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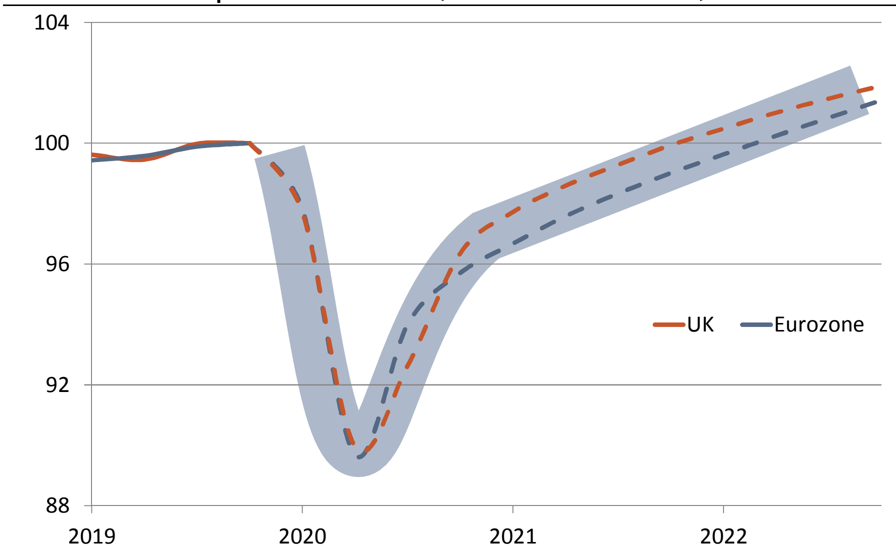
After the virus: the tick-shaped rebound

- **A severe and unusual emergency:** The coronavirus pandemic and the lockdowns to contain it affect supply and demand in the various sectors of the economy in unusual and different ways. The likely impact ranges from sudden stops (long-distance travel) to significant losses (parts of manufacturing), to small losses (water and energy supply) and even to significant increases (healthcare, online shopping).
- **Lessons from the past:** In this report, we compare the onset of previous recessions to the pre-coronavirus starting situation and the unusual nature of the current shock. As long as monetary, fiscal and regulatory policies remain in "whatever it takes" mode, we believe that the risks of second-round effects such as those of a follow-up financial crisis can be contained. Once the pandemic is sufficiently under control and lockdowns can be eased, economies will start to rebound.
- **Our base case:** We assume a severe lockdown of about eight weeks that will be eased step by step from late May onwards. Many activities that had to be switched off can then be switched on again step by step, but some activities such as long-distance travel will be restrained for much longer. The fiscal stimulus will partly offset some hesitation by consumers and companies to spend.
- **The tick mark recovery:** The sharp downturn will be followed by a slightly flatter upturn that ultimately goes beyond the pre-coronavirus level of GDP. Details will vary by country, depending on policies, the medical situation and the non-coronavirus trends in demand and supply. By and large, we expect GDP to surpass its late-2019 level roughly two years after the trough.
- **A long-term drag?** An event on the scale of the coronavirus pandemic and recession will almost certainly have profound economic, financial and political effects that will be felt for a long time. In manufacturing, companies will shorten and diversify supply chains and raise inventories. The need for fiscal repair and more social and healthcare spending can turn into a drag on gains in global supply.
- **A crisis can be the mother of invention:** The coronavirus shock is likely to spur innovation in many fields ranging from a more efficient use of labour and communications technology to increased use of 3D printing. In the long run, the resulting jolt to productivity may be stronger than the drags unless economic policies turn away too much from market-based models.

Chart 1: The tick-shape rebound – real GDP (dotted lines show forecast)



Q4 2019 = 100. Quarterly data. Source: Berenberg, Eurostat, ONS

Key macro reports

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A downturn without precedent

While no two downturns are quite the same...

Before we can discuss the shape of the rebound, we need to consider the forces that usually drive recessions and the subsequent recovery. No two downturns are quite the same. However, they often share some underlying traits. The underlying causes of a recession generally fall within five categories:

.. they often share some underlying traits

1) boom followed by bust in the real economy;
2) a major financial/balance sheet crisis;
3) an external economic shock to the supply-side or the external balance;
4) a major economic policy error; or
5) a natural disaster such as a pandemic.

The coronavirus recession is not due to economic factors

The great financial crisis of 2008/2009 had elements of each of the first four categories. A post-boom bust in the US housing market triggered a global financial crisis when US authorities made the policy mistake of the decade by allowing Lehman Brothers to fail without managing counterparty risk. It coincided with the end of a commodities boom. The collapse in oil prices from above $130 per barrel of Brent crude in July 2008 to $40 by the end of the year exacerbated the shock for oil-producing nations and to global trade overall.

A huge health crisis is delivering a massive shock...

...that could turn into a credit crunch if cashflow problems are left unchecked

The coronavirus recession does not easily fit into any of the four top categories, which all relate to economic factors. Today, a huge global health crisis is delivering a massive and unprecedented sudden shock to domestic and external demand and supply. In this "sudden stop", many economic activities are deliberately shut down as part of the social response to contain the spread of the virus. For the worst-affected regions, the shutdown includes all but essential economic activities for which work cannot be done safely from a remote location. However, economic factors come into play as the disruption to demand and supply looks set to cause a severe liquidity crunch which could morph into a crippling credit crunch unless policy steps in. The second order effects include the risk of a balance sheet recession. The huge uncertainty about the virus and the scale of the self-induced recession also raise the risk of an accidental policy mistake.

We draw four key lessons from previous recessions

Tables 2a-2d (Annex 1) provide a detailed analysis on the previous three downturns in the four major European economies: Germany, the UK, France and Italy. While none of these recessions quite compare to this one, our analysis provides four insights which can help us better assess both the shape of both the ongoing downturn and the eventual rebound.

The global economy was on a stable footing. A downturn was not due soon.

1) **Few excesses in major parts of the advanced world:** Sometimes, it only takes one trigger to topple a vulnerable economy (ie the US, the UK and Spain in 2008). Heading into this downturn, the advanced world was not on an unsustainable growth path. With no serious credit, investment, wage or spending excesses to cleanse, the downturn should end as soon as the containment measures are lifted unless policymakers were to make the mistake of letting serious second-round effects happen.

Structurally weak economies such as Italy could struggle to recover

2) **Watch for structurally weak economies:** Countries with supply-side problems and weak trend growth may struggle to rebound as strongly, even after the recession is over (ie Germany in 1992, France in 2008, Italy in 2001, 2009 and 2013). Today, Italy remains the weakest among major European economies. It is also one of the worst hit by the pandemic so far. Unfortunately, the downturn may have lasting negative effects on Italy's already weak supply potential. Once the acute crisis is over, Italy needs to be serious about pro-growth supply side reforms.

The massive policy response limits the risk of a financial crisis

3) **The scale and speed of the policy response:** Policymakers sometimes underestimate the scale of a crisis or be too slow to respond (ie the advanced world in 2008, the Eurozone in 2011). Sometimes policymakers face budget constraints or inflation risks and thus cannot deliver a big stimulus (France in 1974, the UK in 1980). Today policymakers do not face such constraints. They have acted swiftly with a massive fiscal, monetary and regulatory response. This can limit the near-term and long-term damage.

Cheap oil supports real incomes across the world

4) **The positive supply-side shock from oil:** A surge in the price of oil due to a decline in global oil production has exacerbated downturns in the past (the global economy in 1974/75 and 2008). Today, major oil producers Russia and Saudi Arabia are engaged in a price war to gain market share that has been lost to US shale since 2015. On top of lower demand, this has led to a surge in oil supply and a collapse in the price to c$25 per barrel of Brent crude – down from c$55 a month ago. While this will hurt producers of oil in the near term, it will benefit the 75% of the global economy that net imports oil.

