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#virus

US Inflation

COVID-19 and Inflation: Chained to demand, not the supply chain

Supply chain disruptions can lead to higher inflation, and the global COVID-19 outbreak has caused such concerns. However, when we evaluate CPI on a component level, we find that the negative effects on demand are likely to outweigh those from supply chains, and we see risks as skewed to the downside in the coming months. We also consider why inflation may respond differently than in previous downturns.

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The rapid and wide spread of COVID-19 poses significant risks to the global economy, and the US is unlikely to be shielded from their effects. Fully appreciating that the assessment of these risks is fluid and evolving rapidly, in this note we take a first pass at evaluating what the implications might be for US inflation. There has not yet been meaningful data that show the fallout on the US economy, so we have to be forward-looking and base our analysis on historical experiences where possible. We consider its effect on inflation through two main channels:

- Supply chain disruptions that might lead to shortages of certain imported goods for intermediate production or final consumption. This channel could be a boon to inflation, but there are copious caveats and offsets.
- A shock to demand that emanates from the COVID-19 outbreak and quickly spreads to more than one sector of the economy, leading to a slowing in demand that can vary from mild to severe. Here we see a direct negative from an already-realized drop in energy prices. Other potential forthcoming downward pressure could come from travel-related sectors and an indirect effect (via mortgage rates) on the heavily weighted shelter component.

While, in our view, the negatives on inflation from the demand side outweigh potential positives from supply chain disruptions, we believe this time will be different from the global financial crisis, for a number of reasons: 1) the outbreak has caused more of a supply-side shock, and the usual tools used to boost demand may not work as well; 2) we do not expect housing (rent/OER) to decline as much because there is not enough vacant housing inventory to pull prices down; and 3) some supply chain disruptions could be mildly inflationary in the near term.

Some of these factors suggest that the effect on inflation would not be as bad, eg, if shelter does not turn negative, as it did after the financial crisis. But others, such as a lack of monetary and fiscal tools to deal with the problem, proximity to the ZLB, and a general lack of preparedness for a supply side shock, suggest that it could be worse in other dimensions.

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Supply chains disruptions

A shortage of goods could be a short-term boon to inflation

To evaluate the effects of our first main transmission channel, supply chain disruptions, we find the following three aspects are particularly important to pin down: the channel through which the supply chain could affect inflation, how fast could it feed through to domestic prices, and finally, the size of the effect.

The fast spread of the virus and the abundance of caution with which policymakers, businesses and the public are approaching it suggest that we are heading toward a scenario of supply chain disruption that has multiple centers because of quarantine efforts to contain the virus by a number of countries where it is spreading rapidly. Measures put in place thus far to protect public health are sure to be significantly disruptive to economic activity. Uncertainty around such events is high, but we think it is worth stressing the inflation forecast for this type of scenario.

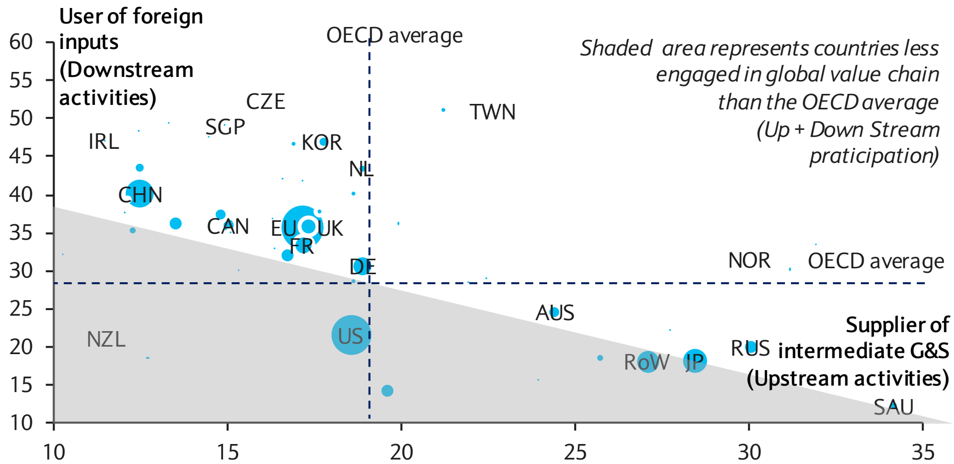
In our view the main effect would be felt on core goods prices. It is possible that severe supply chain disruptions can lead to acute shortages of certain goods which would put upward pressures on prices. The COVID-19 outbreak disruptions can potentially become severe at a global level, especially if the virus continues to spread quickly and countries adopt quarantine measures that reduce or altogether stop activity across sectors of the economy. We are already seeing some of this play out in Asia with factories in Korea closing on reports of shortages of parts imported from China. If the spread is wider, as current data on Europe and the Middle East suggest it might be, then the order of magnitude of the shortages would certainly be significant.

