Global Economics Analyst

V(accine)-Shaped Recovery

- President-elect Joe Biden will likely have to work with a Republican Senate majority, limiting his ability to implement the Democratic fiscal agenda. Nevertheless, we expect a $1 trillion stimulus package, potentially enacted before his inauguration on January 20. This is less than half of what we might have seen under a Democratic sweep, but it should suffice for a small positive fiscal impulse to US growth in coming quarters.
- More important for the growth outlook is the second wave of coronavirus infections that is now sweeping the United States and especially Europe, where governments have already reacted with renewed partial lockdowns. This has led us to downgrade our Q4/Q1 GDP estimates on both sides of the Atlantic; in fact, we now expect the European economy to contract significantly in Q4. These revisions have brought down our 2021 global GDP forecast to 6.0% (vs. consensus of 5.2%) and the near-term risks remain on the downside.
- But just as the global economy rebounded quickly (albeit partially) from the lockdowns in the spring, we expect the current weakness to give way to much stronger growth when the European lockdowns end and a vaccine becomes available. Assuming the FDA approves at least one vaccine by January and mass immunization of the general population starts shortly thereafter, as we expect, growth should pick up sharply in Q2. The apparent lack of scarring effects from the earlier GDP plunge is consistent with this view.
- The DM central banks are likely to steer a dovish path for the next several years. Even under our forecast of a strong growth rebound, labor market conditions will normalize only gradually and inflation looks set to remain below central bank targets. We expect the Fed, the ECB, and the Bank of England to wait until 2025 before hiking rates; besides, the ECB looks set to deliver additional QE next month.
- Our growth forecasts in the emerging world in 2021-22 are mostly above consensus. The main exception is China, where output is already back to pre-pandemic levels, credit is growing rapidly, and fiscal policy remains very expansionary. Policymakers look set to react by easing off the accelerator, which should result in a modest sequential growth slowdown.

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Joe Biden has been elected President of the United States. In the Senate, the most likely outcome is that Republicans will retain their majority, although Democrats could pull even—and thus take control given the Vice President's ability to break ties—if they win both of the runoff races in Georgia on January 5.

With the election largely settled, we have updated our global economic outlook. The implications of our baseline divided-government scenario for the near-term growth outlook are more minor than those of a blue wave scenario with a Democratic Senate majority. Nevertheless, we have made some changes to our fiscal policy outlook, including an assumption that a $1 trillion fiscal stimulus package—a bit less than half the package we would have expected under a blue wave—will be enacted, potentially before Biden's inauguration on January 20.

It's Still Mostly About the Virus

Exhibit 1 shows our GDP forecasts versus the Bloomberg consensus. We are above consensus in most major economies in 2021, and everywhere in 2022. At the most basic level, we view the coronavirus recession as much more V-shaped than previous postwar cycles, which were mostly driven by financial shocks to asset markets and income.

Exhibit 1: Our Global Growth Forecast Is Well Above Consensus in 2021 and 2022

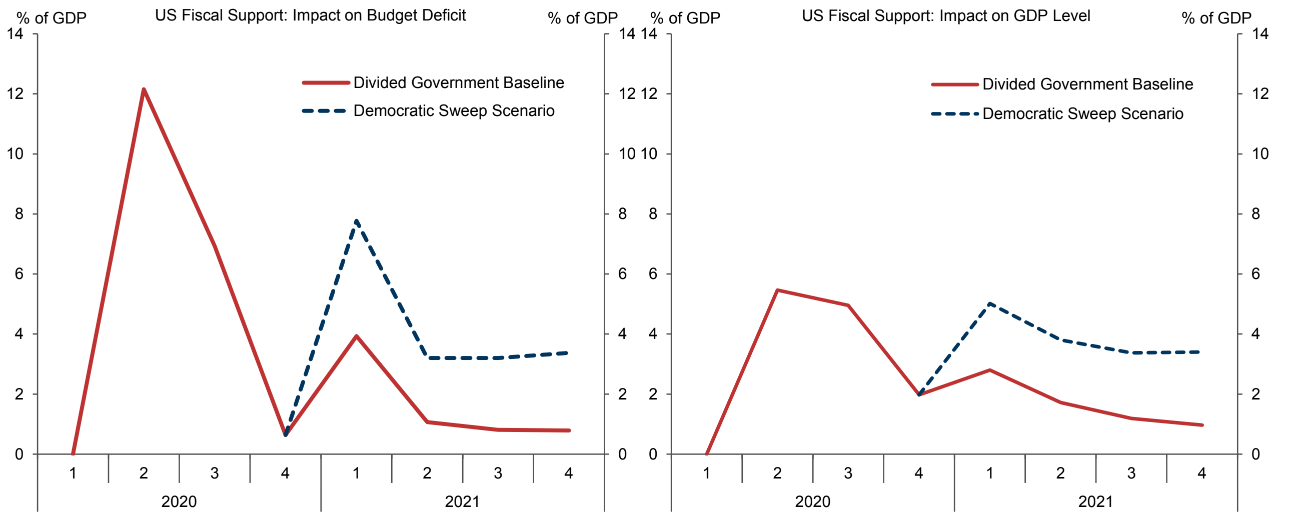
Real GDP Growth Percent Change yoy	2019	2020 (f)		2021 (f)		2022 (f)	
		GS	Consensus	GS	Consensus	GS	Consensus
US	2.2	-3.5	-3.9	5.3	3.8	3.8	2.8
Japan	0.7	-5.3	-5.6	3.3	2.5	2.0	1.5
Euro Area	1.3	-7.2	-7.7	5.3	5.2	4.3	2.6
Germany	0.6	-5.8	-5.8	3.7	4.4	4.2	2.7
France	1.5	-9.2	-9.5	7.0	6.6	4.7	2.7
Italy	0.3	-8.7	-9.8	6.0	5.5	3.6	2.6
Spain	2.0	-11.6	-12.0	7.1	6.4	6.4	4.3
UK	1.3	-10.5	-10.0	6.1	5.5	7.3	2.9
China	6.1	2.0	2.0	7.5	8.0	5.7	5.4
India	4.9	-8.9	-9.0	10.0	7.4	7.2	6.9
Russia	1.3	-4.0	-4.0	5.0	3.0	3.0	2.3
Brazil	1.1	-4.6	-5.2	4.0	3.5	2.9	2.5
World	3.0	-3.9	-4.0	6.0	5.2	4.6	3.7

