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## Contents

### **The Current Economic Prospects — Cancel Next Year's Planned Corporation Tax Rise 1**

Patrick Minford

### **The Liverpool Forecast for the UK and world economy 12**

Vo Phuong Mai Le

### **The Outlook for Emerging Market Economies 22**

Anupam Rastogi

The world economy is slowing under the stress of rising inflation and tightening money, plus an ill-considered Zero Covid policy shutting down parts of China. Nevertheless, world supply shortages are easing and if the UK can reverse the damaging tax rises currently planned, it should escape recession. Under new Conservative leadership by Liz Truss, this reversal should also lead to a new programme of supply-side reform, which should revive longer term growth.

### **The Government's Economic Strategy Needs Serious Revision 29**

The government has been pursuing damaging policies to raise corporation tax and National Insurance. The first damages entrepreneurial innovation, the second raises wage costs; both therefore damage growth, the key determinant of national welfare. They should be cancelled, with borrowing as finance. Instead of short term fiscal rule that prevent optimal smoothing of the finances, the government should ensure the debt/GDP ratio converges to a safe level over the long term. We support Liz Truss's programme for reversing these tax increases and bringing in other supply-side reforms.

Patrick Minford

## **The Julian Hodge Institute of Applied Macroeconomics**

**Editorial and Research Direction:** Patrick Minford<sup>†</sup>.

**Senior Research Associates:** Kent Matthews<sup>†</sup>, Anupam Rastogi, Peter Stoney<sup>‡</sup>.

**Research Associates:** Vo Phuong Mai Le<sup>†</sup>, David Meenagh<sup>‡</sup>, Francesco Perugini, Yongdeng Xu<sup>†</sup>, Zheyi Zhu<sup>†</sup>

<sup>†</sup> Cardiff Business School

<sup>‡</sup> University of Liverpool

The Julian Hodge Institute of Applied Macroeconomics was launched in autumn 1999 in a new collaboration between the Cardiff Business School of Cardiff University and Julian Hodge Bank. The aim of the Institute is to carry out research into the behaviour of the UK economy, and to study in particular its relationship with the other economies of Europe. This research has been given added urgency by the ongoing discussions about the UK's adoption of the Euro in place of the Pound. The new Institute has aimed to develop research relevant to this important debate.

The Institute embraces the original Liverpool Research Group in Macroeconomics, which is now based at Cardiff Business School and is pursuing a research programme involving the estimation and use of macroeconomic models for forecasting and policy analysis. It is grateful for financial support to the Jane Hodge Foundation, the Economic and Social Research Council, Esme Fairbairn Charitable Trust, the Wincott Foundation and Cardiff Business School.

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# CURRENT ECONOMIC PROSPECTS — CANCEL NEXT YEAR'S PLANNED CORPORATION TAX RISE

Patrick Minford

The latest PMIs for June are still signalling growth, with services at 54.3, manufacturing at 53.4, and construction at 52.6. These readings are all below April, signalling some slowdown- not surprisingly. However, they suggest that the UK is likely to avoid recession.

The planned rises in Corporation Tax and National Insurance Contributions are a big mistake and wiser counsels should prevail, cancelling this plan. According to our models of the UK, this tax rise would hit innovation and investment and so growth quite badly: our estimate is that it would reduce growth by about 2.3% per annum, with worse effects in the North than in the South. This would effectively turn the UK into a zero growth zone.

For now we are not factoring this damage into our forecasts; rather we assume that the change in prime minister will cancel the plans. We project inflation falling sharply next year as supply bottlenecks unwind, and higher interest rates reduce inflation expectations. We are looking for growth of just over 2% and inflation just under 5% in 2023.

## Getting UK government economic policy back on track

It is frustrating to watch when policy goes awry and tempting to say that it risks ruining the nation's prospects. But we need to remember Adam Smith's remark to a complaining correspondent: 'there is much ruin in a nation'. National prospects are determined by long run forces over which current government policy has limited control. The long run forces that determine business and personal development are primarily the property rights given by the common law and the independent powers, judicial and policing, that enforce it. These rights are what gives us confidence that if we invest our time, money and energies in a certain way we will own the results over the long period in which they will accumulate. The beauty of the common law in underpinning expectations of the future law is that it is based on precedent and so highly resistant to sudden change; it gives strong 'forward guidance' to us of where our rights will be years from now.

This is why how much legislation a government brings in matters little. More important is how it builds up or chips away at these underlying property rights by piecemeal regulative and other interventions. In this respect the latest proposals from DEFRA to liberalise the EU regulation of genetic engineering are of some importance. Farmers have chafed for years over the EU's blanket banning of 'genetic modification', due to its risk-reduction approach to innovation. This was why many farmers welcomed Brexit even though they wanted the high food prices created by EU protection.

**Table 1: Summary of Forecast**

|                            | 2018  | 2019  | 2020  | 2021  | 2022  | 2023  | 2024  |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|
| GDP Growth <sup>1</sup>    | 1.3   | 1.4   | -9.4  | 7.5   | 4.4   | 1.9   | 1.9   |
| Inflation CPI              | 2.4   | 1.7   | 1.0   | 2.5   | 7.7   | 4.9   | 3.2   |
| Wage Growth                | 3.0   | 3.5   | 1.6   | 5.8   | 7.3   | 5.0   | 4.1   |
| Survey Unemployment        | 4.1   | 3.8   | 4.5   | 4.5   | 3.9   | 3.6   | 2.8   |
| Exchange Rate <sup>2</sup> | 78.6  | 78.3  | 78.2  | 81.5  | 80.4  | 78.5  | 78.1  |
| 3 Month Interest Rate      | 0.4   | 0.8   | 0.2   | 0.1   | 1.5   | 2.4   | 2.9   |
| 5 Year Interest Rate       | 1.0   | 0.6   | 0.1   | 0.4   | 1.9   | 3.5   | 3.0   |
| Current Balance (£bn)      | -82.9 | -89.1 | -53.8 | -60.0 | -71.9 | -21.4 | -13.8 |
| PSBR (£bn)                 | 39.3  | 49.1  | 315.1 | 146.2 | 59.9  | 34.1  | 26.6  |

<sup>1</sup>Expenditure estimate at factor cost

<sup>2</sup>Sterling effective exchange rate, Bank of England Index (2005 = 100)

It is good to see that the government has accepted the need to liberalise other areas of regulation, including on the City, besides its successes in medical regulation over the Covid vaccine regime. The TIGRR Report of the Task Force under Sir Iain Duncan Smith

([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/994125/FINAL\\_TIGRR\\_REPORT\\_1.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/994125/FINAL_TIGRR_REPORT_1.pdf)) pointed the way forward; and it is gratifying that there has been government commitment to following its advice.

Brexit itself has been the major action of this government in improving the environment of property rights by moving away from EU regulation under the continental Napoleonic tradition. This system is both unpredictable because new regulations can easily overthrow precedent and also determined by an EU politico-bureaucratic consensus which prioritises the elimination of risk by stopping change. The other key reform Brexit has brought is our ability to trade freely with the rest of the world, in place of the self-interested protection granted to French farmers and German manufacturers.

More of that anon. But let us simply note that in Adam Smith's terms the rollout of new regulation and free trade will take place over many years, as debate and negotiation unfold. While this is going on, there will be 'disruption' as the old environment is displaced. This is what Remainers have constantly emphasised. We discuss below how exaggerated their estimates are of this disruption. But the key point they ignore is that the post-Brexit environment is being built for the long term, not to minimise the short term change they bewail.

## How to safeguard property rights

It is however unfortunate that this government is making a hash of current economic policy in a way that will undermine key property rights of business. Business innovation and investment is founded on expected future profit. The planned rise in Corporation Tax from 19% to 25% will reduce expected profit substantially. The timing could not

be worse, when we need confidence in the new post-Brexit economy to be maximised.

There is rightly also concern about the latest windfall tax proposal to fund the help to households over the rising costs of food and energy. Windfall taxes are not as damaging as mainstream corporation tax as they only kick in when profits are very high; as this part of the profits distribution is small- i.e. it has a low probability- the effect on expected profit is also small, as revealed by the BP CEO's tepid reaction to it. Nevertheless it is yet another extra business tax when we really do not want it.

The pity of all this self-harm in business taxation is that it is entirely unnecessary, an 'unforced error', inflicted by Treasury failure to understand the role of debt management. The current Treasury view is that debt contracted during Covid should now be repaid as soon as possible, as a priority, and hence that any new spending must be met from new taxes. However, this view is quite wrong and at variance with welfare-maximising debt policy.

The reason is not rocket science. To maximise welfare, tax rates should be set to maximise growth over the long run. This means, because higher tax rates reduce growth, they should be kept constant at the lowest rate the government can afford over the long term, which means equal to long run expected spending. This in turn is equal to long run spending on goods and services plus debt interest. As for short term fluctuations in spending and debt interest these should be paid for by borrowing which consequently 'smooths' out the need for tax rises- much like households or businesses use borrowing to allow them to keep their consumption or investment spending constant.

It is incomprehensible that the Treasury has thrown over this basic economics. A more forceful Chancellor than Rishi Sunak, who has proclaimed that he is a 'low tax' supporter, would have overruled officials on this. It is an irony that it has been Boris Johnson, a self-proclaimed ignoramus on economics, who has insisted on greater realism in budgeting to allow extra short term spending to occur; however, he too has given way to Treasury insistence on 'balancing the books' short term with tax rises.

There are those who are uncomfortable with a public debt ratio to GDP well above the 50% or so to which we became accustomed before the financial crisis and Covid. Of course over the long term such a ratio must be brought down to the comfort zone. But the way to do this is not to sabotage growth but to allow growth gradually to bring it down over time by raising revenue and lowering the need for benefits. In our forecasts, updated here, we have shown that with UK prospective growth the debt ratio is likely to come down steadily over time and so satisfy this requirement.

### **Policy on free trade agreements-FTAs**

The other policy area where the government has produced disappointing results is trade. The FTAs negotiated with

Australia and New Zealand will bring long term gains that are far from negligible

(<https://www.civitas.org.uk/publications/free-trade-under-brexit-why-its-benefits-to-the-uk-have-been-widely-underestimated> )

but they could have been brought forward in time had less weight been given to agricultural protectionism. The ex-High Commissioner of Australia, George Brandis, commented recently that the UK civil service, led by DEFRA, was extremely hostile to the Australian FTA, which was forced through in the end by Liz Truss's ministerial team in concert with the Australians

(<https://www.spectator.co.uk/article/whitehall-was-horrified-by-brexit-an-interview-with-australias-departing-high-commissioner>? ). In the upshot the full elimination of tariffs was deferred for ten years- so deferring the main gains. Much the same occurred with the New Zealand FTA. While the NFU's opposition to free trade is to be expected, the government's civil servant negotiators should not have supported it: greater competition in the farm sector will raise productivity, which its past performance has shown it is entirely capable of (total factor productivity growth in the past 20 years has been about 40%

<https://www.gov.uk/government/statistics/total-factor-productivity-of-the-agricultural-industry/total-factor-productivity-of-the-united-kingdom-agricultural-industry-provisional-estimate-2021#long-term-trends> )

As FTAs widen to manufacturing countries, notably those in the CPTPP of SE Asia, it is vital that this protectionist approach is not repeated. A big gain from free trade is also the productivity increase flowing from more competition in manufacturing- a highly competitive sector, as exemplified by names like Rolls Royce, Dyson, JCB, and British Aerospace.

The Department of International Trade is continuing to push for FTAs around the world, including across US states, many of which are large economies in their own right. The US Federal Government under President Joe Biden is currently unwilling to sign a UK FTA but this should change in time; there are strong mutual gains to be made. We discuss the gains in detail in another section below.

The biggest current trade problem of Brexit is in Northern Ireland, where the EU is unwilling to cooperate in easing the problems at the UK-EU border with N Ireland under the NI Protocol. In practice the goods crossing this border destined for the NI market do not go near the EU single market, and also conform as required to EU standards which are applicable in NI. Therefore a "green lane" of minimal checking for these goods should be easily implementable. However the EU refuses to implement it sufficiently to eliminate the current border problems- apparently because of France's refusal to agree to this flexibility.

This is plainly a serious political problem in terms of NI politics and is leading to proposals for abandoning the Protocol, which in turn could cause the destruction of the Cooperation and Trade Agreement with the EU- in effect a return to the 'no deal' scenario in which tariffs would occur on UK-EU trade.

At present the CTA implies that the UK has a continued FTA with the EU, with zero tariffs and mutual recognition of standards. While there has been border disruption even so, which has discouraged many SME firms from EU trade, so it is reported, nevertheless for firms willing to change their paperwork as needed, this FTA implies that there has been no substantive change in the UK-EU trade relationship. Hence trade continues as if we have not left the EU.

If we had a wide set of FTAs in place with non-EU countries, then trade here would be governed by world prices. But until that happens it is governed by EU prices, since we are still integrated into the large EU market, with non-EU trade restricted.

To understand the effects of free trade, one needs to appreciate what it means to have the market prices here set by world prices. What this implies is that producers and consumers decide what to produce and buy on the basis of getting and paying world prices. This is what happened in Australia and New Zealand when they abandoned protectionism as their dominant organising policy back several decades ago. Their industries became tough world competitors, orientated towards exports; their economies have never looked back. In particular they no longer cared that we had joined the EU's protectionist market; it no longer mattered, as their prices were now set globally. They had removed the UK mother country's previous power to wound them.

The effects of 'no deal' depend critically on this. With world trade opened up fully by FTAs, the effects of no deal would be nugatory, as UK prices would be left unchanged, at world levels. Any EU tariffs under no deal would have no effect on either the prices or the volumes of our exports and imports. Prices would be fixed as before by world prices, producers would produce the same, and consumers buy the same.

However without this opening up to the world, no deal would mean that higher EU tariffs on UK exports would lower UK margins on EU exports- at a material cost of about 2% of GDP-, while UK tariffs on EU imports would raise UK prices of EU imports-though this part is a cost we could obviously avoid by simply not pursuing tariff retaliation. In other words our EU relationship, remaining dominant in our trade, would continue to make us vulnerable to EU tariff policy.

It follows that scope to cancel the NI protocol is critically linked to achieving a wide range of FTAs with the non-EU world. By integrating our economy into the world economy we remove the EU's power to wound us through tariff warfare.

**Policy Conclusions- the government is making unforced errors- Brexit has been done with good long term gains in sight- but the follow-through is poor**

It is the long term progress of the economy that matters. By bringing in Brexit, the government has opened up the prospects of big progress via liberalised regulation and full integration into the world economy. But it is potentially sabotaging this progress by raising business taxes and by only weakly pursuing the free trade agenda.

It needs to abandon the planned rise in corporation tax and engage dynamically in all possible free trade agreements around the world. It can then negotiate with the EU from a position of strength.

### **Supply shocks and the UK inflation outlook**

Much comment on the economy trumpets likely stagflation, as high inflation cuts into living standards and forces lower spending and output. But this analysis neglects the supply-shortage nature of the inflation, and the fact that commodity price/quantity fluctuations come and then typically reverse, as substitution and extra capacity kick in. We have had a pandemic followed by the Ukraine-Russia war, both of which have caused large supply interruption driving commodity prices to huge heights. The nearest parallel to today is the commodity price surge during and after WW1 and the ensuing flu pandemic- shown in the chart below. Real commodity prices had risen by 2020 to 160 compared with a pre-war 100; by 1922 they had come back to 100. Inflation in 1919 was 10%, and 15% in 1920; in 1921 it was -8.5% and in 1922 -14%. The second chart shows how inflation fluctuated due to supply interruptions over a long UK history before the modern Great Inflation due to excess demand policies after WW2. Today UK inflation is only partly due to excess money and demand but mostly due to supply shortages. It follows that what has gone up will come down, with tightening money reducing demand.

How does a rational consumer household respond to such a temporary interruption in living standards when there is credit to be had or savings to be used? The answer is not much, since it can keep its consumption stable and in line with normal or 'permanent' income by using these.

## Commodity prices-past 150 yrs

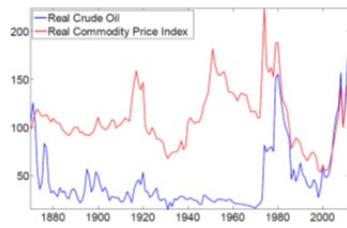
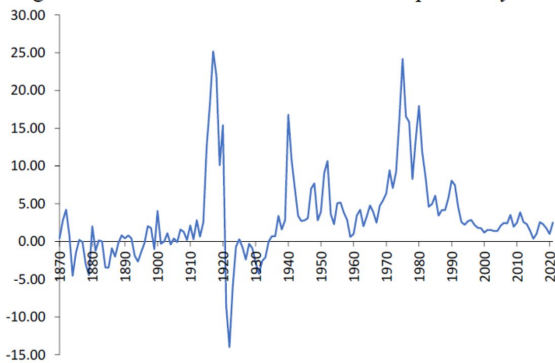


Figure 2: Commodities

Figure 2: UK Consumer Price Inflation — past 150 years



As a result of this analysis we have not forecast much of a slowdown in our forecast due purely to inflation. However, we expect interest rates to rise in response to the inflation, before inflation falls back in 2024. We also see a slowdown in global growth, both as China pursues damaging Covid lockdowns and the US tightens in the face of excess demand in its labour market. These elements cause a slower growth in 2023.

### The scope for growth through free trade agreements

In our analysis of the effects of free trade achieved progressively through FTAs with a growing list of countries around the world, our World Trade Model predicts the biggest gains to come from opening our markets to non-EU imports, hitherto protected against by high EU tariffs and non-tariff barriers in respect of agriculture and manufactures. Because the UK is a small open economy, signing FTAs with a series of other non-EU countries means that their supplies into our markets at world prices could bring our home prices of these hitherto protected products down to these world levels. The mechanism is that, were our prices to remain higher, they would switch their ample supplies from the rest of the world to here, to take advantage of the higher margins.

