



Impact of Covid-19 on the global economy: Beyond the abyss

Global economy in freefall. We estimate that the increasingly stringent lock-down measures to combat Covid-19 in Europe and the US are depressing the levels of consumer and business spending by more than anything we have seen since the Great Depression. The peak-to-trough decline in EA and US GDP is likely to be more than double that during the more prolonged Global Financial Crisis.

Rapid and substantial policy easing. The outlook would be much worse were it not for timely and aggressive monetary and fiscal policy easing. Policymakers have learned important lessons from the failures of the Depression and from dealing with the GFC. The Fed and ECB were quick to pull out all the stops to inject liquidity and confidence into financial markets. The scale of fiscal easing on both sides of the Atlantic has already exceeded the early days of the GFC. Monetary and fiscal policymakers are pledging to do whatever is necessary to fight the virus crisis.

Sharp, brief plunge is the baseline; full recovery will take time. While policy will buffer the impact of virus shock on economies, there will be lasting ramifications. In our baseline scenario, the level of GDP in the transatlantic economy (US and EU) at the end of 2020 will be ~USD 2 trillion below what we were expecting pre-virus. This is despite the “whatever it takes, whatever is necessary” policy stance. At the end of 2021, the level will still be USD 1 trillion below the pre-virus expectation. But, risks may be shifting towards a more negative outcome.

Risk of a protracted pandemic rising. We assume lock-down slows the growth of the virus significantly in Italy by mid-April, a week later in the rest of the euro area, a week after that in the UK, and by early May in the US. Economies will then gradually reopen, like in Asia. The spreading virus and uneven containment raise the risk of a more protracted pandemic, with the virus persisting well into the second half of 2020 before being managed or controlled. A protracted pandemic would bring non-linear costs: larger output losses, prolonged border closures, permanently disrupted supply chains, the political impact of high unemployment, etc. The massive fiscal rescue packages will have to be paid for eventually.

Virus crisis casts dark shadow over European stability. Divergence is Europe’s Achilles Heel and we are concerned the virus shock will again highlight North-South differences, for example, how tourism may expose the South to greater losses. Public debt to GDP ratios could rise 20-25pp in the South. This is particularly concerning since the increase in debt due to the GFC soon afterwards led to the devastating sovereign debt crisis of 2011/2012. European solidarity is being questioned and threatens to turn a socio-economic crisis into a political crisis.

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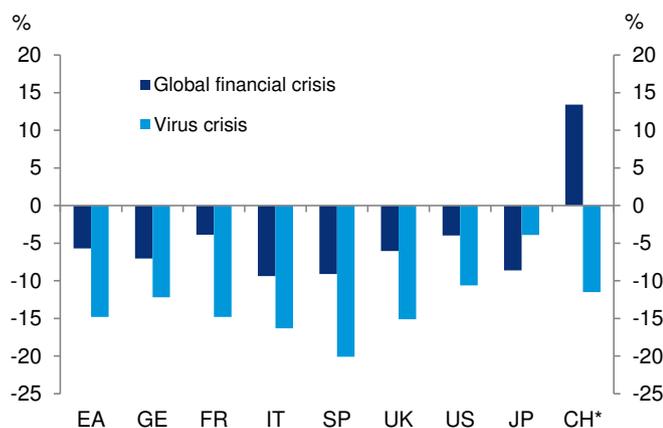
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Overview

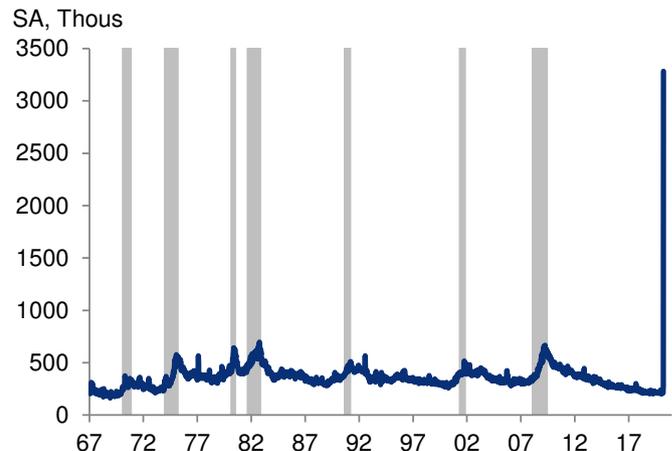
The global economy is in freefall. We estimate that the increasingly stringent containment measures being taken currently and prospectively to combat Covid19 in Europe and the US are depressing the levels of consumer and business spending by more than anything we have seen since the Great Depression of the 1930s. The peak-to-trough decline in EA and US GDP in this crisis is likely to be more than double that during the more prolonged Global Financial Crisis. Even the front edge of the current crisis has led to 3 million US job losses last week—off the chart in terms of job losses in one week dating back to the 1960s¹. At its peak impact, we will likely see 15 million US jobs lost despite massive government efforts to stem these losses. The rise might only be half as large in the euro area thanks for ‘short-shift’ work schemes, although the benefits will differ by country. Spain’s temporary employment workforce could be particularly vulnerable. With China’s economy recording a huge decline in Q1, this downturn is both deeper and more global than the GFC.

Figure 1: % GDP loss from peak to trough



Note: China 'GFC crisis' based on GDP growth over the same period the US contracted; 'virus crisis' is Q1 2020 only. Source: Deutsche Bank Research

Figure 2: Initial jobless claims in the US have sharply increased



Source: Deutsche Bank Research, US Department of Labour

As bad as these expected numbers are, they could be much worse were it not for phenomenally timely and aggressive monetary and fiscal policy responses. Policymakers have learned important lessons from the failures of the Depression and from dealing with the Global Financial Crisis. Fresh from the latter crisis, the Fed and ECB were quick to pull out all the stops to inject liquidity and confidence in financial markets; absent these actions we were well on the way to something much worse than the GFC.

Fiscal policy actions have been even more impressive, in part because they have been very supportive of enhanced monetary policy actions. In the US, fiscal actions have already exceeded the scale of actions taken during the first year of the GFC and more is likely on the way. These policy actions should help tremendously to avoid having this massive demand and supply shock push the economy into

1 Reports suggest that as much as 5-6% of employment has already moved onto 'short-shift' work schemes in France and Spain by the end of last week.

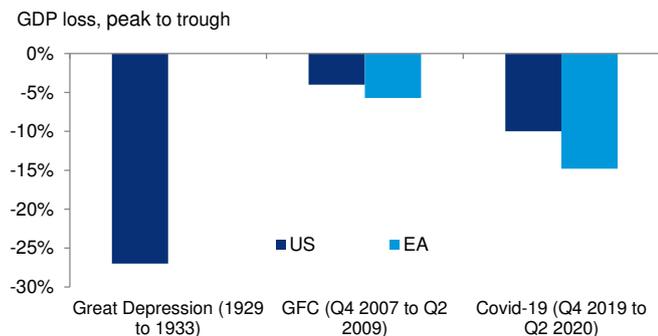
30 March 2020
 Special Report



another Depression. Assuming it is disbursed quickly and effectively, income and employment support will help households to maintain their spending on necessities during the downturn and will help give overall spending a lift when the return to more normal activity gets underway. The Fed will leverage Congressional fiscal support into approximately USD 5 trillion in loans and private debt purchases to help keep businesses both large and small afloat and ready to expand their activity when the time comes.

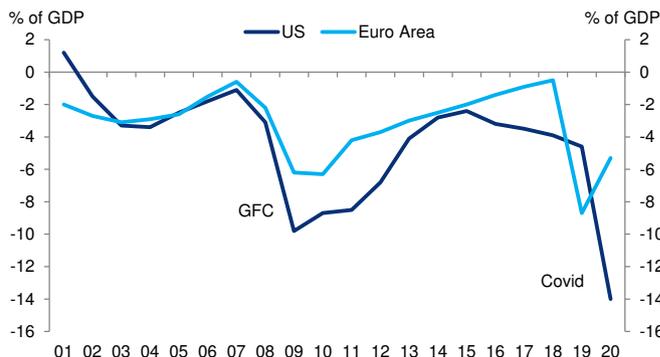
Europe has been quick to take action. In the euro area, the combination of the deficit spending measures announced so far – much of which is designed to temporarily replace incomes – and the expected cyclical deficit from automatic stabilisers is worth almost EUR 1 trillion. This will push deficits-to-GDP ratios this year to high-single-digit levels, roughly 50% higher than the GFC peak. The stand-out fiscal policies are the State credit guarantees, which average about 15% of GDP per member state and total close to EUR 2 trillion. These are contingent liabilities and won't count against deficits and debt unless drawn. Arbitrarily assuming that one quarter of the guarantees are drawn, public debt ratios would jump 15-25pp in 2021, with France and Spain rising towards 120% of GDP and Italy 160% of GDP. Germany would be around 70% of GDP

Figure 3: Peak-to-trough GDP loss to be between Great Depression and GFC



Source : Deutsche Bank Research, CBO, Eurostat
 Note: EA GDP fall during Great Depression not available

Figure 4: Deficit to GDP to surpass the GFC



Source : Deutsche Bank Research, Eurostat



Figure 5: Massive fiscal and monetary response

USD bn	EA	US
<i>Fiscal policy</i>		
Discretionary stimulus	300	1650
Cyclical deficit	600	350
Credit guarantees, etc	1750	N/A
<i>Monetary policy</i>		
Assets purchases	750	1000*
Lending operations	1200	5000
TOTAL	4600	8000
TOTAL ex guarantees	2850	8000

Note: Note: US asset purchases only include through March. Source : Deutsche Bank Research

Sharp but brief plunge in activity is the baseline projection. Our baseline scenario assumes that containment efforts will be effective in slowing/eliminating the spread of the virus over the months just ahead. On this basis and given aggressive policy action, we project a very sharp but relatively brief plunge in activity. Partial recovery of consumer and business spending from extremely depressed levels toward more normal levels will yield impressive bounces in GDP growth rates. Government income support and pent up demand will bolster the recovery over time. In brief, the baseline scenario sees the negative shock in the first half of 2020 partially offset by recovery in the second half, reducing the net decline in GDP for the year.