Think tick mark: the shape of the rebound

The shape of the rebound will depend on four key factors: i) the shape, depth and duration of the downturn, ii) the way in which lockdowns will be eased, iii) the reaction of demand to the easing of restrictions, and iv) the monetary and policy support.

Four factors will determing the shape of the rebound

Impact on sectors

The pandemic and the lockdowns to contain it affect the various sectors of the economy in unusual and very different ways (see Table 1 on page 5). To gauge the extent and profile of the recession, we can group these sectors into five rough-and-ready categories:

Broad-based "sudden stop" shock for some sectors

- **sudden stop:** long-distance travel, tourism, parts of non-food retail, major parts of on-site entertainment (such as theatre and music performances), and trade fairs;
- **serious damage**: major parts of manufacturing hit by shortfall in demand and some supply chain disruptions;
- **modest damage:** construction, repairs and some other services which do not require intense on-site human contact;
- **no significant damage:** activities suited to home office and other forms of remote delivery such as accounting, major parts of financial services as well as essential services exempt from or unaffected by lockdowns such as water and energy supply, food retail – some of these sectors will be affected somewhat from the overall decline in economic activity;
- **significant increase:** health and many medical services, some other public services, online shopping and entertainment, delivery services, and medical research.

There are some winners (i.e. healthcare, delivery services)

Lockdown economics

For every month of a harsh lockdown, we would subtract at least 2.5% from annual 2020 GDP while adding at least 1.5% to 2021 GDP due to base effects and a post-lockdown rebound. We would also raise 2022 growth by up to 0.5ppt as the rebound continues, supported by the monetary and fiscal stimulus. Details vary with the specifics of each country and the assumptions about non-coronavirus trends. The restrictions on daily life and economic activity are hitting most non-digital consumer-facing services more than manufacturing and construction. Countries with a big manufacturing sector (Germany) are being hit less than those where spring and summer tourism usually contributes significantly to GDP (Spain, Italy, Greece).

Every month of lockdown lowers annual GDP by roughly 2.5%

For our base case, we assume a severe lockdown of about eight weeks. While the slowdown in the number of confirmed new infections suggests that some restrictions may be eased slightly from 20 April onwards in some countries, we do not expect these first small steps to make a major economic difference already. To forestall the risk of a renewed surge in infections, most restrictions will likely remain in place for longer.

In our base case we assume a severe lockdown lasting eight weeks...

Instead, we look for the lockdowns to be eased significantly if and when number of active cases has peaked or is no longer rising beyond the capacity of the medical system to cope. Restrictions will likely be lifted in stages over months and according to three criteria: i) low infection risks because of a low density of close-contact interaction between many people;

...but the recession duration depends on the trajectory of the virus

Chart 2: Eurozone GDP, by expenditure component

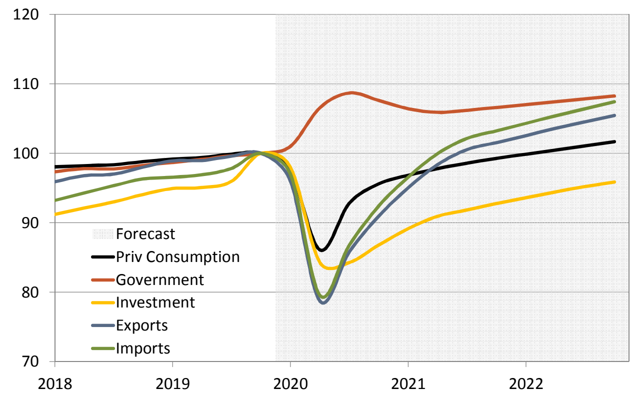

Chart shows real GDP. 2019 Q4 = 100. Source: Eurostat, Berenberg.

Chart 3: UK GDP, by expenditure component

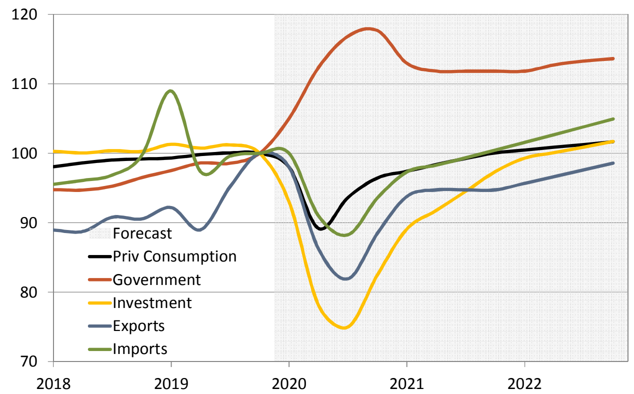

Chart shows real GDP. 2019 Q4 = 100. Source: ONS, Berenberg.

ii) the necessity to ease strains in society, for instance by re-opening schools and nurseries for small children; and iii) the economic importance of the activity.

Some containment measures could last for months

Restrictions on big public events and long-distance travel and tourism will likely be lifted last. Even if a country has brought the pandemic under control, it has to guard against the risk of re-importing it from abroad. For travellers from high-risk countries, which may well include major parts of Africa, Latin America and south Asia for a long time, quarantines may still have to be imposed for months after most other restrictions have been lifted.

Demand after the trough

We expect only very modest damage to the supply capacity of the economy

As long as the harsh lockdown measures do not last longer than three months, we expect only very modest damage to the supply capacity of the economy. In most cases, what had to be switched off can also be switched on again. Of course, a significant number of small businesses will unfortunately go under because official help does not reach them, or not fast enough. However, even the corner mom-and-dad restaurant or shop can be re-opened – possibly under a new owner or tenant – once demand has returned.

Persisting caution once the virus has run its course could restrain demand

The rebound may be muted in many sectors because households and companies may hold back on spending as they are still scarred by the experience. Consumers may not dare to venture out again as much as before. Anecdotal evidence from China points this way. But the rebound will be supported by the unprecedented policy response to the pandemic. Most of the monetary and part of the unprecedented fiscal stimulus will still be in the pipeline if and when the shock to the real economy starts to ease. Pent-up demand may add to that for many goods and some services.

Tick mark rebound

The shape of the rebound will likely resemble a tick mark

Putting the pieces together, we look for a tick-mark-style profile, namely a sharp downturn followed by a slightly flatter upturn that ultimately goes beyond the pre-coronavirus level of GDP. Details will vary by country, depending on policies, the medical situation and the non-coronavirus trends in demand and supply. By and large, we expect GDP to surpass its late 2019 level roughly two years after the trough. With still some idle capacities including still elevated unemployment, growth can remain above trend through 2023 and 2024, helping to narrow the gap between actual GDP and the level economies could have reached without the coronavirus shock. Some four to five years after the trough, the level of GDP may approach the pre-coronavirus trend line.

A risk scenario

In a risk scenario, output may not begin to rebound until Q4 2020

As a risk scenario, Charts 4 and 5 show the likely profile of GDP if the harsh lockdowns are extended through the end of June and eased only so gradually in Q3 that activity stagnates at a low level during the summer. While some activities will rebound, others will be constrained as supply-chain disruptions and bankruptcies hurt. In the risk scenario, activity recovers only from Q4 2020 onwards. With more lost ground to make up for, the rates of the eventual rebound can initially be slightly higher in the risk scenario. But remember that, after a fall from, say, 100 to 80, even a hypothetical 15% rebound within four quarters would only get an economy back 92, still 8% below the starting level.

