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Patrick Minford

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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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WHERE DOES UK GOVERNMENT POLICY GO NOW?

Patrick Minford

Introduction: how the Truss policies were holed by the market/Establishment consensus fed by BOE statements and actions

The story being peddled by the current consensus of policymakers and UK market economists is that the recent mini-budget drove the UK's credit-worthiness to terrible levels, due to fears of budgetary profligacy. Hence the UK budget needs to be balanced to avoid market fears of UK insolvency, putting it in the risk class of Italy. However, this reading of events gets the elements out of focus. The rates on UK gilt 5-year Credit Default Swaps did not move in recent months outside the range of French CDS rates in the past five years of 25-60 basis points; they never got close to the Italian range of 100-300 basis points. Yes, there was a fiscal credibility problem for reasons we discuss later and the CDS rate did worsen during October. However the main cause of the gilt rate surge was the shift in expectations of future BOE-set interest rates, something over which the BOE had control, which as we argue later places it at the centre of the policy implosion.

What mainly happened to raise gilt rates to 5% at one point was a rise in interest rate expectations due to a rise in expected inflation. The economists' consensus was that the mini-budget would stoke UK inflation and so necessitate higher interest rates. This view was also pushed by the Bank's chief Economist, Huw Pill, in a speech on Sept 28th. I explain below that these expectations were not well based, as commodity prices have turned and monetary conditions were already very tight. But it became the market's conventional wisdom which by pushing up gilt rates and mortgage rates made the Truss policies exceedingly unpopular with voters and so with Tory MPs; these also tightened monetary conditions excessively. There should have been a strong BOE QE response pushing gilt and mortgage swap rates down, signalling these expectations would not be implemented because of the implied over-tightening. But without this the policies imploded for lack of support. Thus in effect it was the BOE that pulled the plug on the Truss programme by permitting and even encouraging this market view to take hold.

Looking forward, the key implication of this account of events is that they do not justify a hairshirt avoidance of public borrowing: the UK's credit reputation remains strong and with monetary policy now projected to push interest rates not much above 3%, there is no risk more borrowing will raise expected interest rates given that inflation prospects are firmly for a decline. There is therefore no justification for scorched earth fiscal tightening on the grounds of 'the bond market', as the Sunak/Hunt narrative would have it.

Table 1: Summary of Forecast

	2018	2019	2020	2021	2022	2023	2024
GDP Growth ¹	1.3	1.4	-11.0	7.5	4.6	-0.2	2.1
Inflation CPI	2.4	1.7	1.0	2.5	8.9	5.0	3.2
Wage Growth	3.0	3.5	1.6	5.8	5.8	4.5	3.2
Survey Unemployment	4.1	3.8	4.5	4.5	3.6	3.5	2.8
Exchange Rate ²	78.6	78.3	78.2	81.5	79.4	78.1	77.9
3 Month Interest Rate	0.4	0.8	0.2	0.1	1.8	3.0	3.0
5 Year Interest Rate	1.0	0.6	0.1	0.4	2.3	3.1	3.0
Current Balance (£bn)	-87.8	-63.3	-67.5	-45.6	-97.2	-24.2	-14.7
PSBR (£bn)	39.3	64.3	312.5	133.3	72.3	45.5	26.8

¹Expenditure estimate at factor cost

²Sterling effective exchange rate, Bank of England Index (2005 = 100)

In short while the Truss government was too insensitive to the potential for market opinion to react negatively to its borrowing policies, the present government is going to the opposite extreme and looking far too sensitive in planning not to borrow at all in case market opinion pushes back. The inflation background is very different, with central banks around the world beginning to fear they may have overkilled their economies. Fiscal policies in the US and the EU are now supporting their economies in the face of sharp monetary tightness. The UK government also has scope to do the same without risking a backlash in expected higher interest rates.

Why the current policies of Hunt/Sunk are so wrong

The policies that are being wheeled out by Mr. Hunt and now backed by Rishi Sunak as the new PM, are woefully inappropriate for the UK economy in its current state. First, they will worsen the growing recession and secondly they will depress growth over the longer term.