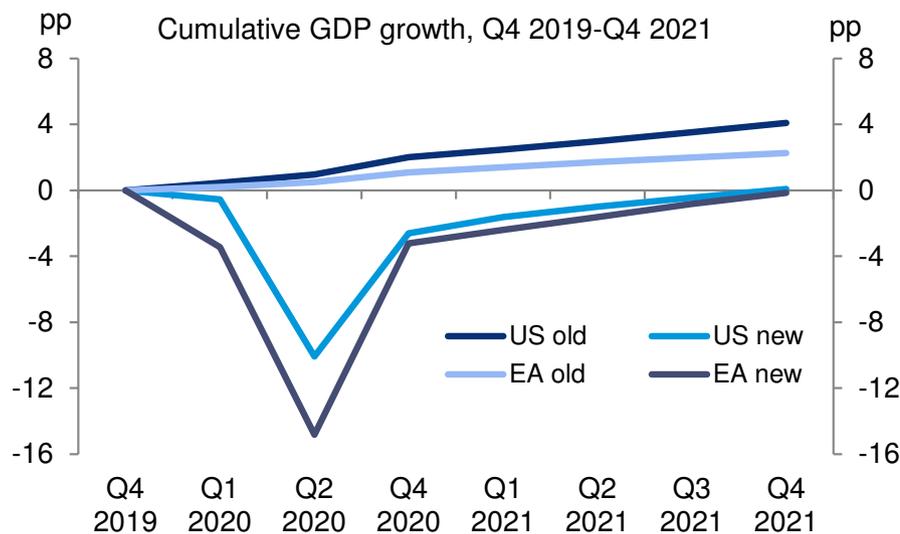
A substantial and persistent loss of income, risk of protracted pandemic rising. In our baseline scenario, the level of GDP in the transatlantic economy (US and EU) at the end of 2020 will be about USD 2 trillion below what we were expecting pre-virus. This is despite the “whatever it takes, whatever is necessary” policy stance. At the end of 2021, the level will still be USD 1 trillion below the pre-virus expectation. This is one way of thinking about the lingering cost or the scarring effect of the crisis. As Covid-19 spreads more rapidly than our models projected earlier and reports of less than fully effective containment efforts increase, the risk of a more persistent shock are rising. Under a more pessimistic protracted epidemic scenario, the recovery would be delayed until 2021, with GDP losses for 2020 significantly larger and recovery in 2021 weaker.

The scarring effects of this crisis could be seen even more in profound changes to the global socioeconomic order than in reduced economic output. The global recovery will likely be slowed for some time by the prolonged closing of borders, the relocation of supply chains, and scars in the labor market. More importantly, the massive fiscal rescue packages will have to be paid for eventually, one way or another. Unprecedented cooperation between fiscal authorities and central banks could be needed for some time. Regardless, sovereign risk premiums will rise, taxes will rise, or concerns about inflation will increase in the longer-term. This is true even in the US where a day of reckoning will eventually come as public debt levels continue their impressive ascent. For the time being, the enormous size of central bank intervention will distort price discovery in most credit and rates markets, creating a problem that will only emerge in the future.



The virus crisis will once again cast a dark shadow over European stability and sustainability. We expect European countries to arrive at the end of 2021 with unprecedented divergence in their economic performance, in growth and unemployment. We are concerned that such renewed divergence could once again raise questions about North-South divergence and the sustainability of the current EU/EA arrangements. National debt are being raised by amounts ranging from roughly 10% of GDP in Germany to 25% in Italy. This increase in sovereign debt is particularly concerning since the increase in debt due to the GFC in the EA soon afterwards led to the devastating sovereign debt crisis of 2011/2012. Not all European countries are able to sustain these fiscal costs. This threatens to turn a socio-economic crisis into a political crisis. European solidarity is being questioned.

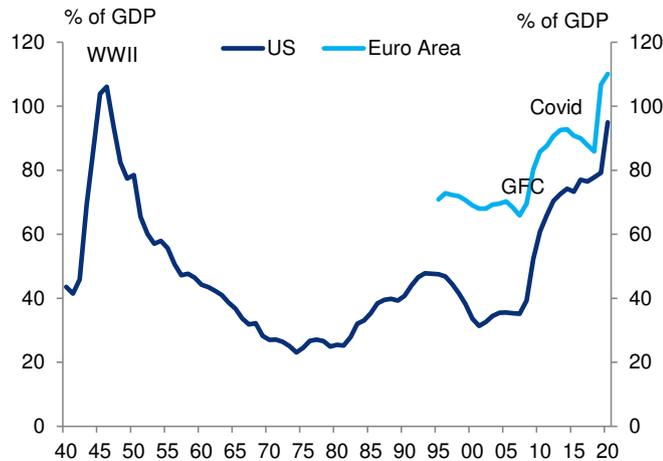
Figure 6: GDP growth forecast: pre-virus vs new baseline



Source : Deutsche Bank Research



Figure 7: US Debt to reach near 100% of GDP



Source : Deutsche Bank Research, CBO

Figure 8: Debt and deficits to increase dramatically in EA and US

% of GDP	Fiscal balance		Gross public debt	
	2019	2020E	2019	2020E
Germany	1.3	-7.3	59.2	68.3
France	-3.2	-9.5	99.2	114.4
Italy	-1.6	-9.2	135.6	157.0
Spain	-2.1	-9.7	96.0	113.5
US	-4.6	-14.0	79.0	95.0

Source : Deutsche Bank Research, National statistics
Note: Indicative estimate for euro area countries. See text for details on the assumptions

Outline of analysis

Last week, we wrote that the initial economic impact of Covid-19 would be a plunge into the void². The data we have received since have confirmed that the plunge is well under way. This document focuses on when we see the global economy recovering from this shock. The timing and shape of the recovery will be determined by several factors, including: (1) the course of the pandemic and effectiveness of efforts to contain it; 2) the depth of the initial decline in activity; and (3) the magnitude, timing, and effectiveness of macro policy responses.

Course of pandemic. While we have much to learn from Asia’s experience, the prospective course of the virus elsewhere remains highly uncertain. It appears well contained in China, but new cases continue to crop up through visitors. New cases may now be decelerating in Italy, but are still rising elsewhere in Europe and in the US. Our health care analysts’ models conditioned by experiences in Italy, Iran, and Korea see cases nearing 340,000 in the US, 120,000 in Germany, and 40,000 in the UK in the next 10 days³. Their latest medium-term model projections have US cases peaking above 2 million by late April. Such projections move around a good deal and have been rising significantly of late. The analysts’ confidence in projections beyond 10 days out is low, partly because of uncertainty about the effectiveness of containment efforts. Our economic projections must therefore be made on the basis of a range of assumptions.

Scenarios: We consider two. Our **baseline scenario**, which may appear increasingly optimistic, sees the virus spreading further in Europe and the US with economic lock-downs tightening further in the weeks just ahead. We assume the containment efforts prove effective in slowing the growth of the virus significantly

2 See "[Special Report: Covid-19 and the global economy: Plunging into the void](#)", March 25, 2020.

3 See "Updated Mid-Term COVID-19 Estimates for the U.S., U.K. and Germany", DB [Cross-Healthcare Research](#), 30 March 2020

30 March 2020
 Special Report



in Italy by mid-April, a week later in the rest of the euro area, a week after that in the UK, and by early May, in the US. We also assume that economic lock-downs can begin to be phased out a week or two later, or by late April in much of Europe and after mid-May in the US. In comparison with China, where, except in Hubei, constraints on movement and economic activity lasted about three weeks from January 23, lock-downs are expected to last up to 6 weeks in the EA (where they have been implemented more forcefully than in most of China), and 7-8 weeks or more in the UK and US where they have been implemented both more slowly and less forcefully.

