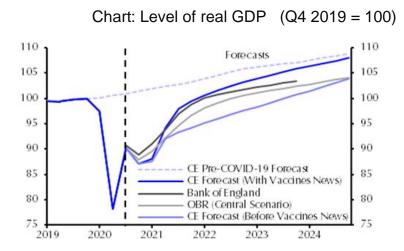
APPENDIX C: Economic Background

- UK. The key quarterly meeting of the Bank of England Monetary Policy Committee kept Bank Rate unchanged on 5.11.20. However, it revised its economic forecasts to take account of a second national lockdown from 5.11.20 to 2.12.20 which is obviously going to put back economic recovery and do further damage to the economy. It therefore decided to do a further tranche of quantitative easing (QE) of £150bn, to start in January when the current programme of £300bn of QE, announced in March to June, runs out. It did this so that "announcing further asset purchases now should support the economy and help to ensure the unavoidable near-term slowdown in activity was not amplified by a tightening in monetary conditions that could slow the return of inflation to the target".
- Its forecasts appeared, at that time, to be rather optimistic in terms of three areas:
 - The economy would recover to reach its pre-pandemic level in Q1 2022
 - The Bank also expected there to be excess demand in the economy by Q4 2022.
 - CPI inflation was therefore projected to be a bit above its 2% target by the start of 2023 and the "inflation risks were judged to be balanced".
- Significantly, there was no mention of negative interest rates in the minutes or Monetary Policy Report, suggesting that the MPC remains some way from being persuaded of the case for such a policy, at least for the next 6 -12 months. However, rather than saying that it "stands ready to adjust monetary policy", the MPC this time said that it will take "whatever additional action was necessary to achieve its remit". The latter seems stronger and wider and may indicate the Bank's willingness to embrace new tools.
- One key addition to the Bank's forward guidance in August was a new phrase in the policy statement, namely that "it does not intend to tighten monetary policy until there is clear evidence that significant progress is being made in eliminating spare capacity and achieving the 2% target sustainably". That seems designed to say, in effect, that even if inflation rises to 2% in a couple of years' time, do not expect any action from the MPC to raise Bank Rate until they can clearly see that level of inflation is going to be persistently above target if it takes no action to raise Bank Rate. Our Bank Rate forecast currently shows no increase, (or decrease), through to quarter 1 2024 but there could well be no increase during the next five years as it will take some years to eliminate spare capacity in the economy, and therefore for inflationary pressures to rise to cause the MPC concern. Inflation is expected to briefly peak at just over 2% towards the end of 2021, but this is a temporary short lived factor and so not a concern.
- However, the minutes did contain several references to downside risks. The MPC reiterated that the "recovery would take time, and the risks around the GDP projection were judged to be skewed to the downside". It also said "the risk of a more persistent period of elevated unemployment remained material". Downside risks could well include severe restrictions remaining in place in some form during the rest of December and most of January too. Upside risks included the early roll out of effective vaccines.