These gains are what would come from unilateral free trade. To achieve them we need to conclude FTAs with enough big suppliers of agriculture and manufactures for these supplies

to be adequate for this purpose. So far the UK has concluded FTAs with two big agricultural exporters, Australia and New Zealand. These two are likely to be sufficient to bring the bulk of agricultural prices here down to world levels, effectively eliminating agricultural protection. According to our model, the gains from fully eliminating agricultural protection are substantial, largely because the price of land is greatly reduced, which in turn lowers an important element in the UK cost base. With land in much smaller demand in agriculture, cheap land availability to the rest of the economy enables expanded production in other sectors. There is also a direct gain to UK consumers via lower food prices, while there are gains to productivity in agriculture and through the expansion of other more productive sectors. In a recent Civitas publication Patrick Minford reported that the Australian FTA could add 3% to UK GDP on the assumption that it would reduce agricultural prices by a moderate amount-

<https://www.civitas.org.uk/publications/free-trade-under-brexits-why-its-benefits-to-the-uk-have-been-widely-underestimated/>

There are also gains from FTAs from the greater penetration they allow for UK exporters into non-EU markets. These gains come about because they face zero trade barriers post-FTA whereas other exporters face full existing barriers. Hence UK exporters can raise their prices by this protective margin. According to the World Bank, the average unweighted tariff across all products was 2.6% in 2020. Non-tariff barriers are difficult to estimate, because they are qualitative. They are probably substantially larger. An OECD study has attempted to estimate them econometrically- its results are shown below. Motor vehicles, a prominent manufacture, averages 22%, while foods average similarly around 20%. The OECD estimates suggest that total trade barriers around the non-EU world are in the range of 10-20%. Our estimates of EU total protection are for about 20% for both agriculture and manufacturing (see Minford et al, 2015- Europe book, 2<sup>nd</sup> edition, chapter 4,)

Plainly the potential gain to UK exporters in obtaining zero barriers via an FTA will depend on the size of the barrier preference and the value of exports sent to each FTA market. The gain in UK % of GDP is the % barrier x the UK exports sent to that market as % of UK GDP. To illustrate what this might amount to on all FTAs in total once eventually concluded across the non-EU world, suppose the average tariff and non-tariff barrier in these countries is 10% in total; all UK non-EU exports are around 18% of GDP. Thus the potential gain from the extra margin on these exports would be about 2% of GDP. By for example switching another 5% of GDP to these non-EU export markets, this could be raised to 2.5% of GDP. Notice that the FTA with the EU, already signed, brings with it a gain of 20% on the 7% of our GDP exported as goods to the EU-around another 1.4% gain, currently concealed by the initial disruption of post-Brexit paper work.



What this reveals is that, over and above the major gain from lowering the UK's own trade barriers just reviewed, there is on any particular FTA some additional gain to be had from the extra margin available on exports to that trading partner. Its size is greater the more protectionist that partner is to the world in general and the larger UK potential exports to that partner can be made.

It follows from all this that the agenda of concluding FTAs around the non-EU world offers considerable gains to the economy in the future. We have put this at about 7% of GDP due to the opening of our markets, to which should be added the potential gain from others opening theirs to us, which could add about another 3% of GDP. This underlines the importance of continuing robustly with the post-Brexit FTA agenda, and ignoring the noisy protectionist voices from the farming and manufacturing lobbies.

Table 2. Baseline AVE estimates on unit value, by HS section

| HS Section                       | Frequency weighted AVE |       |      |      |       | Unweighted AVE |       |       |       |
|----------------------------------|------------------------|-------|------|------|-------|----------------|-------|-------|-------|
|                                  | SPS                    | TBT   | BCM  | QRs  |       | SPS            | TBT   | BCM   | QRs   |
| Live animals                     | 3.0%                   | 14.8% | 1.5% | 0.9% | 20.3% | 4.6%           | 16.5% | 2.8%  | 4.4%  |
| Vegetable products               | 4.1%                   | 10.0% | 1.5% | 0.3% | 15.8% | 5.5%           | 17.1% | 6.9%  | 3.0%  |
| Fats and Oil                     | 10.8%                  | 7.1%  | 0.8% | 1.4% | 20.0% | 17.7%          | 9.1%  | 4.6%  | 4.6%  |
| Processed food                   | 14.8%                  | 12.0% | 0.3% | 1.6% | 28.7% | 13.5%          | 12.1% | 1.3%  | 6.6%  |
| Chemical products                | 1.6%                   | 5.8%  | 0.3% | 0.7% | 8.5%  | 5.8%           | 9.3%  | 1.9%  | 5.6%  |
| Rubber Plastics                  | 3.6%                   | 4.5%  | 1.2% | 0.6% | 9.9%  | 10.5%          | 6.8%  | 13.0% | 11.5% |
| Raw hide skins                   | 0.1%                   | 7.7%  | 0.7% | 1.9% | 10.4% | 0.4%           | 6.0%  | 5.0%  | 14.4% |
| Wood                             | 7.9%                   | 13.9% | 0.3% | 4.7% | 26.8% | 25.0%          | 30.2% | 0.5%  | 10.3% |
| Paper                            | 2.1%                   | 4.0%  | 0.1% | 1.5% | 7.7%  | 8.6%           | 10.4% | 0.2%  | 4.8%  |
| Textile                          | 0.6%                   | 10.8% | 0.6% | 0.9% | 12.9% | 11.4%          | 15.1% | 3.3%  | 5.4%  |
| Footwear                         | 0.2%                   | 0.9%  | 1.2% | 6.0% | 8.3%  | 5.1%           | 1.5%  | 4.4%  | 24.0% |
| Stone Cement                     | 1.1%                   | 6.8%  | 0.1% | 0.4% | 8.4%  | 11.2%          | 12.2% | 0.7%  | 10.9% |
| Precious stones                  | 0.4%                   | 5.5%  | 0.9% | 2.7% | 9.5%  | 15.9%          | 16.1% | 7.2%  | 18.9% |
| Base Metals                      | 0.0%                   | 4.4%  | 0.6% | 1.3% | 6.4%  | 9.1%           | 3.0%  | 13.4% |       |
| Machinery & Electrical Equipment | 0.0%                   | 4.8%  | 0.4% | 0.9% | 6.1%  | 10.1%          | 1.4%  | 7.9%  |       |
| Motor Vehicles                   | 0.0%                   | 15.9% | 0.7% | 5.7% | 22.3% | 20.4%          | 1.5%  | 23.4% |       |
| Optical Medicals                 | 0.0%                   | 5.1%  | 1.1% | 1.5% | 7.7%  | 8.6%           | 4.2%  | 13.5% |       |
| Miscellaneous                    | 0.0%                   | 7.5%  | 0.0% | 1.0% | 8.6%  | 8.9%           | 2.1%  | 6.3%  |       |

Note: SPS is Sanitary and Phytosanitary measures, TBT is Technical barriers (standards), BCM is Border control measures and QRs is Quantitative restrictions.  
For unweighted series the cases for products in a country with no NTM are not taken into account in calculating the average, while in the frequency-weighted series the AVE in such cases are set to zero. Therefore unweighted AVEs capture the restrictiveness of an NTM when it is applied while frequency-weighting captures the average effect of NTMs when accounting for their incidence.  
Source: OECD estimates.

Source:

Cadot, O., J. Gourdon and F. van Tongeren (2018-05-16), "Estimating Ad Valorem Equivalents of Non-Tariff Measures: Combining Price-Based and Quantity-Based Approaches", *OECD Trade Policy Papers*, No. 215, OECD Publishing, Paris. <http://dx.doi.org/10.1787/f3cd5bdc-en>

## The current Treasury orthodoxy is rooted in a past that was entirely different

It would be a good idea to send top civil servants on expensive sabbaticals in academia, with a mission to catch up with the latest economic trends and thinking; it would be money well spent. Time and again we find our top mandarins in the grip of outdated thinking that they absorbed in their youthful progress climbing up the civil service tree. This happened in 1989 when the Treasury strongly opposed the move to monetarist thinking in the suppression of inflation. The head civil servants then had been brought up to think incomes and price controls administered via

tripartite meetings of government, the CBI and the TUC, were the way to control inflation, permitting fiscal and monetary policy to stimulate growth and employment. Of course events and the economic thinking of the time had shown this did not work; but they were too set in their intellectual habits to realise this, and it took a new government under Mrs. Thatcher to force them into the necessary radical policy change. Sadly, in the process most of these top civil servants had to be moved sideways or retired to make these changes possible.

Here we are again. This time the top of the civil service is convinced that we need to raise taxes and cut public spending to avoid insolvency from excessive public debt post-Covid. The Treasury inserted these thoughts into the Chancellor's Mais lecture on Wednesday Feb 24<sup>th</sup>, which proclaimed a generally Thatcherite agenda- freeing up markets, improving regulation, and cutting taxes to incentivise investment, training and R&D. So far it looks as relevant now as back in her day, when these civil servants cut their teeth. But then the Chancellor goes on with the mantra that in the short term it is right to raise taxes to reduce debt. He says that Mrs. Thatcher's government did this before cutting taxes later and cites this as a supportive precedent. This is true but underlines the point that what was right then no longer applies in the world of today- a point that he and the Treasury ought to be fully aware of but are blinded to by their failure to understand the new environment.

The situation in 1981 when the Thatcher government raised taxes was entirely different. Inflation was running close to 20% and interest rates were around 15%. There was a lack of credibility over the ability of monetary policy to control inflation. There was a particular worry that the government would print money to avoid borrowing. The tough budget of 1981 was necessary to create confidence in the control of inflation, so reducing inflation expectations and with them actual inflation; and so to allow interest rates to fall and permit recovery. As a result recovery was strong in 1982 and inflation fell sharply.

Today interest rates are close to zero and there is no credibility problem for the Bank in controlling inflation; its problem until recently has mostly been too little inflation, while today's inflation comes from commodity supply bottlenecks due to the Covid cycle and most recently the war in Ukraine. Now by raising rates moderately it will have a strong dampening impact on inflation; if rates go even as high as 2%, the impact will be strongly deflationary. As for government borrowing, it can be done very cheaply with long rates at just over 1%, negative in real terms. There is no pressure on the government to cut its debt ratio; its solvency is assured, gilts are seen as a highly safe asset. Nor is there any need for borrowing to fall to buttress Bank anti-inflation credibility, as that is, as we have just seen, extremely strong.

There is therefore no parallel between the fiscal policy needs of 1981 and those of today. Then fiscal policy needed to tighten to underpin anti-inflation policy. Today fiscal policy



needs to permit taxes to stay down to underpin growth, and monetary policy is easily capable of the necessary tightening to restrain inflation. Indeed if fiscal policy promotes growth it will allow the Bank to raise interest rates further into more normal ranges, getting us well away from the dangerous zero interest rate region.

The key differences from Mrs. Thatcher's time are therefore first the inflation situation. Then there was an all-pervading inflation psychology, with expected inflation high and with a Bank of England both under political control and hostile to the use of restrictive monetary policy, instead committed to supporting industry with easy credit, and suggesting wage and price controls be used against inflation. To beat that inflation Mrs. Thatcher's government had to impose tight money and underpin its credibility with a tight fiscal policy- exhibited most clearly in the tough 1981 budget which provoked the famous letter from 364 economists. Today inflation expectations are well under control and an independent Bank is mandated by law to bring inflation back to 2%- something it has relentlessly achieved for several decades, and can reassert by moderate tightening today.

The second major difference lies in interest rates. In October 1981 the long-term (10 year) gilt yield was 16.3%; 1981 inflation was 11.9%. The real long run interest rate was therefore round about 4%- back then there were no index-linked gilts to give us a firm estimate. Today the 10-year index-linked gilt yield is minus 1.3%. What this means is that savers are actually paying the government to borrow from them, paying them a negative amount of real resources. Of course this is totally different from paying 4% a year in real resources. It means the government can invest in infrastructure and not merely gain the capital return on that but add into that the borrowing profit.

To this the standard Treasury answer is that rates can change upwards; this is true but irrelevant to new borrowing because the rate is fixed on that by the market rate at the time.

A further Treasury argument is that there will be a solvency problem over the next decades if we do not pay off debt soon. This argument is based on the fear that the economy will not produce enough growth and tax revenue to pay for future spending, so creating a spiralling debt ratio. However, this argument is self-defeating because the growth rate is itself affected by the tax rate. According to our UK regional growth model (available at [http://carbsecon.com/wp/E2020\\_14.pdf](http://carbsecon.com/wp/E2020_14.pdf) and forthcoming in Open Economies Review), which matches UK post-war data, growth responds sensitively to the business tax rate, and net UK tax revenue responds sensitively to growth. The result is that with the currently planned tax rises UK growth over the coming decade falls by 2.3 % p.a., with the North's falling more than the South's;

whereas if the Treasury were to lower the tax rates in a supply-side-boosting £100 billion p.a. package, growth would be stimulated by a similar amount, again with a bigger effect on the North than the South. As for the debt ratio, even if we scale these growth effects down by over half to just 1% in each direction, the effect on the debt ratio by 2035 is minimal; it comes out at around 50% regardless, implying that raising taxes as planned cuts growth with no long-run lowering of the debt ratio because the extra taxes levied damage growth reducing tax revenues in a broadly offsetting way. Furthermore, actually cutting tax rates instead of raising them, would lead to offsetting rises in tax revenue due to higher growth. These projections are shown in the appendix below. They underline the 'tax-smoothing' role of public borrowing, in which you only raise taxes on the basis of the long run cost of financing public spending, meanwhile borrowing to iron out temporary spikes in net spending. This role does not threaten our solvency.

This picture of relatively undisturbed public finances changes radically if we use our Regional Growth model estimates for the growth effects of tax changes; these are the most likely estimates as they fit the UK facts on growth. The projections on these estimates- shown in the second half of the Appendix- that imply double the growth effects, show the debt ratio worsening disastrously (to 135% by 2035) under the currently planned tax rises, presaging a doom loop whereby the Treasury, frustrated by the low tax receipts resulting from lower growth might raise tax rates further, worsening debt even more and so on. Nor does the investment allowance against Corporation Tax help at all: it is no use when the incentive to innovate is destroyed by the high tax rate- without innovation (resulting in intangible capital) and so rising productivity, there is no return to investment for the allowance to write off tax against. The mirror image of this situation is seen under our tax-cutting scenario where the debt ratio falls faster, reaching 50% by 2030; this leads to a virtuous circle where improving finances prompt further tax cuts and even better finances, and so on.

It follows that the effect of higher taxes is at best to leave the projected debt ratio largely unaffected but to reduce growth damagingly, and at worst to risk creating a vicious downward spiral or doom loop; whereas cutting taxes would raise growth beneficially while at worst leaving the projected debt ratio unaffected and at best reducing it faster, enabling a virtuous circle of higher growth and better finances. What this underlines is that the main job of fiscal policy is to underpin growth via supply-side policy on the tax rate. As for demand side fiscal policy, when the real interest rate,  $r$ , is below the growth rate,  $g$ , as now, the situation is one of 'dynamic inefficiency', where the cost in consumption lost in investing for growth is greater than its return on capital invested<sup>1</sup>; the government should run a fiscal deficit to

<sup>1</sup> When  $r = g$ , there is 'dynamic efficiency' as follows:  $r=g$  (rise in capital invested)/capital(K)= Savings/K. Hence return on capital=  $rK$ = Savings=Consumption sacrificed. Thus the growth process, where capital and GDP are growing together at the same

equilibrium rate, is generating a return that desirably just equals the required sacrifice in consumption. When  $r < g$  (as now), consumption should rise, savings fall (government should increase its deficit); when  $r > g$  (as in 1980), consumption should fall and

increase national consumption and boost the economy on the demand side.

None of these points is grasped by the Treasury today, immersed as it is in the fiscal thinking that was appropriate in the early 1980s. Hence while monetary policy, now under Bank control, is likely to be tightened, rightly, in response to higher inflation, pushing interest rates up towards normality, fiscal policy is adrift. It is being wrongly tightened while real interest rates are below the growth rate, cutting demand when demand should be stimulated; and on the supply side it is raising tax rates when they should be cut to boost growth in the long term. The Treasury is truly making a mess of its job, due to a failure to keep up with the times. Its failure risks turning the UK into a growth wreck, plagued by a doom loop, much as we have seen happen in Japan.

Politically, this Treasury failure means that Boris Johnson, who is widely regarded as incompetent in matters economic, has in fact got the correct approach to fiscal policy for our times. He is rightly inclined to be in favour of more public spending, while not wishing to put taxes up because he knows it appals both his backbench MPs and Conservative voters. It is the Chancellor, Rishi Sunak, who has taken the wrong direction, overwhelmed by the Treasury's hostility to the right course. It is past time for a strong course correction.

**APPENDIX on Fiscal/Debt projections under no-tax-change (Base Case), Planned tax-rise (Variant 1), and £100 billion Stimulus package (three quarters tax cut, one quarter spending rise)-Variant 2. PART A assumes half the growth effects of tax estimated in the Cardiff Regional Growth Model. PART B assumes the full effects estimated by it.**

In this Appendix, we show longterm projections for the public finances for the no-policy-change (constant

**current taxes and spending plans) Base Case and for two Variant cases, 1 for the currently planned tax rises, 2 for a £100 billion Stimulus Package on top of reversal of currently planned tax rises, as follows:**

Cut corporation tax by 10% : £32 billion

Abolish the very top additional 5% rate : £1 billion

Cut the top rate of income tax to 30% : £15 billion.

Cut the standard rate of income tax by 5% : £28 billion.

= a total of £76 billion, representing a weighted average tax cut across all income of about 15%, leaving £24 billion extra (about 1% of GDP) for spending on public services and infrastructure.

**The two variants are assessed under two assumptions about the effects on growth: the 'B' variant assumes our model-estimated effect; the 'A' variant assumes half the model-estimated effect.**

**What we see is that in the Base Case the debt/GDP ratio falls to the safe region around 50% by 2035. Under Variants 1a and 2a, the debt ratio by 2035 is not much affected either by going ahead with planned tax rises or by going to the stimulus package. In both case the growth effects roughly cancel out the tax change effects on the debt ratio.**

However, under variants 1b and 2b, where we use the twice as large model-estimated effects, we find that going ahead with planned tax rises causes the debt ratio to spiral upwards, while with the stimulus package the debt ratio fall very sharply; thus the growth effects greatly dominate the tax change effects.

#### Public finance projections from 2025 to 2035

| <b>PART A</b>         | <b>Real GDP growth</b> | <b>Nominal GDP growth</b> | <b>Tax rate growth</b> | <b>Pub Spend</b>     |
|-----------------------|------------------------|---------------------------|------------------------|----------------------|
| <b>Baseline above</b> | 2%                     | 4%                        | 4%                     | -                    |
| <b>Variant 1a</b>     | 1%                     | 3%                        | 2% + £80b p.a.         | same as baseline     |
| <b>Variant 2a</b>     | 3%                     | 5%                        | 6% - £75b p.a.         | baseline + £25b p.a. |

government cut its deficit. This criterion acts as a guide to fiscal demand stimulus or contraction.

