaccination coverage this summer
- Given adverse events of 1:170,000 in Europe and 1:1,000,000 in the US, we expect eventual resumption of J&J vaccines in the US for older populations
- US likely to run into declining vaccine demand before J&J availability issues become a constraint
- Possible impact: decline of 3%-5% in the vaccinated population in the developed world by late June

Background

- The only vaccines approved so far in the developed world are **genetic vaccines**. Pfizer and Moderna are mRNA vaccines, and J&J and AstraZeneca are “Trojan horse” vector vaccines which use an unrelated virus to deliver genetic instructions to the body’s cells. See Section 4 on our virus portal for more information
- Thrombosis refers to **abnormal blood clots which can lead to pulmonary embolisms**. So far, 169 cases of cerebral venous sinus thrombosis (CVST) and 53 cases of splanchnic vein thrombosis (SVT) were reported in Europe out of 34 mm doses of the AstraZeneca vaccine. The European Medicines Agency (EMA) believes that a plausible explanation is an autoimmune reaction similar to “heparin-induced thrombocytopenia”, a rare clotting disorder affecting 1%-2% of people after exposure to the blood thinner heparin
- One study: 11 patients in Europe had unusual thromboses and moderate/severe thrombocytopenia 5 to 16 days after receiving the AstraZeneca vaccine. None had received heparin in the past; nine were women and the median age was 36. Five had more than one clotting event, nine had CVST, three had SVT, three had pulmonary embolisms, and four had other thromboses. Six of these patients died. German scientists refer to these outcomes as “vaccine induced immune thrombotic thrombocytopenia” (VITT)
- A Norwegian study in the New England Journal of Medicine analyzed 5 patients with VITT after the AstraZeneca vaccine. All patients had high levels of the same autoantibodies without past exposure to heparin. Five had CVST and three died. “These results strengthen the view that vaccination may have triggered the syndrome. Although rare, VITT is a new phenomenon with devastating effects for otherwise healthy young adults and requires a thorough risk-benefit analysis” [Nina Schultz, Oslo University Hospital]
- The EMA, the WHO and Britain's MHPRA issued statements saying that overall benefits outweigh risks of very rare blood clots from the AstraZeneca vaccine. **Even so, many countries in Europe now place age restrictions on the AstraZeneca vaccine:** Germany and the Netherlands limit it to people over 60, France set 55 as the threshold and Britain advises that people under 30 without underlying medical conditions take a different vaccine. Norway halted vaccinations, and Canada/Australia also imposed age restrictions
- More than 6 million doses of the J&J vaccine have been administered in the US. There have been 6 cases of thrombosis, all women between the ages of 18 and 48 who experienced CVST and thrombocytopenia within 6 – 13 days of getting the vaccine. One died and another is in critical condition. As a result, the CDC and the FDA recommended today that the US “pause” J&J vaccinations while these risks are assessed

⁴ “From VIPIT to VITT: Thrombosis and COVID Vaccines - More data support link between adenovirus vector vaccines, blood clotting, and low platelets”, Veronica Hackenthal, MedPage Today, April 9, 2021

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