Chart 4: Eurozone GDP: base case and downside risk scenario

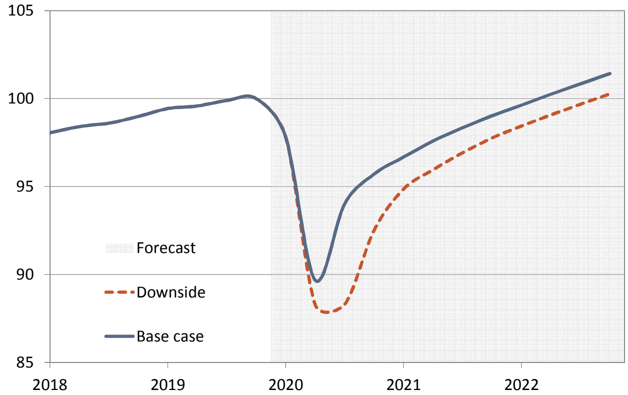

Chart shows real GDP. 2019 Q4 = 100. Source: Eurostat, Berenberg

Chart 5: UK GDP: base case and downside risk scenario

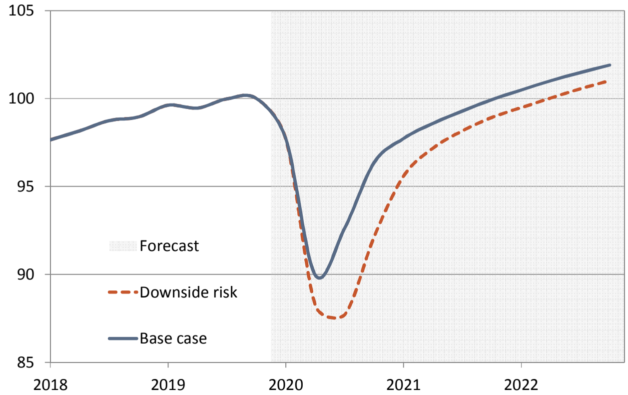

Chart shows real GDP. 2019 Q4 = 100. Source: ONS, Berenberg

Table 1: Impact by key sectors

Sector	Weight	Outlook
Agriculture, forestry and fishing	1.6%	***Near-term:*** *Limited impact except for seasonal foods that cannot be harvested due to a lack of migrant labour. Production and distribution largely protected during virus containment.* ***Medium-term:*** *Unchanged on trend.*
Mining and quarrying	0.5%	***Near-term:*** *Strong negative near-term hit from reduced demand for global tradable goods and lower industrial/construction demand for inputs.* ***Medium-term:*** *Rapid rebound once production and projects come back online.*
Manufacturing	16.2%	***Near-term:*** *Huge near-term shock. Containment measures cripple demand and supply. All elements of non-essential production disrupted – especially production lines and storage and distribution. Surge in demand for medical equipment and some pharmaceuticals.* ***Medium-term:*** *Quick and sustained rebound once containment measures are lifted.*
Electricity, gas, steam and air conditioning	1.9%	***Near-term:*** *Modest near-term drop in output due to lower industrial, retail and office demand.* ***Medium-term:*** *Rebound in line with underlying economic activity.*
Water supply, sewage and waste management	1.0%	***Near-term:*** *Limited impact. Mostly unaffected by virus containment measures. Slight near-term drop due to shut-downs of some activities.* ***Medium-term:*** *No major change in trend.*
Construction	5.3%	***Near-term:*** *Varies by country depending on scale of shutdowns. Most small private sector projects on hold while many major private and public projects still go ahead with limited disruption.* ***Medium-term:*** *Uptick in activity once the shutdown measures are lifted, reflecting stalled projects and pent up demand; no major change to long-term trend.*
Wholesale and retail, transport, accommodation and food	18.9%	***Near-term:*** *Unprecedented plunge in supply and demand. Many activities shut down. Expect record drops in non-food consumption, hotel demand and spending on restaurants; limited offset through surge in online shopping and food delivery services. Massive shock for transport industries.* ***Medium-term:*** *Sudden rebound likely for retail and transport of goods once containment policies are lifted; long distance travel and tourism likely constrained for a long time. Measures against contagion from abroad may need to stay in place for longer than other restrictions.*
IT and communication	5.2%	***Near-term:*** *Sizeable rise in demand and output reflecting increased usage from remote working – working from home etc offsets reduced demand for roaming services due to travel restrictions.* ***Medium-term:*** *Likely to remain elevated following the recovery if working habits change permanently.*
Financial services and insurance	5.2%	***Near-term:*** *Mostly flat to slightly down. Some increase in credit demand and insurance claims. Financial market volatility raises demand for brokers and other intermediaries. More bond issuance, less equity capital financing. Drop in demand for generic consumer and business credit and mortgages.* ***Medium-term:*** *Rebound in line with underlying economic activity.*
Real estate	11.1%	***Near-term:*** *Modest damage. Most rents will still be paid, imputed rent for owner-occupied dwellings falls only slightly. However, sudden stop for many real estate transactions.* ***Medium-term:*** *Rebound during the recovery – initial spike possible due to pent up transactions.*
Professional, scientific and tech	11.4%	***Near-term:*** *Modest rise near-term. Many firms can manage near-term disruptions with remote working. Expect a surge in output among health and medical research institutions. Higher demand for technical support as many workers operate remotely during shut-down.* ***Medium-term:*** *Slightly higher trend growth.*
Public administration, education and social work	18.4%	***Near-term:*** *Surge in demand for key elements of public administration: healthcare, social care as well as increased output to administer support programs (grants, employment subsides etc). Education output down modestly amid school and university closures.* ***Medium-term:*** *Return to more normal level of demand for health and support work likely once the pandemic has run its course. Trend growth likely to be modestly stronger than before as governments and consumers spend more to guard against future health emergencies.*
Arts entertainment and other services	3.3%	***Near-term:*** *Unprecedented plunge comparable to that in non-food retail sector.* ***Medium-term:*** *Quick snap-back during recovery.*

Weight gives share in gross value added (EU28 average). Source: Eurostat, Berenberg

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The role of the policy response

Policymakers across the advanced world and beyond have adopted a simple attitude to the coronavirus crisis – "whatever it takes, whatever works and for as long as it takes".

"Whatever it takes, whatever works and for as long as it takes"

Tables 3a and 3b (Annex 2) provide detailed analysis of the fiscal, monetary and regulatory responses to the coronavirus recession for G7 economies. We highlight the key issues below.

Government intervention into the economy…

Economic policy is no substitute for a competitive market economy…

1) **…is no substitute for a market economy:** A competitive market has no rival in meeting the needs of a modern society. At the most, governments can ensure that all essential and basic needs are met, such as food, energy and sanitation while preserving the underlying private economy during the lockdowns and recession with fiscal and monetary support. However, no amount of government spending or central bank bond buying can substitute for factories and shops that are under enforced lockdown.

…and it cannot end the recession, that depends on the virus trajectory

2) **…cannot end the recession:** Ultimately, the downturn is a function of the virus trajectory. That path depends upon how fast we manage to contain the spread of the virus to an extent that restrictions can safely be lifted again. While the early scenes in supermarkets of some panic buying will ease in time as people adjust, risk aversion by households and companies will remain high until life returns to normal.

But economic policy…

Policy can support the healthcare response…

1) **…can reinforce the response to the health crisis:** While economy policy cannot do anything about the pandemic, it still plays two critical roles. 1) The credible long-term commitments to sound money and budgetary prudence make it possible for advanced economies to borrow to the hilt in order to finance huge emergency spending programs. Pandemics are even more dangerous in developing nations than in advanced ones because poorer societies often lack credible institutions. 2) By supporting incomes, economic policy can limit the direct health impact of the recession.

… and can contain the risk of a financial crisis

2) **…can contain the risk of a financial crisis:** Revenues across the economy have slumped as major industries have been de facto switched off. But companies still have costs to pay. This is a dangerous problem in a credit-based economy that relies on a high velocity of cash flow. But policies including generous credit lines to vulnerable companies, asset purchases (quantitative easing) without pre-set limits, liquidity injections into money markets, generous loan guarantees, tax breaks and cash hand-outs can prevent a negative cash-credit dynamic. The fall in cost to insure against default on North American and European investment grade corporate debt shows that such policies are working – see Chart 6. Along with the subsidies to encourage companies to retain their staff during the downturn, policymakers are raising the chance that the economy can gradually get back to being more normal once any containment restrictions are lifted step by step.

