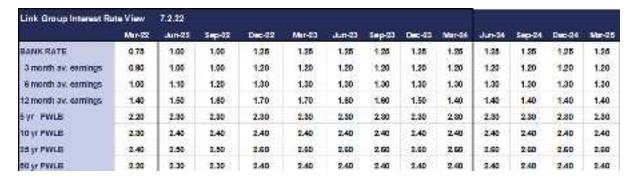
Prospects for Interest Rates

The Council has appointed Link Group as its treasury advisor and part of their service is to assist the Council to formulate a view on interest rates. Link provided the following forecasts on 7th February 2022. These are forecasts for certainty rates, gilt yields plus 80 bps.



Additional notes by Link on this forecast table: -

- LIBOR and LIBID rates ceased at the end of 2021. In a continuation of our previous forecasts, our money market yield forecasts are based on expected average earnings by local authorities for 3 to 12 months.
- Our forecasts for average earnings are averages i.e., rates offered by individual banks may differ significantly from these averages, reflecting their different needs for borrowing short term cash at any one point in time.

Over the last two years, the coronavirus outbreak has done huge economic damage to the UK and to economies around the world. After the Bank of England took emergency action in March 2020 to cut Bank Rate to 0.10%, it left Bank Rate unchanged at its subsequent meetings until raising it to 0.25% at its meeting on 16^{th} December 2021 and then to 0.50% at its meeting of 4^{th} February 2022.

As shown in the forecast table above, the forecast for Bank Rate now includes a further three increases of 0.25% in March, May and November 2022 to end at 1.25%.

Significant risks to the forecasts

- **Mutations** of the virus render current vaccines ineffective, and tweaked vaccines to combat these mutations are delayed, or cannot be administered fast enough to prevent further lockdowns.
- Labour and supply shortages prove more enduring and disruptive and depress economic activity.
- The Monetary Policy Committee acts 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.
- The Monetary Policy Committee tightens monetary policy too late to ward off building inflationary pressures.

- The Government acts too quickly to cut expenditure to balance the national budget.
- **UK / EU trade arrangements** if there was a major impact on trade flows and financial services due to complications or lack of co-operation in sorting out significant remaining issues.
- Longer term US treasury yields rise strongly and pull gilt yields up higher than forecast.
- Major stock markets e.g., in the US, become increasingly judged as being over-valued and susceptible to major price corrections. Central banks become increasingly exposed to the "moral hazard" risks of having to buy shares and corporate bonds to reduce the impact of major financial market selloffs on the general economy.
- Geopolitical risks, for example in Ukraine, Iran, North Korea, but also in Europe and Middle Eastern countries; on-going global power influence struggles between Russia/China/US. These could lead to increasing safe-haven flows.

The balance of risks to the UK economy: -

• The overall balance of risks to economic growth in the UK is now to the downside, including risks from Covid and its variants - both domestically and their potential effects worldwide.

Forecasts for Bank Rate

The Monetary Policy Committee is now very concerned at the way that forecasts for inflation have had to be repeatedly increased within a matter of just a few months. Combating this rising tide of inflation is now its number one priority and the 5-4 vote marginally approving only a 0.25% increase on 4th February rather than a 0.50% increase, indicates it is now determined to push up Bank Rate quickly. A further increase of 0.25% is therefore probable for March, and again in May, followed possibly by a final one in November. However, data between now and November could shift these timings or add to or subtract from the number of increases.

However, it is likely that these forecasts will need changing within a relatively short timeframe for the following reasons: -

- We do not know whether there will be further mutations of Covid and how severe they may be, nor how rapidly scientific advances may be made in combating them.
- The economy was running out of steam during the second half of 2021 and Omicron will mean that economic growth in quarter 1 of 2022 is likely to be flat, though on the rise towards the end of the quarter as the economy recovers. However, 54% energy cap cost increases from April, together with 1.25% extra employee national insurance, food inflation around 5% and council tax likely to rise in the region of 5% too these increases are going to hit lower income families hard despite some limited assistance from the Chancellor to postpone the full impact of rising energy costs.