Note: All forecasts calculated on calendar year basis. IMF forecasts used for India 2022 consensus when quarters not available in Bloomberg.

Source: Bloomberg, Goldman Sachs Global Investment Research

One important assumption underlying our forecast is that governments in countries hard-hit by coronavirus infections will continue to do a reasonable job replacing private sector income lost to the disruptions via wage subsidies, enhanced unemployment benefits, and other income transfers. Most advanced countries have in fact continued to roll forward these programs. In the United States, where much of the support lapsed over the summer, the $1 trillion package we now expect should boost income and deliver a small fiscal stimulus in coming quarters (see Exhibit 2).

Exhibit 2: A Small US Fiscal Stimulus Ahead



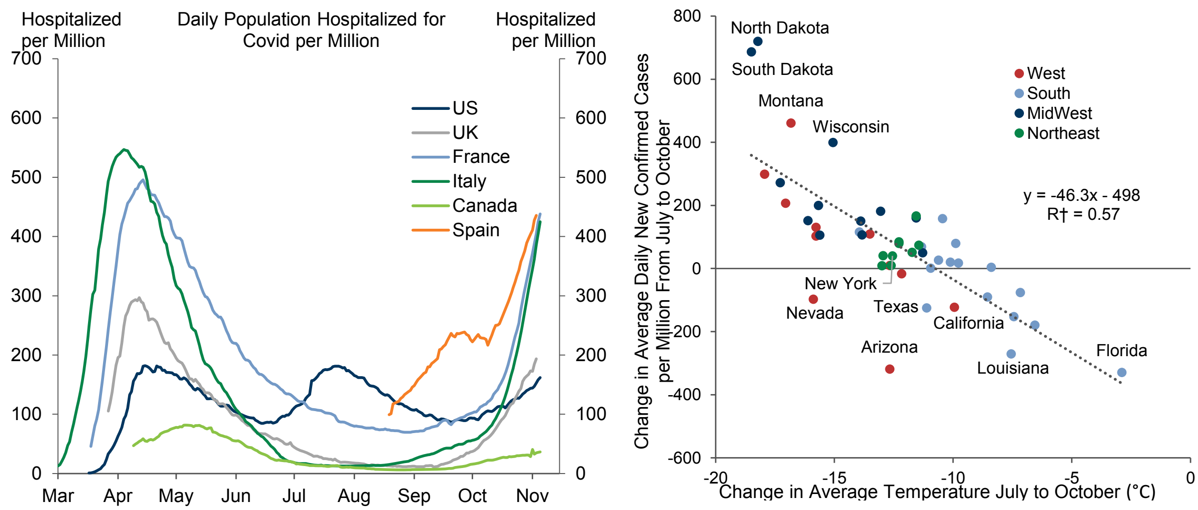
*Discretionary policy includes additional unemployment insurance payouts, business support, household rebates, state and fiscal aid, and federal spending.

Source: Goldman Sachs Global Investment Research

Despite our generally positive view, our 2021 global number of 6.0% represents a ½-point downgrade compared with our forecast of a month ago. The reason is the sharp rise in infections in recent weeks, which has led us to build in a sizable, if short-lived, economic hit, especially in Europe.

The medical news has been poor in recent weeks, not only in terms of confirmed cases (which depend importantly on test volumes) but also in terms of hospitalizations. The left-hand panel of Exhibit 3 shows that the covid patient population is now close to the March/April highs in a number of countries. Moreover, the right-hand panel suggests that the news is likely to remain poor. There is a strong correlation across US states between the change in new cases and the change in the temperature since July, and most of the Northern Hemisphere will be on the wrong side of this chart in coming months.