Our alternative, more pessimistic, **protracted pandemic scenario** assumes some lock-downs are terminated prematurely or prove less than fully effective, resulting in a more persistent spread of the virus into mid summer. This forces further, more stringent lock-downs that extend well into the second half of the year. One can easily imagine more pessimistic scenarios than we have chosen.

Depth of the plunge. Our analysis earlier this week considered in some detail both the supply side and demand side implications of the various economic containment measures that are being implemented. We assumed these measures would be adopted forcefully throughout most of Europe and half of the US, where we assumed the other half of the country would be somewhat less afflicted and somewhat less stringent in its lock-downs. These calculations indicated that at maximum lock-down, the level of GDP could be depressed by something on the order of 15% to 30% on both sides of the Atlantic, though generally somewhat lower in the US than Europe because of the allowance for some areas in the US being less affected.

Policy responses. In the US and Europe these have been described as WWII-like in scale and remarkably timely. While many questions remain about just how timely and effective the implementation of the potentially massive fiscal programs will be, the actions being taken sharply reduce the risk of our falling into another Great Depression 90 years on. The plunge in demand we are experiencing right now is depression-like, and financial markets were at risk of crashing more profoundly than during the great financial crisis. But the Fed (and the ECB to a lesser extent) have intervened in a big way. Fortunately, the GFC had prepared them to take critically important measures quickly to instill liquidity and confidence in financial markets. And fiscal measures are now targeted at forestalling a much deeper drop in aggregate demand than would otherwise occur, and at holding economic infrastructure together well enough to allow a much easier recovery than would otherwise occur when the time comes.

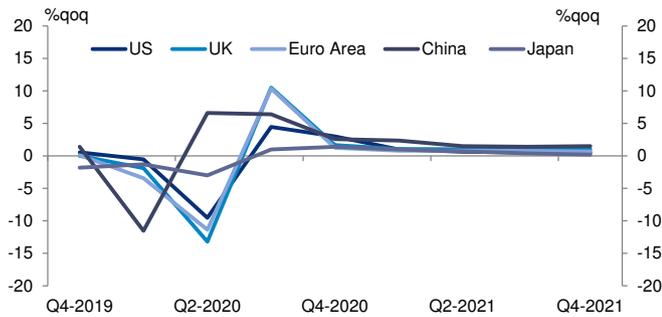
In what follows, we present our economic projections across the major regions, for growth, labor markets, and macro policies. We begin with China, whose experience now has some predictive value elsewhere, and Japan, where the spread and impact of the virus domestically has been remarkably mild. We turn next to Europe, with its range of experiences but likely commonality in tremendous near-term GDP drops followed by significant bounces in H2 and/or 2021. Next is the US, where the decline and bounce are large too, but not quite as large as in Europe. The note ends with a summary of the latest views of our strategists on prospects for the markets for equities, credit, rates and currencies conditioned on our macro view and the current policy environment.

To summarize the projections, the baseline scenario shows the dramatic decline in activity that is already underway. The initial plunge is followed by substantial



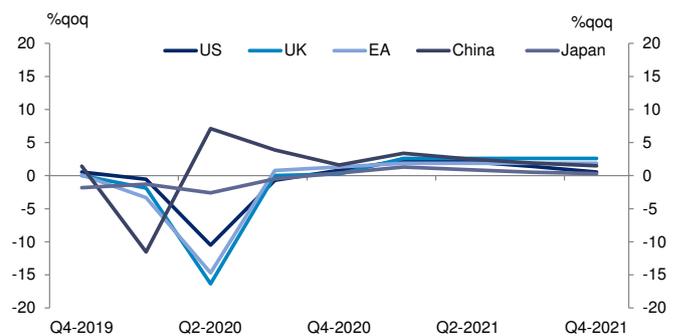
bounces in growth in the second half of 2020 (Q2 in China) and more subdued but still above-trend rates of growth in 2021. The growth bounces occur even with the level of GDP remaining well below pre-virus levels for some time. Net declines in GDP for the year 2020 range from less than 2% in China to 7% and more in much of the euro area. Growth in 2021 is generally well above trend, but with the exception perhaps of China, all countries are expected to incur some longer-term shortfalls in GDP relative to pre-virus trends. Unemployment rates peak at around 12% in the US and 11% in the EA, though more than double that in Spain. By the end of 2021, we would see unemployment less than half way back to the pre-virus level of 7% in the EA and not quite all of the way back in the US. The protracted pandemic scenario would essentially result in little growth at a very low level of GDP in the second half of 2020 and push the bounce in growth off to the first half of 2021. The losses in GDP by 2021 would be significantly larger and rises in unemployment somewhat greater than in the baseline scenario.

Figure 9: GDP growth - baseline



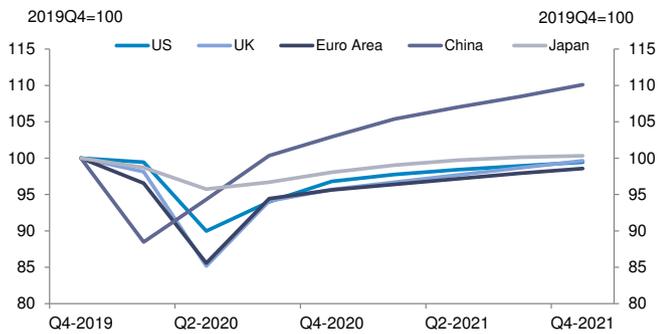
Source : Deutsche Bank Research

Figure 10: GDP growth - protracted pandemic



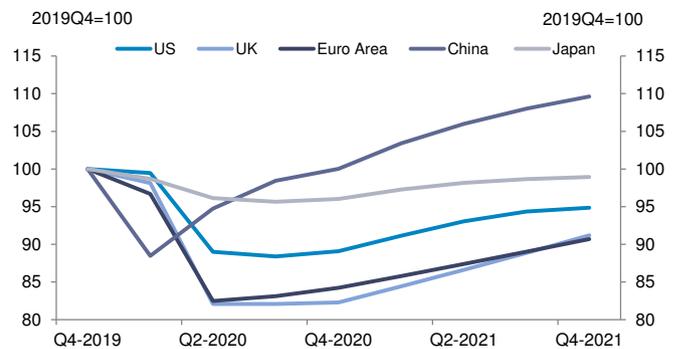
Source : Deutsche Bank Research

Figure 11: GDP levels - baseline



Source : Deutsche Bank Research.

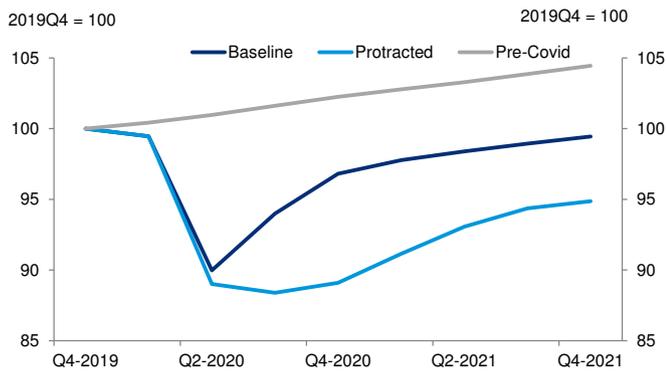
Figure 12: GDP levels - protracted pandemic



Source : Deutsche Bank Research.

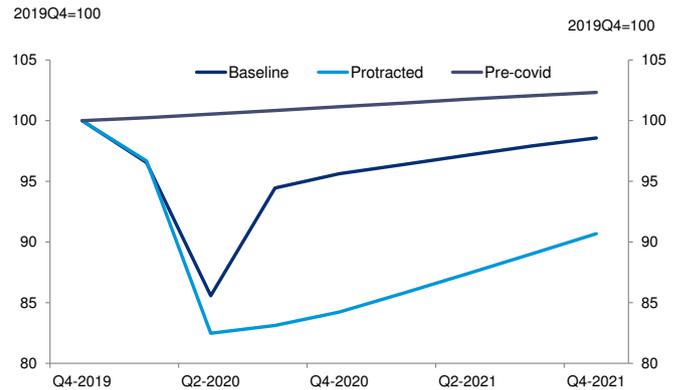


Figure 13: US Real GDP



Source : Deutsche Bank Research

Figure 14: Euro Area real GDP



Source : Deutsche Bank Research

Figure 15: Baseline Scenario Projections

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	2020	2021	2020	2021
GDP Growth (%qoq)					%yoy	%yoy	%q4/q4	%q4/q4
US	-0.5	-9.5	4.5	3.0	-4.2	3.8	-3.2	2.7
Euro Area	-3.4	-11.4	10.4	1.3	-6.9	4.8	-4.4	3.1
Germany	-2.6	-9.6	8.7	1.6	-5.3	5.4	-2.8	4.0
UK	-1.9	-13.2	10.5	1.7	-6.5	5.2	-4.3	4.1
France	-2.8	-12.0	10.2	1.2	-6.8	4.2	-4.7	2.8
Italy	-6.3	-10.0	10.9	0.8	-8.7	4.1	-5.7	1.7
Spain	-3.0	-17.1	14.6	1.2	-8.7	5.0	-6.7	3.3
Japan	-1.3	-3.0	1.0	1.4	-3.9	2.6	-1.9	2.3
China	-11.5	6.6	6.4	2.6	-1.4	11.9	2.9	6.9
Fed Funds Rate	0.1	0.1	0.1	0.1				
ECB Main Refinancing Rate	0.0	0.0	0.0	0.0				
ECB Deposit Facility Rate	-0.5	-0.5	-0.5	-0.5				
BoJ Policy Rate	-0.1	-0.1	-0.1	-0.1				
10Yr US Treasury	1.0	0.9	0.8	1.3				
10Yr German Bund	-0.4	-0.3	-0.1	0.0				
S&P 500	2350	2650	2950	3250				
STOXX 600	275	330	385	440				
US HY	1020*	1100	700	535		400		
US IG	380*	280	180	155		140		
EUR HY	920*	1000	650	490		400		
EUR IG	235*	230	155	130		110		
EUR/USD	1.08	1.1	1.15	1.18		1.25		