- COVID-19 vaccines. We had been waiting expectantly for news that various COVID-19 vaccines would be cleared as being safe and effective for administering to the general public. The Pfizer announcement on 9th November was very encouraging as its 90% effectiveness was much higher than the 50-60% rate of effectiveness of flu vaccines which might otherwise have been expected. However, this vaccine has demanding cold storage requirements of minus 70c that impairs the speed of application to the general population. It has therefore been particularly welcome that the Oxford University/AstraZeneca vaccine has now also been approved which is much cheaper and only requires fridge temperatures for storage. The Government has 60m doses on order and is aiming to vaccinate at a rate of 2m people per week starting in January, though this rate is currently restricted by a bottleneck on vaccine production; (a new UK production facility is due to be completed in June).
- These announcements, plus expected further announcements that other vaccines could be approved soon, have enormously boosted confidence that life could largely return to normal during the second half of 2021, with activity in the stilldepressed sectors like restaurants, travel and hotels returning to their prepandemic levels; this would help to bring the unemployment rate down. With the household saving rate having been exceptionally high since the first lockdown in March, there is plenty of pent-up demand and purchasing power stored up for these services. A comprehensive roll-out of vaccines might take into late 2021 to fully complete; but if these vaccines prove to be highly effective, then there is a possibility that restrictions could start to be eased, beginning possibly in Q2 2021 once vulnerable people and front-line workers have been vaccinated. At that point, there would be less reason to fear that hospitals could become overwhelmed any more. Effective vaccines would radically improve the economic outlook once they have been widely administered; it may allow GDP to rise to its pre-virus level a year earlier than otherwise and mean that the unemployment rate peaks at 7% in 2021 instead of 9%.
- **Public borrowing** was forecast in November by the Office for Budget Responsibility (the OBR) to reach £394bn in the current financial year, the highest ever peace time deficit and equivalent to 19% of GDP. In normal times, such an increase in total gilt issuance would lead to a rise in gilt yields, and so PWLB rates. However, the QE done by the Bank of England has depressed gilt yields to historic low levels, (as has similarly occurred with QE and debt issued in the US, the EU and Japan). This means that new UK debt being issued, and this is being done across the whole yield curve in all maturities, is locking in those historic low levels through until maturity. In addition, the UK has one of the longest average maturities for its entire debt portfolio, of any country in the world. Overall, this means that the total interest bill paid by the Government is manageable despite the huge increase in the total amount of debt. The OBR was also forecasting that the government will still be running a budget deficit of £102bn (3.9% of GDP) by 2025/26. However, initial impressions are that they have taken a pessimistic view of the impact that vaccines could make in the speed of economic recovery.
- Overall, the pace of recovery was not expected to be in the form of a rapid V shape, but a more elongated and prolonged one. The initial recovery was sharp after quarter 1 saw growth at -3.0% followed by -18.8% in quarter 2 and then an

upswing of +16.0% in quarter 3; this still left the economy 8.6% smaller than in Q4 2019. It is likely that the one month national lockdown that started on 5th November, will have caused a further contraction of 8% m/m in November so the economy may have then been 14% below its pre-crisis level.

December 2020 / January 2021. Since then, there has been rapid back-tracking on easing restrictions due to the spread of a new mutation of the virus, and severe restrictions were imposed across all four nations. These restrictions were changed on 5.1.21 to national lockdowns of various initial lengths in each of the four nations as the NHS was under extreme pressure. It is now likely that wide swathes of the UK will remain under these new restrictions for some months; this means that the near-term outlook for the economy is grim. However, the distribution of vaccines and the expected consequent removal of COVID-19 restrictions, should allow GDP to rebound rapidly in the second half of 2021 so that the economy could climb back to its pre-pandemic peak as soon as late in 2022. Provided that both monetary and fiscal policy are kept loose for a few years yet, then it is still possible that in the second half of this decade, the economy may be no smaller than it would have been if COVID-19 never happened. The significant caveat is if another mutation of COVID-19 appears that defeats the current batch of vaccines. However, now that science and technology have caught up with understanding this virus, new vaccines ought to be able to be developed more quickly to counter such a development and vaccine production facilities are being ramped up around the world.



The key describing each line in the above graph is in sequential order from top to bottom in parallel with the lines in the graph.

This recovery of growth which eliminates the effects of the pandemic by about the middle of the decade would have major repercussions for public finances as it would be consistent with the government deficit falling to around 2.5% of GDP without any tax increases. This would be in line with the OBR's most optimistic forecast in the graph below, rather than their current central scenario which

predicts a 4% deficit due to assuming much slower growth. However, Capital Economics forecasts assumed that there is a reasonable Brexit deal and also that politicians do not raise taxes or embark on major austerity measures and so, (perversely!), depress economic growth and recovery.