When an economy is in recession, it makes sense for the government to inject demand into it to help revive it; if instead it insists on balancing its books, it will actually depress the economy further because in recession tax revenues fall and spending rises (eg on benefits). Furthermore it can depress it very seriously if as revenues fall, it tries to replace them with yet higher taxes- hence creating a 'doom loop' as rising tax rates push GDP and revenues lower, in turn raising tax rates further. It seems indeed that the Treasury pushed for 'extra taxes' to offset the fall in revenue induced by the recession its contractionary policies cause yet this thinking is precisely the cause of a doom loop.

That is the first deficiency in current policy: the government is raising taxes to balance the government books in a recession. Yet the government should help to stabilise the economy through its net spending. It can only do this if it borrows in the recession and pays the money back in good times when it will run surpluses for the same reason.

The second deficiency comes from raising key tax rates like Corporation Tax and our top marginal income taxes; these penalise entrepreneurial incentives and so reduce our international competitiveness as a place to do business.

There is a strong need to move to a reformed tax system that maximises growth (i.e. also the average citizen's welfare). This typically involves keeping tax rates down via borrowing for a period until the policies bear fruit in the form of higher growth. From that point the debt/GDP ratio will come down and pay off the borrowing.

This function of borrowing to enable the tax rate to remain constant in spite of temporary deficits is known as 'tax-smoothing' and the earlier policy of stabilising the economy as 'counter-cyclical borrowing'.

To ensure that the whole process does not cause excessive borrowing, one imposes a long term rule that the debt/GDP ratio trends downwards towards a sustainable long run level, such as 50%. It has been the operation of such longterm rules over two centuries that has underpinned the UK's strong credit status and low CDS scoring.

It will be said that Liz Truss' government tried to do this and failed, so we are compelled now to avoid borrowing to keep the 'bond markets' satisfied. But in fact the Truss government never set out its projected finances for the medium term in a way that showed it would satisfy its debt ratio aims. Had it done so, history would have been different. Furthermore, bond markets could have been kept calm by the BOE, as discussed above and further in Appendix 2 on 'What went wrong?'. The Sunak government does not have to balance the books in the short term; it can borrow, as all governments in practice do.

What debt ratio trajectory is implied by the likely new Hunt/Sunak policies, revealed on Nov 17? The OBR projections imply a sharp contraction of the fiscal balance, in order to avoid significant public borrowing; yet due to recession borrowing still rises. As a result the debt/GDP ratio rises from end-2023, and only starts to fall in 2026/27 as mandated by the new short term 'fiscal rules'. Combined with the anticipated raising of short term interest rates to 3.5% and the rise in long term rates to 4%, the economy will be severely squeezed by both fiscal and monetary policy, creating severe 'overkill'. This comes on top of rising tax rates on business and high income earners, which damage the supply-side and reduce competitiveness and growth prospects.

Counter-cyclical fiscal policy is sometimes dismissed by 'monetarists', of whom we are included, as 'Keynesian' interference with the economy. But we know from recent research on the economy's behaviour that a fiscal policy of this sort contributes helpfully to the overall stability of the economy when the central bank is pursuing an inflation target with monetary policy. We all (ourselves included) learnt this point the hard way after the Great Financial crisis when governments, having bailed out banks at great cost, decided they must then pursue 'austerity', leaving the stimulation of recovery to central banks on their own. That led to zero interest rates and massive money printing via huge bond purchases (known as Quantitative Easing, QE); this era of zero cost money produced terrible distortions in

financial markets, including pension funds that could not get decent safe returns, asset bubbles, and large numbers of unproductive 'zombie' firms surviving on low cost money. Had fiscal policy carried part of the burden, this could have been avoided. Now most governments around the world are rebalancing fiscal and monetary policy, with fiscal loosening and monetary tightening, killing off this zero interest rate world. This is a good thing but of course is a big source of market turbulence as it progresses, as people adjust back to a world of normal interest rates.

More generally, we know from simulations of our models of large modern economies like the US, the UK and the eurozone, that they behave better in response to the many diverse shocks to the economy when the counter-cyclical burden is shared between Treasuries and central banks. For the UK we find stability across output, inflation and interest rates is optimised with quite a strong fiscal response. This may indeed be Keynesian but it is implied by modern research on how our economies work. Keynes discovered this applied strongly in the Great Depression; we find it applied strongly in the Great Recession.