Exhibit 3: Sharp Rises in Hospitalizations and Infections Following Colder Weather

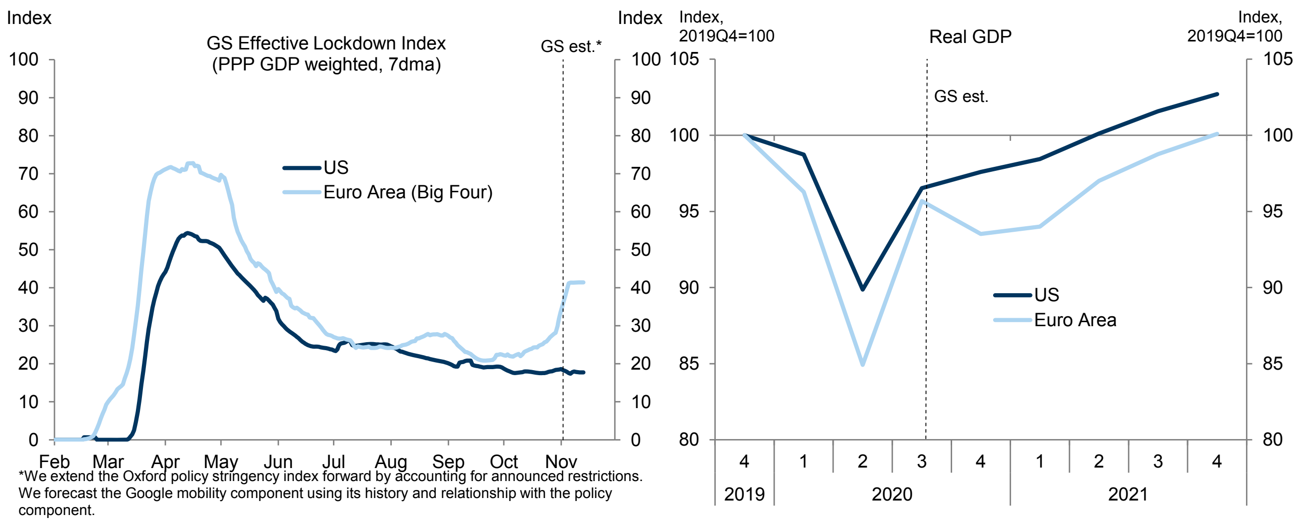


Source: Covid Tracking Project, Santé Publique France, Presidenza del Consiglio dei Ministri Dipartimento della Protezione Civile, Esri Canada, Ministerio De Sanidad, National Oceanic and Atmospheric Administration, United Kingdom National Health Service, Goldman Sachs Global Investment Research

In response to this deterioration, several European governments have already announced renewed partial lockdowns. We estimate that these restrictions will tighten our effective lockdown index (ELI) for the Euro area by 20 points, about one-quarter the move seen in March. US states and municipalities—which largely control health policy—have not yet signaled a meaningful tightening, but we have nevertheless built some renewed restrictions into our economic forecast. Consequently, we have downgraded our European Q4 GDP forecast sharply from +9.1% to -8.7% and also cut our Q1 US GDP forecast from +7% to +3.5%, all in quarter-on-quarter annualized terms.[1] Risks are tilted toward further downgrades if the virus news continues to deteriorate.

[1] Quarterly GDP changes are typically reported at an annualized rate in the United States and at a quarterly rate in Europe. We use annualized numbers throughout our Global Economics publications for consistency. An 8.7% annualized drop corresponds to a 2.3% not annualized decline.

Exhibit 4: Renewed Partial Lockdowns in Europe and a Winter Slowdown in the US and Especially Europe



*We extend the Oxford policy stringency index forward by accounting for announced restrictions. We forecast the Google mobility component using its history and relationship with the policy component.

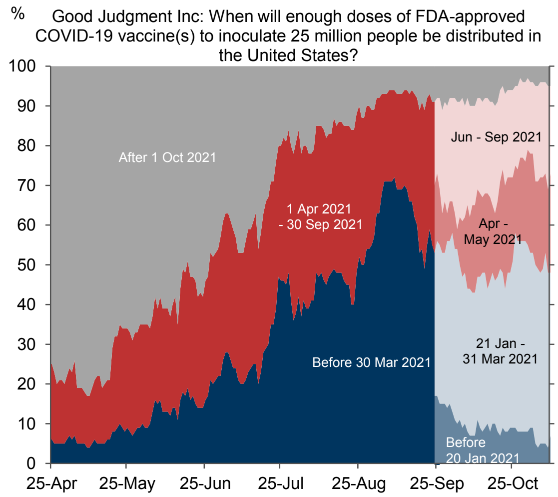
Source: University of Oxford (covidtracker.bsg.ox.ac.uk), Google LLC "Google COVID-19 Community Mobility Reports", Goldman Sachs Global Investment Research

A Vaccine to the Rescue

Despite these downgrades, we remain very comfortable with our above-consensus longer-term view. Beyond the US fiscal boost and our expectation that the renewed European lockdowns will reduce virus spread, this reflects our continued optimism about a coronavirus vaccine. The FDA still looks likely to approve at least one safe and effective vaccine by January, which would be followed by rapid immunizations of high-risk groups and—within a few months—the broader population. The predictions from the "superforecasters" shown in Exhibit 6 seem consistent with this expectation.[2] And while the efficacy of the major vaccine candidates remains uncertain until conclusive Phase III data become available, probably later this month, most medical experts as well as our Healthcare equity research analysts remain upbeat.