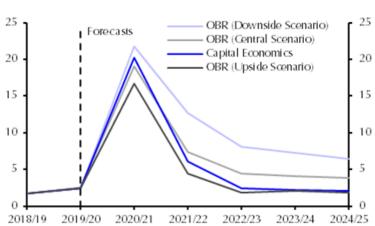


Chart: Public Sector Net Borrowing (as a % of GDP)

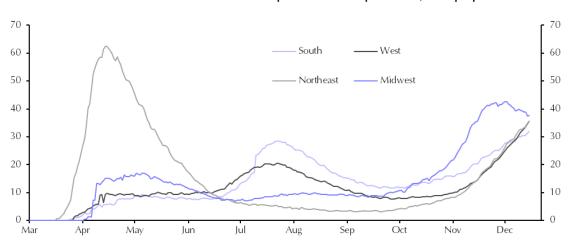
The key describing each line in the above graph is in sequential order from top to bottom in parallel with the lines in the graph.

- There will still be some painful longer term adjustments as e.g. office space and travel by planes, trains and buses may not recover to their previous level of use for several years, or possibly ever, even if vaccines are fully successful in overcoming the current virus. There is also likely to be a reversal of globalisation as this crisis has exposed how vulnerable long-distance supply chains are. On the other hand, digital services are one area that has already seen huge growth.
- Brexit. While the UK has been gripped by the long running saga of whether or not a deal would be made by 31.12.20, the final agreement on 24.12.20, followed by ratification by Parliament and all 27 EU countries in the following week, has eliminated a significant downside risk for the UK economy. The initial agreement only covers trade so there is further work to be done on the services sector where temporary equivalence has been granted in both directions between the UK and EU; that now needs to be formalised on a permanent basis. As the forecasts in this report were based on an assumption of a Brexit agreement being reached, there is no need to amend these forecasts.
- Monetary Policy Committee meeting of 17 December. All nine Committee
 members voted to keep interest rates on hold at +0.10% and the Quantitative
 Easing (QE) target at £895bn. The MPC commented that the successful rollout of
 vaccines had reduced the downsides risks to the economy that it had highlighted
 in November. But this was caveated by it saying, "Although all members agreed

that this would reduce downside risks, they placed different weights on the degree to which this was also expected to lead to stronger GDP growth in the central case." So, while the vaccine is a positive development, in the eyes of the MPC at least, the economy is far from out of the woods. As a result of these continued concerns, the MPC voted to extend the availability of the Term Funding Scheme, (cheap borrowing), with additional incentives for small and medium size enterprises for six months from 30.4.21 until 31.10.21. (The MPC had assumed that a Brexit deal would be agreed.)

- **Fiscal policy.** In the same week as the MPC meeting, the Chancellor made a series of announcements to provide further support to the economy: -
 - An extension of the COVID-19 loan schemes from the end of January 2021 to the end of March.
 - The furlough scheme was lengthened from the end of March to the end of April.
 - The Budget on 3.3.21 will lay out the "next phase of the plan to tackle the virus and protect jobs". This does not sound like tax rises are imminent, (which could hold back the speed of economic recovery).
- The Financial Policy Committee (FPC) report on 6.8.20 revised down their expected credit losses for the banking sector to "somewhat less than £80bn". It stated that in its assessment, "banks have buffers of capital more than sufficient to absorb the losses that are likely to arise under the MPC's central projection". The FPC stated that for real stress in the sector, the economic output would need to be twice as bad as the MPC's projection, with unemployment rising to above 15%.
- US. The result of the November elections meant that while the Democrats gained the presidency and a majority in the House of Representatives, it looks as if the Republicans could retain their slim majority in the Senate provided they keep hold of two key seats in Georgia in elections in early January. If those two seats do swing to the Democrats, they will then control both Houses and President Biden will consequently have a free hand to determine policy and to implement his election manifesto.
- The economy had been recovering quite strongly from its contraction in 2020 of 10.2% due to the pandemic with GDP only 3.5% below its pre-pandemic level and the unemployment rate dropping below 7%. However, the rise in new cases during quarter 4, to the highest level since mid-August, suggests that the US could be in the early stages of a fourth wave. While the first wave in March and April was concentrated in the Northeast, and the second wave in the South and West, the third wave in the Midwest looks as if it now abating. However, it also looks as if the virus is rising again in the rest of the country. The latest upturn poses a threat that the recovery in the economy could stall. This is the single biggest downside risk to the shorter term outlook a more widespread and severe wave of infections over the winter months, which is compounded by the impact of the regular flu season and, as a consequence, threatens to overwhelm health care facilities.