As for cutting taxes for the sake of tax reform, it is obvious that if you do not finance this by borrowing, you will never be able to do it as you could not allow the implied temporary deficit. So borrowing for 'tax-smoothing' is vital to allow the economy to have an efficient tax system. Nor does this hamper inflation-fighting since lower taxes increase supply and reduce wage demands.

Where then does all this leave us with the current Chancellor's agenda? The answer is strongly opposing it. Mr. Hunt risks worsening the recession rather badly with mistimed spending cuts and tax increases. He is also worsening our tax system in the form of rising corporation tax, in order to reduce short term borrowing.

But, you may say, is not this forced on him by the 'bond markets'? The answer is no, not if the arithmetic of debt solvency is properly set out in a logical way, with full arithmetic backing, showing that our debt ratio is in line to fall steadily in the long term. As we saw, when Mr. Kwarteng failed to do this, the UK's CDS rating worsened slightly. But with the right diligence it will remain at its current low level. We do not want to see the economies in which we invest ruined- rather the opposite; the better they do, the more secure our money.

Furthermore, current inflation prospects are firmly for a fall, while prospects for interest rates are for a peak between 3% and 4%. This will keep gilt and mortgage rates in this range.

Thus, to conclude, Mr. Hunt is taking the wrong lesson from our recent episode. He is threatening to produce a worse recession by raising taxes and to damage growth-supporting public services by 'cuts'. This cutting off of borrowing altogether will ironically worsen the public finances in the long term. Yes, he will keep the bond markets totally calm in the short run by eliminating borrowing but by trashing the

economy this policy wrecks the finances in the long run; he is throwing the baby out with the bathwater. We must hope that within the next year as inflation and interest rates come down to reasonable rates the government returns to the policies of lower taxes, solid public services and growth. In Appendix 1 we explain how even now he could raise more revenue without squeezing the economy by refusing to pay interest on money in the form of bank reserves.

This finally leaves the Bank and monetary policy. As discussed above, the Bank has managed to create a huge tightening of money by allowing, even encouraging, long term interest rates to rise in expectation of its intended raising of interest rates to eye-watering levels. This is occurring late in the day, when the world economy is already slowing sharply on extreme and rapid monetary tightening by most world central banks led by the Fed. Money supply growth has fallen to near zero in most countries, the UK included. This now looks like monetary overkill. With commodity prices now plunging and demand cratering, inflation next year is likely to fall to the region of 5% or less, here as elsewhere. The Bank now needs to relieve the monetary pressure, especially where it is greatest in the gilt market where rates are above 3%. The bank can do this by continuing to raise Bank Rate to around or a bit above 3% but using QE to reduce gilt rates towards this level, signalling it sees no need to raise them much further than this. This way it confirms its counter-inflationary intent while loosening the monetary vice currently throttling the economy.

Out of all this emerges another policy conclusion, that the Bank should cooperate in achieving government goals. Indeed that is what the Act says about its 'instrument independence': that it should use its instruments to pursue an inflation target and otherwise support the government's objectives for the economy.

This unhappy episode has illustrated painfully how chaos can be created when the government does not properly command the actions of its executive.

Monetary theory and its implications for the budget deficit- some important fiscal details that could save the Treasury a lot of money

There is an important detail about monetary theory that is being wrongly applied to the public accounts and is causing a massive increase in the public deficit. This concerns the payment of interest on bank reserves. Some central banks do this systematically paying the short term target 'bank rate' on bank reserves- among them are the BOE and the Fed. Others have paid zero or even negative interest rates on bank reserves- including the ECB and the Bank of Japan. The latter have been able to do so because bank reserves can only be exchanged for cash at the central bank. Cash is costly to hold due to storage costs. So banks are willing to get negative interest on their reserves rather than swap them for cash, even though cash carries zero interest.

Hence there is no compulsion for a central bank to pay interest on bank reserves which are swappable only for cash. They are money just like cash; and money is non-interest bearing. Indeed the attraction for the government/central bank to issue money rather than bonds is the saving of interest on money. This is known as 'seigniorage'- being the gain from being able to issue your own money.

In effect the decision to pay interest on bank reserves is equivalent to paying banks a windfall subsidy equal to the short term interest rate. The argument central banks use for this is that it incentivises each individual bank to keep holding its bank reserves rather than buying Treasury Bills with them. The banks as a group cannot reduce their bank reserves; if one bank buys a Tbill from a household for cash, the household will deposit the cash in its bank, which in turn will exchange it at the central bank for bank reserves, leaving total bank reserves the same. Nevertheless, individual banks could by arbitrage in the Tbill market drive T bill rates down to any lower rate on bank reserves; this is why the BOE pays Bank Rate on bank reserves.