* Credit numbers are for Q1 are current

Source : Deutsche Bank Research



Figure 16: Protracted Scenario Projections

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	2020	2021	2020	2021
GDP Growth (%qoq)					%yoy	%yoy	%q4/q4	%q4/q4
US	-0.5	-10.5	-0.7	0.8	-7.8	2.0	-10.9	6.4
Euro Area	-3.3	-14.7	0.8	1.3	-13.3	1.8	-15.9	7.7
Germany	-3.0	-10.1	0.3	0.5	-10.0	2.0	-12.1	7.0
UK	-1.9	-16.3	0.0	0.3	-13.7	1.9	-17.7	10.8
France	-2.8	-14.9	0.5	1.5	-12.9	2.9	-15.6	9.5
Italy	-5.8	-14.2	1.5	2.5	-14.9	1.1	-15.9	4.1
Spain	-3.0	-24.0	2.5	3.5	-18.3	2.0	-21.8	9.3
Japan	-1.3	-2.6	-0.5	0.4	-4.5	1.7	-4.0	3.0
China	-11.5	7.1	3.9	1.6	-2.5	12.0	0.0	9.6
Fed Funds Rate	0.1	0.1	0.1	0.1				
ECB Main Refinancing Rate	0.0	0.0	0.0	0.0				
ECB Deposit Facility Rate	-0.5	-0.6	-0.7	-0.7				
BoJ Policy Rate	-0.1	-0.1	-0.1	-0.1				
10Yr US Treasury	0.8	0.5	0.7	0.9				
10Yr German Bund	-0.4	-0.6	-0.5	-0.4				
S&P 500	2200	2050	2500	2950				
STOXX 600	260	245	325	400				
US HY	1020*	1400	1300	1000		400		
US IG	380*	350	350	290		140		
EUR HY	920*	1400	1300	1000		400		
EUR IG	235*	270	270	225		110		
EUR/USD	1.08	1.1	1.15	1.18		1.25		

* Credit numbers are for Q1 are current

Source : Deutsche Bank Research

Our **market** strategists argued earlier this week for moving from an underweight to neutral allocation in **equities**, with the market having fallen to the lows implied by our baseline economic scenario and positioning having fallen to the lowest levels on record. That scenario is consistent with a significant bounce later this year, but equities are expected to move lower if the protracted scenario is realized. **Credit** spreads, which have gotten some relief from ECB and Fed buying programs, will now be more bifurcated between IG, which should be more stable now, and HY where companies will be progressively under earnings stress and won't see the same level of intervention from the authorities. IG will not be immune from this stress, and there will be many large fallen angels, but the starting point is now more attractive as it is still pricing in dysfunctional funding liquidity which is now being addressed central banks. **Rates** will remain at depressed levels thanks to central bank policy, but will eventually rise as markets look ahead to the potential inflationary implications of fiscal actions that are being taken. In **currencies**, the dollar will remain somewhat overvalued thanks to strong global demand in uncertain times, but could eventually reverse quickly as global dollar funding pressures ease.

Asia

The peak of the Covid-19 outbreak in China was from January 23 – when the government “locked down” Wuhan – to February 10 when the extended Lunar New Year holiday ended.⁴ Restrictions on movement and business activity were much less onerous outside Hubei, but many Chinese voluntarily stayed home even if they weren't compelled to. We estimate that during those three weeks **industrial production fell 27%yoy and retail sales fell 37%**⁵. The purchasing managers surveys suggest that services sectors fared worse than manufacturing overall, although the government's services activity index posted a decline comparable to

4 For a discussion of how China and other countries in Asia Pacific have responded to the Covid-19 pandemic, see "[The Asia Economist: How Asia fights the virus](#)", March 24, 2020.

5 See "[China Macro: Anatomy of the Covid-19 recession in China](#)," March 25, 2020.

30 March 2020
 Special Report



that of the industrial sector. Still, while economic activity declined at probably a record pace during the height of the crisis, this was not a total lock-down of the Chinese economy.

Encouraged by data showing new infections had peaked on February 5, **businesses began to reopen in mid-February**. Statistics on internal travel, ports traffic, property sales, and coal consumption indicate that about half the decline in activity may have been recovered over the following month as people returned to work. The restrictions on Wuhan have begun to be lifted this week and all restrictions on travel in and out of the province of Hubei are to be lifted on April 7.

So, the experience in China has been that the period of greatest social distancing lasted about a month and that they were on track to fully reopen business over the following two months. We, therefore, expect a record 11.5%QoQ(sa) (-7.7%yoy) decline in Chinese GDP in Q1, but expect a robust recovery by 6.6%QoQ(sa) in Q2.

That recovery will be slowed down by the recession in the US and EU which are only now dealing with what China faced two months ago. Export orders in February were at their lowest since the GFC and likely fell again in March. We expect exports to decline at least 25% in Q2, larger than the 17% decline in exports during the GFC. In Q3, as the EU and US begin to recover, that external drag will begin to moderate. Expectations of further monetary and fiscal stimulus in China lead us to expect another reasonably strong quarter of 6.4% growth in Q3 before the economy slows towards its underlying potential.

On the monetary policy front, after cutting the MLF only 10bps so far this year, we expect the PBOC will add another 40-50bps of rate cuts by mid-year. On the fiscal side, we expect the government is likely to see its deficit rise to 4% or more of GDP. The augmented deficit, which includes off-budget funds and local government borrowing, is likely to rise by at least 3% of GDP to 11% or more. The central government has already waived social welfare payroll taxes for businesses for the next three months – five months for SMEs. Other measures being implemented include subsidies for automobile purchases and coupons for use in restaurants and travel services companies. The 2020 budget introduced in April will likely include incentives to companies to retain employment and measures to support consumption, through tax cuts and subsidies. We also expect more infrastructure investment spending, especially on health care and IT (a faster roll-out of 5G networks).

Given the depth of the recession, as growth recovers and continues into 2021, the year-on-year comparisons will be artificially inflated -- we expect GDP growth to average 11.9%yoy next year after a contraction of 1.5% on average this year. But a more reasonable perspective might be that by the end of this year the economy will have grown 2.9% and by the end of next year it will have grown 6.9%.

In the protracted pandemic scenario, we expect policy stimulus to be applied more rapidly, slightly boosting Q2 growth, but the external drag is much worse in Q3 and Q4 – dragging down our forecasts for Chinese growth in those quarters almost by half. In that scenario, we would expect the economy to decline at an average rate of -2.5% this year, with Q4/Q4 GDP registering zero growth.

The Japanese economic outlook is increasingly dependent on developments abroad as constraints on monetary and fiscal policy leave policymakers little room to stimulate growth. The pandemic has so far not spread widely in Japan with

30 March 2020
 Special Report



fewer than 2,000 cases, although caseloads are rising more quickly in recent days, so external demand is the main influence on the forecast. The postponement of the Olympic Games removes an important prop to growth that we had been expecting in Q3, exacerbating the external drag on growth⁶. We now see in our baseline view the economy contracting 3%QoQ(sa) in Q2. The external drag from the US and European recessions is large – exports could fall 9%QoQ(sa) in Q2, even with a sharp rebound in China, subtracting 1.5pts off GDP growth. This would be the worst quarter for the economy since the GFC and a third consecutive decline in GDP.

We think the BoJ will refrain from cutting its policy rate unless the yen appreciates through 100/USD, so will mainly ensure adequate liquidity in markets. A further expansion of private asset purchases is a possible means of supporting the real economy. **A supplementary budget is already in the works** – the headline figure could be as large as JPY50tn but we expect the effective stimulus to be on the order of JPY10-15tn (1.8% - 2.7% of GDP). We expect this to include a JPY200-300,000 cash payment to households; coupons for use in restaurants or travel companies; enhancements to employment adjustment subsidies to support businesses that give workers leave rather than terminating their employment; and property tax cuts for SMEs.