Under those circumstances, states might feel it necessary to return to more draconian lockdowns.



COVID-19 hospitalisations per 100,000 population

- The restrictions imposed to control the spread of the virus are once again weighing on the economy with employment growth slowing sharply in November and retail sales dropping back. The economy is set for further weakness in December and into the spring. However, a \$900bn fiscal stimulus deal passed by Congress in late December will limit the downside through measures which included a second round of direct payments to households worth \$600 per person and a three-month extension of enhanced unemployment insurance (including a \$300 weekly top-up payment for all claimants). GDP growth is expected to rebound markedly from the second quarter of 2021 onwards as vaccines are rolled out on a widespread basis and restrictions are loosened.
- After Chair Jerome Powell unveiled the Fed's adoption of a flexible average inflation target in his Jackson Hole speech in late August 2020, the mid-September meeting of the Fed agreed by a majority to a toned down version of the new inflation target in his speech - that "it would likely be appropriate to maintain the current target range until labour market conditions were judged to be consistent with the Committee's assessments of maximum employment and inflation had risen to 2% and was on track to moderately exceed 2% for some time." This change was aimed to provide more stimulus for economic growth and higher levels of employment and to avoid the danger of getting caught in a deflationary "trap" like Japan. It is to be noted that inflation has actually been under-shooting the 2% target significantly for most of the last decade, (and this year), so financial markets took note that higher levels of inflation are likely to be in the pipeline; long-term bond yields duly rose after the meeting. The FOMC's updated economic and rate projections in mid-September showed that officials expect to leave the fed funds rate at near-zero until at least end-2023 and probably for another year or two beyond that. There is now some

expectation that where the Fed has led in changing its inflation target, other major central banks will follow. The increase in tension over the last year between the US and China is likely to lead to a lack of momentum in progressing the initial positive moves to agree a phase one trade deal.

- The Fed's meeting on **5 November** was unremarkable but at a politically sensitive time around the elections. At its **16 December** meeting the Fed tweaked the guidance for its monthly asset quantitative easing purchases with the new language implying those purchases could continue for longer than previously believed. Nevertheless, with officials still projecting that inflation will only get back to 2.0% in 2023, the vast majority expect the fed funds rate to be still at near-zero until 2024 or later. Furthermore, officials think the balance of risks surrounding that median inflation forecast are firmly skewed to the downside. The key message is still that policy will remain unusually accommodative with near-zero rates and asset purchases continuing for several more years. This is likely to result in keeping Treasury yields low which will also have an influence on gilt yields in this country.
- EU. In early December, the figures for Q3 GDP confirmed that the economy staged a rapid rebound from the first lockdowns. This provides grounds for optimism about growth prospects for next year. In Q2, GDP was 15% below its pre-pandemic level. But in Q3 the economy grew by 12.5% q/q leaving GDP down by "only" 4.4%. That was much better than had been expected earlier in the year. However, growth is likely to stagnate during Q4 and in Q1 of 2021, as a second wave of the virus has affected many countries: it is likely to hit hardest those countries more dependent on tourism. The €750bn fiscal support package eventually agreed by the EU after prolonged disagreement between various countries, is unlikely to provide significant support, and quickly enough, to make an appreciable difference in the countries most affected by the first wave.
- With inflation expected to be unlikely to get much above 1% over the next two years, the ECB has been struggling to get inflation up to its 2% target. It is currently unlikely that it will cut its central rate even further into negative territory from -0.5%, although the ECB has stated that it retains this as a possible tool to use. The ECB's December meeting added a further €500bn to the PEPP scheme, (purchase of government and other bonds), and extended the duration of the programme to March 2022 and re-investing maturities for an additional year until December 2023. Three additional tranches of TLTRO, (cheap loans to banks), were approved, indicating that support will last beyond the impact of the pandemic, implying indirect yield curve control for government bonds for some time ahead. The Bank's forecast for a return to pre-virus activity levels was pushed back to the end of 2021, but stronger growth is projected in 2022. The total PEPP scheme of €1,850bn of QE which started in March 2020 is providing protection to the sovereign bond yields of weaker countries like Italy. There is therefore unlikely to be a euro crisis while the ECB is able to maintain this level of support. However, as in the UK and the US, the advent of highly