- Consumers are estimated to be sitting on over £160bn of excess savings left over from the
 pandemic so that will cushion some of the impact of the above increases. But most of those
 holdings are held by more affluent people whereas poorer people already spend nearly all
 their income before these increases hit and have few financial reserves.
- These increases are already highly disinflationary; inflation will also be on a gradual path down after April so that raises a question as to whether the MPC may shift into protecting economic growth by November, i.e., it is more debatable as to whether they will deliver another increase then.
- The BIG ISSUE will the current spike in inflation lead to a second-round effect in terms of labour demanding higher wages, (and/or lots of people getting higher wages by changing job)?
- If the labour market remains very tight during 2022, then wage inflation poses a greater threat to overall inflation being higher for longer, and the MPC may then feel it needs to take more action.
- If the UK were to invoke article 16 of the Brexit deal over the dislocation in trading arrangements with Northern Ireland, this would have the potential to end up in a no-deal Brexit.

In summary, with the high level of uncertainty prevailing on several different fronts, we expect to have to revise our forecasts again - in line with whatever the new news is.

Forecasts for PWLB rates and gilt and treasury yields

Gilt yields. Since the start of 2021, we have seen a lot of volatility in gilt yields, and hence PWLB rates. Our forecasts show little overall increase in gilt yields during the forecast period to March 2025 but there will doubtless be a lot of unpredictable volatility during this forecast period.

While monetary policy in the UK will have a major impact on gilt yields, there is also a need to consider the potential impact that rising treasury yields in America could have on gilt yields. As an average since 2011, there has been a 75% correlation between movements in US 10-year treasury yields and UK 10-year gilt yields. This is a significant UPWARD RISK exposure to our forecasts for medium to longer term PWLB rates. However, gilt yields and treasury yields do not always move in unison.

US treasury yields. During the first part of 2021, US President Biden's, and the Democratic party's, determination to push through a \$1.9trn (equivalent to 8.8% of GDP) fiscal boost for the US economy as a recovery package from the Covid pandemic was what unsettled financial markets. This was in addition to the \$900bn support package previously passed in December 2020. Financial markets were alarmed that all this stimulus was happening at a time when: -

- 1. A fast vaccination programme roll-out had enabled a rapid opening up of the economy during 2021.
- 2. The economy was growing strongly during the first half of 2021 although it has weakened during the second half.
- 3. It started from a position of little spare capacity due to less severe lockdown measures than in many other countries.
- 4. And the Fed was still providing substantial stimulus through monthly QE purchases during 2021.

It was not much of a surprise that a combination of these factors would eventually cause an excess of demand in the economy which generated strong inflationary pressures. This has eventually been recognised by the Fed at its recent December meeting with an aggressive response to damp inflation down during 2022 and 2023.

- At its 3rd November Fed meeting, the Fed decided to make a start on tapering its \$120bn per month of QE purchases so that they ended next June. However, at its 15th December meeting it doubled the pace of tapering so that they will end all purchases in February. These purchases are currently acting as downward pressure on treasury yields and so it would be expected that treasury yields will rise over the taper period, all other things being equal.
- It also forecast that it expected there would be three rate rises in 2022 of 0.25% from near zero currently, followed by three in 2023 and two in 2024. This would take rates back above 2% to a neutral level for monetary policy. It also gave up on calling the sharp rise in inflation as being 'transitory'.
- At its 26th January meeting, the Fed became even more hawkish following inflation rising sharply even further. It indicated that rates would begin to rise very soon, i.e., it implied at its March meeting it would increase rates and start to run down its holdings of QE purchases. It also appears likely that the Fed could take action to force longer term treasury yields up by prioritising selling holdings of its longer bonds as yields at this end have been stubbornly low despite rising inflation risks. The low level of longer dated yields is a particular concern for the Fed because it is a key channel through which tighter monetary policy is meant to transmit to broader financial conditions, particularly in the US where long rates are a key driver of household and corporate borrowing costs.

There are also possible **DOWNSIDE RISKS** from the huge sums of cash that the UK populace have saved during the pandemic; when savings accounts earn little interest, it is likely that some of this cash mountain could end up being invested in bonds and so push up demand for bonds and support their prices i.e., this would help to keep their yields down. How this will interplay with the Bank of England eventually getting round to not reinvesting maturing gilts and then later selling gilts, will be interesting to monitor.