That stimulus would help support the recovery in the second half of the year, that should see the economy return to growth above 1.0%QoQ(sa). For the year as a whole, though, even our baseline forecast has the economy contracting 3.9%yoy on average (-1.9%Q4/Q4). A continuation of the recovery phase in early 2021, combined with the Olympic Games in Q3 would ensure robust growth in excess of 2% next year.

In the protracted pandemic scenario, though, while we would expect a second supplementary budget to be announced, the economy's sensitivity to external demand would be highlighted. We expect the economy would continue to contract for a fourth consecutive quarter in Q3 this year and recover slowly thereafter. An average rate of real GDP decline of 4.5% this year would be followed by a tepid recovery of only 1.7% next year.

Europe

Assumptions. In the baseline scenario we assume that economic lock-down will flatten the epi-curves (lower new cases) in Europe with a two week lag, as it did in Hubei. Italy has been moving into ever tougher lock-down over the last two weeks, with the toughest form beginning 25 March. We assume that new virus cases will be clearly slowing in Italy before mid-April and the total number of cases will have nearly stopped rising around the end of April.

In terms of epi-curve dynamics, Italy is one week ahead of the other main continental European economies, and the UK is one week behind. Spain's lock-down began on 14 March; Germany began closures on 15 March and reached tough lock-down on 22 March; France began a tough lock-down on 18 March. We expect the UK to begin a strict lock-down (close all non-essential business) by mid-April.

6 See "[Japan Economic Perspectives: Impact of Tokyo Olympic postponement,](#)" [March 24,2020](#)



With the lock-downs , we expect new cases to inflect downwards in Germany, France and Spain before the third week of April and to have ceased rising significantly by early May. In the UK, we expect the epi-curve to inflect around the end of April and new cases to stop rising in mid-May.

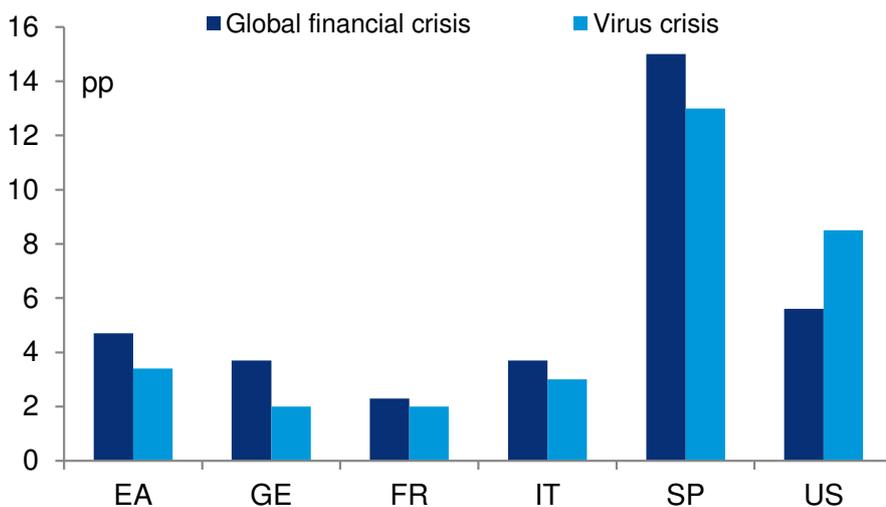
Baseline scenario. With lock-downs beginning before the end of Q1, we expect euro area GDP to contract 3.4% qoq already in Q1 and fall a much larger 11.4% qoq in Q2. At the intra-quarter low, activity is expected to be about 75% of its normal level. We are expecting activity to be recovering but still be about 10% below normal by the end of Q2. The intensity of the recession will differ across countries (cumulative change in GDP in Q1 and Q2): Germany -12.2%, France -14.8%, UK -15.1%, Italy -16.3%, Spain -20.1%.

The rising trajectory into Q3 relative to a low trough in Q2 means there will be quite a strong qoq rebound in Q3 of between 9% and 15% qoq depending on the country. The rise in Q3 will be assisted by the more persistent and structural elements in the fiscal stimulus announcements and the reabsorption of involuntary savings after the collapse in consumption in Q2. Even with this rise, the level of GDP will still be about 5% below the pre-virus level in Q3.

Beyond Q3, we see a very gradual return to pre-crisis levels of activity. This is longer or shorter depending on the degree of scarring. We judge this on the basis of the rise in unemployment, which differs country by country depending on structural factors and the success of the policy response to keep businesses afloat and workers in jobs. Even by mid-2021, GDP is still expected to be running 3-4% below pre-virus levels in Italy and Spain.

We project the euro area unemployment rate to rise from close to 7% at the moment to about 11% later this year, equivalent to a rise in jobless numbers of about 5 million. All the main euro area economies have 'short-shift' labour market support policies. As in the GFC, Spain is likely to see a disproportionately large rise because of its tourist-centric economy and reliance on temporary workers.

Figure 17: Unemployment rates are likely to rise sharply in response to the virus crisis



Source : Deutsche Bank

30 March 2020
 Special Report



Calendar-year GDP growth estimates range from -5.3% in Germany to -8.7% in Italy and Spain. We expect the growth performance to be more bunched in 2021. Germany will lead with 5.4% growth. Others will lag somewhat, restrained by scarring effects like unemployment.

Protracted pandemic scenario. In this scenario, the contraction in GDP in Q2 is deeper and the recovery thereafter is considerably slower than the baseline scenario. Member states will contract in 2020 by between 10% (Germany) and 18% (Spain). Economies will grow in 2021 but at less than half the rate assumed in the baseline scenario, at about 2% on average for the EA and roughly 3% for the U.K.. Under the protracted pandemic the level of GDP will still be about 5-10% below the pre-virus level on average in 2021, with Italy and Spain at the weaker end of this spectrum. The rise in the unemployment rate will be much larger in the protracted pandemic scenario and will peak at around 16% in the euro area in 2020 – equivalent to an increase in jobless numbers of about 15 million – and fall only slightly in 2021.

Policy response – euro area. The euro area fiscal response has been considerable. In terms of classic above-the-line deficit spending, the median increase is 2% of GDP, and twice that in Germany (EUR 250bn in aggregate). Much of this consists of temporary income replacement policies. In our baseline scenario, the cyclical deficit is likely to be about 4-5% of GDP (EUR 450-550bn). Based on what has been announced and our baseline growth forecasts, the headline deficits of some the Big4 EA members could be between 7% and 10% of GDP. Below-the-line items are larger at about 15% of GDP (EUR 1.75tr in aggregate). These include financial transactions (equity injections) and mostly come from State credit guarantees.

Much of the above-the-line costs are temporary: one-off income replacement policies and cyclical effects (automatic stabilisers). The more persistent cost of the virus crisis will be a function of structural demand stimulus policies and the extent to which the credit guarantees are triggered. Both are likely to be a function of the economic scarring, that is, higher in those countries where unemployment rises the most.

The quantum of fiscal easing is broadly matched by the ECB's monetary policies. There are two main policy measures. First, the pandemic emergency asset purchase programme (EUR 750bn) can be deployed flexibly, including with temporary deviations from the capital key, and has the authority to purchase non-financial firms' commercial paper. The second is the enlarged TLTRO3. The increase in capacity is equivalent to EUR 1.2tr. The ECB has announced adjustments to collateral and bank capital rules to ensure banks can maximise access to the larger TLTRO3 lending capacity.

The implicit monetary-fiscal policy coordination regime would work well if all member states had the same starting position in terms of fiscal health. This is not the case. Some euro member states have more fragile debt dynamics, not least Italy. Given the particular vulnerability of employment in tourist-centric economies like Italy and Spain to the virus, we are concerned about a differential unemployment shock. Spain has one of the zone's most cyclically-sensitive labour markets.

Solving this will be one of the greatest challenges to emerge from the virus crisis and it is coming quickly. The ESM is available to make concessional loans with light conditionality. However, even light conditionality comes with a political cost in the

30 March 2020
 Special Report



recipient countries when the virus is interpreted as a common shock.

There are growing demands for a more comprehensive common fiscal response without a stigma to underpin European solidarity. A 'coronabond' – a common debt instrument with a strictly defined purpose and lifetime – has been proposed by a subset of nine member states. There is resistance from those with the traditionally stronger balance sheets. Delays will inevitably lead to doubts about EU solidarity in those countries likely to be most economically impacted. Traditional EU compromises may be criticized. The ramification in a world of growing populism could cast a lasting shadow over Europe⁷.

Policy response – UK. Much like across the rest of Europe, there was a coordinated policy reaction between the Treasury and the Bank of England to help support households and businesses over the coming months. To date, the UK Government has outlined around 2% of GDP in direct cash spending, from grants to small businesses to an unprecedented Coronavirus Job Retention Scheme, where the Chancellor has pledged to compensate furloughed employee wages (up to 80%). Moreover, the Treasury has committed to underwrite around GBP 330bn in loans for businesses.