We expect any short-term disruption to the availability of intermediate and consumer goods to work with a lag of about one quarter. This is in part because the inventory stock of retailers will likely absorb some of the near-term demand/supply mismatch. For instance, large US retailers such as Walmart will typically hold inventories of goods (domestic and imported) that amount to anywhere between 40-60 days' worth of sales. In addition, while imports from China to a number of Asian economies already dropped sharply in February, such responses in the US data should come later given the geographical distance. Much of US trade with China is done out of major ports in California, Washington and New York, where cargo shipping times vary between 2-4 weeks. With the addition of processing times at ports and domestic transit it is possible that US businesses and consumers may not have felt the supply chain pinch yet, and it may only become evident in late Q1 20 or early Q2.

But, shipping issues could also lead to some disinflationary supply chain effects. Because shipping from China into US ports has been disrupted, fewer containers are available for US exports. This is a particular problem for perishable food exports, which rely on refrigerated containers. Fruit and other perishable goods which would have typically been destined for exports might end up hitting the domestic market instead. Another reason to expect the shock from global trade disruptions to be smaller on US CPI is that the US is considered to be one of the countries less engaged in global value chains than the average OECD country (Figure 1).

FIGURE 1

The US is less engaged in global value chains than the OECD average



Note: This figure first appeared in *Brexit trade trade-offs - Part I: There's no market like the single Market*.Source: OECD, Barclays Research

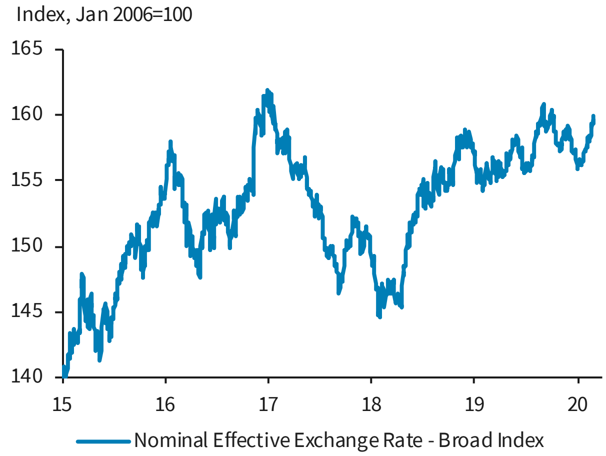
"Out-of-stock" more likely than price gouging

While a decline in supply could lead to higher prices in some categories, we see only a limited effect on overall CPI from supply-chain disruptions. Similar to the tariff story stemming from the trade war with China, the supply-chain disruptions are likely to be concentrated on a sub-sector of goods, and not likely to have much of an impact on consumer prices more broadly for several reasons. On tariffs, we argued that because the import share of US goods sales was relatively low, so would be the effect of higher import tariffs on prices (*US-China Trade Tariffs: The Costs are yet to Come*, September 26, 2019). While there were some import-sensitive core goods CPI categories where a tariff effect was evident, the weight of these was fairly small. Tariffs are a form of supply-chain disruption and we believe the same arguments holds in the current scenario.