### Baseline Forecast

|         | Nom PSBR (£bn) | Nom GDP (£bn) | Nom Pub Spend (£bn) | PSBR/GDP % <sup>1</sup> | Spend/GDP % | Nom Debt (£bn) | Debt Interest (£bn) | Debt/GDP % | Net Taxes (£bn) | Net Tax Rate% |
|---------|----------------|---------------|---------------------|-------------------------|-------------|----------------|---------------------|------------|-----------------|---------------|
| 2019/20 | 49.1           | 2196.3        | 472.2               | 2.2                     | 21.5        | 1621.0         | 48.1                | 73.8       | 471.2           | 21.5          |
| 2020/21 | 315.1          | 2007.9        | 479.2               | 15.7                    | 23.9        | 1936.1         | 39.8                | 96.4       | 203.9           | 10.2          |
| 2021/22 | 146.2          | 2311.1        | 494.1               | 6.3                     | 21.4        | 2082.3         | 42.6                | 90.1       | 390.5           | 16.9          |
| 2022/23 | 59.9           | 2574          | 565.8               | 2.3                     | 22.0        | 2142.2         | 41.1                | 83.2       | 547.0           | 21.3          |
| 2023/24 | 34.1           | 2742.9        | 597.4               | 1.2                     | 21.8        | 2176.3         | 42.9                | 79.3       | 606.3           | 22.1          |
| 2024/25 | 26.6           | 2867.2        | 641.6               | 0.9                     | 22.4        | 2202.9         | 44.1                | 76.8       | 659.0           | 23.0          |
| 2025/26 | 3.8            | 2981.9        | 670.9               | 0.1                     | 22.5        | 2206.7         | 45.2                | 74.0       | 712.2           | 23.9          |
| 2026/27 | 0.2            | 3101.2        | 724.7               | 0.0                     | 23.4        | 2206.9         | 46.2                | 71.2       | 770.7           | 24.9          |
| 2027/28 | 0.2            | 3225.2        | 786.6               | 0.0                     | 24.4        | 2207.1         | 47.2                | 68.4       | 833.6           | 25.9          |
| 2028/29 | 0.0            | 3354.2        | 853.5               | 0.0                     | 25.4        | 2207.1         | 48.2                | 65.8       | 901.6           | 26.9          |
| 2029/30 | 0.0            | 3488.4        | 926.2               | 0.0                     | 26.5        | 2207.1         | 49.1                | 63.3       | 975.2           | 28.0          |
| 2030/31 | 0.0            | 3627.9        | 1004.9              | 0.0                     | 27.7        | 2207.1         | 49.9                | 60.8       | 1054.8          | 29.1          |
| 2031/32 | 0.0            | 3773.0        | 1090.1              | 0.0                     | 28.9        | 2207.1         | 50.7                | 58.5       | 1140.9          | 30.3          |
| 2032/33 | 0.0            | 3924.0        | 1182.5              | 0.0                     | 30.1        | 2207.1         | 51.5                | 56.2       | 1234.0          | 31.5          |
| 2033/34 | 0.0            | 4080.9        | 1282.4              | 0.0                     | 31.4        | 2207.1         | 52.2                | 54.1       | 1334.7          | 32.7          |
| 2034/35 | 0.0            | 4244.2        | 1390.6              | 0.0                     | 32.8        | 2207.1         | 52.9                | 52.0       | 1443.6          | 34.0          |

### Variant 1a Forecast

|         | Nom PSBR (£bn) | Nom GDP (£bn) | Nom Pub Spend (£bn) | PSBR/GDP % <sup>1</sup> | Spend/GDP % | Nom Debt (£bn) | Debt Interest (£bn) | Debt/GDP % | Net Taxes (£bn) | Net Tax Rate% |
|---------|----------------|---------------|---------------------|-------------------------|-------------|----------------|---------------------|------------|-----------------|---------------|
| 2019/20 | 49.1           | 2196.3        | 472.2               | 2.2                     | 21.5        | 1621.0         | 48.1                | 73.8       | 471.2           | 21.5          |
| 2020/21 | 315.1          | 2007.9        | 479.2               | 15.7                    | 23.9        | 1936.1         | 39.8                | 96.4       | 203.9           | 10.2          |
| 2021/22 | 146.2          | 2311.1        | 494.1               | 6.3                     | 21.4        | 2082.3         | 42.6                | 90.1       | 390.5           | 16.9          |
| 2022/23 | 59.9           | 2574          | 565.8               | 2.3                     | 22.0        | 2142.2         | 41.1                | 83.2       | 547.0           | 21.3          |
| 2023/24 | 34.1           | 2742.9        | 597.4               | 1.2                     | 21.8        | 2176.3         | 42.9                | 79.3       | 606.3           | 22.1          |
| 2024/25 | 26.6           | 2867.2        | 641.6               | 0.9                     | 22.4        | 2202.9         | 44.1                | 76.8       | 659.0           | 23.0          |
| 2025/26 | -56.3          | 2953.2        | 670.9               | -1.9                    | 22.7        | 2146.6         | 45.2                | 72.7       | 772.4           | 26.2          |
| 2026/27 | -36.6          | 3041.8        | 724.7               | -1.2                    | 23.8        | 2110.0         | 46.1                | 69.4       | 807.4           | 26.5          |
| 2027/28 | -10.6          | 3133.1        | 786.6               | -0.3                    | 25.1        | 2099.4         | 47.0                | 67.0       | 844.2           | 26.9          |
| 2028/29 | 18.4           | 3227.1        | 853.5               | 0.6                     | 26.4        | 2117.7         | 47.8                | 65.6       | 882.9           | 27.4          |
| 2029/30 | 51.2           | 3323.9        | 926.2               | 1.5                     | 27.9        | 2168.9         | 48.6                | 65.3       | 923.5           | 27.8          |
| 2030/31 | 88.1           | 3423.6        | 1004.9              | 2.6                     | 29.4        | 2257.0         | 49.4                | 65.9       | 966.2           | 28.2          |
| 2031/32 | 129.4          | 3526.3        | 1090.1              | 3.7                     | 30.9        | 2386.4         | 50.3                | 67.7       | 1011.0          | 28.7          |
| 2032/33 | 175.7          | 3632.1        | 1182.5              | 4.8                     | 32.6        | 2562.1         | 51.4                | 70.5       | 1058.2          | 29.1          |
| 2033/34 | 227.5          | 3741.0        | 1282.5              | 6.1                     | 34.3        | 2789.6         | 52.7                | 74.6       | 1107.6          | 29.6          |
| 2034/35 | 285.2          | 3853.3        | 1390.7              | 7.4                     | 36.1        | 3074.8         | 54.2                | 79.8       | 1159.6          | 30.1          |

### Variant 2a Forecast

|         | Nom PSBR (£bn) | Nom GDP (£bn) | Nom Pub Spend (£bn) | PSBR/GDP % <sup>1</sup> | Spend/GDP % | Nom Debt (£bn) | Debt Interest (£bn) | Debt/GDP % | Net Taxes (£bn) | Net Tax Rate% |
|---------|----------------|---------------|---------------------|-------------------------|-------------|----------------|---------------------|------------|-----------------|---------------|
| 2019/20 | 49.1           | 2196.3        | 472.2               | 2.2                     | 21.5        | 1621.0         | 48.1                | 73.8       | 471.2           | 21.5          |
| 2020/21 | 315.1          | 2007.9        | 479.2               | 15.7                    | 23.9        | 1936.1         | 39.8                | 96.4       | 203.9           | 10.2          |
| 2021/22 | 146.2          | 2311.1        | 494.1               | 6.3                     | 21.4        | 2082.3         | 42.6                | 90.1       | 390.5           | 16.9          |
| 2022/23 | 59.9           | 2574          | 565.8               | 2.3                     | 22.0        | 2142.2         | 41.1                | 83.2       | 547.0           | 21.3          |
| 2023/24 | 34.1           | 2742.9        | 597.4               | 1.2                     | 21.8        | 2176.3         | 42.9                | 79.3       | 606.3           | 22.1          |
| 2024/25 | 26.6           | 2867.2        | 641.6               | 0.9                     | 22.4        | 2202.9         | 44.1                | 76.8       | 659.0           | 23.0          |
| 2025/26 | 82.5           | 3010.6        | 695.9               | 2.7                     | 23.1        | 2285.4         | 45.2                | 75.9       | 658.5           | 21.9          |
| 2026/27 | 54.7           | 3161.1        | 749.7               | 1.7                     | 23.7        | 2340.1         | 46.3                | 74.0       | 741.4           | 23.5          |
| 2027/28 | 25.5           | 3319.1        | 811.6               | 0.8                     | 24.5        | 2365.6         | 47.5                | 71.3       | 833.6           | 25.1          |
| 2028/29 | -9.1           | 3485.1        | 878.5               | -0.3                    | 25.2        | 2356.5         | 48.7                | 67.6       | 936.3           | 26.9          |
| 2029/30 | -49.6          | 3659.4        | 951.2               | -1.4                    | 26.0        | 2306.8         | 49.8                | 63.0       | 1050.6          | 28.7          |
| 2030/31 | -97.1          | 3842.3        | 1029.9              | -2.5                    | 26.8        | 2209.7         | 50.8                | 57.5       | 1177.8          | 30.7          |
| 2031/32 | -152.7         | 4034.4        | 1115.1              | -3.8                    | 27.6        | 2057.0         | 51.5                | 51.0       | 1319.4          | 32.7          |
| 2032/33 | -217.4         | 4236.2        | 1207.5              | -5.1                    | 28.5        | 1839.6         | 52.1                | 43.4       | 1476.9          | 34.9          |
| 2033/34 | -292.7         | 4448.0        | 1307.4              | -6.6                    | 29.4        | 1546.9         | 52.2                | 34.8       | 1652.3          | 37.1          |
| 2034/35 | -379.9         | 4670.4        | 1415.6              | -8.1                    | 30.3        | 1167.0         | 51.9                | 25.0       | 1847.5          | 39.6          |

<sup>1</sup>GDP at market prices (Financial Year)

### PART B

#### Public finance projections from 2025 to 2035- summary

| PART B         | Real GDP growth | Nominal GDP growth | Tax rate growth | Pub Spend            |
|----------------|-----------------|--------------------|-----------------|----------------------|
| Baseline above | 2%              | 4%                 | 4%              | -                    |
| Variant 1b     | 0%              | 1.7%               | 0% + £80b p.a.  | same as baseline     |
| Variant 2b     | 4%              | 6.3%               | 8% - £75b p.a.  | baseline + £25b p.a. |

### Variant 1b Forecast

|         | Nom PSBR (£bn) | Nom GDP (£bn) | Nom Pub Spend (£bn) | PSBR/GDP % <sup>1</sup> | Spend/GDP % | Nom Debt (£bn) | Debt Interest (£bn) | Debt/GDP % | Net Taxes (£bn) | Net Tax Rate% |
|---------|----------------|---------------|---------------------|-------------------------|-------------|----------------|---------------------|------------|-----------------|---------------|
| 2019/20 | 49.1           | 2196.3        | 472.2               | 2.2                     | 21.5        | 1621.0         | 48.1                | 73.8       | 471.2           | 21.5          |
| 2020/21 | 315.1          | 2007.9        | 479.2               | 15.7                    | 23.9        | 1936.1         | 39.8                | 96.4       | 203.9           | 10.2          |
| 2021/22 | 146.2          | 2311.1        | 494.1               | 6.3                     | 21.4        | 2082.3         | 42.6                | 90.1       | 390.5           | 16.9          |
| 2022/23 | 59.9           | 2574          | 565.8               | 2.3                     | 22.0        | 2142.2         | 41.1                | 83.2       | 547.0           | 21.3          |
| 2023/24 | 34.1           | 2742.9        | 597.4               | 1.2                     | 21.8        | 2176.3         | 42.9                | 79.3       | 606.3           | 22.1          |
| 2024/25 | 26.6           | 2867.2        | 641.6               | 0.9                     | 22.4        | 2202.9         | 44.1                | 76.8       | 659.0           | 23.0          |
| 2025/26 | -34.2          | 2915.9        | 670.9               | -1.2                    | 23.0        | 2168.7         | 45.2                | 74.4       | 750.2           | 25.7          |
| 2026/27 | 9.2            | 2965.5        | 724.7               | 0.3                     | 24.4        | 2178.0         | 46.2                | 73.4       | 761.6           | 25.7          |
| 2027/28 | 60.5           | 3015.9        | 786.6               | 2.0                     | 26.1        | 2238.5         | 47.1                | 74.2       | 773.2           | 25.6          |
| 2028/29 | 116.6          | 3067.2        | 853.5               | 3.8                     | 27.8        | 2355.1         | 48.1                | 76.8       | 785.0           | 25.6          |
| 2029/30 | 178.4          | 3119.3        | 926.2               | 5.7                     | 29.7        | 2533.5         | 49.2                | 81.2       | 797.0           | 25.5          |
| 2030/31 | 246.3          | 3172.4        | 1004.9              | 7.8                     | 31.7        | 2779.8         | 50.6                | 87.6       | 809.2           | 25.5          |
| 2031/32 | 320.8          | 3226.3        | 1090.1              | 9.9                     | 33.8        | 3100.5         | 52.2                | 96.1       | 821.6           | 25.5          |
| 2032/33 | 402.5          | 3281.1        | 1182.5              | 12.3                    | 36.0        | 3503.1         | 54.3                | 106.8      | 834.2           | 25.4          |

|         |       |        |        |      |      |        |      |       |       |      |
|---------|-------|--------|--------|------|------|--------|------|-------|-------|------|
| 2033/34 | 492.2 | 3336.9 | 1282.4 | 14.8 | 38.4 | 3995.3 | 56.8 | 119.7 | 847.0 | 25.4 |
| 2034/35 | 590.5 | 3393.7 | 1390.6 | 17.4 | 41.0 | 4585.8 | 60.0 | 135.1 | 860.0 | 25.3 |

<sup>1</sup>GDP at market prices (Financial Year)

### Variant 2b Forecast

|         | Nom<br>PSBR<br>(£bn) | Nom<br>GDP<br>(£bn) | Nom Pub<br>Spend<br>(£bn) | PSBR/GDP<br>% <sup>1</sup> | Spend/GDP<br>% | Nom<br>Debt<br>(£bn) | Debt<br>Interest<br>(£bn) | Debt/GDP<br>% | Net<br>Taxes<br>(£bn) | Net Tax<br>Rate% |
|---------|----------------------|---------------------|---------------------------|----------------------------|----------------|----------------------|---------------------------|---------------|-----------------------|------------------|
| 2019/20 | 49.1                 | 2196.3              | 472.2                     | 2.2                        | 21.5           | 1621.0               | 48.1                      | 73.8          | 471.2                 | 21.5             |
| 2020/21 | 315.1                | 2007.9              | 479.2                     | 15.7                       | 23.9           | 1936.1               | 39.8                      | 96.4          | 203.9                 | 10.2             |
| 2021/22 | 146.2                | 2311.1              | 494.1                     | 6.3                        | 21.4           | 2082.3               | 42.6                      | 90.1          | 390.5                 | 16.9             |
| 2022/23 | 59.9                 | 2574                | 565.8                     | 2.3                        | 22.0           | 2142.2               | 41.1                      | 83.2          | 547.0                 | 21.3             |
| 2023/24 | 34.1                 | 2742.9              | 597.4                     | 1.2                        | 21.8           | 2176.3               | 42.9                      | 79.3          | 606.3                 | 22.1             |
| 2024/25 | 26.6                 | 2867.2              | 641.6                     | 0.9                        | 22.4           | 2202.9               | 44.1                      | 76.8          | 659.0                 | 23.0             |
| 2025/26 | 59.4                 | 3047.8              | 695.9                     | 2.0                        | 22.8           | 2262.3               | 45.2                      | 74.2          | 681.6                 | 22.4             |
| 2026/27 | 2.4                  | 3239.8              | 749.7                     | 0.1                        | 23.1           | 2264.8               | 46.3                      | 69.9          | 793.6                 | 24.5             |
| 2027/28 | -63.2                | 3444.0              | 811.6                     | -1.8                       | 23.6           | 2201.6               | 47.4                      | 63.9          | 922.2                 | 26.8             |
| 2028/29 | -143.0               | 3660.9              | 878.5                     | -3.9                       | 24.0           | 2058.5               | 48.3                      | 56.2          | 1069.8                | 29.2             |
| 2029/30 | -239.2               | 3891.6              | 951.2                     | -6.1                       | 24.4           | 1819.4               | 49.0                      | 46.8          | 1239.3                | 31.8             |
| 2030/31 | -354.7               | 4136.7              | 1029.9                    | -8.6                       | 24.9           | 1464.7               | 49.3                      | 35.4          | 1433.9                | 34.7             |
| 2031/32 | -493.1               | 4397.3              | 1115.1                    | -11.2                      | 25.4           | 971.6                | 49.0                      | 22.1          | 1657.2                | 37.7             |
| 2032/33 | -658.2               | 4674.4              | 1207.5                    | -14.1                      | 25.8           | 313.3                | 48.0                      | 6.7           | 1913.7                | 40.9             |
| 2033/34 | -854.6               | 4968.9              | 1307.4                    | -17.2                      | 26.3           | -541.2               | 46.1                      | -10.9         | 2208.1                | 44.4             |
| 2034/35 | -1087.5              | 5281.9              | 1415.6                    | -20.6                      | 26.8           | -1628.7              | 43.0                      | -30.8         | 2546.1                | 48.2             |

### Want has Brexit done to trade and GDP?

There has been a flurry of efforts to determine the effects of Brexit so far on the economy. They are usefully exemplified by the Centre for European Reform's paper by John Springford 'What can we know about Brexit so far?' In this work other countries are averaged together to provide a similar behaviour to the UK in a previous period. This group is a 'doppelganger'. Then the difference of the UK in the Brexit period is taken to be the 'effect of Brexit'. According to this method different doppelganger groups are found for different variables and the Brexit effect then varies between a 5.2% fall in GDP, a 13.7% fall in investment and a 13.6% fall in trade.

However this approach suffers from a severe statistical problem that it does not allow for the volatility of the shocks, both before and after Brexit, hitting both the doppelgangers and the UK. We need to know if the difference during the Brexit period is statistically significant. This depends on the variability of the shocks hitting these countries in both periods. Furthermore it depends on the effects of identifiable other shocks, such as Covid, occurring in both periods. So suppose we denote the other group as G, there will be some relationship as follows for say GDP:

$$GDP_t^{UK} = a + bGDP_t^G + cCOVID + dBREXIT + u_t$$

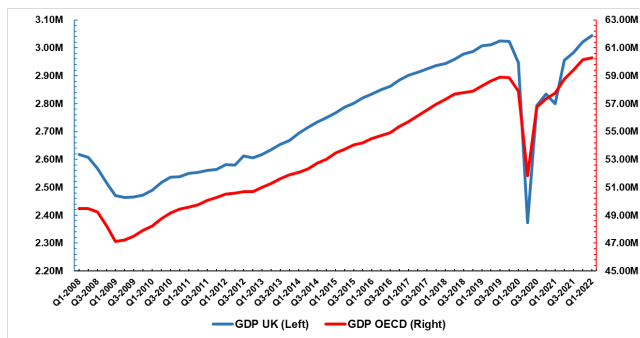
This specifies the assumed relationship with the effects of Covid and Brexit and the general shock  $u(t)$ . For Brexit to

have a significant effect  $d$  must be significant- this allows for the variance of the shocks and the effects of the identifiable Covid shock.

Another problem with this doppelganger method is that it allows the researcher to 'data-mine' doppelganger groups with a view to backing a preconceived view. The UK is 'like' many other rich countries in various ways. It is all too easy to select a group of these that did unusually well in the Brexit period and so backs the Remainer viewpoint that damage was caused. Call this data-mining 'selection bias'.

One way to get around this bias in selecting the comparator group is to use the average of all OECD countries. This averaging reduces the impact of all country-specific shocks. This OECD average also represents the average world business cycle which is the major exogenous variable impacting on the UK as a very open economy. The coefficient on it also usefully measures whether the UK is 'doing as well' as the average cet.par.; this can be taken as a comment on general UK policy adequacy.

We carry out this regression from 2008 to today below. What we see is that the coefficient on the log of OECD GDP is 1.03, implying that cet par the UK grew slightly faster than the OECD, but not significantly so. Covid is significant, as expected with the UK's hard lockdowns. Brexit is not, either at the referendum or the departure stage.