effective vaccines will be a game changer, although growth will struggle before later in quarter 2 of 2021.

- China. After a concerted effort to get on top of the virus outbreak in Q1, economic recovery was strong in Q2 and then into Q3 and Q4; this has enabled China to recover all of the contraction in Q1. Policy makers have both quashed the virus and implemented a programme of monetary and fiscal support that has been particularly effective at stimulating short-term growth. At the same time, China's economy has benefited from the shift towards online spending by consumers in developed markets. These factors help to explain its comparative outperformance compared to western economies. However, this was achieved by major central government funding of yet more infrastructure spending. After years of growth having been focused on this same area, any further spending in this area is likely to lead to increasingly weaker economic returns in the longer term. This could, therefore, lead to a further misallocation of resources which will weigh on growth in future years.
- Japan. A third round of fiscal stimulus in early December took total fresh fiscal spending this year in response to the virus close to 12% of pre-virus GDP. That's huge by past standards, and one of the largest national fiscal responses. The budget deficit is now likely to reach 16% of GDP this year. Coupled with Japan's relative success in containing the virus without draconian measures so far, and the likelihood of effective vaccines being available in the coming months, the government's latest fiscal effort should help ensure a strong recovery and to get back to pre-virus levels by Q3 2021 around the same time as the US and much sooner than the Eurozone.
- World growth. World growth will have been in recession in 2020. Inflation is unlikely to be a problem for some years due to the creation of excess production capacity and depressed demand caused by the coronavirus crisis.
- Until recent years, world growth has been boosted by increasing globalisation i.e. countries specialising in producing goods and commodities in which they have an economic advantage and which they then trade with the rest of the world. This has boosted worldwide productivity and growth, and, by lowering costs, has also depressed inflation. However, the rise of China as an economic superpower over the last thirty years, which now accounts for nearly 20% of total world GDP, has unbalanced the world economy. The Chinese government has targeted achieving major world positions in specific key sectors and products, especially high tech areas and production of rare earth minerals used in high tech products. It is achieving this by massive financial support, (i.e. subsidies), to state owned firms, government directions to other firms, technology theft, restrictions on market access by foreign firms and informal targets for the domestic market share of Chinese producers in the selected sectors. This is regarded as being unfair competition that is putting western firms at an unfair disadvantage or even putting some out of business. It is also

regarded with suspicion on the political front as China is an authoritarian country that is not averse to using economic and military power for political advantage. The current trade war between the US and China therefore needs to be seen against that backdrop. It is, therefore, likely that we are heading into a period where there will be a **reversal of world globalisation and a decoupling of western countries** from dependence on China to supply products. This is likely to produce a backdrop in the coming years of weak global growth and so weak inflation.

Summary

Central banks are, therefore, likely to support growth by maintaining loose monetary policy through keeping rates very low for longer. Governments could also help a quicker recovery by providing more fiscal support for their economies at a time when total debt is affordable due to the very low rates of interest. They will also need to avoid significant increases in taxation or austerity measures that depress demand in their economies.

If there is a huge surge in investor confidence as a result of successful vaccines which leads to a major switch out of government bonds into equities, which, in turn, causes government debt yields to rise, then there will be pressure on central banks to actively manage debt yields by further QE purchases of government debt; this would help to suppress the rise in debt yields and so keep the total interest bill on greatly expanded government debt portfolios within manageable parameters. It is also the main alternative to a programme of austerity.