On the monetary policy front, the BoE cut rates by a total of 65bps, taking the Bank Rate to a record low 0.1%. It also introduced a new Term Funding Scheme with additional incentives for small and medium sized businesses, and ramped up QE by 10% of GDP (GBP 200bn), bringing its total stock of asset purchases to GBP 645bn. The Bank also lowered its countercyclical capital buffer to 0%, releasing an additional GBP 190bn in liquidity.

US

Slower return of activity in the US. Directly applying the timeline of a return to activity in China to the US, most businesses would begin to reopen around the middle of April and public places such as restaurants, bars and malls would begin to open by the end of April. This timeline is too optimistic in the US given that containment measures have been considerably less stringent and geographically diverse and population mobility has, for the most part, continued. As a result, we have delayed the timeline that would be implied directly by the China experience by about four to six weeks. Our underlying assumption is, therefore, that containment measures will prove effective enough to begin to flatten the epi curve by meaningfully slowing the growth rate of new cases by the end of April. Businesses would then begin to reopen around mid-May allowing for some return of economic activity at that point with activity further normalizing in June.

US economy to contract a record amount in Q2. Using these underlying assumptions, after declining about 0.5% QoQ (sa) in Q1 (-2.2% annualized), we now see US activity falling a further nearly 10% in the second quarter (about -33% annualized). To put this into context, that decline would be more than three times the sharpest ever quarterly contraction in the post-war experience and about four times the contraction at the worst of the financial crisis in Q4 2008.

Economy to rebound in the second half. We anticipate that growth will rebound in the second half of the year, mostly driven by massive fiscal and monetary policy

⁷ "EU leaders' summit: Impasse, but what next?", DB [Data Flash](#), 27 March 2020.

30 March 2020
 Special Report



responses and a further normalization in activity as containment measures fade further and households and businesses become more comfortable with returning towards pre-virus practices. The recovery in activity will not be V-shaped, however, and indeed we believe that the expected recovery in activity will be gradual as eradication of the virus remains uncertain for some time. For 2020, the economy is expected to contract 4.2% on an annual average basis (-3.2% in Q4/Q4 terms), but rebounds more strongly in 2021 as there is “make up” from past activity that was lost. This profile produces growth of 3.8% in 2021 (2.7% Q4/Q4).

Unemployment to reach post-world-war high. As the recent record spike in jobless claims makes clear, the near-term implications for the labor market are stark under this scenario. The unemployment rate is likely to rise to a peak level in the neighborhood of 12% in Q2 -- this would be a post-war record high – but then decline relatively quickly compared to “typical” recessions in the coming quarters, just about halving by year-end. We continue to see the unemployment rate remaining somewhat elevated relative to its recent five-decade low, even through end-2021, as disruptions to some industries, particularly those related to travel and tourism, could be more persistent.

Fiscal and monetary response has been aggressive. Helping to set a baseline for the growth rebound in the second half and buffer household income losses, has been an aggressive response from monetary and fiscal authorities. For the former, the Fed has cut rates to zero, restarted open-ended QE, offered record levels of liquidity, and restarted old and introduced new asset purchase programs, including for the first time corporate bonds. On the fiscal side, Congress has enacted three packages, which together total around USD 2.75tn (equal to about 12.5% of 2019 nominal GDP). The latest bill passed helps households through expanded unemployment benefits (an additional USD 600 on top of state benefits), direct cash payments (USD 1,200 per individual, USD 2,400 per couple, and USD 500 per dependent, subject to income thresholds), deferment of tax payments, delays in certain debt payments (e.g., student loans), deferments of foreclosures, and incentives to be kept on payrolls. It also assists businesses through direct support to severely impacted industries, loans to small- and medium-sized businesses, deferral of the employer portion of the payroll tax, and the establishment of Fed facilities that will directly support lending to businesses (see: ["What's in the \\$2 trillion stimulus package?"](#)). The fiscal response may not be limited to already enacted measures, as Congress and the White House have already hinted at the potential for a fourth stimulus bill to follow after congressional recess.

The fiscal cost of these efforts to support the economy are likely to be immense. We estimate that the fiscal deficit will balloon to at least USD 3tn in fiscal year 2020, nearly 15% of nominal GDP. For comparison, this deficit is more than double that during the global financial crisis in 2009. Debt-to-GDP is likely to rise to about 95% this year, up from 79% in 2019, and reaching a level not seen since the mid-1940s. This accelerates the timing of debt equaling output by a decade. US debt-to-GDP was already on a relentless climb higher in the coming decades driven by burgeoning commitments to mandatory health items and rising debt service costs. This fiscal response, while necessary, will clearly exacerbate this trajectory.

Protracted pandemic would lead to delayed recovery and greater permanent output loss. Under the protracted pandemic scenario we assume that containment measures prove ineffective and the virus spread worsens in Q3. With a further spread of the virus and repeated lock-downs, we also see more scarring from this scenario, with growth returning to only slightly positive in Q4 and only slowly

30 March 2020
 Special Report



normalizes in 2021. For the year, the economy contracts 7.8% in 2020 under this profile (-10.9% Q4/ Q4), and the rebound is more subdued in 2021, with activity rising only 2.0% (6.4% Q4/Q4).

Latest views on markets

Historically, the sell-off in **US equities** around recessions is well explained by the extent of the initial (over/under) valuation and the severity of the recession (extent of the peak-to-trough decline in earnings measured on a last-twelve-months basis). The sell-off in the S&P 500 from the February peak to the recent bottom, down 34%, has been in line with the expected earnings decline in our baseline economic scenario and argued for moving from underweight to neutral equities (DB: The Covid-19 Equity Sell-off—The Case For Moving To Neutral, March 25 2020). Our baseline scenario sees equities recovering most of their losses by year end in historically typical manner. We see European equities moving in sync with US equities but with a higher beta. Typically equities bottom half way through a recession, so much depends on whether it is an extended pandemic or not. If it is, equities would be expected to fall further and we would expect a bottom 5% lower than the recent one, so a peak to trough decline of around -40%.

In **credit** markets, the extremely easy stance of monetary policy over the past decade has led to a huge liquidity problem. Very low rates have forced investors to move into lower rated and more illiquid credit risk in order to hit return targets. On the flip side, tighter regulation has reduced dealers' balance sheets. So credit markets have rapidly expanded in size relative to market makers' ability to trade it.

In good times with constant inflows this doesn't matter as clients only want to buy. However, as the economy slumps and outflows are seen, everyone tries to exit the same very narrow door. As such, spreads gap wider.

This has contributed to outsized moves in credit so far in this crisis. However over the last week the ECB have massively increased their CSPP program and the Fed have now got a vehicle to buy corporate bonds. As such, the plumbing of credit markets should now be in better shape. As the economy dramatically slows, the problems should migrate away from access to liquidity towards reflecting the damage to companies' businesses. This should push more of the problems towards HY on a relative basis vs IG.

HY is also being hit by exposure to US energy (the largest sector at 14% in the US HY market) and risk of fallen angels (IG downgrades to HY). Over the last decade, BBBs have grown from c.100% to c.270% of the size of HY market. This leaves a huge overhang of potential large former IG companies swamping the smaller HY market. These names are underperforming massively at the moment.

For the **rates** forecast, the nature of the policy mix (central bank support and fiscal support) is a critical input. We expect the Fed and the ECB to maintain rates at their current levels over the forecast horizon. This is not because they are out of ammunition, but rather because further rate cuts would be counterproductive. Given low inflation and the exogenous nature of the shock we expect central banks to remain in a "whatever it takes" mode. The recent unprecedented announcements from both the Fed and the ECB amount to a very aggressive credit easing in combination with an implicit yield curve control. In turn, central banks' support is enabling an equally unprecedented fiscal response. Therefore, the yield

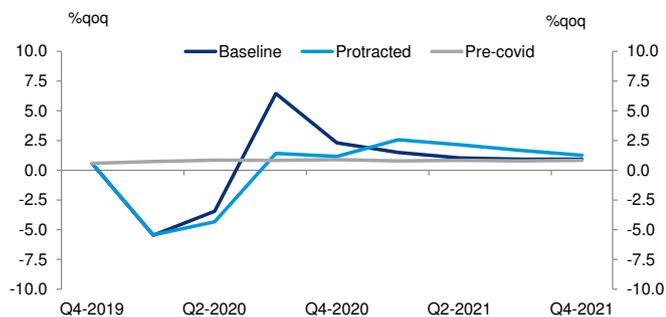


forecast assumes a very aggressive fiscal stimulus and the necessary central bank measures to maintain funding to the real economy. For reference, the Fed capped bond yields at 2.5% during WWII to support war financing. This policy mix de facto replicates “helicopter money” and should be inflationary in the longer run. This is what underlies the rise in yields towards the end of the forecast horizon.

There is one notable difference between the Fed and the ECB. The 30Y rate is relevant in the US for the mortgage market, increasing the incentive for the Fed to ensure that it remains low. In contrast, lower long-end rates in Europe are likely to be counterproductive given their adverse impact on the pension and insurance sector. Thus, the ECB is less likely to lean against a rise in core long-end rates in Europe.