**Table 2** Variable description

| Dependent Variable      | Definition  | Source |
|-------------------------|---|--------|
| GDP UK                  | UK GDP, volume estimates, USD Million, fixed PPPs   | OECD   |
| Independent Variable    |   |        |
| GDP OECD                | OECD GDP, volume estimates, USD Million, fixed PPPs | OECD   |
| Brexit referendum dummy | 1 from Q2 2016, 0 otherwise                         | -      |
| Brexit departure dummy  | 1 from Q1 2020, 0 otherwise                         | -      |
| COVID dummy             | 1 from Q2 2020 to Q4 2020, 0 otherwise              | -      |
| COVID recovery dummy    | 1 from Q1 2021, 0 otherwise                         | -      |

$$\ln(\text{GDP UK}) = C + \beta_1 \ln(\text{GDP OECD}) + \beta_2 \text{Brexit referendum dummy} + \beta_3 \text{Brexit departure dummy} + \beta_4 \text{Covid dummy} + \beta_5 \text{Covid recovery dummy}$$

**Table 3** OLS estimate results, 2008Q1 to 2022Q1,

|                         | GDP UK           |
|-------------------------|------------------|
| OECD GDP                | 1.03*<br>(0.05)  |
| Brexit referendum dummy | -0.01<br>(0.01)  |
| Brexit departure dummy  | -0.02<br>(0.01)  |
| COVID dummy             | -0.05*<br>(0.01) |
| COVID recovery dummy    | 0.02<br>(0.01)   |
| Constant                | -3.57*<br>(0.81) |

Note: \*significant at the 5% level

$$\ln(\text{Export EU}) = C + \beta_1 \ln(\text{RXR}) + \beta_2 \ln(\text{EU GDP}) + \beta_3 \text{COVID} + \beta_4 \text{Brexit}$$

$$\ln(\text{Export nonEU}) = C + \beta_1 \ln(\text{RXR}) + \beta_2 \ln(\text{World import}) + \beta_3 \text{COVID} + \beta_4 \text{Brexit}$$

$$\ln(\text{Import EU}) = C + \beta_1 \ln(\text{UK GDP}) + \beta_2 \ln(\text{RXR}) + \beta_3 \text{COVID} + \beta_4 \text{Brexit}$$

$$\ln(\text{Import nonEU}) = C + \beta_1 \ln(\text{UK GDP}) + \beta_2 \ln(\text{RXR}) + \beta_3 \text{COVID} + \beta_4 \text{Brexit}$$



One can do a similar analysis for trade, with the EU and the non-EU. Here the regression relates imports to demand in the importing country/bloc, to the real exchange rate, Covid and Brexit. Here we find that Brexit has a significant effect only on UK imports from the EU, but not at all otherwise.

This result is the same on data in trade value or volume. This Brexit-related fall in EU imports could either be met by a rise in non-EU imports or home production (GDP); as the rise in non-EU imports is not significant, these regressions do not help us estimate this.

**Table 4** Variable description

| Dependent Variable     | Definition   | Source   |
|------------------------|--|----------|
| Export EU              | Exports trade goods & services EU, current price, SA                   | ONS      |
| Export non-EU          | Exports trade goods & services Non. EU, current price, S               | ONS      |
| Import EU              | Imports trade goods & services EU SA                                   | ONS      |
| Import non-EU          | Imports trade goods & services Non. EU SA                              | ONS      |
| Independent Variable   |  |          |
| RXR                    | Effective Exchange rate index  | BoE      |
| UK GDP                 | GDP, CP/CVM, SA  | ONS      |
| EU GDP                 | Millions of Chained 2010 Euros/Market price, Seasonally Adjusted       | Eurostat |
| World import           | Import trade in goods & services, Current price/ constant price & PPPs | OECD     |
| Brexit departure dummy | 1 from Q1 2020, 0 otherwise  | -        |
| COVID dummy            | 1 from Q2 2020 to Q4 2020, 0 otherwise                                 | -        |
| COVID recovery dummy   | 1 from Q1 2021, 0 otherwise  | -        |

$$\ln(\text{Export EU}) = C + \beta_1 \ln(\text{EU GDP}) + \beta_2 \ln(\text{RXR}) + \beta_3 \text{Brexit departure dummy} + \beta_5 \text{Covid dummy} + \beta_6 \text{Covid recovery dummy}$$

$$\ln(\text{Export nonEU}) = C + \beta_1 \ln(\text{World import}) + \beta_2 \ln(\text{RXR}) + \beta_3 \text{Brexit departure dummy} + \beta_5 \text{Covid dummy} + \beta_6 \text{Covid recovery dummy}$$

$$\ln(\text{Import EU}) = C + \beta_1 \ln(\text{UK GDP}) + \beta_2 \ln(\text{RXR}) + \beta_3 \text{Brexit departure dummy} + \beta_5 \text{Covid dummy} + \beta_6 \text{Covid recovery dummy}$$

$$\ln(\text{Import nonEU}) = C + \beta_1 \ln(\text{UK GDP}) + \beta_2 \ln(\text{RXR}) + \beta_3 \text{Brexit departure dummy} + \beta_5 \text{Covid dummy} + \beta_6 \text{Covid recovery dummy}$$

**Table 5** Volume, OLS estimate results, 2005Q1 to 2021Q3,

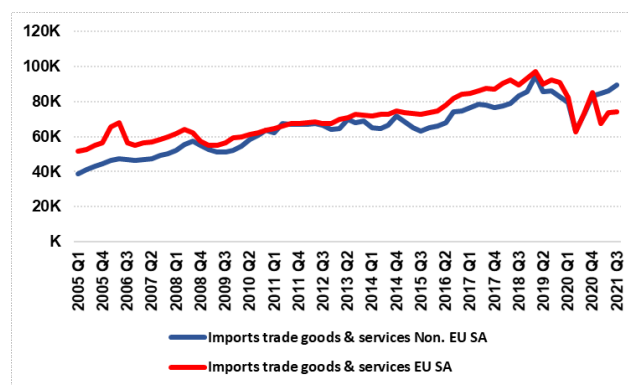
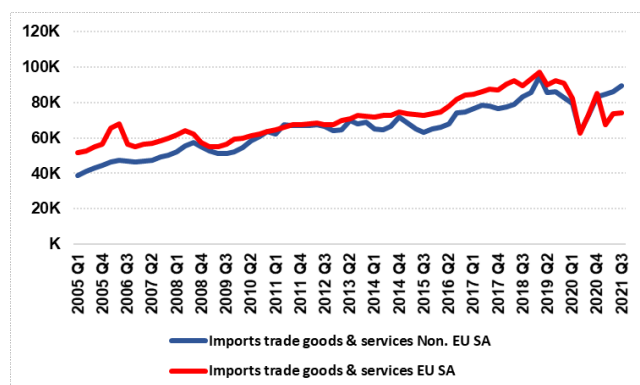
|                  | Export EU         | Export non-EU      | Import EU          | Import non-EU      |
|------------------|-------------------|--------------------|--------------------|--------------------|
| EU GDP           | 1.018*<br>(0.096) |                    |                    |                    |
| Word import      |                   | 0.707*<br>(0.085)  |                    |                    |
| UK GDP           |                   |                    | 1.166*<br>(0.122)  | 1.236*<br>(0.134)  |
| RXR              | -0.100<br>(0.096) | -0.733*<br>(0.125) | 0.018<br>(0.069)   | -0.696*<br>(0.077) |
| Brexit departure | -0.058<br>(0.065) | +0.064<br>(0.082)  | -0.046*<br>(0.018) | +0.031<br>(0.020)  |
| COVID            | -0.109<br>(0.075) | -0.104<br>(0.094)  | -0.068<br>(0.037)  | -0.134*<br>(0.041) |
| COVID recovery   | -0.123<br>(0.074) | -0.166*<br>(0.094) | -0.187*<br>(0.041) | -0.027<br>(0.046)  |

Note: \*significant at the 5% level; Constant is included in the regression

**Table 6** Current price measure, OLS estimate results, 2005Q1 to 2021Q3,

|                  | Export EU          | Export non-EU      | Import EU          | Import non-EU      |
|------------------|--------------------|--------------------|--------------------|--------------------|
| EU GDP           | 1.104*<br>(0.065)  |                    |                    |                    |
| World import     |                    | 1.010*<br>(0.037)  |                    |                    |
| UK GDP           |                    |                    | 1.034*<br>(0.064)  | 1.114*<br>(0.070)  |
| RXR              | -0.243*<br>(0.108) | -0.590*<br>(0.077) | 0.019<br>(0.080)   | -0.654*<br>(0.087) |
| Brexit departure | -0.026<br>(0.065)  | +0.005<br>(0.047)  | -0.057*<br>(0.018) | +0.026<br>(0.019)  |
| COVID            | -0.075<br>(0.073)  | 0.001<br>(0.053)   | -0.063<br>(0.041)  | -0.145*<br>(0.044) |
| COVID recovery   | -0.112<br>(0.073)  | -0.112*<br>(0.053) | -0.162*<br>(0.043) | -0.021<br>(0.047)  |

Note: \*significant at the 5% level; Constant is included in the regression



## Conclusions

The short term outlook is for slowing growth with inflation coming down again toward the target region of around 2%. However, longer term growth prospects are cloudy because of the self-inflicted injuries of rising corporate and personal tax rates- insisted upon by a Treasury and Chancellor out of touch with the modern world. It is essential that these tax rises are withdrawn to maintain the UK's growth prospects. If not, our forecasts show that with growth falling the public finances too will become threatening.

# THE UK ECONOMY

Vo Phuong Mai Le

The economic recovery slowed as inflation continued to rise. Real output rose 0.8% in Q1 compared to a 1.3% rise in Q4 2021. The loss of growth momentum was driven by a slowdown in services (0.6% down from 1.5% in Q4), which was partially compensated by expansion in construction (2.2% up from 1.0% in Q4) and production (1.3% up from -0.2% in Q4). On the expenditure side, the growth figure is driven by a strong domestic demand — consumption (2.3%, up from 1.9% in Q4), government spending (2.5% up from 1.9% in Q4) and investment (5.3% from 1.7% in Q4). The negative contribution came from the net trade, as exports collapsed (-1.7%, down from 11.1% in Q4) and imports surged (13.9%, up from 3.9% in Q4).

## Labour market, costs and prices

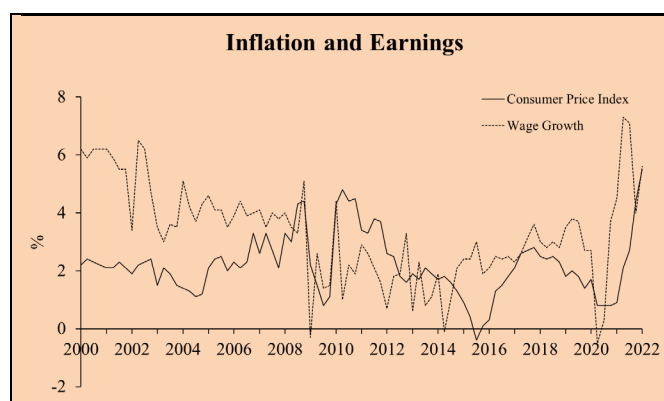
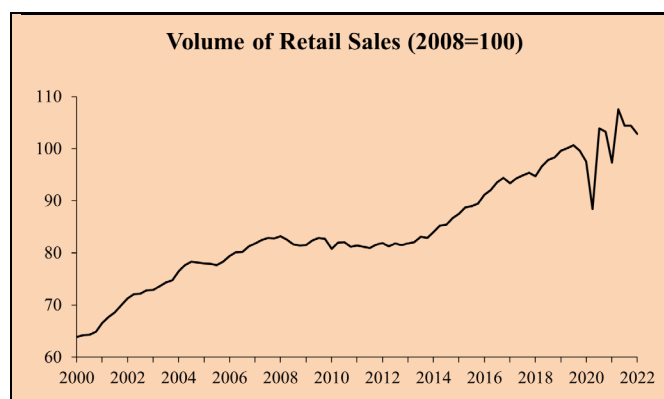
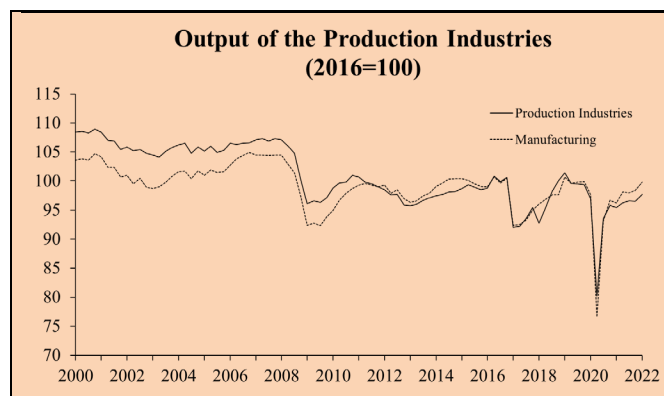
The labour market remained tight. According to the Labour Force Survey for February–April the employment rate was 75.6%, up from 75.4% for November–January period. At the same time, the unemployment rate was 3.8%, down from 4.0% for November–January. There are signs that the market has stabilised. Although the number of job vacancies rose by almost 1.3 million in the period of March–May the growth rate of vacancies has slowed down (2.8% compared to 5.8% in November–January). Average weekly earnings including bonuses also slowed down, rising 6.8% down from 7% in the previous three months.

Annual CPI inflation has surged sharply in recently months. It rose to a 40-year high of 9.1% in May 2022, following 9.0% in April. High inflation is driven by high prices in transport (13.8%, after 13.5% in April), housing and utility (19.4%, after 19.2% in April), furniture, household equipment and maintenance (10.8%, following 10.5% in April), and restaurants and hotels (7.6%, after 7.9% in April). Core inflation also has been consistently high. It was 5.9% in May, following 6.2% in April. Energy, material, and food prices are expected to rise further due to the ongoing Russian-Ukrainian conflict and they will continue putting upward pressures on inflation.

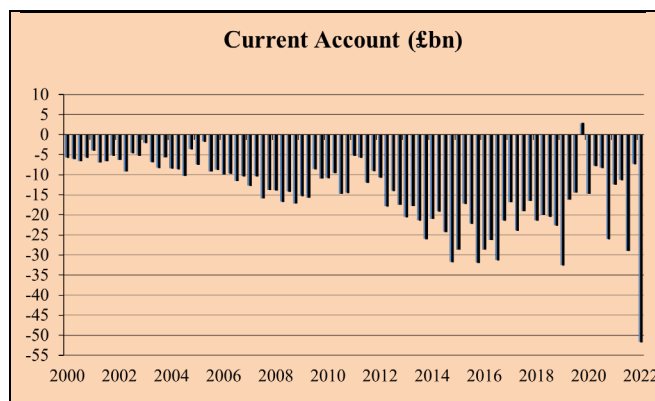
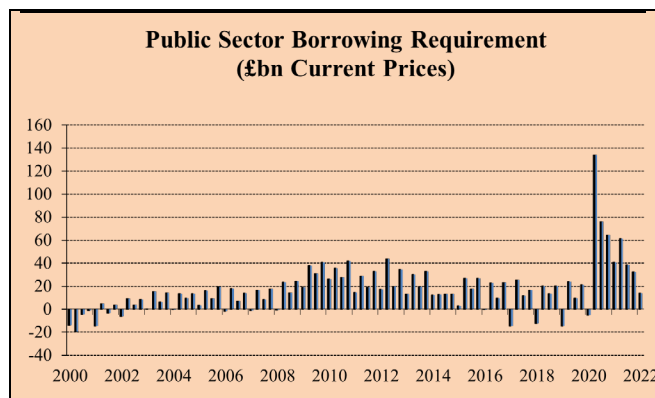
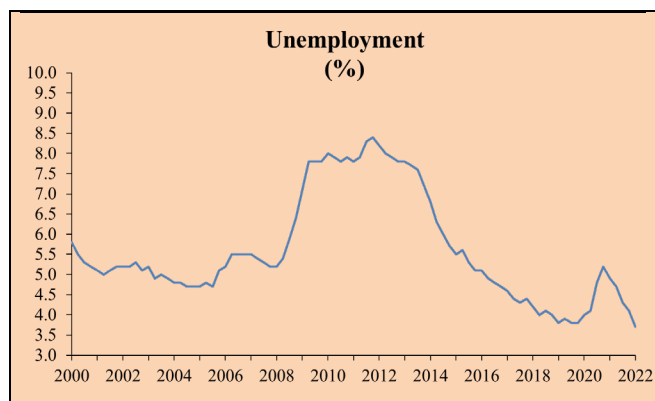
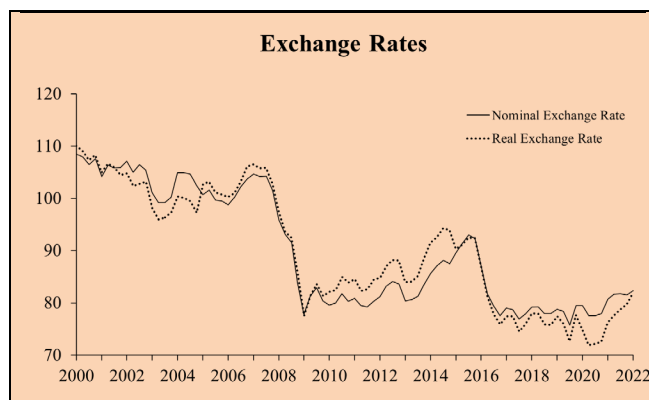
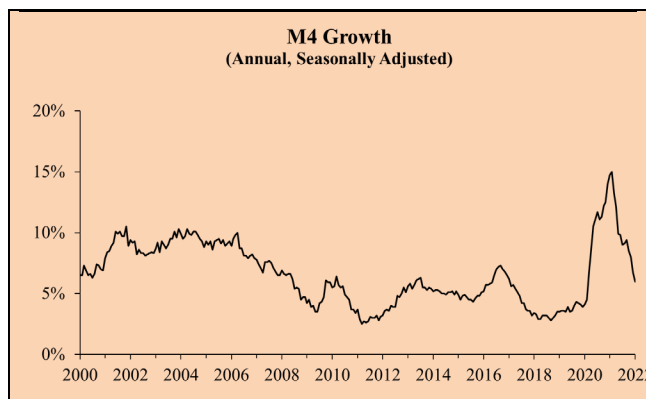
## Fiscal and Monetary Developments

In Q2 economic activity is expected to expand, but the rate of growth should be more moderate as economic activity has continuously slowed across construction (CIPS Construction PMI of 52.6 in June, down from 56.4 in May) and manufacturing (CIPS Manufacturing PMI of 52.8, after 54.6 in May) sectors. Although the services sector expanded more rapidly in June (its Markit CPI of 54.3 in June, up from 53.4 in May), the average Markit CPI reading in Q2 of 55.6 was well below the 59.1 mark of Q1.

Given the inflation and economic outlook, at the June meeting the Bank of England tightened its monetary policy



for the fifth time. It raised the bank rate from 1% to 1.25% to pull back inflation.