2 This assumes that it takes a couple of months between approval and availability of 25 million doses in the US.

Exhibit 5: Superforecasters and Experts Remain Constructive on Vaccine Outlook

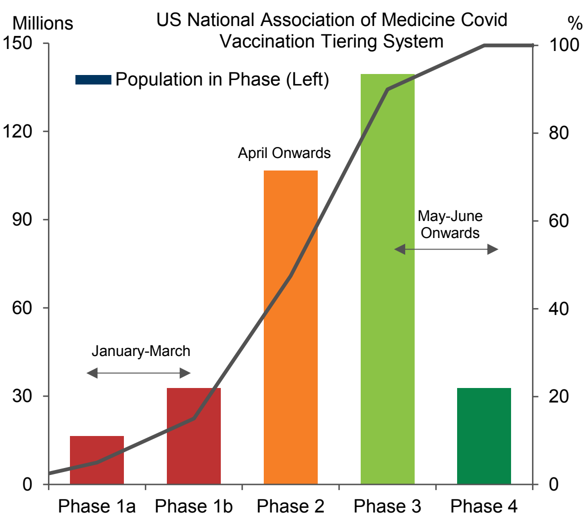


Expert Opinion on Vaccine Efficacy
"I'm not too worried about vaccines and longevity of antibody responses … I think we're in the 90%+ area [of having a safe and effective vaccine]... I think based on the data that we've seen from animal models, data that we've seen from phase I and II trials, it's very likely that we'll have something that works." *- Dr. Florian Krammer (Professor of Vaccinology at Mount Sinai) October 8*
"It does seem that if you have neutralizing antibodies, you're very likely to be protected against infection … in many cases, vaccines induce considerably higher levels of antibody than natural infection." *- Dr. Marc Lipsitch (Director of the Harvard Center for Communicable Disease Dynamics) October 19*
"We cannot assume COVID-19 vaccines, even if shown to be effective in reducing severity of disease, will reduce virus transmission to a comparable degree." *- Peiris and Leung (The Lancet) September 21*

Source: Good Judgement Project, Goldman Sachs Global Investment Research

Once the FDA approves a vaccine for emergency use (or offers early "compassionate use" access through an Expanded Access Protocol), the first available doses will go to high-risk groups, namely healthcare and other frontline workers, the elderly, and people with significant co-morbidities. These groups not only benefit most from immunity themselves, but their vaccination—at least in the case of frontline workers—also has the greatest positive impact on the broader population. And once the high-risk groups have been vaccinated, broader distribution will commence, perhaps early in the second quarter.

Exhibit 6: Front-line Healthcare Workers, Essential workers, and the Elderly Would Get Vaccine First

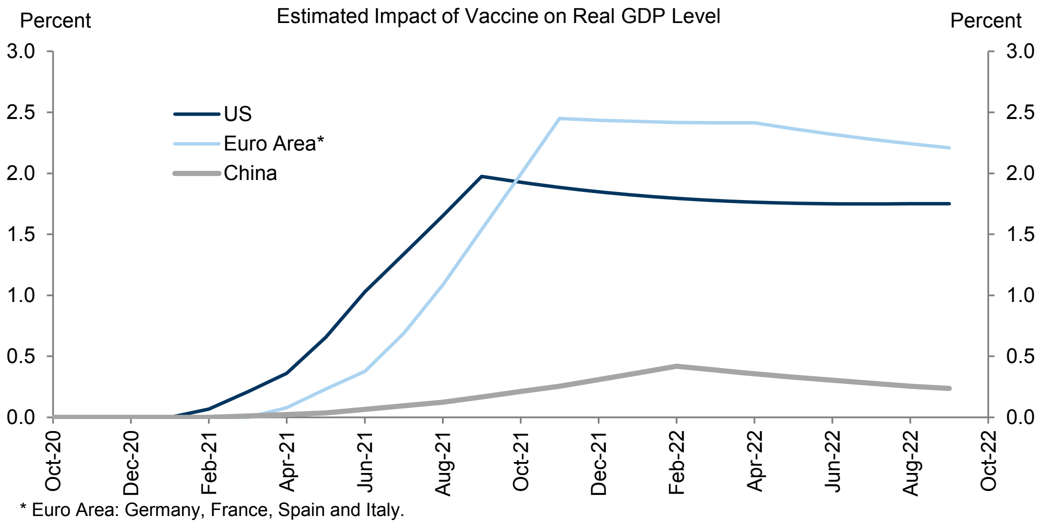


Phase 1 (~45mn)	Phase 2 (~105mn)
Phase 1a - High Risk Health Workers (12.6mn) - First Responders (2.1mn) *Phase 1b* - 2+ Comorbid Conditions (20mn) - Over Age 65 in Crowded Settings (6.8mn)	- One Comorbid Condition (80mn) - Obesity (30mn) - Diabetes (10mn) - Remaining Over Age 65 (13.2mn) - K-12 Teachers (9.1mn) - Essential Workers (2.7mn) in - Food Production/Cashiers - Construction/Utilities - Transportation/Delivery - Incarcerated + Staff (2.7mn) - Homeless + Shelter Staff (1mn)
Phase 3 (~140mn)	**Phase 4 (~33mn)**
- Children (80mn) - Young Adults Ages 18-30 (46.5mn) - Workers in Important Industries (13mn) - University Staff - Factory Workers - Restaurant/Hotel Staff - Bank Tellers and Librarians - Barbers and Exercise Instructors	Remaining population of the US (33mn)

Source: National Association of Medicine, Goldman Sachs Global Investment Research

As the population builds immunity to the virus in the spring and summer, we expect economic activity to rebound sharply in depressed sectors such as travel, accommodation, and food services. Among the G3, we estimate that the US and Europe will enjoy a GDP boost of about 2%, with most emerging economies on a more delayed timeline and China benefiting much less because it has already largely recovered from the virus.