The role of monetary and fiscal policy

While central banks have an important role to play in making sure financial market function smoothly, especially in critical areas such as interbank and overnight markets, near-term economic outcomes will depend more on the path of fiscal policy. Government spending can be more precisely targeted than monetary policy. The fiscal response contains three major components:

Fiscal policy will be more effective than monetary policy this time around

1) **automatic stabilisers** such as unemployment benefits and automatic declines in tax receipts as incomes, sales and economic activities contract;
2) **discretionary spending**: increased spending on healthcare, grants to private businesses, employment subsidies, more generous income support to families and tax breaks/holidays for businesses;
3) **direct loans and loan guarantees**: bridge loans to small and medium-sized businesses and loan guarantees for major corporates.

Unprecedented fiscal response will add to public sector debt

Across advanced economies, we expect these measures to add up to 20ppt to government debt as a percentage of GDP over the next year or two. Two conditions make the massive increase in public debt possible: 1) long-term inflation expectations remain well anchored;

Low inflation and central bank bond purchases make the spending possible and 2) government debt markets remain liquid at risk spreads that are tolerable even for more vulnerable economies such as Italy, Greece and Spain. As long as potential creditors remain confident that their cash will retain its value while the government has it and that if they want to sell their bonds, they just have to form an orderly queue, fiscal policymakers will be able to raise the funds they need.

Hello Japan

Most of the new public debt will end up on central bank balance sheets

We expect major central banks to hoover up most or all of the extra debt their governments accumulate to tackle the coronavirus hit in order to keep benchmark borrowing costs favourable. This will make the debt burden bearable in most cases. We expect a degree of "Japanification" in this particular sense. Also, due to elevated demand for precautionary balances – central bank balance sheets will need to remain bigger for longer.

More QE likely from the ECB and the BoE

Public debt of 20% of 2019 GDP would equal c$4.3trn in the US, c€2.4trn in the Eurozone and c£440bn in the UK. Whereas the Fed has promised unlimited asset purchases in order to support the US economy, the ECB's planned purchases total €1.1trn for 2020 along with £200bn for the Bank of England (BoE). Judging by the likely rise in debt in the coming year, we expect both the ECB and the BoE to promise to step up planned asset purchase programmes – see Chart 7. The liquidity injections help to meet the surge in demand for pre-cautionary balances by households, companies and financial institutions alike.

Policy rates will remain lower for longer

A major part of the extra debt will end up on central bank balance sheets. Policy rates will likely be lower for much longer after the coronavirus recession.

Low risk of a major policy mistake

Policy makers have acted swiftly with massive measures

Once they noticed the problem, global policymakers have reacted to the pandemic with remarkable speed. Reacting to the severity of the medical emergency, they did not to take the usual "wait-and-see" approach. They reacted well before economic data even showed that the global economy was contracting.

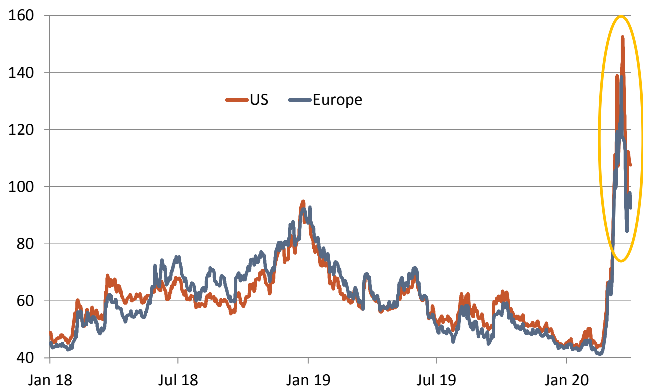
The risk of a policy error remains low – too much caution for that

In response to the non-economic shock of the acute health emergency, the risk of a major economic policy mistake – ie policymakers not doing enough to support their economies – remains low.

By limiting the damage, policy can promote a strong recovery

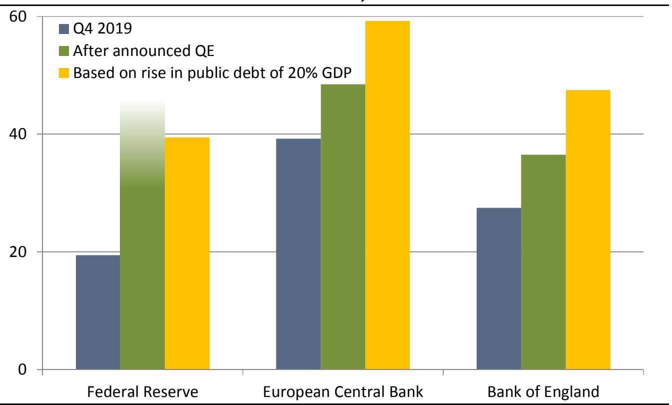
This is a far cry from 2008 when the failure of Lehman Brothers at the hands of US policymakers turned what would have been a garden variety recession into the worst financial and economic crisis since the early 1930s. Today's "whatever it takes" approach will help to stabilise confidence during the downturn, reduce the risk of a financial crisis, and will help to promote a rebound once containment measures are lifted.

Chart 6: CDS index for investment grade corporate debt



Credit default swaps indexes. Source: Bloomberg. Daily data

Chart 7: Central bank balance sheets, in % 2019 GDP



Faded bar for Federal Reserve announced QE reflects 'unlimited' commitment. Source: Federal Reserve, BoE, ECB, Eurostat, BoE, ONS, Berenberg calculations

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What could the post-COVID-19 world look like?

No two economic upswings are alike

No two economic upswings are alike. Nothing about the way the world looked before the financial crisis, with mostly stable politics and economic exuberance in major parts of the advanced world, could have provided even a remote signal about the key traits of the last decade – namely, political instability and excessive economic caution in the wake of the policy mistakes that contributed to the great financial crisis and the euro crisis.

The post-coronavirus world could look quite different

An event on the scale of the virus pandemic and the recession will almost certainly have profound economic, financial and political effects that will be felt for a long time. No one can say for sure what is around the corner. However, economic logic and the current policy responses suggest that the global economy could look much different during the post-coronavirus recovery in five ways.

More state intervention to prepare for new pandemics or other risks

1) **A greater role for the state:** The scramble to upgrade healthcare systems across the world to deal with the surprise pandemic has revealed 1) the inability of existing facilities to handle a sudden surge in demand, and 2) a reliance on long-distance imports for crucial medicines and equipment. Looking ahead, we expect governments across the world to take the necessary steps to better prepare their health, social and economics systems for a future medical emergency. This will likely involve a permanently larger role for the state, at least in some sectors of the economy seen as relevant for this or other potential emergencies. It could include sweeping regulatory change, higher taxation to fund a rise in healthcare spending and a much more active trade and industrial policy to promote strategic industries like healthcare and defence.

Fiscal success now could lead to more fiscal activism

2) **More fiscal activism:** Thanks to the swift and aggressive policy response by the government of major economies, especially the massive loan guarantees and generous employment subsidies, the huge coronavirus shock will likely be short-lived in the end. We expect policy interventions to prevent a repeat of the 2008/2009 financial crisis. Countries that have taken the most aggressive action – the UK, Germany and France – will likely experience the least long-term damage. As long as inflation risks remain contained and markets do not penalise governments too much for taking on the extra debt, fiscal policymakers may be inclined to turn their hands to other economic problems – weak productivity, income inequality – with aggressive debt-financed fiscal activism or – hopefully – with measures to strengthen supply.