## UK FORECAST DETAIL

### Prices, Wages, Interest Rates and Exchange Rate Forecast (Seasonally Adjusted)

|        | Inflation % <sup>1</sup><br>(CPI) | Short Dated<br>(5 Year)<br>Interest Rates | 3 Month<br>Int. Rates | Nominal<br>Exchange<br>Rate (2005=100) <sup>2</sup> | Real Exchange<br>Rate <sup>3</sup> | Real 3 Month<br>Int. Rates % <sup>4</sup> | Inflation<br>(RPIX) | Real Short<br>Dated Rate of<br>Interest <sup>5</sup> |
|--------|-----------------------------------|---|-----------------------|---|------------------------------------|---|---------------------|--|
| 2019   | 1.7                               | 0.6                                       | 0.8                   | 78.3  | 73.8                               | -0.7                                      | 2.6                 | -0.5   |
| 2020   | 1.0                               | 0.1                                       | 0.2                   | 78.2  | 72.9                               | -1.3                                      | 1.5                 | -1.4   |
| 2021   | 2.5                               | 0.4                                       | 0.1                   | 81.5  | 78.2                               | -5.6                                      | 3.0                 | -5.3   |
| 2022   | 7.7                               | 2.3                                       | 1.5                   | 80.4  | 82.6                               | -0.8                                      | 12.5                | 2.3  |
| 2023   | 4.9                               | 3.5                                       | 2.4                   | 78.5  | 83.3                               | 0.4                                       | 8.1                 | 3.5  |
| 2024   | 3.2                               | 3.0                                       | 2.9                   | 78.1  | 84.2                               | 0.9                                       | 4.9                 | 3.0  |
| 2019:1 | 1.8                               | 0.9                                       | 0.9                   | 79.0  | 75.4                               | -0.8                                      | 2.5                 | -0.8   |
| 2019:2 | 2.0                               | 0.7                                       | 0.8                   | 78.6  | 74.0                               | -0.7                                      | 3.0                 | -0.6   |
| 2019:3 | 1.8                               | 0.4                                       | 0.8                   | 76.0  | 70.7                               | -0.8                                      | 2.6                 | -0.4   |
| 2019:4 | 1.4                               | 0.5                                       | 0.8                   | 79.6  | 75.0                               | -0.5                                      | 2.2                 | -0.2   |
| 2020:1 | 1.7                               | 0.4                                       | 0.6                   | 79.5  | 74.9                               | -0.2                                      | 2.6                 | -0.4   |
| 2020:2 | 0.8                               | 0.0                                       | 0.1                   | 77.6  | 71.9                               | -1.0                                      | 1.2                 | -1.1   |
| 2020:3 | 0.8                               | -0.1                                      | 0.1                   | 77.6  | 72.2                               | -1.5                                      | 1.1                 | -1.7   |
| 2020:4 | 0.8                               | 0.0                                       | 0.1                   | 78.0  | 72.6                               | -2.5                                      | 1.1                 | -2.5   |
| 2021:1 | 0.9                               | 0.6                                       | 0.1                   | 80.7  | 76.2                               | -3.6                                      | 0.7                 | -3.1   |
| 2021:2 | 2.1                               | 0.9                                       | 0.1                   | 81.7  | 77.6                               | -5.0                                      | 2.4                 | -4.2   |
| 2021:3 | 2.7                               | 0.7                                       | 0.1                   | 81.8  | 78.7                               | -6.5                                      | 3.0                 | -5.9   |
| 2021:4 | 4.4                               | 0.9                                       | 0.2                   | 81.5  | 79.7                               | -7.5                                      | 5.7                 | -6.8   |
| 2022:1 | 5.5                               | 1.4                                       | 0.7                   | 82.3  | 81.9                               | -7.2                                      | 6.8                 | -6.5   |
| 2022:2 | 7.8                               | 2.1                                       | 1.3                   | 81.2  | 83.0                               | -6.0                                      | 13.4                | -5.2   |
| 2022:3 | 8.8                               | 2.8                                       | 1.8                   | 79.4  | 82.8                               | -4.3                                      | 15.2                | -3.3   |
| 2022:4 | 8.6                               | 3.0                                       | 2.0                   | 78.6  | 82.6                               | -2.9                                      | 14.7                | -1.9   |
| 2023:1 | 6.5                               | 3.0                                       | 2.0                   | 79.2  | 82.6                               | -2.2                                      | 11.0                | -1.2   |
| 2023:2 | 5.4                               | 3.5                                       | 2.2                   | 78.8  | 83.4                               | -1.4                                      | 9.0                 | -0.1   |
| 2023:3 | 4.0                               | 3.5                                       | 2.5                   | 78.4  | 83.7                               | -0.9                                      | 6.4                 | 0.1  |
| 2023:4 | 3.8                               | 4.0                                       | 3.0                   | 77.7  | 83.5                               | -0.2                                      | 6.0                 | 0.8  |
| 2024:1 | 3.5                               | 3.0                                       | 2.5                   | 78.5  | 83.5                               | -0.3                                      | 5.5                 | 0.2  |
| 2024:2 | 3.2                               | 3.0                                       | 3.0                   | 78.2  | 84.3                               | 0.5                                       | 5.0                 | 0.5  |
| 2024:3 | 3.0                               | 3.0                                       | 3.0                   | 78.2  | 84.5                               | 0.8                                       | 4.6                 | 0.8  |
| 2024:4 | 3.0                               | 3.0                                       | 3.0                   | 77.4  | 84.3                               | 1.0                                       | 4.6                 | 1.0  |

<sup>1</sup> Consumer's Expenditure Deflator

<sup>2</sup> Sterling Effective Exchange Rate Bank of England

<sup>3</sup> Ratio of UK to other OECD consumer prices adjusted for nominal exchange rate

<sup>4</sup> Treasury Bill Rate less one year forecast of inflation

<sup>5</sup> Short Dated 5 Year Interest Rate less average of predicted 5 year ahead inflation rate

# Labour Market and Supply Factors (Seasonally Adjusted)

|        | Average<br>Earnings<br>(1990=100) <sup>1</sup> | Wage<br>Growth <sup>2</sup> | Survey<br>Unemployment<br>Percent | Millions | Real Wage<br>Rate <sup>3</sup><br>(1990=100) |
|--------|--|-----------------------------|-----------------------------------|----------|--|
| 2019   | 275.7  | 3.5                         | 3.8                               | 1.0      | 148.8  |
| 2020   | 279.1  | 1.6                         | 4.5                               | 1.3      | 149.7  |
| 2021   | 295.0  | 5.8                         | 4.5                               | 1.3      | 154.5  |
| 2022   | 316.5  | 7.3                         | 3.9                               | 1.1      | 153.9  |
| 2023   | 332.5  | 5.0                         | 3.6                               | 1.0      | 154.0  |
| 2024   | 346.1  | 4.1                         | 2.8                               | 0.7      | 155.4  |
| 2019:1 | 273.4  | 3.4                         | 3.8                               | 1.0      | 148.1  |
| 2019:2 | 273.5  | 4.0                         | 3.9                               | 1.0      | 147.9  |
| 2019:3 | 278.1  | 3.7                         | 3.8                               | 1.0      | 149.7  |
| 2019:4 | 277.9  | 2.7                         | 3.8                               | 1.0      | 149.6  |
| 2020:1 | 279.7  | 2.7                         | 4.0                               | 1.1      | 150.0  |
| 2020:2 | 270.1  | -0.2                        | 4.1                               | 1.2      | 145.9  |
| 2020:3 | 278.6  | 0.2                         | 4.8                               | 1.4      | 149.0  |
| 2020:4 | 288.2  | 3.7                         | 5.2                               | 1.6      | 154.1  |
| 2021:1 | 292.1  | 4.4                         | 4.9                               | 1.5      | 155.3  |
| 2021:2 | 289.6  | 7.2                         | 4.7                               | 1.4      | 153.4  |
| 2021:3 | 298.3  | 7.1                         | 4.3                               | 1.3      | 155.5  |
| 2021:4 | 299.8  | 4.0                         | 4.1                               | 1.2      | 153.6  |
| 2022:1 | 308.5  | 5.6                         | 3.7                               | 1.0      | 155.5  |
| 2022:2 | 311.1  | 7.4                         | 3.8                               | 1.1      | 152.7  |
| 2022:3 | 322.7  | 8.2                         | 3.9                               | 1.1      | 154.5  |
| 2022:4 | 323.8  | 8.0                         | 4.2                               | 1.2      | 152.8  |
| 2023:1 | 326.6  | 5.9                         | 4.2                               | 1.2      | 154.5  |
| 2023:2 | 328.3  | 5.5                         | 3.6                               | 1.0      | 152.9  |
| 2023:3 | 337.6  | 4.6                         | 3.4                               | 0.9      | 155.4  |
| 2023:4 | 337.4  | 4.2                         | 3.2                               | 0.9      | 153.3  |
| 2024:1 | 340.0  | 4.1                         | 2.9                               | 0.8      | 155.4  |
| 2024:2 | 341.3  | 4.0                         | 2.8                               | 0.7      | 154.0  |
| 2024:3 | 351.9  | 4.2                         | 2.8                               | 0.7      | 157.3  |
| 2024:4 | 351.3  | 4.1                         | 2.8                               | 0.7      | 155.0  |

<sup>1</sup> Whole Economy

<sup>2</sup> Average Earnings

<sup>3</sup> Wage rate deflated by CPI



# Estimates and Projections of the Gross Domestic Product<sup>1</sup> (£ Million 1990 Prices)

|         | Expenditure Index | £ Million '90 prices | Non-Durable Consumption <sup>2</sup> | Private Sector Gross Investment Expenditure <sup>3</sup> | Public Authority Expenditure <sup>4</sup> | Net Exports <sup>5</sup> | AFC      |
|---------|-------------------|----------------------|--------------------------------------|--|---|--------------------------|----------|
| 2019    | 167.8             | 803514.3             | 475369.3                             | 308458.5   | 209136.4                                  | -70959.7                 | 118490.2 |
| 2020    | 152.0             | 728097.3             | 427575.8                             | 258732.0   | 199232.3                                  | -33095.4                 | 124347.4 |
| 2021    | 163.5             | 783000.8             | 452313.8                             | 292986.2   | 208533.4                                  | -36884.7                 | 133947.9 |
| 2022    | 170.6             | 816960.4             | 480580.5                             | 278551.9   | 218569.2                                  | -23811.9                 | 136929.3 |
| 2023    | 173.9             | 832660.8             | 494514.0                             | 270715.0   | 225319.5                                  | -18609.1                 | 139278.6 |
| 2024    | 177.2             | 848691.0             | 509517.0                             | 264731.3   | 232155.5                                  | -15893.6                 | 141819.2 |
| 2019/18 | 1.4               |                      | 0.3                                  | 3.1  | 3.0                                       |                          | -0.1     |
| 2020/19 | -9.4              |                      | -10.1                                | -16.2  | -4.8                                      |                          | 4.9      |
| 2021/20 | 7.5               |                      | 6.8                                  | 16.0   | 5.2                                       |                          | 7.7      |
| 2022/21 | 4.4               |                      | 6.4                                  | -4.3   | 4.8                                       |                          | 2.0      |
| 2023/22 | 1.9               |                      | 2.9                                  | -2.9   | 3.1                                       |                          | 0.9      |
| 2024/23 | 1.9               |                      | 3.0                                  | -2.2   | 3.0                                       |                          | 1.1      |
| 2019:1  | 167.5             | 200481.1             | 119045.5                             | 83717.3  | 53429.6                                   | -27900.7                 | 27810.6  |
| 2019:2  | 167.1             | 200009.6             | 118526.3                             | 74816.9  | 51617.9                                   | -19203.6                 | 25747.9  |
| 2019:3  | 168.3             | 201443.7             | 118808.6                             | 71008.4  | 51891.0                                   | -12473.8                 | 27790.5  |
| 2019:4  | 168.4             | 201579.9             | 118988.8                             | 78916.0  | 52197.9                                   | -11381.7                 | 37141.1  |
| 2020:1  | 163.4             | 195632.5             | 118032.8                             | 72147.1  | 51656.8                                   | -11632.2                 | 34572.0  |
| 2020:2  | 131.6             | 157502.4             | 91565.8                              | 47009.3  | 43743.5                                   | 429.6                    | 25245.8  |
| 2020:3  | 155.3             | 185971.2             | 109964.7                             | 64749.1  | 50846.1                                   | -8204.0                  | 31384.7  |
| 2020:4  | 157.9             | 188991.2             | 108012.5                             | 74826.5  | 52985.9                                   | -13688.8                 | 33144.9  |
| 2021:1  | 155.9             | 186597.5             | 106673.9                             | 68534.3  | 51081.5                                   | -7820.5                  | 31871.7  |
| 2021:2  | 163.9             | 196206.0             | 112092.7                             | 66778.3  | 51382.3                                   | -668.1                   | 33379.2  |
| 2021:3  | 166.4             | 199160.9             | 116084.7                             | 78815.1  | 52892.3                                   | -14394.2                 | 34237.0  |
| 2021:4  | 167.9             | 201036.4             | 117462.5                             | 78858.5  | 53177.3                                   | -14001.9                 | 34460.0  |
| 2022:1  | 169.3             | 202740.2             | 119289.4                             | 72588.4  | 53945.3                                   | -9205.8                  | 33877.1  |
| 2022:2  | 170.2             | 203768.4             | 119522.5                             | 66816.2  | 54464.8                                   | -2836.6                  | 34198.5  |
| 2022:3  | 171.0             | 204726.9             | 120432.5                             | 70118.7  | 54873.7                                   | -6096.3                  | 34601.7  |
| 2022:4  | 171.8             | 205724.9             | 121336.2                             | 69028.7  | 55285.4                                   | -5673.1                  | 34252.3  |
| 2023:1  | 172.6             | 206673.0             | 122246.4                             | 74497.3  | 55700.1                                   | -11224.9                 | 34545.9  |
| 2023:2  | 173.5             | 207727.6             | 123162.9                             | 65873.0  | 56117.7                                   | -2729.5                  | 34696.5  |
| 2023:3  | 174.3             | 208640.7             | 124087.0                             | 65240.7  | 56538.8                                   | -2249.0                  | 34976.8  |
| 2023:4  | 175.1             | 209619.4             | 125017.7                             | 65104.0  | 56962.9                                   | -2405.7                  | 35059.5  |
| 2024:1  | 175.9             | 210539.7             | 125955.3                             | 71982.2  | 57390.1                                   | -9647.9                  | 35140.0  |
| 2024:2  | 176.8             | 211629.0             | 126899.6                             | 64692.7  | 57820.3                                   | -2456.3                  | 35327.3  |
| 2024:3  | 177.7             | 212714.3             | 127851.6                             | 64001.8  | 58254.1                                   | -1824.2                  | 35569.0  |
| 2024:4  | 178.6             | 213807.9             | 128810.5                             | 64054.6  | 58691.0                                   | -1965.2                  | 35783.0  |

<sup>1</sup> GDP at factor cost. Expenditure measure; seasonally adjusted

<sup>2</sup> Consumers expenditure less expenditure on durables and housing

<sup>3</sup> Private gross domestic capital formation plus household expenditure on durables and clothing plus private sector stock building

<sup>4</sup> General government current and capital expenditure including stock building

<sup>5</sup> Exports of goods and services less imports of goods and services

## Financial Forecast

|        | PSBR/GDP % <sup>1</sup> | GDP1<br>(£bn) | PSBR<br>(£bn)<br>Financial Year | Current<br>Account<br>(£ bn) |
|--------|-------------------------|---------------|---------------------------------|------------------------------|
| 2019   | 2.2                     | 2196.3        | 49.1                            | -89.1                        |
| 2020   | 15.8                    | 2007.9        | 315.1                           | -53.8                        |
| 2021   | 6.3                     | 2311.1        | 146.2                           | -60.0                        |
| 2022   | 2.2                     | 2574.0        | 59.9                            | -71.9                        |
| 2023   | 1.2                     | 2742.9        | 34.1                            | -21.4                        |
| 2024   | 0.9                     | 2867.2        | 26.6                            | -13.8                        |
|        |                         |               |                                 |                              |
| 2020:1 | -0.9                    | 549.4         | -5.0                            | -12.6                        |
| 2020:2 | 30.6                    | 437.6         | 133.8                           | -6.6                         |
| 2020:3 | 14.6                    | 519.2         | 76.0                            | -7.9                         |
| 2020:4 | 12.2                    | 525.7         | 64.3                            | -26.8                        |
|        |                         |               |                                 |                              |
| 2021:1 | 7.8                     | 525.3         | 40.9                            | -12.4                        |
| 2021:2 | 11.1                    | 555.3         | 61.4                            | -11.3                        |
| 2021:3 | 6.8                     | 568.5         | 38.6                            | -28.9                        |
| 2021:4 | 5.5                     | 584.2         | 32.3                            | -7.3                         |
|        |                         |               |                                 |                              |
| 2022:1 | 2.3                     | 602.6         | 14.1                            | -51.7                        |
| 2022:2 | 2.3                     | 623.2         | 14.4                            | -18.3                        |
| 2022:3 | 2.4                     | 641.6         | 15.2                            | -6.1                         |
| 2022:4 | 2.3                     | 654.1         | 15.1                            | 4.1                          |
|        |                         |               |                                 |                              |
| 2023:1 | 2.3                     | 655.1         | 15.2                            | -18.6                        |
| 2023:2 | 1.5                     | 670.5         | 9.9                             | -18.8                        |
| 2023:3 | 1.2                     | 680.7         | 8.1                             | 3.3                          |
| 2023:4 | 1.2                     | 692.1         | 8.3                             | 12.6                         |
|        |                         |               |                                 |                              |
| 2024:1 | 1.1                     | 699.6         | 7.7                             | -15.0                        |
| 2024:2 | 1.1                     | 705.7         | 8.0                             | -18.3                        |
| 2024:3 | 1.2                     | 714.6         | 8.7                             | 5.1                          |
| 2024:4 | 0.8                     | 727.3         | 6.0                             | 14.4                         |

<sup>1</sup>GDP at market prices (Financial Year)

## Public Finance Forecast

|         | Nom<br>PSBR<br>(£bn) | Nom<br>GDP<br>(£bn) | Nom Pub<br>Spend<br>(£bn) | PSBR/GDP<br>% <sup>1</sup> | Spend/GDP<br>% | Nom<br>Debt<br>(£bn) | Debt<br>Interest<br>(£bn) | Debt/GDP<br>% | Net<br>Taxes<br>(£bn) | Net Tax<br>Rate% |
|---------|----------------------|---------------------|---------------------------|----------------------------|----------------|----------------------|---------------------------|---------------|-----------------------|------------------|
| 2019/20 | 49.1                 | 2196.3              | 472.2                     | 2.2                        | 21.5           | 1621.0               | 48.1                      | 73.8          | 471.2                 | 21.5             |
| 2020/21 | 315.1                | 2007.9              | 479.2                     | 15.7                       | 23.9           | 1936.1               | 39.8                      | 96.4          | 203.9                 | 10.2             |
| 2021/22 | 146.2                | 2311.1              | 494.1                     | 6.3                        | 21.4           | 2082.3               | 42.6                      | 90.1          | 390.5                 | 16.9             |
| 2022/23 | 59.9                 | 2574                | 565.8                     | 2.3                        | 22.0           | 2142.2               | 41.1                      | 83.2          | 547.0                 | 21.3             |
| 2023/24 | 34.1                 | 2742.9              | 597.4                     | 1.2                        | 21.8           | 2176.3               | 42.9                      | 79.3          | 606.3                 | 22.1             |
| 2024/25 | 26.6                 | 2867.2              | 641.6                     | 0.9                        | 22.4           | 2202.9               | 44.1                      | 76.8          | 659.0                 | 23.0             |
| 2025/26 | 3.8                  | 2981.9              | 670.9                     | 0.1                        | 22.5           | 2206.7               | 45.2                      | 74.0          | 712.2                 | 23.9             |
| 2026/27 | 0.2                  | 3101.2              | 724.7                     | 0.0                        | 23.4           | 2206.9               | 46.2                      | 71.2          | 770.7                 | 24.9             |
| 2027/28 | 0.2                  | 3225.2              | 786.6                     | 0.0                        | 24.4           | 2207.1               | 47.2                      | 68.4          | 833.6                 | 25.9             |
| 2028/29 | 0.0                  | 3354.2              | 853.5                     | 0.0                        | 25.4           | 2207.1               | 48.2                      | 65.8          | 901.6                 | 26.9             |
| 2029/30 | 0.0                  | 3488.4              | 926.2                     | 0.0                        | 26.5           | 2207.1               | 49.1                      | 63.3          | 975.2                 | 28.0             |
| 2030/31 | 0.0                  | 3627.9              | 1004.9                    | 0.0                        | 27.7           | 2207.1               | 49.9                      | 60.8          | 1054.8                | 29.1             |
| 2031/32 | 0.0                  | 3773.0              | 1090.1                    | 0.0                        | 28.9           | 2207.1               | 50.7                      | 58.5          | 1140.9                | 30.3             |
| 2032/33 | 0.0                  | 3924.0              | 1182.5                    | 0.0                        | 30.1           | 2207.1               | 51.5                      | 56.2          | 1234.0                | 31.5             |
| 2033/34 | 0.0                  | 4080.9              | 1282.4                    | 0.0                        | 31.4           | 2207.1               | 52.2                      | 54.1          | 1334.7                | 32.7             |
| 2034/35 | 0.0                  | 4244.2              | 1390.6                    | 0.0                        | 32.8           | 2207.1               | 52.9                      | 52.0          | 1443.6                | 34.0             |

<sup>1</sup>GDP at market prices (Financial Year)

# THE WORLD ECONOMY

## US

The economy contracted in Q1. Real GDP decreased 0.4%, after expanding 1.725% in Q4. The positive contribution came from expansion in private consumption (0.45%, after 0.6% growth in Q4) and investment (1.25%, following 9.175% in Q4). On the other hand, negative contributions came from a weak net trade figure (subtracting 0.81 percentage points from Q1's growth, following -0.06 percentage points in Q4), as exports fell 1.2% (after a rise of 5.6% in Q4) while imports demand remained robust (4.4%, following 4.5% in Q4).