But this is an expensive way for the public sector to control money because it means giving up seigniorage. There are much cheaper ways: for example interest can be paid only on a tranche of bank reserves above a certain level; it can also set this level as a compulsory reserve ratio, with no interest, paying interest on 'excess reserves' above it. Or indeed banks can simply be prohibited from holding more than a certain amount in Treasury Bills. We must remember that the banks are secured against bank runs by the Lender of Last Resort function of the BOE, of which bank reserves are a part; they need to cooperate with the Bank's other tasks. So a central bank has a large toolbox it can deploy to determine the money supply and interest rates in the economy. It does not need to sacrifice its seigniorage.

This seigniorage in total money value depends on the size of bank reserves. Currently it is quite enormous, owing to the massive QE operations the BOE has carried out in recent years. Bank reserves are currently £950 billion. As interest rates rise to 3%, the seigniorage on that is just under £30 billion. If rates rise to 4% within a year that will become nearly £40 billion, which the taxpayer is being deprived of and handed to the banks- a huge windfall subsidy.

Notice that the BOE gives all its 'profits' to the Treasury as it is wholly owned by the state. Hence in practice when the BOE pays the banks interest on reserves it is a reduction of the 'profit' it hands to the Treasury- so it comes out of public revenue in effect. There is another technical monetary detail that should detain us. The Treasury has agreed to indemnify the BOE for any capital losses it sustains on its QE purchases. Thus if the BOE buys a bond under QE then sells it at a loss later, the Treasury 'pays it' for the loss. Effectively, this loss shows up in the BOE's lower profit, which the Treasury now agrees to take without protest under this arrangement.

Notice however that this capital loss corresponds to a capital gain by the Treasury, whose liability the bond is. In effect as interest rates go up the value of the government's debt on the markets is lower- it makes a capital gain. So in no sense does this fall in profit cost the taxpayer anything. When you consolidate the accounts of the BOE with the government's there is no capital gain or loss- as noted by the OBR. Yet in the press comment this change in capital value of BOE bond holdings is often represented as a 'cost' to the Treasury. It is not.

There is more. Because the BOE holds around £900 billion in government bonds, the interest payments on this debt by the government are returned to it via BOE profits. The true interest payments of the public sector are those on privately held bonds only. When press reports are made of 'interest costs' to the public sector, they do not usually make this adjustment.

A final point concerns index-linked bond. Often it is suggested that the inflation-linked interest payment on these is an interest cost. However, this payment simply cancels out the fall in the debt's value due to inflation; so the 'interest cost minus the inflation devaluation' equals zero. On most of this debt the remaining interest (the 'real interest') is negative because it was issued during the long period since the financial crisis when real interest rates were negative.

Finally, we should understand that as interest rates rise they only gradually affect the amount of interest payments made because the average maturity of debt is about 16 years. This means that the payments only change when the debt expires and is rolled over with a new contract at the new market rates. Hence UK government interest payments move slowly in response to rising rates, contrary to some excitable press comment that rising interest rates plunge the finances into the red rapidly.

Meanwhile as inflation proceeds it destroys the real value of government debt and so also the debt/GDP ratio whose trend should be the focus of solvency.

The Autumn Statement projections do not satisfy long run conditions for the debt/GDP ratio and are not needed to conquer inflation

Today's budget has presented us with big tax rises and spending cuts in order to avoid a large 'fiscal hole' created by the need to have the debt/GDP ratio falling by 2026-27. These measures will worsen the recession and stymie growth. They are wrong and unnecessary.

The government must balance its books over the long run, as ours has always done for the past two centuries. But the words 'long run' here are vital. They mean that, looking ahead, the government's debt must always be reliably serviceable, so that it can be rolled over as needed. In practice we can test this by making long term projections, typically ten years ahead at least, to check that the debt/GDP

ratio is coming down to a level such as 50% where it poses no problem of sustainability.