More de-globalisation of goods trade – more onshoring

3) **De-globalisation in goods trade:** Reacting to the disruption in global trade flows and supply chains, manufacturing and production industries will shorten and diversify supply chains and raise inventories. As they forego some of the earlier gains of globalisation, the sector will lose some momentum in line with a slowdown in global goods trade. A public policy response to "onshore" strategic industries and produce vital medicines and equipment at home will add to this trend of deglobalisaiton in goods trade.

A crisis can be the mother of innovation – better productivity gains ahead?

4) **Accelerated innovation:** A crisis can be the mother of invention. The coronavirus shock is likely to spur innovation in many fields ranging from a more efficient use of labour and communications technology to increased use of 3D printing. In the long run, the resulting jolt to productivity may be stronger than the drags unless economic policies turn away too much from market-based models. If working habits change permanently, especially working from home, that will further raise demand for technologies that facilitate remote working.

Watch the inflation risk in the long-run – after very subdued inflation first

5) **More inflation in the long run?** We view this as a risk rather than a likely outcome. The need for post-recession fiscal repair and the rise in unemployment during the downturn suggest that inflationary pressures will be subdued for while. For the next few years, the risk of an inflationary boom in consumption or an excessive surge in wage costs looks even more remote than before. That is our base. However, in the longer run, we also need to watch out for factors that could add to inflation pressures over time. In some respects, the surge in government spending and interventions into the economy carries echoes of a "war economy". Inflation often picks up once wars ends and life returns to normal. Although one key factor, a lifting of wartime price controls, will play no role now, other factors may. During the latter stages of the recovery, less elastic global supply may meet the lagged impact of fiscal activism and could push inflation higher over time.

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Annex I: Recession analyses

Table 2a: UK recession analysis

UK	*Recession 1*	*Recession 2*	*Recession 3*
Key features of recession			
Duration	Q2-08 to Q2-09	Q3-90 to Q3-91	Q1-80 to Q1-81
% fall in GDP	6.0%	2.0%	4.2%
Worst fall qoq	2.1% (Q4-08)	1% (Q3-90)	2% (Q2-80)
Return to peak	Q2-13	Q2-93	Q2-82
Causes	***Collapse in US subprime** mortgage market & weak domestic banks ***Credit crunch** (annualised growth in credit falls from +10% mid-07 to 0% by mid-09) ***Rising global oil prices** - $53 to $132 a barrel (Jan-07 to Jun-08)	***Policy recession** - tight monetary policy - bank rate raised from 7.4% - c14.9% (May-88 to mid-89) to curtail inflation ***US recession** - triggered by contractionary Fed policies & savings/loan crisis	***Global recession** - hit weak UK economy following bad policies & high inflation *RPI at 22% in Apr-80 (from c7.5% in mid-78) ***Thatcher administration** - fiscal austerity, tight monetary policy & major labour market deregulation
Impact			
Industrial production	12% decline (May-07 to Aug-09) - stalled prior to GDP contraction	6.7% decline (Jun-90 to Aug-91) - end to decade long boom (output increased by 30%)	12.1% decline (Dec-79 to Jan-81) - output only recovered to pre-crisis peak in 1985.
Employment	2.5% decline (Apr-08 to Jun-09)	6.3% decline (Jun-90 to Mar-93)	6.5% decline (Jan-80 to Apr-83) hitting manufacturing disproportinately
Unemployment	Increased from 5.2% (Apr-08) to 8.5% (Oct-11)	Increased from 6.9% (Jun-90) to 10.7% (Jan-93)	Increased from 5.7% (Jan-80) to 11.9% (Apr-84)
Policy response			
Monetary policy	*BoE cuts rates from 5% to 0.5% (Sept-08 to Mar-09) *£200bn in QE from Mar-09 to Nov-09	*BoE cuts rate from 14.9% to 10.4% (Sept-90 to Sept-91) & second cut to 5.1% (Feb-94)	*Thatcher administration did not attempt to offset recession with stimulus *Recession & job losses viewed as inevitable consequence of necessary measures to fix economy *Downturn ran its course
Fiscal measures	*Automatic stabilisers & with modest stimulus constrained by surge in deficit (+10% 09) *VAT cut from 17.5% to 15% (Dec-08 to Dec-09) *Small loan guarentee schemes *Mortgage support schemes *Bank bail outs/nationalisation/capitalisation	*Mostly automatic stabilisers *Public sector deficit rose to 6.7% in 93	
Recovery			
Nature	*Sluggish - narrowly avoided double debt recession 11/12 *Average growth of 0.44% qoq (Q2-09 to Q2-19)	*Longest post-war upswing with c3.2% average growth yoy (93 to 99) *Strong employment and low/stable inflation	*Sluggish early rebound followed by high growth in 80s - 'Lawson boom' *Employment rose 11.8% (Apr-83 to Dec-89)
Explanation	*Constrained by: 1) household balance sheet repair; 2) harsh austerity; 3) weak rebound in global trade *Weak business investment growth & stagnant productivity *Impact of populism & Brexit	*Solid productivity gains - IT & tech boom *BoE independence helps stablise inflation *Fiscal excesses, strong credit growth & weak regulatory oversight led to huge late-cycle housing-led bubble, which laid seeds for Financial Crisis 08.	*Tight policy dragged on growth & employment *Social unrest at start of upswing gave way to gains in prosperity & employment in second half *Deliberate shift away from heavy industry towards services & finance *Role of government reduced

Source: Berenberg

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Table 2b: Germany recession analysis

Germany	*Recession 1*	*Recession 2*	*Recession 3*
Key features of recession			
Duration	Q2-08 to Q1-09	Q3-00 to Q1-05	Q2-92 to Q1-93
% fall in GDP	7.0%	1.3% growth (de facto stagnation)	2.0%
Worst fall qoq	4.7% (Q1-09)	1.5% (Q1 2003)	0.74% (Q1-93)
Return to peak	Q1-11	---	Q2-94
Causes	*Suffered indirectly from **huge drop in global demand** - despite not participating in housing & credit fuelled upswing *Exports declined 18.3% (Q1-08 to Q2-09) ***Rising global oil prices** - $53 to $132 a barrel (Jan-07 to Jun-08)	***'Sick man' of Europe** - de facto 5 year stagnation ***Structural issues** - excessive regulation, bloated welfare system, excessive labour costs ***Excessive government footprint** - 47.5% of GDP; fiscal deficit averages 3-4% of GDP (01-05)	***Boom-bust & after reunification** ***Policy recession** - Bundesbank tight monetary policies to contain inflation *GDP deflator peaked at 12.6% yoy in Q4-91
Impact			
Industrial production	23.6% decline (Jan-08 to Apr-09) with transport, auto, chemicals & metals hit hardest	Remains below Feb-01 peak of 85.0 until May-04	14.8% decline (Feb-92 to Jul-93) - broad-based across subsectors
Employment	1.4% decline (Oct-08 to Jul-09)	1.9% decline (Apr-01 to Dec-04)	Declines 5.0% from 91-97, partly reflecting near-collapse of East German industry
Unemployment	Increased from 7% to 7.9% (Sept-08 to Jul-09)	Increased from 7.6% to 11.2% (Apr-01 to Apr-05)	Increased from 5.2% to 8.6% (Feb-91 to Apr-94)
Policy response			
Monetary policy	*ECB cut its main refi rate from 4.25% (Sept-08) to 1.0% (May-09) *No asset purchases but significant expansion of liquidity provisions (e.g. unlimited bank liquidity at policy rate, more assets accepted as collateral, increased counterparty eligibility)	*Reacting to slowing growth across the whole Eurozone (due to Dot-Com Bubble burst 01), ECB cut its main refi rate from 4.75% (April-01) to 2.0% (Jun-03), with 1 year pause from Nov-01	*The Bundesbank had started to tighten monetary policy in mid-88 and this continued through to Aug-92 *Discount Rate increased from 2.5% (Jun-88) to 8.75% (Aug-92) *Sharp rate cuts from Sep-92 onwards as recession sets in - Discount Rate to 2.5% by May-96
Fiscal/other measures	*EUR120bn stimulus (70bn Nov-08, 50bn Feb-09) *Savings deposit guarentees & loan guarantees *Recapitalisations/temporary bank nationalisations	*Reduction in government expenditures as % of GDP (48.3% in 03, 43.4% by 07) *Decentralisation of wage setting contributed to export competitiveness	*Attempts to tighten fiscal policy to pay for the debt-financed costs of reunification *Tax hikes & expenditure cuts
Recovery			
Nature	*Golden decade - stable growth & employment *c0.5% average growth qoq (Q2-09 to Q2-10) *5.1m jobs added from Jul-09 to Jan-20	*Rapid but shortlived upswing as reforms begin to pay off (until financial crisis) *0.8% average GDP growth qoq (Q3-05 to Q1-08) *Employment jumps 5.1% (Apr-05 to Jul-09)	*Volatile & sluggish relative to other advanced economies - 0.4% average growth qoq (Q3-93 to Q3-99) *Unemployment rose during upswing & peaked at 9.7% in spring-97 as East German industry collapsed
Explanation	•Robust growth against the backdrop of generally weak economic performance elsewhere in Europe (i.e. 10/11 euro crisis) *Strong employment growth following the "Agenda 2010" reforms of 03/04 lead to fiscal surplus	*Deregulation & lighter-touch industrial policy support gains in private sector activity *Global pre-Lehman boom & falling unit labour costs lift real exports by 30.3% (Q2-05 to Q1-08)	*Cost of unification weighed on potential growth; companies relocate to escape excessive labour costs *Trade and production-oriented economy faces several big international shocks (94 Mexican crisis, 97/98 Asian crisis and oil price surge 99/00)