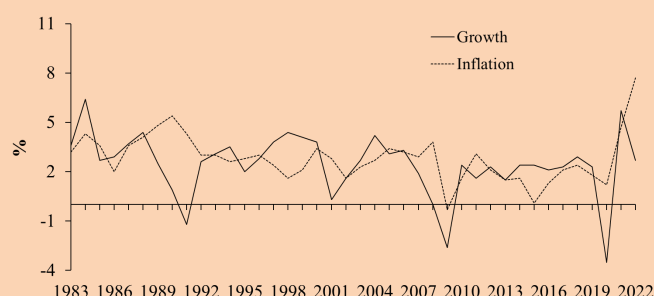
The labour market remained strong. Total nonfarm payrolls increased by 372,000 in June, following 368,000 in May. The unemployment rate remained at 3.6% for the fourth consecutive month and hourly earnings were up 5.1% year-on-year (following 5.33% in May).

Consumer price inflation continued to rise and in May it reached its highest level since 1981. The annual rate of CPI growth was 8.6%, up from 8.3% in April. It was largely driven by persistently rising price of food (10.1%, following 9.4% in April) and energy (34.6%, following 30.3%). Excluding food and energy, core inflation rose 6.0%, down from 6.1% in April.

According to the latest data and surveys, economic activity should grow in Q2 at a moderate rate. The US Composite Output Index was 51.2 in June, down from 53.6 in May. This signalled a further easing in the rate of expansion in business activity. The slowdown in activity appeared in the services sector (Flash Services Business index of 51.6 in June, down from 53.4 in May), while the manufacturing sector's factory production actually declined (Flash Manufacturing Output Index of 49.6, down from 55.2 in May). The inflationary pressure continued to weigh on the consumer confidence level, which showed a second consecutive fall in June, 98.7 down from 103.2 in May. It showed that consumers have become pessimistic.

To rein in the surging inflation the Federal Reserves had to tighten its monetary stance aggressively. It decided to raise the target range of the federal funds rate by 75 basis points to 1.5–1.75% at the June meeting. They also stated that they would continue to reduce the size of the balance sheet and to increase the Fed Funds target range. According to their own projections, the federal funds rate will rise to 3.1–3.6% by the end of the year.

**U.S.: Annual Growth Rates of Real GNP and Consumer Prices**



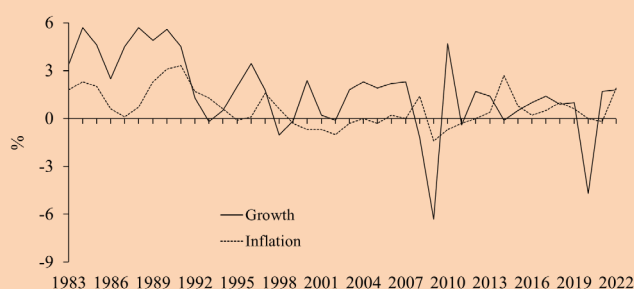
## US

|                                       | 2018   | 2019   | 2020   | 2021   | 2022   | 2023   |
|---------------------------------------|--------|--------|--------|--------|--------|--------|
| Real GDP Growth (% p.a.)              | 3.0    | 2.2    | -3.5   | 5.7    | 2.6    | 1.8    |
| Inflation (% p.a.)                    | 2.4    | 1.8    | 1.2    | 4.7    | 7.7    | 3.6    |
| Real Short Int. Rate                  | 0.6    | 0.3    | -4.6   | -7.1   | -1.4   | -0.5   |
| Nominal Short Int. Rate               | 2.4    | 1.5    | 0.4    | 0.1    | 2.2    | 3.1    |
| Real Long Int. Rate                   | 0.9    | 0.7    | -3.8   | -6.1   | -0.5   | -0.4   |
| Nominal Long Int. Rate                | 2.7    | 1.9    | 0.9    | 1.6    | 3.1    | 3.2    |
| Real Ex. Rate (2000=100) <sup>1</sup> | 93.5   | 96.3   | 97.6   | 95.5   | 98.5   | 97.0   |
| Nominal Ex. Rate <sup>2</sup>         | 112.01 | 115.73 | 117.78 | 113.13 | 111.49 | 112.10 |

<sup>1</sup>The real exchange rate is the domestic price level relative to the foreign price level converted into domestic currency. A rise in the index implies an appreciation of the real exchange rate.

<sup>2</sup> The series for the USA is a nominal broad U.S dollar index (2006=100)

**Japan: Annual Growth Rates of Real GNP and Consumer Prices**



## Japan

|                                       | 2018   | 2019   | 2020   | 2021   | 2022   | 2023   |
|---------------------------------------|--------|--------|--------|--------|--------|--------|
| Real GDP Growth (% p.a.)              | 0.6    | 0.0    | -4.7   | 1.7    | 1.7    | 1.9    |
| Inflation (% p.a.)                    | 1.0    | 0.5    | 0.0    | -0.2   | 1.9    | 1.2    |
| Real Short Int. Rate                  | -0.4   | 0.1    | 0.3    | -2.9   | -1.1   | -1.1   |
| Nominal Short Int. Rate               | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    |
| Real Long Int. Rate                   | -0.5   | 0.0    | 0.2    | -2.9   | -1.0   | -1.0   |
| Nominal Long Int. Rate                | 0.0    | 0.0    | 0.0    | 0.1    | 0.2    | 0.2    |
| Real Ex. Rate (2000=100) <sup>1</sup> | 57.8   | 59.4   | 60.6   | 54.8   | 52.1   | 51.5   |
| Nominal Ex. Rate                      | 112.10 | 110.40 | 109.02 | 106.78 | 126.00 | 123.30 |

<sup>1</sup>The real exchange rate is the domestic price level relative to the foreign price level converted into domestic currency. A rise in the index implies an appreciation of the real exchange rate.

## Japan

Economic activity continued to contract, but at a slower rate. Real GDP fell 0.1% in Q1, after -1.0% in Q4. This contraction was driven mainly by the state of emergency COVID measures and rising inflation that caused a slowdown in private consumption. Consumption growth

stalled after rising 2.4% in Q4. The other negative contribution to growth came from net trade. It subtracted 0.4 percentage points from Q1's growth (after adding 0.1 percentage point to Q4's growth), as imports grew (0.6%, after 0.3% in Q4) faster than exports (0.2%, after 0.9% in Q4). Private residential investment stalled (following -1.1% in Q4) and non-residential investment fell 0.1% (after rising 0.1% in Q4).

Into the second quarter, there were some signs of upturn as the government lifted the COVID restrictions. Au Jibun Bank Flash Japan Composite PMI was 53.2 in June, up from 52.3 in May. It signalled the strongest rise in private sector output in seven months. Within this services appears to have had the strongest expansion since October 2013 with its Business Activity Index of 54.2 (up from 52.6 in May). The manufacturing sector continues to expand with Flash Output Index of 51.0 (after 51.5 in May). On the other hand, the recent weaker yen and rising inflation due to higher commodity prices dampened consumer sentiment and consumption. The confidence index dropped to an 18-month low of 32.1 in June, down from 34.1 in May.

The annual inflation rate was 2.5% in May, unchanged from April. Inflation reached above the 2% target for the first time in seven years. The main contribution came from food price inflation (4.1% in May, compared to 4.0% in April) and the cost of fuel, light, and water charges (14.4%, after 15.7%). Excluding energy and food, core inflation was 2.1% in May, unchanged from April. However, the Bank of Japan forecasts that inflation would be just 1.1% in fiscal year 2023, as wage growth remains subdued (1% in May, after 1.7% in April) and commodity prices would cool down.

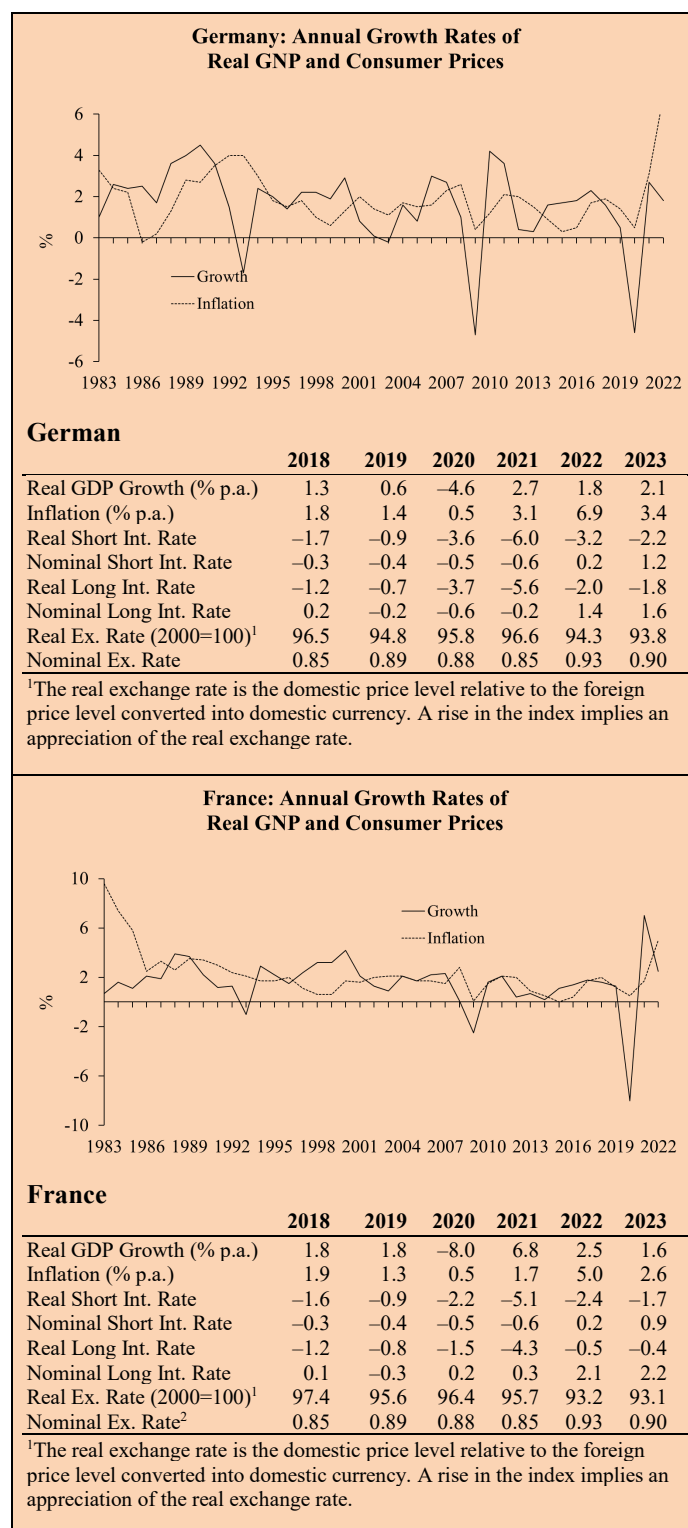
Assessing the inflation and economic outlook, in June meeting the Bank of Japan decided to maintain its accommodative monetary policy stance. It kept the policy rate unchanged at -0.01% and its 10-year government bond yield target at 0%. It also committed to purchasing an unlimited number of government bonds as part of its yield curve control policy.

## Germany

Economic growth rebounded in Q1. Real GDP rose 0.2%, after contracting 0.3% in Q4. The rebound was driven by investment and inventory build-up. Changes in inventories contributed 1.2 percentage points to quarterly growth, up from 0.2 percentage points in Q4. Fixed investment grew 2.7% (up from 0.0% in Q4). Meanwhile, consumption decreased 0.1%, following -1.3% in Q4. Net trade subtracted 1.4 percentage points from growth (after adding 0.1 percentage points to Q4's growth), as exports fell 2.1% (after +3.8% in Q4) and imports grew 0.9% (down from 4.1% in Q4).

Recent data and surveys imply a gloomy prospect for Q2 economic growth. The flash PMI Composite Output Index (51.3, down from 53.7 in May) showed a sharp loss in

momentum in private sector activity towards the end of Q2. Business sentiment was 92.3 in June (after 93.0 in May), below the 100 threshold showing that German business became more pessimistic. Consumer confidence is at a record low of -27.4 in July (after -26.2 in June) as the consumers face both inflationary pressure and the risk of economic recession.



## France

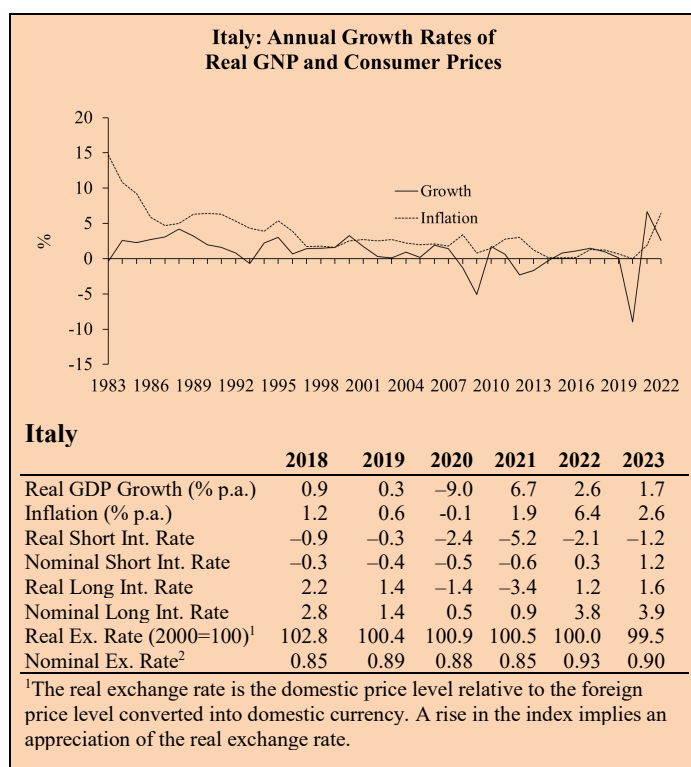
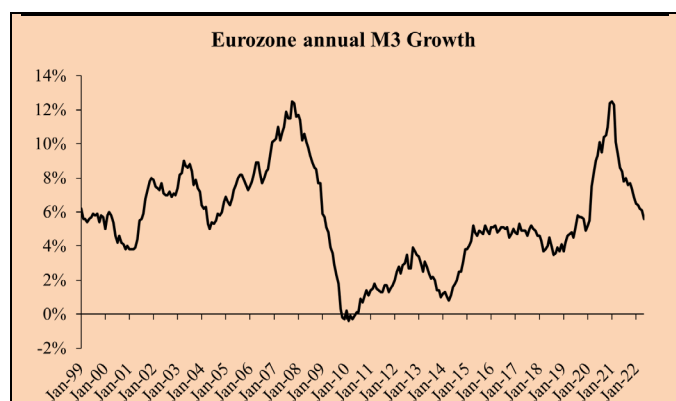
The economy contracted in Q1. Real GDP fell 0.2%, after rising 0.4% in Q4. This was the first contraction since April 2020. The downturn was driven by a sharp contraction in private consumption (-1.5%, down from +0.3% in Q4) due to Covid restrictions and accelerating prices. On the other hand, fixed investment rebounded, rising 0.6% after falling 0.3% in Q4. Although exports fell (-1.2%, after +2.6% in Q4) and imports growth slowed (0.5%, compared to 3.9% in Q4), overall net trade contributed 0.2 percentage points to the quarterly growth (compared to 0.4 percentage points in Q4).

Looking ahead, recent data and surveys indicate another difficult quarter for Q2. The Flash PMI Composite Output Index fell sharply from 57.0 in May to 52.8 in June, showing the slowest rise in private sector activity since the beginning of 2022. The economic slowdown is evidenced by weakening trends in both services, whose Flash PMI Activity Index was 54.4, down from 58.3 in May, and manufacturing, whose Flash PMI Manufacturing Index was 45.7, down from 51 in May. Industrial output dropped 0.1% month on month in April, following – a drop of 0.3% in March.

## Italy

Real GDP rose 0.1% in Q1, after expanding 0.7% in Q4. While domestic demand contributed positively to the quarterly growth, net exports contributed negatively as imports growth (4.3%, after 4.2% in Q4) dominated exports growth (3.5%, after stalling in Q4). Within domestic demand, final consumption dropped (-0.6%, after +0.2% in Q4) and fixed capital investment rose (3.9%, up from 2.8% in Q4).