INTEREST RATE FORECASTS

Brexit. The interest rate forecasts provided by Link in the main report were predicated on an assumption of a reasonable agreement being reached on trade negotiations between the UK and the EU by 31.12.20. There is therefore no need to revise these forecasts now that a trade deal has been agreed. Brexit may reduce the economy's potential growth rate in the long run. However, much of that drag is now likely to be offset by an acceleration of productivity growth triggered by the digital revolution brought about by the COVID crisis.

The balance of risks to the UK

- The overall balance of risks to economic growth in the UK is probably now skewed to the upside, but is still subject to some uncertainty due to the virus and the effect of any mutations, and how quick vaccines are in enabling a relaxation of restrictions.
- There is relatively little UK domestic risk of increases or decreases in Bank Rate and significant changes in shorter term PWLB rates. The Bank of England has effectively ruled out the use of negative interest rates in the near term and increases in Bank Rate are likely to be some years away given the underlying economic expectations. However, it is always possible that safe haven flows, due to unexpected domestic developments and those in other major economies, could impact gilt yields, (and so PWLB rates), in the UK.

Downside risks to current forecasts for UK gilt yields and PWLB rates currently include:

- UK government takes too much action too quickly to raise taxation or introduce austerity measures that depress demand in the economy.
- **UK Bank of England** takes action too quickly, or too far, over the next three years to raise Bank Rate and causes UK economic growth, and increases in inflation, to be weaker than we currently anticipate.
- A resurgence of the **Eurozone sovereign debt crisis**. The ECB has taken monetary policy action to support the bonds of EU states, with the positive impact most likely for "weaker" countries. In addition, the EU agreed a €750bn fiscal support package. These actions will help shield weaker economic regions for the next two or three years. However, in the case of Italy, the cost of the virus crisis has added to its already huge debt mountain and its slow economic growth will leave it vulnerable to markets returning to taking the view that its level of debt is unsupportable. There remains a sharp divide between northern EU countries favouring low debt to GDP and annual balanced budgets and southern countries who want to see jointly issued Eurobonds to finance economic recovery. This divide could undermine the unity of the EU in time to come.
- Weak capitalisation of some **European banks**, which could be undermined further depending on extent of credit losses resultant of the pandemic.
- German minority government & general election in 2021. In the German general election of September 2017, Angela Merkel's CDU party was left in a vulnerable minority position dependent on the fractious support of the SPD party, as a result of the rise in popularity of the anti-immigration AfD party. The CDU has done badly in subsequent state elections but the SPD has done particularly badly. Angela Merkel has stepped down from being the CDU party leader but she will remain as Chancellor until the general election in 2021. This then leaves a major question mark over who will be the major guiding hand and driver of EU unity when she steps down.
- Other minority EU governments. Austria, Sweden, Spain, Portugal, Netherlands, Ireland and Belgium also have vulnerable minority governments dependent on coalitions which could prove fragile.

- Austria, the Czech Republic, Poland and Hungary now form a strongly antiimmigration bloc within the EU, and they had threatened to derail the 7 year EU budget until a compromise was thrashed out in late 2020. There has also been a rise in anti-immigration sentiment in Germany and France.
- Geopolitical risks, for example in China, Iran or North Korea, but also in Europe and other Middle Eastern countries, which could lead to increasing safe haven flows.

Upside risks to current forecasts for UK gilt yields and PWLB rates

- **UK** a significant rise in inflationary pressures e.g. caused by a stronger than currently expected recovery in the UK economy after effective vaccines are administered quickly to the UK population, leading to a rapid resumption of normal life and return to full economic activity across all sectors of the economy.
- The **Bank of England is too slow** in its pace and strength of increases in Bank Rate and, therefore, allows inflationary pressures to build up too strongly within the UK economy, which then necessitates a rapid series of increases in Bank Rate to stifle inflation.