There is likely to be **exceptional volatility and unpredictability in respect of gilt yields and PWLB rates** due to the following factors: -

 How strongly will changes in gilt yields be correlated to changes in US treasury yields (see below). As the US financial markets are, by far, the biggest financial markets in the world, any upward trend in treasury yields will invariably impact and influence financial markets in other countries. Over 10 years since 2011 there has been an average 75% correlation between movements in US treasury yields and gilt yields. However, from time to time these two yields can diverge. Lack of spare economic capacity and rising inflationary pressures are viewed as being much greater dangers in the US than in the UK. This could mean that central bank rates will end up rising higher in the US than in the UK; the consequent increases in treasury yields could well spill over to cause (lesser) increases in gilt yields. There is, therefore, an upside risk to forecasts for gilt yields due to this correlation. The Link Group forecasts have included a risk of a 75% correlation between the two yields.

- Will the Fed take action to counter increasing treasury yields if they rise beyond a yet unspecified level?
- Would the MPC act to counter increasing gilt yields if they rise beyond a yet unspecified level?
- How strong and enduring will inflationary pressures turn out to be in both the US and the UK, and so impact treasury and gilt yields?
- Will the major western central banks implement their previously stated new average or sustainable level inflation monetary policies when inflation has now burst through all previous forecasts and far exceeded their target levels? Or are they going to effectively revert to their previous approach of prioritising focusing on pushing inflation back down and accepting that economic growth will be very much a secondary priority - until inflation is back down to target levels or below?
- How well will central banks manage the running down of their stock of QE purchases of their national bonds i.e., without causing a panic reaction in financial markets as happened in the "taper tantrums" in the US in 2013?
- Will exceptional volatility be focused on the short or long-end of the yield curve, or both?
- If Russia were to invade Ukraine, this would be likely to cause short term volatility in financial markets, but it would not be expected to have a significant impact beyond that.

The forecasts are also predicated on an assumption that there is no break-up of the Eurozone or EU within the forecasting period, despite the major challenges that are looming up, and that there are no major ructions in international relations, especially between the US and Russia, China / North Korea and Iran, which have a major impact on international trade and world GDP growth.

The balance of risks to medium to long term PWLB rates: -

There is a balance of upside risks to forecasts for medium to long term PWLB rates.

A new era for local authority investing

- a fundamental shift in central bank monetary policy

One of the key results of the pandemic has been a fundamental rethinking and shift in monetary policy by major central banks like the Fed, the Bank of England and the ECB, to tolerate a higher level of inflation than in the previous two decades when inflation was the prime target to bear down on so as to stop it going above a target rate. There is now also a greater emphasis on other targets for monetary policy than just inflation, especially on 'achieving broad and inclusive "maximum" employment in its entirety' in the US, before consideration would be given to increasing rates.

- The Fed in America has gone furthest in adopting a monetary policy based on a clear goal of allowing the inflation target to be symmetrical, (rather than a ceiling to keep under), so that inflation averages out the dips down and surges above the target rate, over an unspecified period of time.
- The Bank of England has also amended its target for monetary policy so that inflation should be 'sustainably over 2%' before starting on raising Bank Rate and the ECB now has a similar policy.
- For local authorities, this means that investment interest rates and very short term PWLB
 rates will not be rising as high as in previous decades when the economy recovers from a
 downturn and the recovery eventually runs out of spare capacity to fuel continuing
 expansion.
- Labour market liberalisation since the 1970s has helped to break the wage-price spirals that
 fuelled high levels of inflation and has now set inflation on a lower path which makes this shift
 in monetary policy practicable. In addition, recent changes in flexible employment practices,
 the rise of the gig economy and technological changes, will all help to lower inflationary
 pressures once economies recover from the various disruptions caused by the pandemic.
- Governments will also be concerned to see interest rates stay lower as every rise in central rates will add to the cost of vastly expanded levels of national debt; (in the UK this is £21bn for each 1% rise in rates). On the other hand, higher levels of inflation will help to erode the real value of total public debt.