Exhibit 7: A Larger Vaccine GDP Boost to the US and Europe Than to China



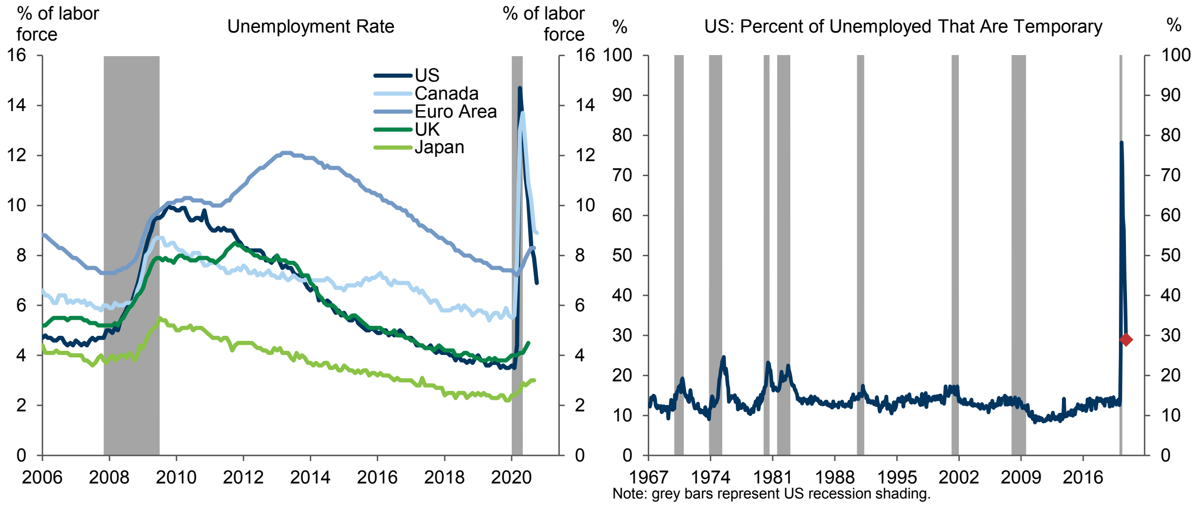
Source: Goldman Sachs Global Investment Research

Few Signs of Scarring So Far

As the immediate health emergency recedes in 2021, concerns about long-term scarring from the unprecedented downturn in labor demand and business revenues of 2020 are likely to reemerge. If these effects are substantial, they could weigh on long-term supply potential and standards of living. But how real are these risks?

So far, we think the news has been surprisingly good. In the labor market, most advanced economies including Europe and Japan have successfully used generous wage subsidies and job retention programs to keep the rise in the headline unemployment rate very limited, as shown in the left panel of Exhibit 8. And even in countries where unemployment has risen sharply, most notably the United States, the increase has primarily come in the form of temporary layoffs, as shown in the right panel. Many of these temporary job losers have already returned to work, pushing the headline unemployment rate down by nearly 8pp, but the remaining ones still account for 2pp of excess unemployment. If the health situation and aggregate demand follow our 2021 forecasts, we expect most of them to return to work fairly quickly, with limited long-term effects.

Exhibit 8: Limited Increases in Unemployment in Europe and Japan and Sharp Declines in North America



Source: Haver, Goldman Sachs Global Investment Research

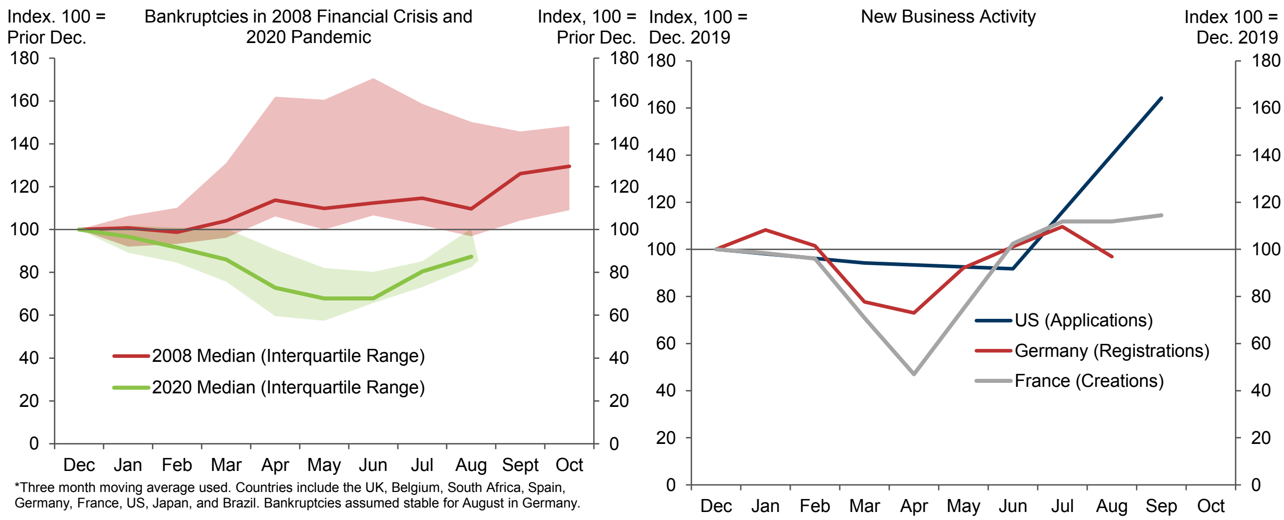
The business sector has also coped with the downturn better than many commentators had expected. The left panel of Exhibit 9 shows that bankruptcies are actually down on the year across the major economies, in sharp contrast to the significant increases after the 2008 crisis. Much of this reflects the efforts by central banks and fiscal policymakers to keep credit flowing, as well as the expectation that the health emergency will be relatively short.[3] Unless that expectation proves wrong—e.g. because the vaccines take longer or are less effective than currently expected—we think bankruptcies will remain below prior recession levels.