Source: Berenberg

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Table 2c: France recession analysis

France	*Recession 1*	*Recession 2*	*Recession 3*
Key features of recession			
Duration	Q2-08 to Q2-09	Q3-92 to Q1-93	Q4-74 to Q3-75
% fall in GDP	3.9%	0.9%	2.7%
Worst fall qoq	1.6% (Q1-09)	0.7% (Q1-93)	1.8% (Q4-74)
Return to peak	Q1-11	Q1-94	Q1-76
Causes	*Suffered indirectly from **huge drop in global demand** - despite not participating in housing & credit fuelled upswing *Exports declined 14.3% (Q1-08 to Q2-09) ***Rising global oil prices** - $53 to $132 a barrel (Jan-07 to Jun-08)	***EMS crisis** (European Monetary System) *Tight monetary policy by Banque de France ***Bust after german reunification** - 13.4% drop in nominal goods exports to Germany (Q1-92 to Q2-93)	***Global recession following oil shock & stagflation** in major economies ***Net importer of oil**, WTI per barrel rises 213% from Jul-73 to Oct-74 *GDP deflator peaked at 15.6% yoy in Q1-75
Impact			
Industrial production	19.5% decline (Apr-08 to Mar-09) - with c50% drop in vehicle production	Modest 6.7% drop (Mar-92 to Jun-93)	14.9% contraction (Aug-74 to May-75) - collapse in export demand
Employment	2.5% down (Apr-08 to Jun-09)	Begins to decline well before recession sets in, down 6.1% (Feb-90 to Mar-93)	1.2% decline (Sep-74 to Aug-76)
Unemployment	7.2% (Feb-08) to 9.5% (Oct-09)	8.3% (Mar-91) to 10.8% (Jan-94)	Continued to rise after recession, from 2.7% (Dec-73) to 4.6% (Mar-76)
Policy response			
Monetary policy	*ECB cut its main refi rate from 4.25% (Sept-08) to 1.0% (May-09) *No asset purchases but significant expansion of liquidity provisions (e.g. unlimited bank liquidity at policy rate, more assets accepted as collateral, increased counterparty eligibility)	*Monetary policy remains devoted to the exchange rate target as part of the ERM *Banque de France policy de facto shadows the Bundesbank through the downturn *M1 growth virtually stagnated in first half of the 90s following +8% growth yoy in the late 80s	*Curbs to commercial bank lending *Efforts to reduce growth in the money supply bring inflation (GDP deflator measure) below 10% temporarily in 77
Fiscal measures	*Automatic stabilisers & discretionary stimulus *Infrastructure investment, tax rebates for SMEs, eased construction restrictions & car scrappage scheme *Public sector deficit rises - 2.6% (07) to 7.1% (09)	*Automatic stabiliser & descretionary loosening to compensate for tight monetary policy *Fiscal deficit increased to a peacetime high of 6.4% (93) from 1.8% (89)	*President Giscard d'Estaing imposes austerity to curb rising inflation - hikes to income & corporation tax *Fiscal balance initially drops from 0.1% of GDP (74) to -2.8% (75) before rising to -1.6% (76)
Recovery			
Nature	*Sluggish - 0.3% average growth qoq (Q3-09 to Q3-19) *Persistent high unemployment & weak jobs growth	*Strong stable growth for 15 years from Q2-93 to Q1-08 - average 0.6%, low inflation *55% rise in total investment	*Stong but lumpy growth averaging 0.66% qoq *Unemployment rises to +10% by Sept-84 contributing to perception of general mailaise
Explanation	*Structural issues - big government footprint (high government spending & excessive regulations) *Unheathly industrial relations - too-powerul unions, excessive strike actions *Weak European economic backdrop *Macron economic reforms (labour market, pension) help a lot from May-17 onwards	*Healthy investment led growth despite persistently high unemployment (averaged 9.5% from 93 to 08) *Benefits from global boom & introduction of euro *Sharp rise in household & corporate debt	*Major push to reduce reliance on oil imports & reduce current account deficit *Series of policy u-turns throughout the 80s *Early 80s - nationalisation of banks & many industries. Losses on public companies & high social spending damages credibility *Mid-80s onwards - privatisation & austerity lifts performance

Source: Berenberg

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Table 2d: Italy recession analysis