Investment and borrowing rates

- **Investment returns** have started improving in the second half of 21/22 and are expected to improve further during 22/23 as the MPC progressively increases Bank Rate.
- Borrowing interest rates fell to historically very low rates as a result of the COVID crisis and the
 quantitative easing operations of the Bank of England and still remain at historically low levels.
 The policy of avoiding new borrowing by running down spare cash balances has served local
 authorities well over the last few years.
- On 25.11.20, the Chancellor announced the conclusion to the review of margins over gilt yields for PWLB rates which had been increased by 100 bps in October 2019. The standard and certainty margins were reduced by 100 bps but a prohibition was introduced to deny access to borrowing from the PWLB for any local authority which had purchase of assets for yield in its three-year capital programme. The current margins over gilt yields are as follows: -.
 - PWLB Standard Rate is gilt plus 100 basis points (G+100bps)
 - PWLB Certainty Rate is gilt plus 80 basis points (G+80bps)
 - PWLB HRA Standard Rate is gilt plus 100 basis points (G+100bps)
 - PWLB HRA Certainty Rate is gilt plus 80bps (G+80bps)
 - Local Infrastructure Rate is gilt plus 60bps (G+60bps)

Borrowing for capital expenditure. Our long-term (beyond 10 years) forecast for Bank Rate is 2.00%. As nearly all PWLB certainty rates are now above this level, borrowing strategy will need to be reviewed, especially as the maturity curve has flattened out considerably. Better value can be obtained at the very short and at the longer end of the curve and longer-term rates are still at historically low levels. Temporary borrowing rates are likely, however, to remain near Bank Rate and may also prove attractive as part of a

balanced debt portfolio. In addition, there are also some cheap alternative sources of long-term borrowing if a client is seeking to avoid a "cost of carry" but also wishes to mitigate future re-financing risk.

An economic update has been provided by our treasury advisors, link asset service:

COVID-19 vaccines.

These were the game changer during 2021 which raised high hopes that life in the UK would be able to largely return to normal in the second half of the year. However, the bursting onto the scene of the Omicron mutation at the end of November, rendered the initial two doses of all vaccines largely ineffective in preventing infection. This dashed such hopes and raised major concerns that a fourth wave of the virus could overwhelm hospitals in early 2022. What we now know is that although this mutation is very fast spreading, it does not cause severe illness in fully vaccinated people. Rather than go for full lockdowns which heavily damage the economy, the government strategy this time focused on getting as many people as possible to have a third (booster) vaccination after three months from the previous last injection., It also placed restrictions on large indoor gatherings and hospitality venues over Christmas and into January and requested workers to work from home. This hit sectors like restaurants, travel, tourism and hotels hard which had already been hit hard during 2021. Economic growth will also have been lower due to people being ill and not working, similar to the pingdemic in July. The economy, therefore, faces significant headwinds in early 2022 although some sectors have learned how to cope well with Covid. The big question still remains as to whether any further mutations of this virus could develop which render all current vaccines ineffective, as opposed to how quickly vaccines can be modified to deal with them and enhanced testing programmes be implemented to contain their spread until tweaked vaccines become widely available.

A SUMMARY OVERVIEW OF THE FUTURE PATH OF BANK RATE

- The threat from Omicron was a wild card causing huge national concern at the time of December's MPC meeting; now it is seen as a vanquished foe disappearing in the rear-view mirror.
- The MPC shifted up a gear last week in raising Bank Rate by another 0.25% and narrowly avoiding making it a 0.50% increase by a 5-4 voting margin.
- Our forecast now expects the MPC to deliver another 0.25% increase in March; their position appears to be to go for sharp increases to get the job done and dusted.
- The March increase is likely to be followed by an increase to 1.0% in May and then to 1.25% in November.
- The MPC is currently much more heavily focused on combating inflation than on protecting economic growth.
- However, 54% energy cap cost increases from April, together with 1.25% extra employee national
 insurance, food inflation around 5% and council tax likely to rise in the region of 5% too these
 increases are going to hit lower income families hard despite some limited assistance from the
 Chancellor to postpone the full impact of rising energy costs.
- Consumers are estimated to be sitting on over £160bn of excess savings left over from the pandemic so that will cushion some of the impact of the above increases. But most of those holdings are held by more affluent people whereas poorer people already spend nearly all their income before these increases hit and have few financial reserves.
- The increases are already highly disinflationary; inflation will also be on a gradual path down after April so that raises a question as to whether the MPC may shift into protecting economic growth by November, i.e., it is more debatable as to whether they will deliver another increase then.