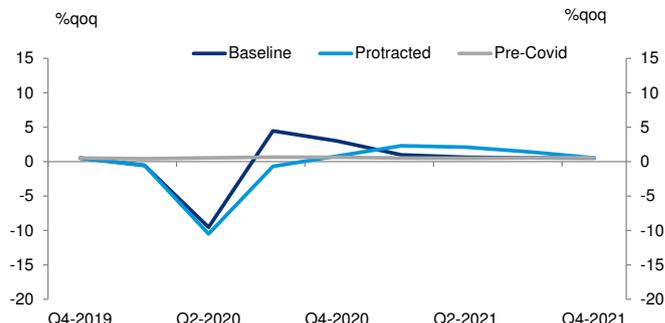
The **foreign exchange** market has been dominated by widespread dollar hoarding in recent weeks that led to an appreciation of the dollar. Recent central bank actions, most notably the expansion of FX swap lines to more central banks as well as the Fed’s corporate credit facilities, have helped alleviate some of the immediate stress and many liquidity indicators have normalized. Once immediate dollar demand abates, we think the risk is of a sharp reversal of dollar strength similar to that experienced in 2008. The dollar has significantly overshot fair value, interest rate differentials between the US and the rest of the world have collapsed and it is now very cheap for foreign corporates and investors to hedge their underlying dollar exposure. What is more, we worry that the rest of the world will be able to manage the healthcare and economic fallout from the virus crisis better than the US. Most notably, the medium-term impact of the crisis on the unemployment rate is likely to be larger in the US and Europe given the differentiated emphasis on labor protection schemes, while Europe in aggregate is likely to be able to manage an exit strategy from the containment phase of the crisis more sustainably than the US. All of this points to building dollar weakness over the remainder of the year.

Figure 18: World GDP growth*



* Weighted average of EA, US, UK, China & Japan
Source: Deutsche Bank Research.

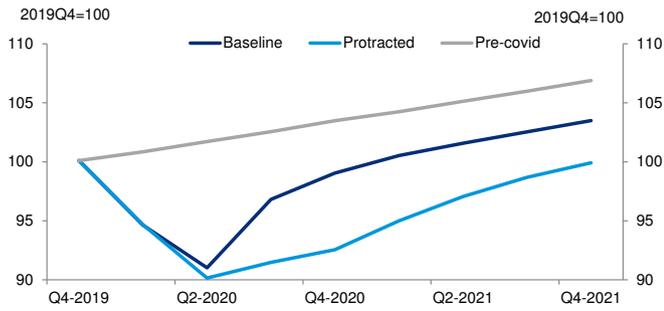
Figure 19: GDP growth in the US



Source: Deutsche Bank Research.

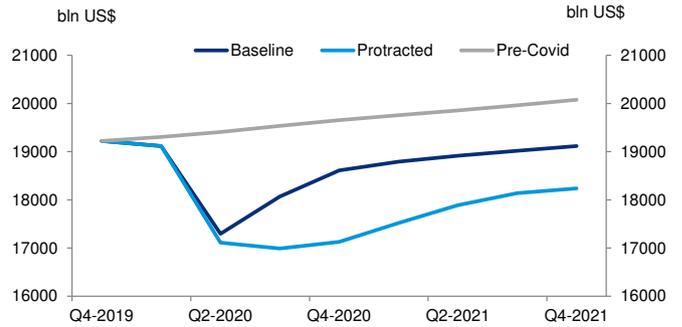


Figure 20: World real GDP*



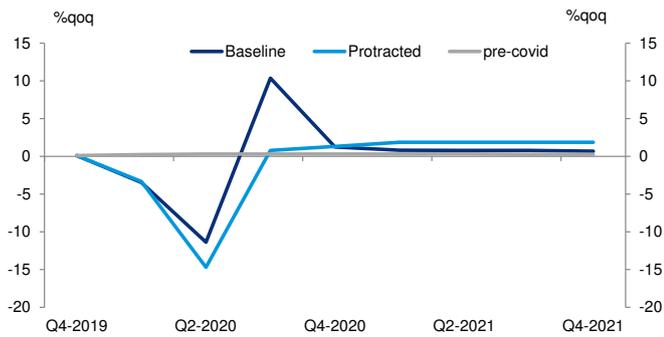
* Weighted average of EA, US, UK, China & Japan
Source: Deutsche Bank Research

Figure 21: US real GDP



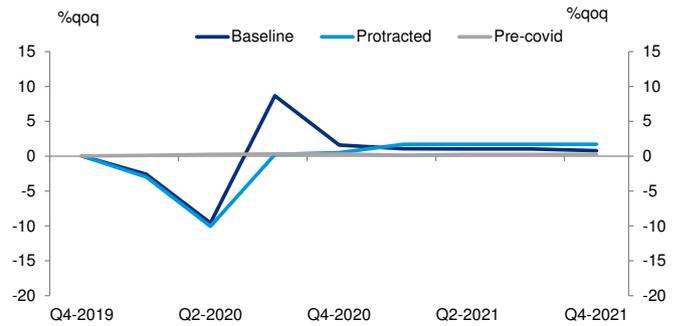
Source: Deutsche Bank Research

Figure 22: GDP growth in the Euro Area



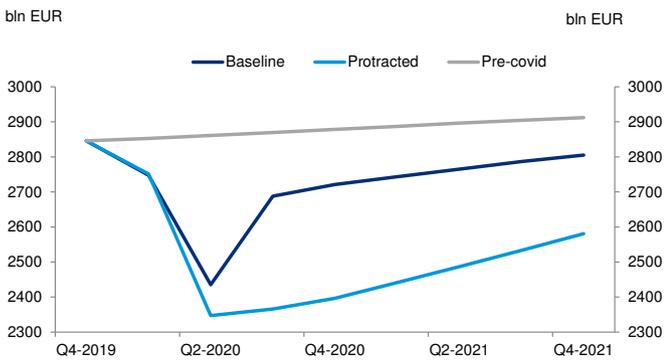
Source: Deutsche Bank Research

Figure 23: GDP growth in Germany



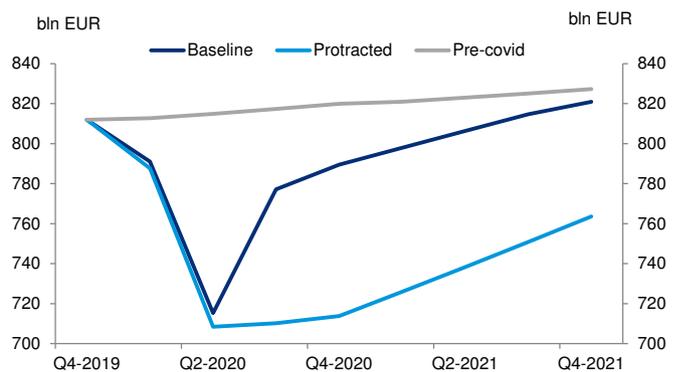
Source: Deutsche Bank Research.

Figure 24: Euro Area real GDP



Source: Deutsche Bank Research

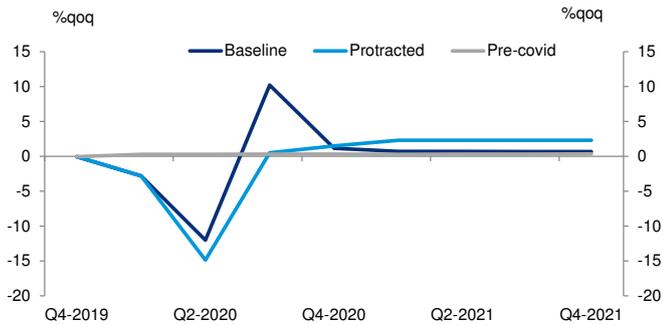
Figure 25: Germany real GDP



Source: Deutsche Bank Research

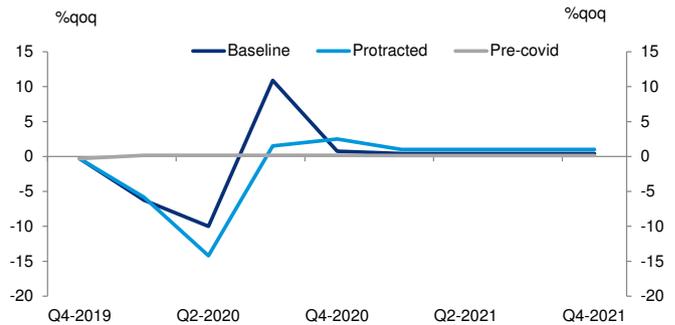


Figure 26: GDP growth in France



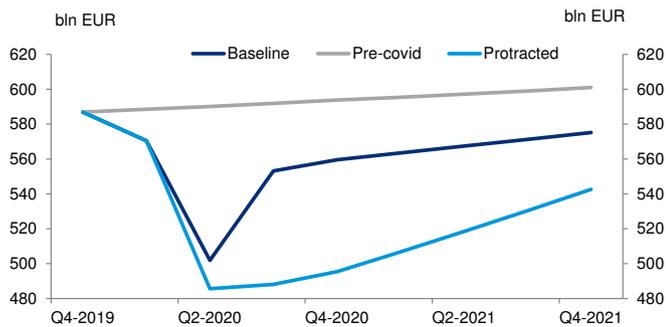
Source : Deutsche Bank Research.