Perhaps more surprising than the subdued level of bankruptcies has been the sharp increase in new business formations, at least in the United States.[4] Some of this reflects a backlog from the lockdown period during the spring, but the right-hand side of Exhibit 9 shows that this can only explain a relatively small part of the increase. Our preliminary takeaway is that the pandemic recession has not only caused less scarring than widely anticipated, but might actually have jolted the economy's dynamism to some degree.

3 Regulatory changes, such as delays to bankruptcy filings, have likely also weighed on bankruptcies in several countries.

4 See David Choi, "The Surprising Surge in Business Formation," US Daily, September 28, 2020.

Exhibit 9: Surprisingly Few Bankruptcies and Elevated Business Formation



Source: Haver Analytics, Serasa Experian, Goldman Sachs Global Investment Research

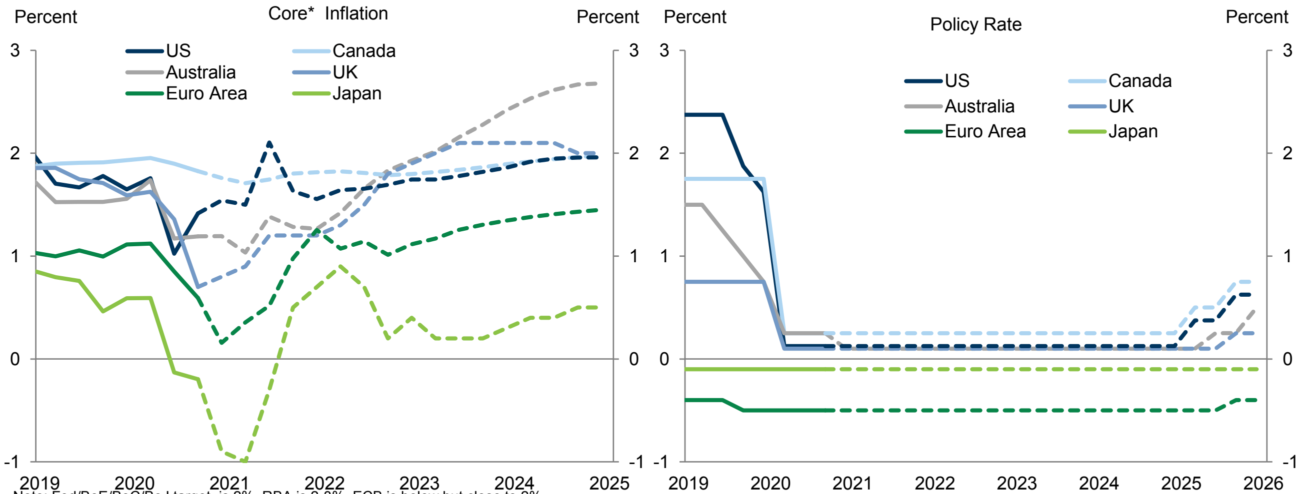
Easy Monetary Policy Across DM

Inflation fell sharply during the spring lockdown, largely because of dramatic declines in covid-affected areas such as travel, entertainment, and food services. In 2021, these distortions are likely to reverse, pushing year-on-year inflation rates temporarily above their underlying trend (even if renewed restrictions could weigh on sequential inflation). If this pickup coincides with a sharp rebound in economic activity, it could lead bond market participants to worry about an earlier-than-expected exit from the current expansionary policy stance.

The underlying inflation reality, however, looks set to remain benign. Even under our optimistic GDP forecast, it will likely take several years before output and employment are back to their potential levels. In the meantime, excess slack will be weighing on both wage and price inflation, and there is some evidence that this is already happening underneath the surface. Many of the standard wage measures are currently badly distorted by composition effects, as they simply divide the wage bill by the number of employees or hours worked and therefore show higher hourly wages when low-paid workers (e.g. in the restaurant sector) lose their jobs. But there are two US indicators that should be largely immune to this distortion, namely the US employment cost index (which looks at pay for specific types of work) and the Atlanta Fed's wage growth tracker (which looks at year-on-year wage changes for the same individual). Both have slowed by about ½pp on a year-on-year basis since the spring lockdowns.