- The BIG ISSUE will the current spike in inflation lead to a second-round effect in terms of labour demanding higher wages, (and/or lots of people getting higher wages by changing job)?
- If the labour market remains very tight during 2022, then wage inflation poses a greater threat to overall inflation being higher for longer, and the MPC may then feel it needs to take more action.

PWLB RATES

- The yield curve has flattened out considerably.
- We view the markets as having built in, already, nearly all the effects on gilt yields of the likely increases in Bank Rate.
- It is difficult to say currently what effect the Bank of England starting to sell gilts will have on gilt yields once Bank Rate rises to 1%: it is likely to act cautiously as it has already started on not refinancing maturing debt. A passive process of not refinancing maturing debt could begin in March when the 4% 2022 gilt matures; the Bank owns £25bn of this issuance. A pure roll-off of the £875bn gilt portfolio by not refinancing bonds as they mature, would see the holdings fall to about £415bn by 2031, which would be about equal to the Bank's pre-pandemic holding. Last August, the Bank said it would not actively sell gilts until the "Bank Rate had risen to at least 1%" and, "depending on economic circumstances at the time."
- It is possible that Bank Rate will not rise above 1% as the MPC could shift to relying on quantitative tightening (QT) to do the further work of taking steam out of the economy and reducing inflationary pressures.
- Increases in US treasury yields over the next few years could add upside pressure on gilt yields though, more recently, gilts have been much more correlated to movements in bund yields than treasury yields.

MPC MEETING 4TH FEBRUARY 2022

- After the Bank of England became the first major western central bank to put interest rates up in this upswing in December, it has quickly followed up its first 0.15% rise by another 0.25% rise to 0.50%, in the second of what is very likely to be a series of increases during 2022.
- The Monetary Policy Committee voted by a majority of 5-4 to increase Bank Rate by 25bps to 0.5% with the minority preferring to increase Bank Rate by 50bps to 0.75%. The Committee also voted unanimously for the following:
 - o to reduce the £875n stock of UK government bond purchases, financed by the issuance of central bank reserves, by ceasing to reinvest maturing assets.
 - to begin to reduce the £20bn stock of sterling non-financial investment-grade corporate bond purchases by ceasing to reinvest maturing assets and by a programme of corporate bond sales to be completed no earlier than towards the end of 2023.
- The Bank again sharply increased its forecast for inflation to now reach a peak of 7.25% in April, well above its 2% target.
- The Bank estimated that UK GDP rose by 1.1% in quarter 4 of 2021 but, because of the effect of Omicron, GDP would be flat in quarter 1, but with the economy recovering during February and March. Due to the hit to households' real incomes from higher inflation, it revised down its GDP growth forecast for 2022 from 3.75% to 3.25%.
- The Bank is concerned at how tight the labour market is with vacancies at near record levels and a general shortage of workers who are in a very favourable position to increase earnings by changing job.
- As in the December 2021 MPC meeting, the MPC was more concerned with combating inflation over the medium term than supporting economic growth in the short term. However, what was

notable was the Bank's forecast for inflation: based on the markets' expectations that Bank Rate will rise to 1.50% by mid-2023, it forecast inflation to be only 1.6% in three years' time. In addition, if energy prices beyond the next six months fell as the futures market suggests, the Bank said CPI inflation in three years' time would be even lower at 1.25%. With calculations of inflation, the key point to keep in mind is that it is the rate of change in prices – not the level – that matters. Accordingly, even if oil and natural gas prices remain flat at their current elevated level, energy's contribution to headline inflation will drop back over the course of this year. That means the current energy contribution to CPI inflation, of 2% to 3%, will gradually fade over the next year.