Italy	*Recession 1*	*Recession 2*	*Recession 3*
Key features of recession			
Duration	Q3-11 to Q1-13	Q2-08 to Q2-09	Q2-01 to Q1-02
% fall in GDP	5.3%	7.5%	-0.70%
Worst fall qoq	1.1% (Q1-12)	2.8% (Q1-09)	0.3% (Q2-01)
Return to peak	Q3-15	Q4-10	Q3-02
Causes	***Euro crisis** - government bond yields surge from 3.7% (Aug-10) to 7.5% (Nov-11). Italy less affected than Greece, Spain, Portugal and Rep. Ireland ***Fragile banking system/fiscal imbalances/lack of competitiveness** ***ECB policy error** (50bps of rate hikes in 11)	***Huge drop in global demand** hit already vulnerable & structurally weak economy *Exports declined 23.6% (Q1-08 to Q2-09) ***Rising global oil prices** - $53 to $132 a barrel (Jan-07 to Jun-08)	***Global dip** that coincided with burst of Dot-Com bubble & 9/11 (broad-based weakness across advanced nations) ***Struggles to adjust to monetary union** - needs internal devaluation ***Structural & regulatory challenges** - policy reacts
Impact			
Industrial production	12.3% decline (Apr-11 to Apr-13) - sluggish recovery (total output currently at 88 level)	25.4% decline (May-07 to Mar-09) - output still c20% below May-07 peak in Jan-20	7.6% decline (Dec-00 to Nov-02) - never fully recovers
Employment	2.1% decline (Q1-11 to Q3-13) - second leg of the decline that started in 2008	3.2% decline (Apr-08 to Aug-10) - ends solid run of employment growth since 95	Modest 1.3% decline (Q1-01 to Q2-02)
Unemployment	Increases from 7.8% (Apr-11) to 12.8% (Jan-14)	Increases from 6.8% (Apr-08) to 8.6% (Apr-10)	Decreases from 9.2% (Apr-01) to 8.5% (Sep-02)
Policy response			
Monetary policy	*ECB cut its main refi rate from 1.5% (Oct-11) to 0.05% (Sep 14) * Vast expansion of LTROs (Long Term Refinancing Ops) * ECB announced OMT (Outright Monetary Trans) * ECB balance sheet jumps from 19.9% of GDP (Q2-11)	*ECB cut its main refi rate from 4.25% (Sept-08) to 1.0% (May-09) *No asset purchases but significant expansion of liquidity provisions (e.g. unlimited bank liquidity at policy rate, more assets accepted as collateral, increased counterparty eligibility)	*Reacting to slowing growth across the whole Eurozone, ECB ut its main refi rate from 4.75% (April-01) to 2.0% (Jun-03), with 1 year pause from Nov-01
Fiscal measures	*Contractionary with some supply side reform *Increased taxes, pension reform & measures to reduce tax evasion (structural fiscal balance rises from -4.1% in Q4-11 to -0.2% in Q3-13 *Labour market deregulation *EU level - EFSF (May-10) & EFSM (Jan-11) combine to become the ESM in Jul-12	*Automatic stabilisers & modest stimulus (Nov-08 & Dec-09) *Welfare transfers, business relief & car scrappage scheme *Structural balance down from -3.0% (07) to -4.2% (Q1-09)	*Berlusconi government fails to properly address causes of low growth/high debt trap *Tax system simplifcation, public works programme *Government debt dynamics worsen *Structural balance falls from -0.84% of GDP in 99 to -4.0% by 02
Recovery			
Nature	*Stagnation - Q4-19 GDP 0.8% below Q2-11 peak *0.2% average growth qoq (Q3-13 to Q3-19)	*Sluggish & short-lived *0.4% average growth qoq (Q3-09 to Q2-11)	*Begins 20 years of mailaise & stagnating living standards - GDP in Q4-19 only 1.3% above Q1-01
Explanation	*'Sick man of Europe' *Excessive regulation harms labour market performance & competitiveness *Fragile banking system hurts business activity *Noisy politics - failed/reversed attempts at reform *Risk of sovereign debt crisis	*Employment declines 0.6% during 'recovery' *Fiscal response constrained by debt/deficit dynamics *Investment started to fall well before the crisis & continued into the recovery & into/after euro crisis *GFCF down 27.8% (Q2-06 to Q2-14)	*Industry badly hurt by rise of China & other emerging markets *Unsettled politics & rising populism

Source: Berenberg

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Annex II: Summary of policy responses to 2020 virus pandemic

Table 3a: Summary of policy responses

	France	Germany	Italy
Monetary Policy			
Benchmark rate	ECB deposit rate unchanged at -0.5%		
Asset purchases and other tools	*€750b Pandemic Emergency Purchase Programme (PEPP), to run until at least year end, including all eligible assets under existing programmes, but 33% issuer/issuance limit does not apply and debt with maturity <1 year also eligible *Purchasing programmes extended to include (non-financial) commercial paper and Greek debt *€120b additional asset purchases under other purchase programmes until end of 2020, tilted towards corporate bonds (on top of €20bn in net monthly purchases since Nov 2019) *TLTRO III outstanding amounts between June 2020 and June 2021 at a rate as low as 25bps below deposit rate, counterparty borrowing raised to 50% of stock *Temporary additional longer-term refinancing operations (LTROs) at deposit rate		
International actions	*Co-ordinated action by 6 central banks - (Fed, ECB, BoE, BoJ, BoC and SNB). *Agreed to lower the premium rate on the standing, permanent US dollar liquidity swap arrangements from 50bps to 25bps (the new rate is the US dollar Overnight Index Swap (OIS) rate plus 25bps). *Extended the maturity of central bank dollar loans to 84-days alongside the existing 7-day maturities. *Fed to increase the frequency of 7-day maturity operations from weekly to daily, until at least the end of April. *Swap line networks extended temporarily to include 9 additional countries (including Australia, Denmark, Sweden and Norway)		
Regulatory response			
Financial system	*Banks can fully use capital and liquidity buffers, and relief in composition of capital *Relaxation of countercyclical capital buffer by national authorities where possible *EU-wide banking stress tests postponed to 2021		
State aid	*EU temporary framework 1) allows governments to hand out direct and indirect support of up to €800k (from €500k) per company 2) provides EU legal backing for generous state guarantees or subsidies for loans to businesses		
Fiscal Policy			
Total (national) package % of GDP	23%	51%	21%
Fiscal impulse % of GDP	1%	4%	1%
Fiscal impulse measures	*€16bn: €32bn indicated for tax deferrals, cancellations & social security contributions for workers/companies (half-half cancellation/deferral assumed) *€2bn for the health system *€8.5bn to cover forced part-time employment for 2 months: companies pay 70% of their salary (or 100% for minimum wage) and state reimburses (up to €6927 monthly) *€1bn Solidarity Fund offering subsidies for SMEs with revenue less than €1m (who have lost +70% of revenue in March 2020 vs. 2019)	*€100bn for the Economic Stabilisation Fund to recapitalise & buy stakes in struggling companies (c€50bn: One-off transfers up to €15k for self-employed) *€10bn to prevent mass dismissals via Kurzarbeitergeld (more generous and much easier to access) *€3.5bn in emergency measures, e.g. protective suits, vaccine development & repatriating Germans stranded around the world *Relaxation of rules for accessing welfare provisions, with means-testing rules removed for 6 months *€3bn per annum 2021-24 of additional injections into private sector *€2bn for the health system *Regional support: €20bn fund launched in Bavaria to buy stakes in struggling businesses; €8.5bn fund in Hesse; and €5bn fund in Baden-Württemberg to help SMEs and self-employed.	*€2.5 reduced taxes and contributions for firms in badly hit sectors (suspension of VAT payments, 60% tax break on commercial rents etc.) *€10bn to support labour market - including one-off €600 payments per person for self-employed; freeze on work lay-offs for 2 months; and extension of unemployment insurance *€3.5bn for the health system *€1.5b for civil protection agency
Deferrals % of GDP	9%	15%	13%
Deferral measures	*€16bn: €32bn indicated for tax deferrals, cancellations & social security contributions for workers/companies (half-half cancellation/deferral assumed) *€180bn repayment moratorium to defer corporate loan repayments by 6 months *3bn deferral of utility fees and rent for SMEs with revenue less than €1m (who have lost +70% of revenue in March 2020 vs. 2019)	*Bruegel estimates €500bn: €70bn in direct corporate income tax; €470bn for indirect taxes and social contributions (assuming 75% tax deferral and 4% GDP loss in 2020)	*€11bn in deferred tax and other company contributions deferrals for invoices up to €2m *€220bn moratorium on mortgages and bills payable in instalments until end of Sept for SMEs
Other provisions % of GDP	12%	32%	7%
Other provision measures	*up to €300bn in loan guarantees for businesses	*€100bn loan to KfW to provide unlimited aid to companies facing liquidity issues *€400bn Economic Stabilisation Fund to guarantee/take on liabilities *€50bn to dispense bridging loans to SMEs and self employed *Up to c€550bn (€460bn to be increased by €93bn if necessary) to guarantee and subsidise loans through KfW and launch additional special KfW programmes	*€100bn Central Guarantee Fund providing loans for SMEs *€10bn state guarantee for banks financing larger enterprises *€10bn for incentives for liquidity unlocking by banks and enterprises
Supranational measures	*Fiscal rules of "Stability and Growth Pact" formally suspended under general escape clause (proposed by European Commission, to be approved by national governments) *€20bn additional investment in SMEs by the EIB *€29bn of co-financing from the EU budget *€37bn Investment Initiative - including cohesion policy funds and redirecting expenditure towards fighting coronavirus. *European Commission has mobilised €140m to develop vaccines, new treatments and diagnostic tests *17 projects (136 research teams) selected to receive €47.5m from EU's Horizon 2020 research and innovation funding programme. *€80m in support for CureVac - innovative European vaccine developer aiming to launch clinical testing of vaccine by June 2020.		
Sources			
IMF, ECB, Fed, BoE, BoC, BoJ, national government websites, European			