Figure 27: GDP growth in Italy



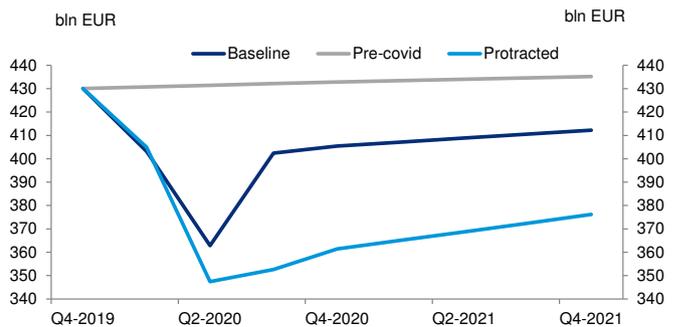
Source : Deutsche Bank Research.

Figure 28: France real GDP



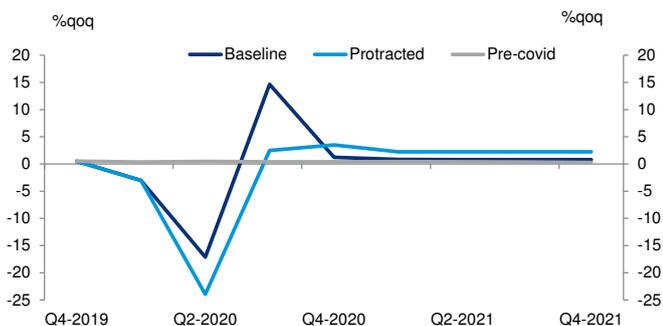
Source : Deutsche Bank Research

Figure 29: Italy real GDP



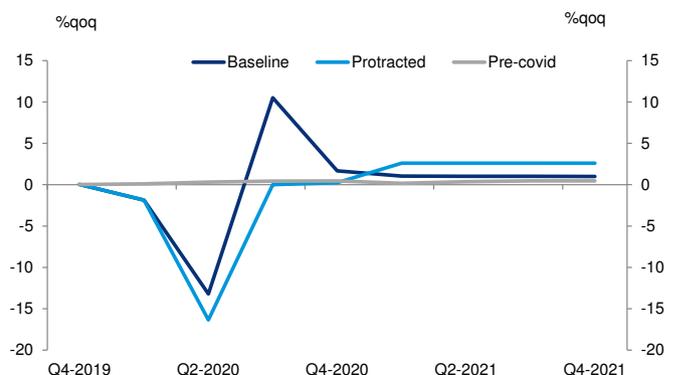
Source : Deutsche Bank Research

Figure 30: GDP growth in Spain



Source : Deutsche Bank Research.

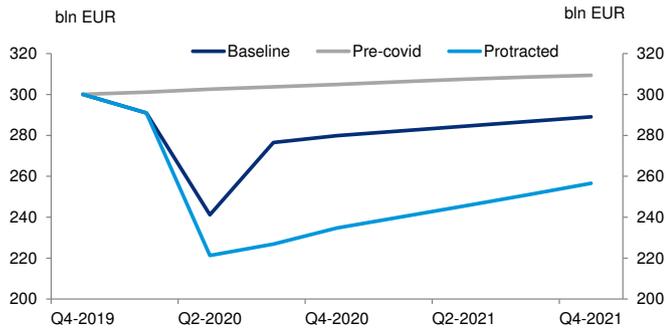
Figure 31: GDP growth in the UK



Source : Deutsche Bank Research.

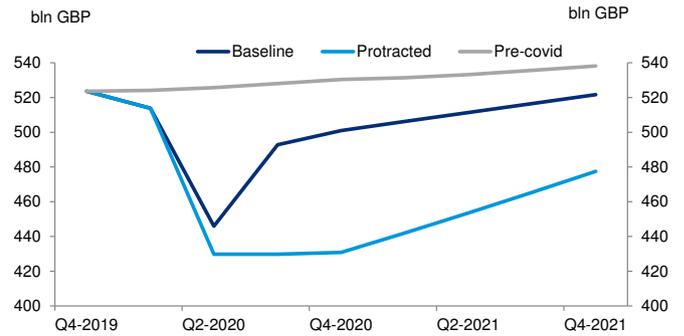


Figure 32: Spain real GDP



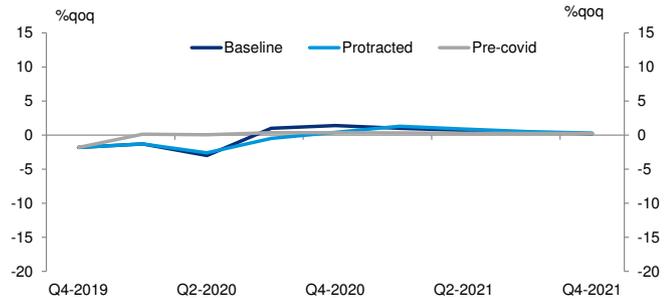
Source : Deutsche Bank Research

Figure 33: UK real GDP



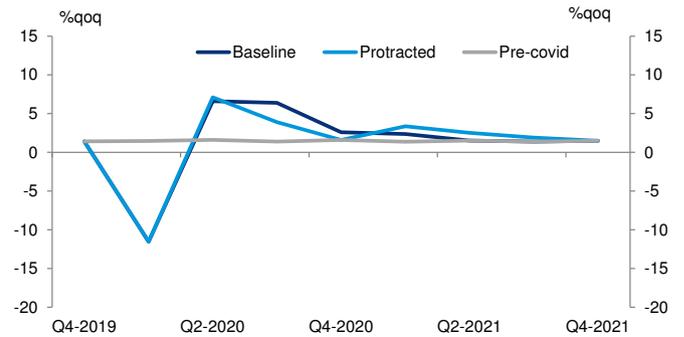
Source : Deutsche Bank Research

Figure 34: GDP growth in Japan



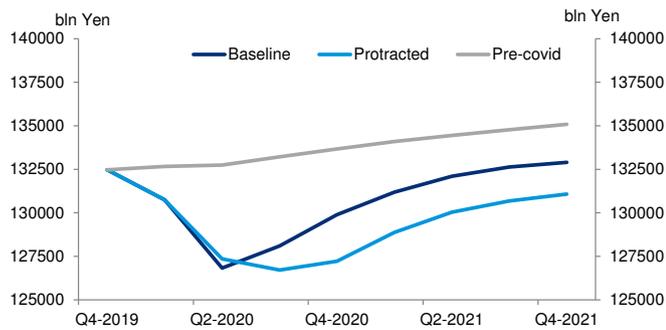
Source : Deutsche Bank Research.

Figure 35: GDP growth in China



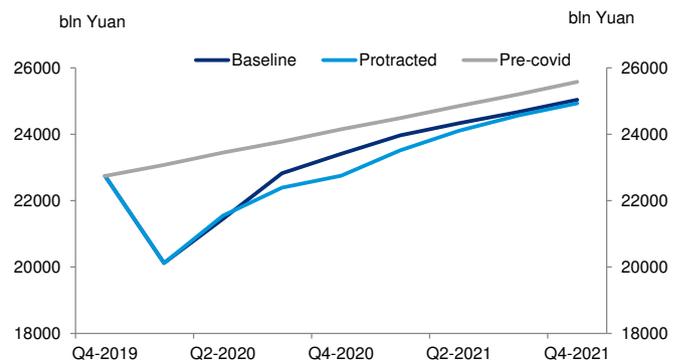
Source : Deutsche Bank Research.

Figure 36: Japan real GDP



Source : Deutsche Bank Research.

Figure 37: China real GDP



Source : Deutsche Bank Research.

30 March 2020
Special Report



Appendix 1

Important Disclosures

*Other information available upon request

*Prices are current as of the end of the previous trading session unless otherwise indicated and are sourced from local exchanges via Reuters, Bloomberg and other vendors. Other information is sourced from Deutsche Bank, subject companies, and other sources. For disclosures pertaining to recommendations or estimates made on securities other than the primary subject of this research, please see the most recently published company report or visit our global disclosure look-up page on our website at <https://research.db.com/Research/Disclosures/CompanySearch>. Aside from within this report, important risk and conflict disclosures can also be found at <https://research.db.com/Research/Topics/Equities?topicId=RB0002>. Investors are strongly encouraged to review this information before investing.

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30 March 2020
Special Report



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30 March 2020
Special Report



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30 March 2020
Special Report



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30 March 2020
Special Report



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