- So the message to take away from the Bank's forecast is that they do not expect Bank Rate to rise to 1.5% in order to hit their target of CPI inflation of 2%. The immediate issue is with four members having voted for a 0.50% increase in February, it would only take one member more for there to be another 0.25% increase at the March meeting.
- The MPC's forward guidance on its intended monetary policy on raising Bank Rate versus selling (quantitative tightening) holdings of bonds is as follows: -
 - 1. Raising Bank Rate as "the active instrument in most circumstances".
 - 2. Raising Bank Rate to 0.50% before starting on reducing its holdings.
 - 3. Once Bank Rate is at 0.50% it would stop reinvesting maturing gilts.
 - 4. Once Bank Rate had risen to at least 1%, it would start selling its holdings.

OUR FORECASTS

a. Bank Rate

- Covid remains a major potential downside threat as we are most likely to get further mutations.
 However, their severity and impact could vary widely, depending on vaccine effectiveness and how broadly it is administered.
- If the UK invokes article 16 of the Brexit deal over the dislocation in trading arrangements with Northern Ireland, this has the potential to end up in a no-deal Brexit.

In summary, with the high level of uncertainty prevailing on several different fronts, we expect to have to revise our forecasts again - in line with whatever the new news is.

b. PWLB rates and gilt and treasury yields

Gilt yields. Since the start of 2021, we have seen a lot of volatility in gilt yields, and hence PWLB rates. Our forecasts show little overall increase in gilt yields during the forecast period to March 2025 but there will doubtless be a lot of unpredictable volatility during this forecast period.

While monetary policy in the UK will have a major impact on gilt yields, there is also a need to consider the potential impact that rising treasury yields in America could have on gilt yields. As an average since 2011, there has been a 75% correlation between movements in US 10-year treasury yields and UK 10-year gilt yields. This is a significant UPWARD RISK exposure to our forecasts for medium to longer term PWLB rates. However, gilt yields and treasury yields do not always move in unison.

US treasury yields. During the first part of 2021, US President Biden's, and the Democratic party's, determination to push through a \$1.9trn (equivalent to 8.8% of GDP) fiscal boost for the US economy as a recovery package from the Covid pandemic was what unsettled financial markets. This was in addition to the \$900bn support package previously passed in December 2020. Financial markets were alarmed that all this stimulus was happening at a time when: -

- 1. A fast vaccination programme roll-out had enabled a rapid opening up of the economy during 2021.
- 2. The economy was growing strongly during the first half of 2021 although it has weakened during the second half.
- 3. It started from a position of little spare capacity due to less severe lockdown measures than in many other countries.
- 4. And the Fed was still providing substantial stimulus through monthly QE purchases during 2021.

It was not much of a surprise that a combination of these factors would eventually cause an excess of demand in the economy which generated strong inflationary pressures. This has eventually been recognised by the Fed at its recent December meeting with an aggressive response to damp inflation down during 2022 and 2023.

- At its 3rd November Fed meeting, the Fed decided to make a start on tapering its \$120bn per month of QE purchases so that they ended next June. However, at its 15th December meeting it doubled the pace of tapering so that they will end all purchases in February. These purchases are currently acting as downward pressure on treasury yields and so it would be expected that treasury yields will rise over the taper period, all other things being equal.
- It also forecast that it expected there would be three rate rises in 2022 of 0.25% from near zero currently, followed by three in 2023 and two in 2024. This would take rates back above 2% to a neutral level for monetary policy. It also gave up on calling the sharp rise in inflation as being 'transitory'.
- At its 26th January meeting, the Fed became even more hawkish following inflation rising sharply even further. It indicated that rates would begin to rise very soon, i.e., it implied at its March meeting it would increase rates and start to run down its holdings of QE purchases. It also appears likely that the Fed could take action to force longer term treasury yields up by prioritising selling holdings of its longer bonds as yields at this end have been stubbornly low despite rising inflation risks. The low level of longer dated yields is a particular concern for the Fed because it is a key channel through which tighter monetary policy is meant to transmit to broader financial conditions, particularly in the US where long rates are a key driver of household and corporate borrowing costs.