Source: Berenberg

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Table 3b: Summary of policy responses

	UK	US	Canada	Japan
Monetary Policy				
Benchmark rate	65bp rate cut in two moves to 0.1%	150bps cut in two moves to 0-0.25% range	150bps cut in three moves to 0.25%	Unchanged at -0.1%
Asset purchases and other tools	*£200bn asset purchases taking total £645bn - mainly Gilts (some non-financial investment grade bonds) *New Term-Funding-Scheme (FSME): over the next 12 months, 4-year funding available, incentives for banks that increase lending to SMEs *Covid corporate financing facility (CCFF): purchase of commercial paper to support liquidity/lending for large firms	*Open-ended, massive asset purchases via LSAP (at least $500bn in Treasuries & $200bn in MBS). *Primary Market Corporate Credit Facility - open to investment-grade companies, providing short-term bridge financing of 4 years *Secondary Market Corporate Credit facility for outstanding corporate bonds. Fed to buy investment grade rated corporate bonds with maturity of 5+ years *Commercial Paper Funding Facility, Term Asset-Backed Securities Loan Facility (TALF), Money Market Mutual Fund Liquidity Facility *Borrowing discount window extended to 90 days *$1trn a day in overnight repo operations through March	*Open-ended QE with minimum of CAD$5bn per week across yield curve (first ever asset purchase programme) *12m commercial paper purchase programme (CPPP); primary/secondary market purchases, also asset-backed CP, issued by Canadian firms, municipalities and provincial agencies, up to 3m maturity of sufficiently high quality *New Bankers' Acceptance Purchase Facility to support funding for SMEs *New Term Repo operations with terms of 6 and 12 months (alongside existing 1 and 3 month) *Eligible collateral broadened *Will provide support to the Canada Mortgage Bond (CMB) market as necessary	*Annual purchases of ETFs and REITs doubled to c¥12tn and c¥180bn, respectively *New operation to provide one-year zero-rate loans against corporate debt *¥4.2tn annual corporate bonds purchases raised from ¥3.2tn *¥80tn annual limit of government bond purchases maintained
International actions	*Co-ordinated action by 6 central banks - (Fed, ECB, BoE, BoJ, BoC and SNB). *Agreed to lower the premium rate on the standing, permanent US dollar liquidity swap arrangements from 50bps to 25bps (the new rate is the US dollar Overnight Index Swap (OIS) rate plus 25bps). *Extended the maturity of central bank dollar loans to 84-days alongside the existing 7-day maturities. *Fed to increase the frequency of 7-day maturity operations from weekly to daily, until at least the end of April. *Swap line networks extended temporarily to include 9 additional countries (including Australia, Denmark, Sweden and Norway)			
Regulatory response				
Financial system	*Bank's countercyclical buffer reduced from 1% to 0% (could support c£190bn of bank lending) *New supervisory guidelines for bank plus measures to help insurance companies smooth impact of bond yield movements	*Relaxed capital and liquidity buffer requirements *Reserve requirement reduced to 0%	*OSFI lowered the Domestic Stability Buffer by 1.25% of risk-weighted assets - could support domestic banks $300bn of additional lending *All consultations on regulatory matters suspended	*Relaxed capital and liquidity requirements
Fiscal Policy				
Total (national) package % of GDP	18%	12%	6%	7% (could rise to c10% soon)
Fiscal impulse % of GDP	1%	6%	1%	0.4%
Fiscal impulse measures	*c£10.5bn job retention scheme allowing employers to cover 80% of salaries for employees (up to £2.5k per month) *c£9bn for self-employed, also covering 80% of average monthly profits (up to £2.5k a month) over last 3 years for an initial period of 3 months *£5bn fund for NHS resources and other public services *£3.8bn for businesses and individuals, including Statutory Sick Pay, plus increase in universal credit allowance *£2.2bn Grant scheme for SMEs *£1bn business rate relief extended to leisure/hospitality sectors and discount increased to 100% *Business Rates discounts from £1k to £5k for pubs with rateable value below £100k	*c$600bn (Bruegel estimate): Direct cash payments to lower income households - $1.2k to individuals earning up to $75k and additional $500 for each child *$117bn for hospitals and veterans' health care *$100bn for emergency measures, including paid sick leave, free virus testing and extension of unemployment insurance coverage by 13 weeks. Provides additional $600 per week for 4 months and includes gig and freelance workers *$193bn (Bruegel estimate): jobless aid expanded, providing additional 13 weeks and 4-month enhancement of benefits, extended to freelancers and gig workers *$50bn employment retention cash credit for firms (required to maintain 50% of wages) *$32bn to support airline industry *$8.3bn to authorities containing the outbreak, including $3bn for vaccine development *$16.3bn for food stamps, Child Nutrition Program & emergency food assistance programmes *$3.4bn to fund additional Defence purchases, Peace Corps, USAID, State Department & National Guard	*$10bn Emergency Care Benefit - $450 a week for 15 weeks for self-employed, quarantined or parents *$5bn Emergency Support Benefit - for recently unemployed *$3.8bn Temporary 3 month wage subsidy equal to 10% of remuneration (up to $1.4k per employee & $25k per employer) *$5.5bn Goods and Services Tax Credit offering one-time $400 payment for low-income individuals ($600 for couples) *$1.9bn enhancing Canada Child Benefit payments to an additional $300 per child *$305m to support indigenous communities *$700m in other support (homelessness, women's shelters etc.)	*¥2tr in measures to support healthcare system & contain spread of the virus (including testing) *¥223bn for households including enhanced paid-leave & compensation for working parents *¥142bn to mitigate economic impact including subsidies to firms who maintain employment
Deferrals % of GDP	1%	3%	2%	6%
Deferral measures	*£30bn in VAT tax deferrals *3-month mortgage holiday *One-year abolition of property taxes for some businesses	*c$490bn in tax deferrals until Jan 2021 *Temporary student loan payment suspensions until end of Sept (overall cost c$69bn)	*$55bn of deferred tax payments until Sept (individuals and corporates) *$190mn towards 6-month interest free moratorium on student loan repayment	*Tax return filing and payment of income tax deadlines extended from mid-Mar to mid-Apr *¥33.2tr in tax deferrals (individual and corporate)
Other provisions % of GDP	15%	4%	3%	0.3%
Other provision measures	*£330bn available for government loan guarantees and credit *Business interruption loan limits increased to £5m for SMEs, no interest for 12 months *New lending facility for larger firms	*$500bn fund to help to buy stakes in most impacted companies, including $32bn for the airline industry and $17bn for businesses that work in national security *$377bn in loans and grants for SMEs *Firms receiving loans are banned from stock buybacks for the term of the assistance plus one year	*Business Credit Availability Programme to allow the BDC and EDC to provide more than $10bn of support, targeting SMEs *Insured Mortgage Purchase Program whereby government will purchase $50bn of insured mortgage pools through the Canada Mortgage and Housing Corporation (CMHC)	*¥1.6tr in special financing and guarantees for SMEs
Sources				
IMF, ECB, Fed, BoE, BoC, E IMF, ECB, Fed, BoE, BoC, BoJ, national government websites, European Commission, Bruegel, FT, Reuters, Bloomberg, CNBC				

Source: Berenberg

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