Recent data signalled a moderate growth in Q2. Although all sectors' activity rose continues to grow, growth is slowing. The Manufacturing PMI fell to 50.9 in June, from 51.9 in May. The Services PMI fell to 51.6, down from 53.7 in May. Construction activity nearly stalled in June, with a PMI of 50.4, down from 54.3 in May. Business sentiment was depressed by ongoing material shortages, rising prices, and elevated economic uncertainty.



## Euro-zone monetary policy

The annual Harmonized Index of Consumer Price (HICP) Inflation rate has risen significantly. It was 8.1% in May, up from 7.4% in April. The main factors causing this rise were a further acceleration for energy (41.9%, up from 39.1% in April) and food, alcohol, and tobacco (8.9%, up from 7.5% in April). Core HICP, excluding energy and food, rose 3.7% in May, compared to 3.8% in April.

Given the inflation conditions, at the May meeting the European Central Bank decided to take further steps to normalise its monetary policy. It decided to end net asset purchases under the asset purchase programme on July 1st. It expressed an intention to raise the key interest rates by 0.25 basis points at the July meeting and further in September. In the meantime, it left the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility unchanged.

## WORLD FORECAST DETAIL

### Growth Of Real GNP

|         | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------|------|------|------|------|------|------|
| U.S.A.  | 3.0  | 2.2  | -3.5 | 5.7  | 2.6  | 1.8  |
| U.K.    | 1.3  | 1.4  | -9.4 | 7.5  | 4.4  | 1.9  |
| Japan   | 0.6  | 0.0  | -4.7 | 1.7  | 1.7  | 1.9  |
| Germany | 1.3  | 0.6  | -4.6 | 2.7  | 1.8  | 2.1  |
| France  | 1.8  | 1.8  | -8.0 | 7.0  | 2.5  | 1.6  |
| Italy   | 0.9  | 0.3  | -9.0 | 6.7  | 2.6  | 1.7  |

### Growth Of Consumer Prices

|         | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------|------|------|------|------|------|------|
| U.S.A.  | 2.4  | 1.8  | 1.2  | 4.7  | 7.7  | 3.6  |
| U.K.    | 2.5  | 1.8  | 1.0  | 2.5  | 7.7  | 4.9  |
| Japan   | 1.0  | 0.5  | 0.0  | -0.2 | 1.9  | 1.2  |
| Germany | 1.8  | 1.4  | 0.5  | 3.1  | 6.9  | 3.4  |
| France  | 1.9  | 1.3  | 0.5  | 1.7  | 5.0  | 2.6  |
| Italy   | 1.2  | 0.6  | -0.1 | 1.9  | 6.4  | 2.4  |

### Real Short-Term Interest Rates

|         | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------|------|------|------|------|------|------|
| U.S.A.  | 0.6  | 0.3  | -4.3 | -7.6 | -1.4 | -0.5 |
| U.K.    | -1.4 | -0.2 | -2.3 | -7.6 | -3.4 | -2.5 |
| Japan   | -0.4 | 0.1  | 0.3  | -1.8 | -1.1 | -1.1 |
| Germany | -1.7 | -0.9 | -3.6 | -7.5 | -3.2 | -2.2 |
| France  | -1.6 | -0.9 | -2.2 | -5.6 | -2.4 | -1.7 |
| Italy   | -0.9 | -0.3 | -2.4 | -7.0 | -2.1 | -1.2 |

### Nominal Short-Term Interest Rates

|         | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------|------|------|------|------|------|------|
| U.S.A.  | 2.4  | 1.5  | 0.4  | 0.1  | 2.2  | 3.1  |
| U.K.    | 0.4  | 0.8  | 0.2  | 0.1  | 1.5  | 2.4  |
| Japan   | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  |
| Germany | -0.3 | -0.4 | -0.5 | -0.6 | 0.2  | 1.2  |
| France  | -0.3 | -0.4 | -0.5 | -0.6 | 0.2  | 0.9  |
| Italy   | -0.3 | -0.4 | -0.5 | -0.6 | 0.3  | 1.2  |

### Real Long-Term Interest Rates

|         | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------|------|------|------|------|------|------|
| U.S.A.  | 0.9  | 0.7  | -3.8 | -6.1 | -0.5 | -0.4 |
| U.K.    | -0.8 | -0.4 | -2.4 | -7.3 | -3.0 | -1.4 |
| Japan   | -0.5 | 0.0  | 0.2  | -1.8 | -1.0 | -1.0 |
| Germany | -1.2 | -0.7 | -3.7 | -7.1 | -2.0 | -1.8 |
| France  | -1.2 | -0.8 | -1.5 | -4.7 | -0.5 | -0.4 |
| Italy   | 2.2  | 1.4  | -1.4 | -5.5 | 1.4  | 1.5  |

### Nominal Long-Term Interest Rates

|         | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---------|------|------|------|------|------|------|
| U.S.A.  | 2.7  | 1.9  | 0.9  | 1.6  | 3.1  | 3.2  |
| U.K.    | 1.0  | 0.6  | 0.1  | 0.4  | 1.9  | 3.5  |
| Japan   | 0.0  | 0.0  | 0.0  | 0.1  | 0.2  | 0.2  |
| Germany | 0.2  | -0.2 | -0.6 | -0.2 | 1.4  | 1.6  |
| France  | 0.1  | -0.3 | 0.2  | 0.3  | 2.1  | 2.2  |
| Italy   | 2.8  | 1.4  | 0.5  | 0.9  | 3.8  | 3.9  |

### Index Of Real Exchange Rate (2000=100)<sup>1</sup>

|         | 2018  | 2019  | 2020  | 2021  | 2022  | 2023 |
|---------|-------|-------|-------|-------|-------|------|
| U.S.A.  | 93.5  | 96.3  | 97.6  | 95.5  | 98.5  | 97.0 |
| U.K.    | 77.4  | 78.6  | 78.3  | 78.2  | 82.6  | 83.3 |
| Japan   | 57.8  | 59.4  | 60.6  | 54.8  | 52.1  | 51.5 |
| Germany | 96.5  | 94.8  | 95.8  | 96.6  | 94.3  | 93.8 |
| France  | 97.4  | 95.6  | 96.4  | 95.7  | 93.2  | 93.1 |
| Italy   | 102.8 | 100.4 | 100.9 | 100.5 | 100.0 | 99.5 |

<sup>1</sup> The real exchange rate is the domestic price level relative to the foreign price level converted into domestic currency. A rise in the index implies an appreciation in the real exchange rate.

### Nominal Exchange Rate

(Number of Units of Local Currency To \$1)

|                     | 2018   | 2019   | 2020   | 2021   | 2022   | 2023   |
|---------------------|--------|--------|--------|--------|--------|--------|
| U.S.A. <sup>1</sup> | 112.01 | 115.73 | 117.78 | 113.13 | 111.49 | 112.10 |
| U.K.                | 1.34   | 1.28   | 1.28   | 1.38   | 1.28   | 1.30   |
| Japan               | 112.10 | 110.40 | 109.02 | 106.78 | 126.00 | 123.30 |
| Eurozone            | 0.85   | 0.89   | 0.88   | 0.85   | 0.93   | 0.90   |

<sup>1</sup> The series for the USA is a nominal broad U.S dollar index (2006=100); the series for the UK is \$ per £

\* Forecasts based on the Liverpool World Model



# EMERGING MARKETS

Anupam Rastogi

## India

The Indian economy is growing at a fast clip as the private sector is keen to take advantage of government policy and a shift in strategic thinking on the part of MNCs to have an alternate manufacturing source other than China. The government sees an investment-led growth supported by government expenditure on infrastructure. The government's breakneck push towards digitization is bearing fruit as both direct and indirect tax collection is growing.

Indian Manufacturing Purchasing Managers' Index (PMI) fell to 53.9 in June from 54.6 in May, a nine-month low. The June PMI data pointed to an improvement in operating conditions for the twelfth month. Despite an increase in commodity prices, the manufacturing side is still growing. We maintain our current fiscal year GDP growth at 6.5% and continue with this growth rate for another two years amidst a slowing world economy. The government expects GDP growth to touch 7.5%, making it the fastest growing major economy on the back of the government's initiatives in technology-led development, ease of doing business, and the digital sector. Probably a good target but difficult to achieve while the world economy faces many headwinds.

The Indian economy grew 8.7% in 2021–22; GDP was above the pre-pandemic level by December 2021. Bank credit is growing at 12.1% at the end of May, from 11.1% in April. Liquidity conditions also remained in surplus.

The consumer price index (CPI) inflation in May moderated to 7% from April's eight-year high of 7.8%. The inflation problem is not going away, and it will take a while to get it back under control. RBI Governor Shaktikanta Das said that the central bank's primary focus was to bring inflation closer to its target but could not disregard growth concerns. The Reserve Bank of India has raised borrowing costs by 90 basis points this year and vows to do more to bring price gains below its target ceiling of 6%. Good weather conditions prevailing in the country may help in the recovery.

The RBI may raise the policy repurchase rate to 5.5%, from 4.9% now, citing worsening and broadening inflationary pressures. If inflation persists, the benchmark interest rate can be pushed to 6% to ensure that the second-order impact of inflation is squeezed out.

The RBI's Monetary Policy Committee (MPC) unanimously and expectedly decided to hike the policy repo rate by 50bps to 4.9%. The RBI now expects headline inflation to remain well above the upper bound of 6% until the end of December 2022 and maintains a growth forecast for FY23 at 7.2% (versus our forecast of 6.5%). For India, inflation

India: BSE Sensex



traditionally has a lot to do with energy prices, though food prices have also played their part. This time also, fuel-led inflation has impacted the country. Still, at the same time, high fuel prices, commodity prices, and logistic issues on account of the Russia-Ukraine war have resulted in fertilizer prices shooting up.

India's merchandise trade deficit surged to a new high of \$25.6 billion in June amid slowing demand for Indian exports and rising imports of gold, coal, and crude oil. Exports grew 16.8% year-on-year to \$38 billion in June, while imports jumped 51% to \$63.6 billion, according to the preliminary data released by the commerce ministry.

We expect the current account deficit (CAD) to double to \$30 billion in Q1 FY23 from the modest \$13 billion in the previous quarter. However, robust service surpluses will partly absorb the shock. We expect the CAD to be in the \$100-105 billion range in FY23. The CAD in the current fiscal year is expected to be 3% of GDP. India witnessed a current account deficit (CAD) of 1.2% of GDP in 2021–22 against a surplus of 0.9% in FY2020–21 due to a wider trade deficit.

The Reserve Bank of India (RBI) has been intervening in the foreign exchange (forex) market to contain volatility in the rupee. But with other emerging market currencies weakening, RBI allowed the Indian currency to weaken gradually. We may witness a rupee at 80 to the dollar. India's forex reserves have fallen by \$35 billion in the last three months. However, reserves at close to \$600 billion (12 months of import cover) are sufficient for RBI to cushion the rupee's fall.

Going by the real effective exchange rate weighted by India's trade with 40 countries, INR is still around 2% overvalued compared to its long-term average. A sharp drop in INR is unlikely, given that RBI is hiking policy rates in line with rate hikes by the U.S. Fed. With the US-India interest rate differential maintained, a steep slide in the rupee's external value will be avoided.

The rupee has depreciated over 5% against the dollar this year, with the currency touching a low of 79 to a dollar. The Indian currency could weaken to 80 to the dollar over the next few weeks. Forex reserves stood at \$596.5 billion as of 10 June. However, over the next year, reserves could rise if exporters benefit from the cost advantage.

In 2021–22, gross foreign direct investment (FDI) inflows into India increased for the ninth consecutive year to \$83.5 billion, an all-time high. The Indian central bank defines FDI as investments from those outside India in an unlisted company or 10% or more of a listed company.

The United States has named India for currency manipulation because India met two of the three specific criteria for determining if a country's exchange rate is being artificially manipulated to gain an unfair advantage over the United States. The three criteria are a bilateral goods and service trade surplus of at least US\$15 billion, a current account surplus equivalent to 3% of GDP, and persistent, one-sided foreign-exchange interventions worth at least 2%. India met the first and the third criteria. Incidentally, the US has become India's largest trading partner displacing China.

India did not allow an anticipated effort by China's Xi Jinping to use this year's BRICS summit as a platform to highlight his efforts to build an alternative to the US-led global order. The virtual event brought Xi, Russian President Vladimir Putin, Indian Prime Minister Narendra Modi, South Africa's Cyril Ramaphosa, and Brazil's Jair Bolsonaro. India also effectively prevented any attempts by China and Russia to use the summit to score a propaganda victory against the U.S.

|                         | 20–21 | 21–22 | 22–23  | 23–24 | 24–25 |
|-------------------------|-------|-------|--------|-------|-------|
| GDP (%p.a.)             | -6.6  | 8.7   | 6.5    | 6.5   | 6.5   |
| WPI (%p.a.)             | 5.5   | 6.0   | 6.5    | 5.3   | 5.0   |
| Current A/c(US\$ bill.) | 35.0  | -42.0 | -100.0 | -90.0 | -80.0 |
| Rs./\$(nom.)            | 75.0  | 74.5  | 78.5   | 79.0  | 80.0  |

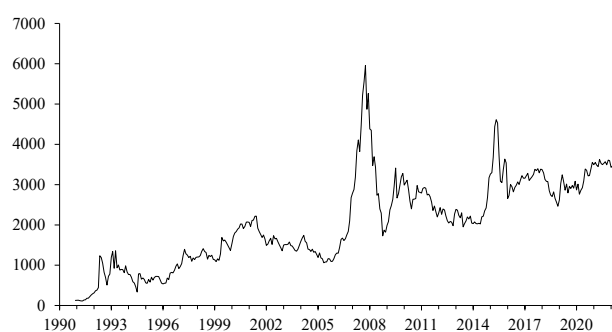
## China

The Covid pandemic is upsetting the public at large. A news item quoted an influential politburo member saying that the zero covid policy will remain in place for the next five years. The news item was quickly removed from the website as it may have caused panic. The public is wary of the government tracking all their movements. Public protests and street brawls with enforcement officials have become frequent.

Effects related to the Covid pandemic will make it challenging for China to meet its 5.5% annual growth target, according to Wang Yiming, an adviser to the monetary policy committee of the People's Bank of China. Greater China continues to rank among the worst places to live during the pandemic.

President Xi Jinping reaffirmed the GDP target and given the doubtful integrity of the government's published data, we

China: SSE Composite Index



may see the same in print. China's commitment to its zero-Covid policy remains intact. Only the result of the 20th Party Congress in October can change this policy. We maintain our forecast of GDP growth of 4% in 2022 and 2023 because the industrial sector seems less affected by the pandemic than people at large.

The Chinese economy has suffered from the Covid lockdowns since March in the technology hub Shenzhen, car manufacturing centre Jilin and financial metropolis Shanghai. But it returned to growth in June as Shanghai reopened and lockdowns eased elsewhere. Its manufacturing PMI recorded 51.7, its fastest in 13 months, in June due to a strong rebound in output, as the lifting of Covid lockdowns sent factories racing to meet recovering demand. Its services Purchasing Managers' Index climbed to 54.5 in June from 41.4 in May, the highest level in nearly a year.

Inflationary pressure stayed soft in China as Covid-19 lockdowns hammered domestic demand, leading economists to forecast that policymakers might increase stimulus to boost economic growth and employment.

Consumer inflation continued low in May, as the inflationary pressure was checked due to domestic demand compression. Consumer prices were up 2.1% from a year earlier, matching April's rate. The CPI remained below the government target of 3%. The producer price index rose 6.4% in May. With moderated inflation in May as global commodity prices cooled and consumer demand weakened, there was room for authorities to ease monetary policy and add stimulus to shore up the economy. The PBOC cut its one-year medium-term lending facility rate in January and refrained from cutting it again in May despite mounting evidence of a slowdown in economic growth. We expect the PBOC to cut its policy rate by 20 basis points by the end of the year. We also expect a cut to the reserve requirement ratio (RRR) by 50 basis points in 2022. The central bank last reduced the RRR in April by a smaller-than-expected amount. The divergence between China's monetary policy and the West is because China did not have to stimulate the economy in 2020 and 2021. The People's Bank of China kept the one-year loan prime rate (LPR) unchanged at

3.70%, while the five-year LPR, the reference rate for mortgages, was left at 4.45%.

China's central bank cut interest rates for first-time home buyers while slashing its benchmark reference rate for mortgages by an unexpectedly wide margin of 0.15 percentage points in May.

China's exports may contract this year in volume terms even if nominal growth could be positive due to price increases. Exports in May surged as Covid-19 restrictions eased. Exports grew 16.9% in May compared with a year earlier. Imports also rose 4.1% in May after staying flat in April. The strong export surge pushed China's overall trade surplus to \$78.8 billion in May, widening from a \$51.1 billion surplus in April.

Foreign investors are abandoning China's bond markets. There have been three main drivers of the change: (1) a deepening monetary-policy divergence, (2) the collapse in China's growth rate due to the impact of rolling lockdowns and restrictions to curb Covid-19 and, and (3) a hit from Russia's war on Ukraine as investors worry that the war will linger on. However, the equity market index, the CSI 300, has risen almost 20% from its lows in April, helped by optimism about Beijing easing some of its Covid restrictions and that the government will continue to provide support from monetary and fiscal policies. President Xi presided over celebrations marking 25 years since the U.K. returned Hong Kong to China and incoming Chief Executive John Lee's swearing-in.

The People's Bank of China will create a yuan reserve pool with the Bank for International Settlements and five other regulators to provide liquidity to participating economies in periods of market volatility. The agreement marks the latest step from Beijing to push the internationalization of the Chinese currency, challenging a global financial system dominated by the U.S. dollar. It is partly in line with Russian thinking to develop a new global reserve currency alongside China and other BRICS nations, to challenge the dominance of the U.S. dollar. China is ready to bid on behalf of Russia as China noted the speed and stealth with which the U.S. Treasury moved on dollar-denominated assets of Russian nationals.

|                           | 20   | 21   | 22   | 23   | 24   |
|---------------------------|------|------|------|------|------|
| GDP (%p.a.)               | 2.2  | 8.1  | 4.0  | 4.0  | 4.5  |
| Inflation (%p.a.)         | 2.5  | 1.8  | 2.0  | 2.0  | 1.5  |
| Trade Balance(US\$ bill.) | 60.0 | 80.0 | 60.0 | 52.0 | 45.0 |
| Rmb/\$(nom.)              | 6.7  | 6.4  | 6.7  | 6.7  | 6.6  |

## South Korea

The spectre of the worldwide recession has taken a toll on the growth rate of GDP in South Korea. In the first quarter of 2022, the economy slowed down a little, and we forecast GDP growth to be 2.4%. In 2023, the country's GDP is also forecast by the same amount. South Korea has come up with a mixed bag of policy measures for slower growth and higher

**Korea: Composite Index**



Consumer prices advanced 5.4% in May from a year earlier, and the central bank expects inflation to grow at the same pace amid supply constraints for crude oil and grain in June and July. The central bank is unlikely to switch from a quarter-percentage-point hike to a half-percentage-point increase in the base rate.

South Korea's exports rose 5.4% yearly in June on solid demand for chips and petroleum products. Imports advanced by 26.2% due mainly to high global energy costs and the surge in raw materials prices. Accordingly, the country had a trade deficit of \$10.3 billion from January-June.