With inflation subdued, our monetary policy forecasts remain quite dovish across the advanced economies. We continue to expect Fed liftoff in early 2025 as the economy returns to full employment and inflation sustainably reaches 2%. Subsequently, we are penciling in a hike every six months until the funds rate is back in the 2-2½% range late in the decade (although this is obviously highly uncertain).

Exhibit 10: Low Inflation and Policy Rates in Coming Years



Note: Fed/BoE/BoC/BoJ target is 2%, RBA is 2-3%, ECB is below but close to 2%.
*US core PCE excl. food and energy, EA and UK HICP core excl. energy, food, alcohol and tobacco, Canada average of 3 preferred BoC measures, Australia CPI trimmed mean, Japan core CPI excl. fresh food.

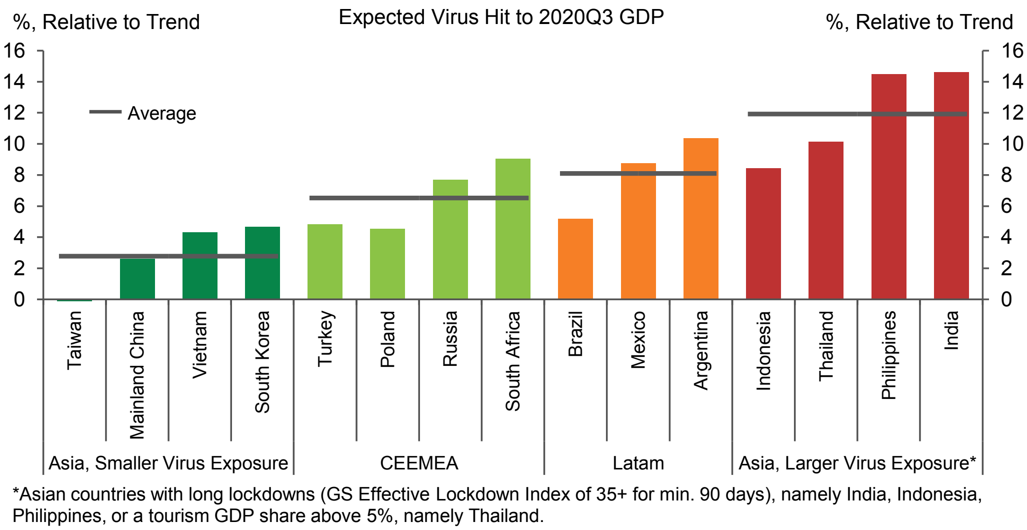
Source: Goldman Sachs Global Investment Research

By contrast, we have become even more dovish in Europe on the back of the recent growth and inflation disappointments, as well as our expectation that the ECB will move to a symmetric 2% inflation target with some elements of AIT. Not only do we expect the Governing Council to upsize its PEPP by €400bn in December but we have also pushed back the first hike in the deposit rate to 2025. Indeed, a further near-term rate cut is possible if the growth outlook continues to deteriorate. In the UK, we expect no changes in Bank Rate until 2025, with risks tilted toward cuts into negative territory in the near term.

Marching to a Different Drummer

The coronacrisis hit the emerging world in very different ways. China and some of its neighbors managed to get through 2020 with a comparatively limited number of cases and deaths, and saw only a temporary decline in GDP early in the year. Most CEEMEA countries, especially in Eastern Europe, also managed to avoid bad outbreaks in the first wave by locking down early, though they have seen the numbers deteriorate sharply more recently. By contrast, both Latin America and much of South and Southeast Asia suffered serious virus outbreaks and a large economic hit in the spring, in some cases amplified by a collapse in tourism revenue.

Exhibit 11: The Coronacrisis Hit The Emerging World in Very Different Ways



The expected virus hit to 2020Q3 GDP is the difference between (i) the counterfactual GDP level in the absence of the virus assuming average 2017-2019 growth and (ii) actual/forecasted GDP level in 2020Q3.

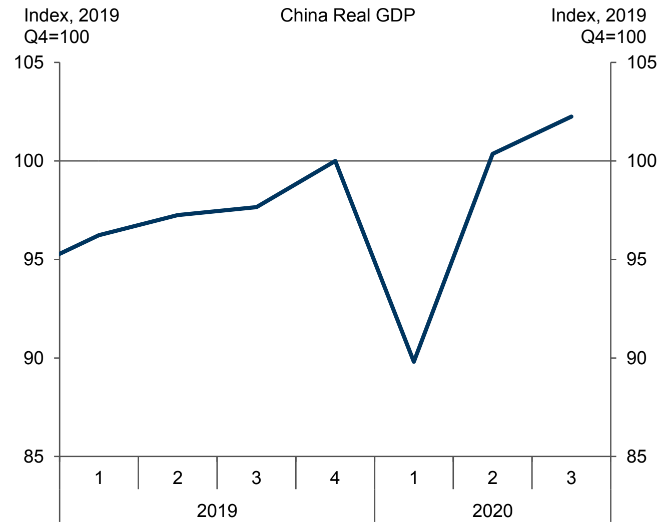
Source: Goldman Sachs Global Investment Research

What will 2021 hold? In the near term, we are most concerned about Central and Eastern Europe, which enjoyed a strong GDP rebound in Q3 but is now slowing sharply because of renewed virus outbreaks and the risk of another round of lockdowns. As in much of Western Europe, we expect this deterioration to be temporary and see a sharp improvement in the spring on the back of higher temperatures and ultimately a vaccine. But the next few months are likely to be tough.