Changes in the value of the USD can also offset the inflationary pressures from abroad. The USD has appreciated roughly 2.5% in the first two months of the year in nominal trade-weighted terms (Figure 2). Based on our analysis using vector autoregressive estimates (VAR), we find that a 10% appreciation of the US dollar would lower domestic consumer prices by roughly 40bp. Our VAR results suggest that the offsetting effect of the stronger dollar will play out primarily through the response of core goods prices. This seems plausible to us, given that the import penetration in consumer goods has increased significantly during the past few decades, while that for services has been stable at very low levels (Figure 3). In a similar fashion, we would expect the effect of global supply chain disruptions to feed into consumer prices through the goods inflation channel, as services inflation inputs are predominantly of a domestic nature. Currency appreciation of a magnitude similar to what has occurred since the start of the year would be a drag of roughly 10bp on US inflation.

FIGURE 2

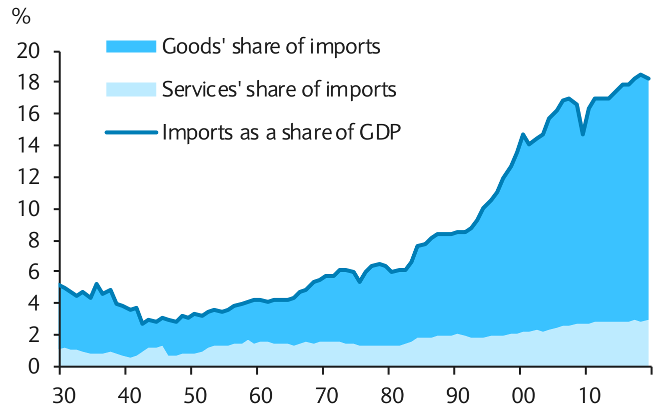
The USD has appreciated significantly since the start of 2020



Source: FRB, Haver Analytics, Barclays Research

FIGURE 3

Global value chains matter more for the goods sector



Source: BEA, Haver Analytics, Barclays Research

One cannot exclude opportunistic price behavior from some importers or retailers that could push up the price of certain goods in anticipation of future shortages and significant demand. However, we think that in the current climate this type of behavior may be limited and discouraged. On products where inventory is low because of a decline in trade, we expect that large corporations are unlikely to price gouge, and instead will put up a 'temporarily out-of-stock' sign or absorb the higher production cost of an alternative supply chain, at least as long as the disruption is expected to be short-lived. There might be some alarming headlines about price spikes in goods which are in short supply and have inelastic demand (eg, medical masks and bottles of sanitizer), but we see those as likely to be caused by isolated, anecdotal stories. All told, we think that any positive effect to inflation from supply chain disruptions would likely be with a delay and only modest positive on overall CPI.

Demand shocks

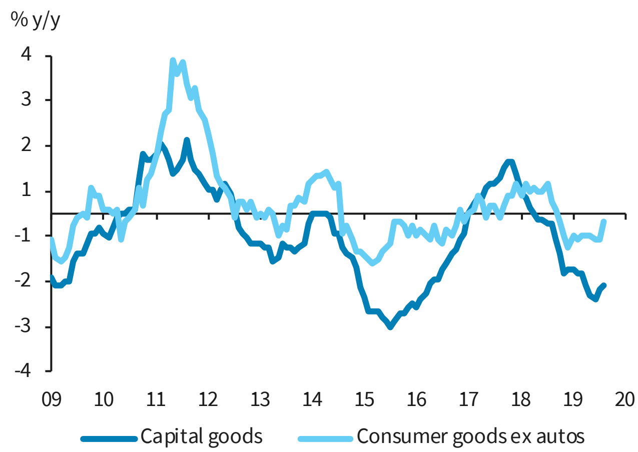
Tell-tale virus symptom: Loss of energy

While we expect the supply side effects to be limited, the demand side has already been a clear negative to the direction of inflation, even if there is significant uncertainty as to the magnitude. One thing we know with certainty is that concerns over demand destruction has led to lower energy prices. AAA reports that average US retail gasoline prices are down nearly 7%. Applying this to the relative importance of energy commodities CPI of 3.6%, it alone is worth a 25bp drag on 1y headline CPI.