There are also possible **DOWNSIDE RISKS** from the huge sums of cash that the UK populace have saved during the pandemic; when savings accounts earn little interest, it is likely that some of this cash mountain could end up being invested in bonds and so push up demand for bonds and support their prices i.e., this would help to keep their yields down. How this will interplay with the Bank of England eventually getting round to not reinvesting maturing gilts and then later selling gilts, will be interesting to monitor.

Globally, our views are as follows: -

- **EU.** The ECB joined with the Fed by announcing on **16th December** that it will be reducing its QE purchases by half from October 2022, i.e., it will still be providing significant stimulus via QE purchases during the first half of 2022. The ECB did not change its rate at its **3**rd **February** meeting, but it was clearly shocked by the increase in inflation to 5.1% in January. The President of the ECB, Christine Lagarde, hinted in the press conference after the meeting that the ECB may accelerate monetary tightening before long and she hinted that asset purchases could be reduced more quickly than implied by the previous guidance. She also refused to reaffirm officials' previous assessment that interest rate hikes in 2022 are "very unlikely". It, therefore, now looks likely that all three major western central banks will be raising rates this year in the face of sharp increases in inflation which is looking increasingly likely to be stubbornly high and for much longer than the previous oft repeated 'transitory' descriptions implied.
- China. The pace of economic growth has now fallen back after the initial surge of recovery from the pandemic and China has been struggling to contain the spread of the Delta variant through using sharp local lockdowns which depress economic growth. However, with Omicron having now spread to China, and being much more easily transmissible, lockdown strategies may not prove so successful in future. To boost flagging economic growth, The People's Bank of China cut its key interest rate in December 2021.
- **Japan.** 2021 was a patchy year in combating Covid. However, recent business surveys indicate that the economy is rebounding rapidly now that the bulk of the population is fully vaccinated, and new virus cases have plunged. The Bank of Japan is continuing its very loose monetary policy but with little prospect of getting inflation back towards its target of 2% any time soon.
- World growth. World growth was in recession in 2020 but recovered during 2021 until starting to lose momentum more recently. Inflation has been rising due to increases in gas and electricity prices, shipping costs and supply shortages, although these should subside during 2022. It is 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, and vice versa. This is likely to reduce world growth rates from those in prior decades.
- Supply shortages. The pandemic and extreme weather events, followed by a major surge in demand after lockdowns ended, have been highly disruptive of extended worldwide supply chains. Major queues of ships unable to unload their goods at ports in New York, California and China built up rapidly during quarters 2 and 3 of 2021 but then halved during quarter 4. Such issues have led to a misdistribution of shipping containers around the world and have contributed to a huge increase in the cost of shipping. Combined with a shortage of semi-conductors, these issues have had a disruptive impact on production in many countries. The latest additional disruption has been a shortage of coal in China leading to power cuts focused primarily on producers (rather than consumers), i.e., this will further aggravate shortages in meeting demand for goods. Many western countries are also hitting up against a difficulty in filling job vacancies. It is expected that these issues will be gradually sorted out, but they are currently contributing to a spike upwards in inflation and shortages of materials and goods available to purchase.

The balance of risks to the UK economy: -

The overall balance of risks to economic growth in the UK is now to the downside.

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

- Mutations of the virus render current vaccines ineffective, and tweaked vaccines to combat these
 mutations are delayed or unable to be administered fast enough to stop the NHS being
 overwhelmed.
- Labour and supply shortages prove more enduring and disruptive and depress economic activity.
- **Bank of England** acts 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.
- **The Government** acts too quickly to increase taxes and/or cut expenditure to balance the national budget.
- **UK / EU trade arrangements** if there was a major impact on trade flows and financial services due to complications or lack of co-operation in sorting out significant remaining issues.
- **Geopolitical risks**, for example in Ukraine/Russia, Iran, China, North Korea and Middle Eastern countries, which could lead to increasing safe-haven flows. If Russia were to invade Ukraine, this would be likely to cause short term volatility in financial markets, but it would not be expected to have a significant impact beyond that.

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

- 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 later rapid series of increases in Bank Rate faster than we currently expect.
- Longer term US treasury yields rise strongly and pull gilt yields up higher than forecast.