We are more optimistic about Latin America and South/Southeast Asia. These countries suffered from rampant virus spread in the middle of this year but have seen an ongoing improvement in recent months. If this trend continues, we expect GDP in many of these countries to continue to recover quite strongly from still-depressed levels.

China once again marches to a different drummer. It has largely beaten the virus—at least for now—and brought GDP back to nearly the pre-crisis trend, with high-frequency indicators suggesting further solid growth in Q4 and at least some possibility of trade détente with the United States under the incoming Biden administration. Given this favorable backdrop, Chinese policymakers have started to redirect their attention to the risk of future financial instability from excessively loose lending conditions (see Exhibit 12).

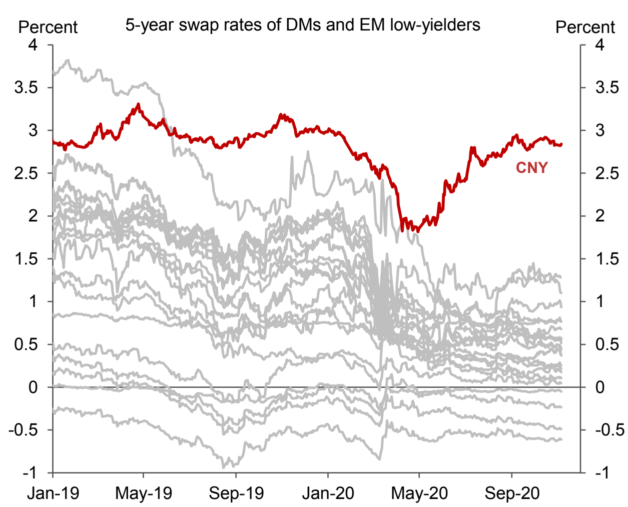
Exhibit 12: China GDP Is Nearly Back to the Pre-Crisis Trend and Fiscal Policy Is Still Very Loose

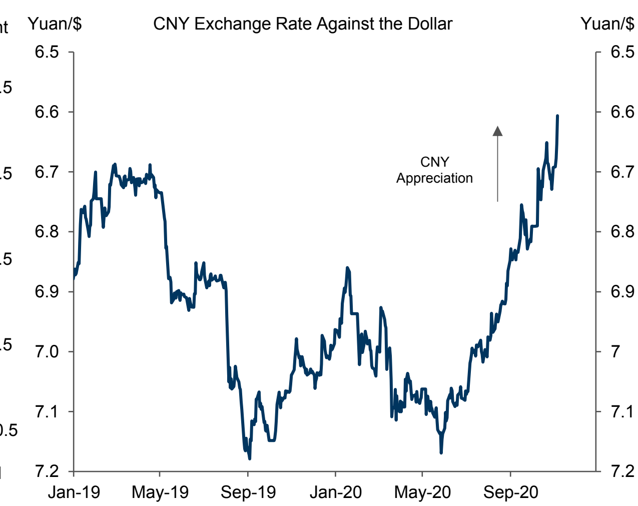


Source: Goldman Sachs Global Investment Research

For the financial markets, the main implications are higher interest rates—at least relative to the rock-bottom levels seen almost everywhere else—and an appreciation in the currency, both illustrated in Exhibit 13. These are key aspects of the broader monetary, fiscal, and credit policy normalization that large explains why our growth forecast for China in 2021 is modestly below consensus.

Exhibit 13: Higher Rates and Currency Appreciation in China





Source: Bloomberg, Haver, Goldman Sachs Global Investment Research

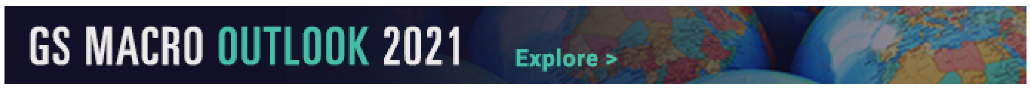
Rebound Coming

After six months of mostly positive news, the fresh virus outbreaks have forced us to pare back our optimism on the global economy. The near-term risks to our forecast are asymmetric to the downside because the range of outcomes for infections is asymmetric to the upside. But even in a more negative scenario, another plunge on a par with March/April is highly unlikely, as the world has adapted to the risk of bad outbreaks via hygiene measures such as face masks that allow large parts of the economy—especially manufacturing and construction—to stay open.

More importantly, if we are right that a safe and effective vaccine arrives before long, the economy should soon get back onto a strong recovery path. Our confidence in this forecast rests in part on the impressive if partial recovery in Q3, when the worst part of the pandemic seemed to be in the rear-view mirror. If monetary and fiscal policy remains focused on the importance of supporting household incomes and business cash flows during any renewed lockdowns—a policy that proved highly successful in Q2/Q3—a swift rebound again looks likely.

Jan Hatzius

Daan Struyven



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Reg AC

We, Jan Hatzius, Daan Struyven, Sid Bhushan and Daniel Milo, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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