Other categories could be effected by a drop in demand as well. The Fed's Beige Book this week noted that COVID-19 concerns were hurting travel and tourism, and this was based on reports on or before February 24, which seems long ago in terms of market moves (the 10y nominal Treasury closed at 1.37% that day; it is now 0.95%). As airlines cancel flights and a decline in foreign visitors to the US leave hotel rooms vacant, the effect on spending in these areas is clear. To follow could be a drop on demand for other services such as restaurants, sporting events, concerts and other public venues. What is not known is how much prices might be lowered to entice demand; after all, demand curves might be inelastic in these areas because fear may win out over lower prices. However, even if the magnitude is uncertain, the directional effect on prices is clear.

FIGURE 4

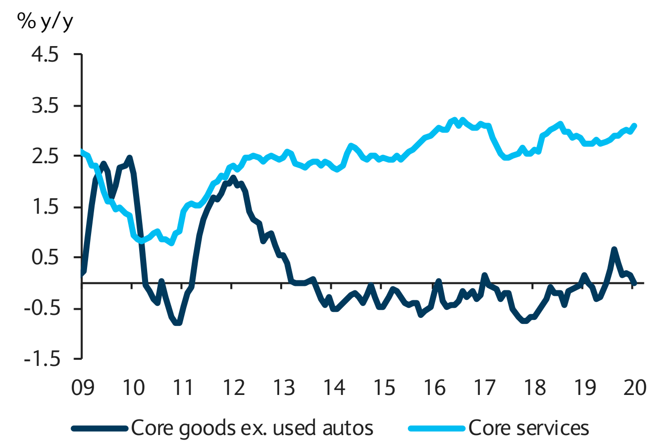
Imported inflation of investment and consumer goods…



Source: BLS, Haver Analytics, Barclays Research

FIGURE 5

… is muted, as is core goods inflation



Source: BLS, Haver Analytics, Barclays Research

Side effect: Low rates could boost homeownership and soften rent inflation

Another category which could be influenced by current events is shelter CPI, specifically rents and OER. We have already discussed that downside risks have risen because of the recent acceleration of multifamily housing starts on the rental supply front and higher new home sales from the demand side (if homeowners would have been renters instead) (*Double, double, toil and trouble*, February 27, 2020). COVID-19 itself is not likely to contribute directly to this equation, but resulting lower interest rates may. Last week, St. Louis Fed President Bullard noted that "housing has bounced back, helped by 2019 cuts" and that the recent drop in long-term Treasury yields is "bullish for the economy" in part because of the effect on housing. Bloomberg reported that Freddie Mac 30y mortgage rates had fallen to a record low 3.29% as of March 5. All else equal, lower rates tilt the buy/rent decision toward homeownership and this could result in slowing rental growth and reduced shelter CPI inflation. Given the lags between the rental market and shelter CPI because of BLS methodology, this may not dampen shelter inflation for quarters to come, and even then only modestly assuming the US avoids a deep recession, but it presents another downside risk factor for investors to consider.

Still, this time is different

While, in our view, the negatives from the demand side outweigh potential positives from supply chain disruptions, we believe this time it will be different from the global financial crisis for a number of reasons: 1) the outbreak has caused more of a supply side shock and the usual tools used to boost demand may not work as well, 2) we don't expect housing (rent/OER) to be impacted as much because we do not think there is enough housing inventory to pull prices down, and 3) some supply chain disruptions could be mildly inflationary in the near term.

Some of these factors suggest that the effect on inflation would not be as bad, eg, if shelter does not turn negative as it did after the financial crisis. But others, such as a lack of monetary and fiscal tools to deal with the problem, proximity to the ZLB and our general lack of preparedness for a supply side shock, suggest it could be worse in other dimensions. On net, we believe that one thing will hold true: in the case of a downturn, inflation will respond with a significant lag. So if we enter or are already in a recession this year (which is not our baseline scenario so far) we would expect inflation to start weakening next year.