South Korea's won is just shy of 1300 to a U.S. dollar, the weakest level in 13 years on a concern of aggressive rate hikes in the U.S. South Korea has recorded more than \$14 billion in foreign outflows this year through mid-June. It had a knock-on effect on the stock market. The benchmark Kospi Composite was down about 21% this year amid a global market selloff.

|                         | 20   | 21   | 22   | 23   | 24   |
|-------------------------|------|------|------|------|------|
| GDP (%p.a.)             | -0.9 | 4.2  | 2.4  | 2.4  | 2.3  |
| Inflation (%p.a.)       | 0.5  | 2.5  | 5.0  | 3.5  | 3.0  |
| Current A/c(US\$ bill.) | 70.0 | 91.0 | 50.0 | 40.0 | 35.0 |
| Won/\$(nom.)            | 1070 | 1150 | 1250 | 1300 | 1310 |

## Taiwan

The impact of China's slowdown is becoming visible in Taiwan. Laying off workers due to demand shrinkage of industrial products is weakening private consumption. We expect Taiwan's GDP to grow by 3.5% in 2022. An outbreak of indigenous COVID-19 infection forced businesses in the service sector to place their workers on unpaid leave. But this type of interruptions will be few. In Taiwan, 83% of the population is fully vaccinated.

The central bank has cut the GDP growth forecast to 3.75% in 2022 as downside risks in the global economy are expected to hurt the local economy.

The central bank revised the consumer price index upwards to grow 2.83%. To rein in growing inflationary pressure, the central bank raised its key interest rates by 12.5 basis points, with the discount rate up to 1.5% in June. In the second consecutive quarter, the central bank has hiked interest rates after a 25 basis point hike in March. Besides this, the central

bank has also raised the reserve ratio by 25 basis points effective from 1 July. In line with central banks elsewhere, the bank moved to reduce market liquidity. According to the central bank's estimates, its measures will take about NT\$120 billion (~US\$4 billion) out of the banking sector.

In June, the trade surplus was down 60.5% from a year earlier; even though the exports are growing by 20% from a year earlier, the imports rose 26.7% year-on-year.

The United States has named Taiwan for currency manipulation because Taiwan met two of the three specific criteria for determining if a country's exchange rate is being artificially manipulated to gain an unfair advantage over the United States. The three criteria are a bilateral goods and service trade surplus of at least US\$15 billion, a current account surplus equivalent to 3% of GDP, and persistent, one-sided foreign-exchange interventions worth at least 2%.

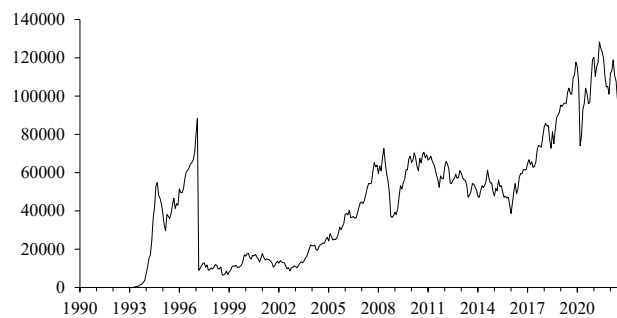
The U.S. has moved further in its policy of strategic ambiguity with respect to Taiwan. The U.S. has insisted that the U.S. government's "One China Policy" had not changed. In May, the U.S. Department of State website changed its description of U.S. relations with Taiwan. It removed wording "on not supporting Taiwan independence and on acknowledging Beijing's position that Taiwan is part of China." The description is changed again to "not support Taiwan independence." Taiwan has not raised any concern as it is hopeful that help from the Quad countries — Australia, Japan, India, and the U.S. — will be swifter than the help provided by the U.S. and the E.U. to Ukraine.

|                         | 20   | 21   | 22   | 23   | 24   |
|-------------------------|------|------|------|------|------|
| GDP (%p.a.)             | 3.1  | 6.5  | 3.5  | 3.0  | 2.8  |
| Inflation (%p.a.)       | -1.0 | 2.0  | 2.7  | 2.0  | 1.6  |
| Current A/c(US\$ bill.) | 71.0 | 90.0 | 90.0 | 65.0 | 60.0 |
| NT\$/\$(nom.)           | 29.0 | 27.5 | 29.0 | 29.0 | 29.0 |

**Taiwan: Weighted TAIEX Price Index**



**Brazil: Bovespa**



## Brazil

Brazilian economic indicators have been very volatile in the last 18 months because of inflated commodity prices and unprecedented monetary tightening. The Central Bank expects Gross Domestic Product (GDP) to grow 1.7% by the end of 2022. We want to keep our cautious GDP forecast for the time being at 1% because of uncertainty around the presidential election due in October.

The central bank also expects inflation to cool down rapidly. The bank forecast National Consumer Price Index (IPCA) to grow by 6.3% in 2022. It projects inflation to subside to 4% and 3.1% in 2022 and 2023, respectively. Our forecast for 2022 and two years after that remains unchanged as recession in developed countries and muted growth of the Chinese economy will adversely impact Brazil's exports while imports remain elevated.

The central bank raised its benchmark interest rate for the 11th consecutive time in mid-June, despite signs of slowing inflation and economic growth, and signalled another rate boost at its next meeting in August. It raised the Selic rate by a half-point to 13.25%, the highest level in more than five years. The effects on inflation from its previous hikes are visible, but it will take another two quarters before it falls within the central banks' target of 4% with +/- 1.5% tolerance.

Congress approved a bill to limit states' fuel sales taxes, which should help slow the pace of consumer-price increases ahead of Brazil's October presidential election.

Brazil's trade surplus narrowed in May as imports rose more than exports. The country recorded an excess of \$4.9 billion in May after a surplus of \$8.1 billion in April. Brazil's trade balance for the year's first five months accumulated a surplus of US\$ 25 billion.

The real declined more than 9% against the dollar over the last three months due to a decline in commodity prices.

Presidential candidate Luiz Inacio Lula da Silva is gaining currency that he can put the economy back on track and help to boost the country's currency. A stronger real would help in bringing inflation down. Many who supported Bolsonaro in 2018 are now "jumping ship."

Brazil President Jair Bolsonaro is facing a more significant challenge from a Supreme Court judge. Justice Alexandre de Moraes leads a broad investigation into disinformation that keeps touching the president. Bolsonaro is following Donald Trump's lead and sowing doubt about the integrity of the voting process. Moraes is due to take charge of the electoral authority six weeks before October's vote has made things worse.

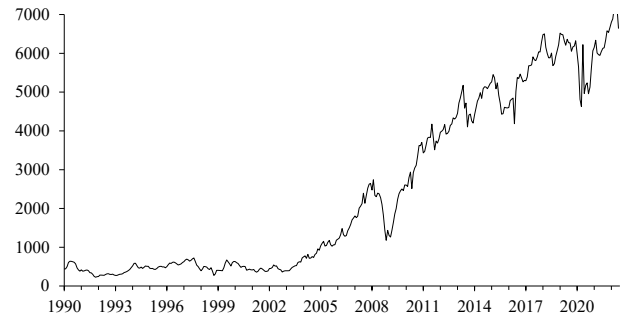
|                         | <b>20</b> | <b>21</b> | <b>22</b> | <b>23</b> | <b>24</b> |
|-------------------------|-----------|-----------|-----------|-----------|-----------|
| GDP (%p.a.)             | -3.9      | 4.6       | 1.0       | 2.0       | 2.0       |
| Inflation (%p.a.)       | 4.5       | 8.5       | 4.5       | 4.0       | 4.0       |
| Current A/c(US\$ bill.) | -7.6      | -10.0     | -10.0     | -12.0     | -20.0     |
| Real/\$(nom.)           | 5.5       | 5.3       | 4.8       | 4.9       | 4.9       |

## Other Emerging Markets

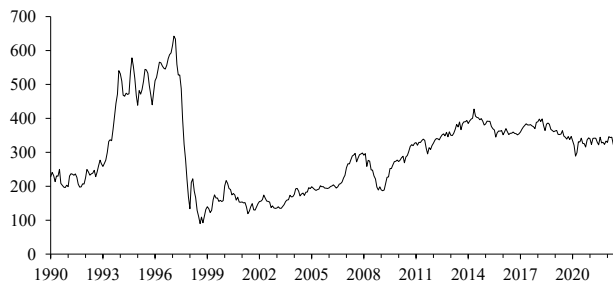
**Hong Kong: FT-Actuaries**



**Indonesia: Jakarta Composite**



**Malaysia: FT-Actuaries  
(US\$ Index)**



**Thailand: Composite Index**



**Singapore: Straits Times Index**



**Philippines: Manila Composite**

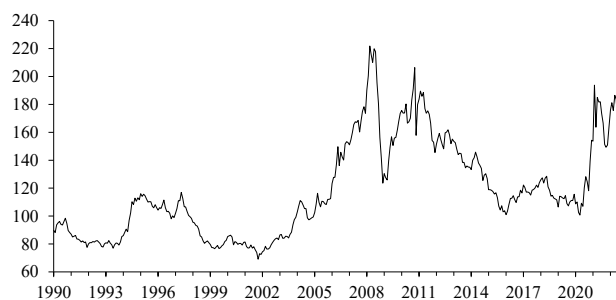




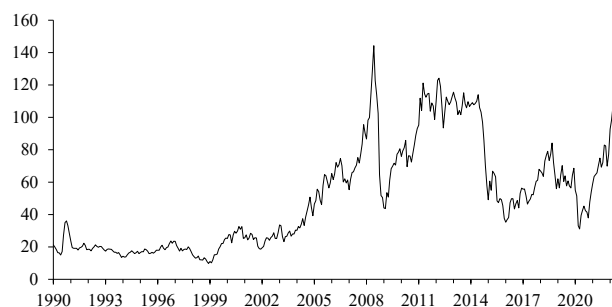
# COMMODITY MARKETS

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**Commodity Price Index (Dollar)**  
(Economist, 2015 = 100)



**Oil Price: North Sea Brent (in Dollars)**



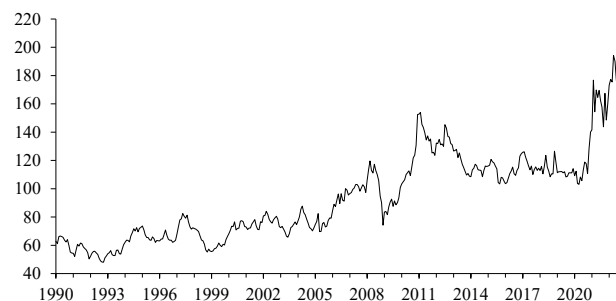
**Commodity Price Index (Sterling)**  
(Economist, 2015 = 100)



**Gold Price (in Dollars)**



**Commodity Price Index (Euro)**  
(Economist, 2015 = 100)



## THE GOVERNMENT'S ECONOMIC STRATEGY NEEDS SERIOUS REVISION

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Patrick Minford

There is a battle now raging for the Conservative Party leadership. This is very welcome as so far it has been difficult to discern anything of good strategic quality in current economic policy. Out of this battle we hope to see major changes in economic policy. As this note will explain, the leader most likely to pursue the necessary changes is Liz Truss.

The worst area of policy concerns the taxation of business and entrepreneurs. Business innovation and investment is founded on expected future profit. The planned rise in Corporation Tax from 19% to 25% will reduce expected profit substantially. The timing could not be worse, when we need confidence in the new post-Brexit economy to be maximised.

There is rightly also concern about the latest windfall tax proposal to fund the help to households over the rising costs of food and energy. Windfall taxes are not as damaging as mainstream corporation tax as they only kick in when profits are very high; as this part of the profits distribution is small-i.e it has a low probability- the effect on expected profit is also small, as revealed by the BP CEO's tepid reaction to it. Nevertheless it is yet another extra business tax when we really do not want it.

Furthermore, raising taxes like National Insurance Contributions on wages when the cost of living is being forced up by world commodity prices forces up business costs and reduces growth too. The government's programme of precipitate tax raising is an all round disaster, damaging growth and forcing up wages in response to the cost of living crisis.

The pity of all this self-harm in taxation is that it is entirely unnecessary, an 'unforced error', inflicted by Treasury failure to understand the role of debt management. The current Treasury view is that debt contracted during Covid should now be repaid as soon as possible, as a priority, and hence that any new spending must be met from new taxes. However, this view is quite wrong and at variance with welfare-maximising debt policy.

The reason is not rocket science. To maximise welfare, tax rates should be set to maximise growth over the long run. This means, because higher tax rates reduce growth, they should be kept constant at the lowest rate the government can afford over the long term, which means equal to long run expected spending. This in turn is equal to long run spending on goods and services plus debt interest. As for short term fluctuations in spending and debt interest these should be paid for by borrowing which consequently 'smooths' out the need for tax rises- much like households or businesses use borrowing to allow them to keep their consumption or investment spending constant.

It is incomprehensible that the Treasury has thrown over this basic economics. A more forceful Chancellor than Rishi Sunak, who has proclaimed that he is a 'low tax supporter', would have overruled officials on this. Instead, he has given way to Treasury insistence on 'balancing the books' short term with tax rises. Boris Johnson went along with this, in spite of strong opposition from his backbenches. As a result he and his Chancellor threatened to kill off economic growth just when post-Covid and post-Brexit we most need it to boost confidence in the economy's future.

There are those who are uncomfortable with a public debt ratio to GDP well above the 50% or so to which we became accustomed before the financial crisis and Covid. Of course over the long term such a ratio must be brought down to the comfort zone. But the way to do this is not to sabotage growth but to allow growth gradually to bring it down over time by raising revenue and lowering the need for benefits. In chapter 1 of this Quarterly Bulletin we have shown on our updated forecasts that with baseline UK prospective growth, assuming the planned tax rises are cancelled, the debt ratio is likely to come down steadily over time and so satisfy this requirement. However, the irony is that by continuing on the current planned path of tax-raising, we also show that, using our model-based estimates of the growth effects, the debt ratio will steadily worsen over time and ultimately become unmanageable.

This idea that borrowing is a bad thing goes back a long way, especially in Conservative circles after all the battles over the budget in the 1980s under Mrs. Thatcher. I too was in those battles and indeed fought against the '364 economists' and their letter opposing the tough 1981 budget. But the world has changed radically since then. Inflation then reached 25%, today it has been close to or at 2% for most of the last three decades. Unions, mighty then, are today weak and controlled by tough union laws. In 1981, the government controlled both debt and money and markets were afraid it had lost control of both; to bring inflation down it had to convince them with that tough budget. Today the Bank controls money; its current tightening will bring inflation down which allows the government freedom to use the budget to support the economy. Finally interest rates today, the cost of borrowing, are close to zero, whereas in 1981 they were well into double digits. Real interest rates today are negative, which means the Treasury is actually being paid to borrow. The Treasury has resisted all advice to reissue as much debt as possible at today's negative real rates; why look such a gift horse in the mouth?

Government borrowing today should optimally support the real economy by keeping taxes down, growing output and productivity and tempering wage costs. Furthermore, it should aim to go further and actually cut taxes, not merely cancel the planned and recent increases, to boost growth further. Doing this will in fact bring the debt ratio down faster through its effect on growth- again we show the arithmetic in chapter 1.

A variety of specious arguments are put forward to justify pushing up taxes today. One set is to do with inflation and money: that they help to keep down inflation; and that inflation will add to debt service costs, and so increase debt. Another set is to do with using them to create a super-deduction for investment. Both are fallacious.

### Monetary arguments for raising taxes

Inflation control is the job of the Bank of England and its monetary policy, on interest rates and the printing of money (Quantitative Easing). So far it has misjudged these, creating too much money and allowing interest rates to stay too low for too long. Now it is getting its act together; interest rates are rising and money printing is being curbed. This monetary tightening will bring inflation down in time, especially as supply bottlenecks from Covid and the Ukraine war ease, as they eventually will. Meanwhile, we need to keep the economy as strong as possible by supporting growth through the supply-side tax policies set out above. Borrowing to pay for these tax-cuts will allow the Bank to raise interest rates to normal levels in restraint of inflation, without triggering a recession or undermining long-term growth. Fiscal policy in other words can protect growth while the Bank clamps down on inflation.

What then of the canard that higher inflation raises the cost of debt service? This is pure nonsense. The real cost of debt is the real rate of interest, i.e. interest rates minus inflation; this is because inflation lowers the resources that the government must repay, hence it offsets the money paid in interest. The current real rate of interest, as seen in the ten-year index-linked gilt market, is minus 1.1%. Even if real interest rates rise, as they probably will, with UK debt having an average maturity of about 16 years, it will only gradually raise the real interest paid on the government's debt. Its slowly rising cost is a minor element in our forward projections for the debt ratio.

One last canard: it is said that the Bank by buying long-dated gilts in exchange for cash and bank reserves on which it may pay interest has lowered the public sector's debt maturity. This is also nonsense. Bank reserves are money not debt; banks cannot swap them at the Bank except for cash. No interest needs to be paid on them, any more than it is paid on cash. In any case, we need to consider the debt ratio on the assumption that the Bank has sold off all its holdings of debt, and reversed QE, and with it brought bank reserves down to normal operating levels, as well as returning its gilt holdings to the private sector.

### The fallacy of the super-deduction

The Chancellor justifies his rise in corporation tax as a way to stimulate investment via his accompanying super-deduction. This is not a free market approach but an attempt to micro-manage the private sector via confiscatory intervention; first confiscate much of future profits, then offset this for investment in tangible capital by giving a rebate on today's spending. In this way, tangible investment

that would have happened naturally due to future profitability will still go ahead. But the problem is that all other business activity to raise profit is penalised: namely via intangible capital due to general innovation or via simply expanding the business via more employment. The Chancellor appeals to the lack of evidence that investment has surged in recent years as backing for his proposed interventionist super-deduction. It is not possible to inspect investment and draw such a conclusion: many factors are at work. In fact there is strong evidence that a free market approach to cutting taxes and regulation on entrepreneurs has been successful here in the decades since 1970, once you allow for all the shocks that have buffeted the economy over the period. We have estimated and tested a full model of the economy in which growth due to all relevant factors depends on tax and regulation; it matches the UK economy's behaviour well- the table of decadal growth below suggests why: growth surged in the 1980s as the Thatcher reforms took hold. As one side implication, it finds that the North responds more to a policy of cutting tax and regulation than the South- so contributing to levelling-up (see [http://carbsecon.com/wp/E2020\\_14.pdf](http://carbsecon.com/wp/E2020_14.pdf) to be published in Open Economies Review.). Hence it provides strong evidential support for a policy of not merely keeping taxes down but actually cutting them further.

**Table of UK growth by decades (e.g. 1970s=Q1 1970 to Q1 1980)**

| Decade | Growth rate |
|--------|-------------|
| 1970s  | 2.5         |
| 1980s  | 2.8         |
| 1990s  | 2.3         |
| 2000s  | 1.6         |
| 2010s  | 1.5         |

**Source: Fed of St Louis databank, FRED.**

### Conclusions

This notionally free market government has gone badly off the rails. But all is not lost. In the current leadership debate, Liz Truss proposes to restore a programme of supply-side reform that promises to get policy back on track. We must hope that she will win this important contest.