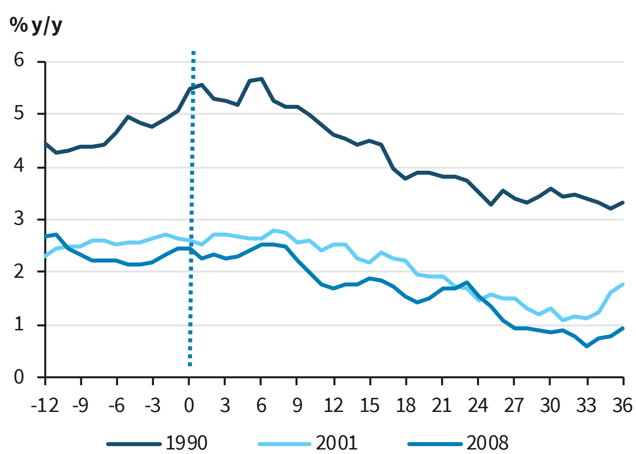
Let's briefly talk through how a downturn could play out for US inflation. If the virus spreads here as it did in China and if some significant public health safety measures are implemented, it could be very disruptive to economic activity. Social distancing would lead consumers to refrain from spending on retail, hospitality and delay vacations. It is hard to see how low interest rates can change this behavior as long as virus concerns remain elevated. Low interest rates will help pave the recovery once the virus spread has been controlled, but even then there will be people who have lost wages that will be reluctant to elevate spending for some time. This weakness in demand could dampen the rebound in investment, too, as long as investment in the US continues to follow an accelerator-type behavior, whereby it closely trails an acceleration in demand growth rather than leading it. In this scenario, a generalized slowing in economic activity would weigh on demand and prices.

For illustration purposes, we also consider the behavior of inflation over the last three recessions, a period over which central banks have laid claim to taming inflation and anchoring business and consumer inflation expectations. The lesson from the last three recessions suggest that core CPI after a downturn has fallen on average 200bp. In addition, it has started to trend down about half a year after output first contracted and it has stabilized about two years from then (Figure 6). Based on the experience of the past three decades, a 100bps-200bp slowing in annual headline inflation is possible depending on whether the COVID-19 shock leads the economy into a mild to severe downturn and depending on how much the labor market is affected.

For example, our Philipps curve model suggests that a 1pp rise in the UR could lower core inflation by about 0.1pp (*Protectionism to intensify cost pressures in tradable goods sectors,* December 10, 2018). In our view, another important issue is the level core inflation will stabilize at after the next downturn. In addition, we should be concerned about its effect on inflation expectations, because over the past decades they been shifting lower (Figure 7). If they were to fall further there is a risk that the Fed will not be effective in halting another structural decline. The bar was already high for the Fed's framework review to result in credibility around its 2% PCE inflation target; the current situation makes it all the more challenging.

FIGURE 6

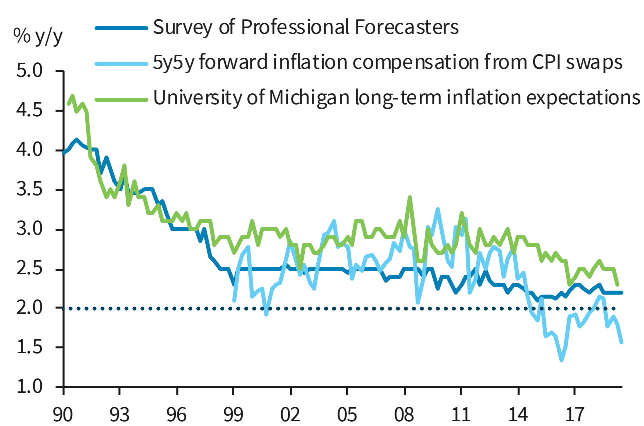
Inflation troughs after recessions with a long lag



Source: BLS, Haver Analytics, Barclays Research

FIGURE 7

Inflation expectations have moved lower



Source: FRB, U Michigan, Haver Analytics, Barclays Research

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