Now turn to Thursday's plans to see its major error in assessing state solvency. Why has 2026/27 been picked as the year when the debt ratio must be falling? This pick is both too strong and too weak. Too strong because it is manifestly preventing the flexibility needed for the two functions- tax-smoothing and counter-cyclical policy-identified above. Tax rates essential to supporting growth, notably Corporation Tax, are being sacrificed to it. Also a bad looming recession which the government should mitigate will be on the contrary worsened by its pro-cyclical fiscal tightening.

So this budget will worsen the recession and damage growth. But this date pick is also too weak because it does not reassure us about long term debt sustainability. Indeed, because growth will be damaged the UK's long term debt/GDP ratio will be badly worsened. According to our Cardiff models growth will be reduced to zero, and then if anything like current spending plans are maintained, as will be needed for the most basic functions of the government to be carried out, then the debt/GDP ratio will spiral upwards towards dangerous levels- see Table 2 following. Such projections reveal the importance of growth not merely to our citizens' welfare and living standards but also to our government's financial health.

Table 2: Cardiff model projection of UK debt/GDP ratio, based on model prediction of zero long run real growth- the New post Statement baseline

	Nom PSBR (£bn)	Nom GDP (£bn)	Nom Pub Spend (£bn)	PSBR/GDP % ¹	Spend/GDP %	Nom Debt (£bn)	Debt Interest (£bn)	Debt/GDP %	Net Taxes (£bn)	Net Tax Rate%
2019/20	64.3	2316.4	514.6	2.8	22.2	1621.0	46.7	70.0	497.0	21.5
2020/21	312.5	2076.8	483.5	15.0	23.3	1933.5	39.9	93.1	210.9	10.2
2021/22	133.3	2421.9	481.2	5.5	19.9	2066.8	61.3	85.3	409.2	16.9
2022/23	72.3	2685.5	582.4	2.7	21.7	2139.1	60.6	79.7	570.7	21.3
2023/24	45.5	2800.8	603.7	1.6	21.6	2184.6	60.9	78.0	619.1	22.1
2024/25	26.8	2976.7	649.9	0.9	21.8	2211.4	61.1	74.3	684.2	23.0
2025/26	-31.7	3027.3	682.8	-1.0	22.6	2179.7	61.4	72.0	775.8	25.6
2026/27	12.7	3078.8	738.7	0.4	24.0	2192.4	61.6	71.2	787.7	25.6
2027/28	65.9	3131.1	803.8	2.1	25.7	2258.2	61.8	72.1	799.7	25.5
2028/29	124.1	3184.3	874.0	3.9	27.4	2382.4	62.1	74.8	811.9	25.5
2029/30	188.3	3238.5	950.2	5.8	29.3	2570.7	62.6	79.4	824.4	25.5
2030/31	258.8	3293.5	1032.6	7.9	31.4	2829.6	63.3	85.9	837.0	25.4
2031/32	336.1	3349.5	1121.7	10.0	33.5	3165.7	64.4	94.5	849.9	25.4
2032/33	421.1	3406.5	1218.1	12.4	35.8	3586.8	65.9	105.3	863.0	25.3
2033/34	514.2	3464.4	1322.5	14.8	38.2	4101.0	68.0	118.4	876.3	25.3
2034/35	616.3	3523.3	1435.4	17.5	40.7	4717.3	70.7	133.9	889.8	25.3

¹GDP at market prices (Financial Year)

Table 3: Cardiff model projection of UK debt/GDP ratio, based on model prediction of 2% long run real growth with no rises in Corporation Tax or top marginal income tax rates

	Nom PSBR (£bn)	Nom GDP (£bn)	Nom Pub Spend (£bn)	PSBR/GDP %	Spend/GDP %	Nom Debt (£bn)	Debt Interest (£bn)	Debt/GDP %	Net Taxes (£bn)	Net Tax Rate%
2019/20	56.9	2196.3	481.4	2.6	21.9	1621.0	46.7	73.8	471.2	21.5
2020/21	309.4	2007.9	473.4	15.4	23.6	1930.4	39.9	96.1	203.9	10.2
2021/22	144.1	2311.2	473.3	6.2	20.5	2074.5	61.3	89.8	390.5	16.9
2022/23	125.5	2599.6	617.3	4.8	23.7	2200.0	60.6	84.6	552.5	21.3
2023/24	124.1	2759.2	673.0	4.5	24.4	2324.1	61.0	84.2	609.9	22.1
2024/25	30.8	2943.8	646.0	1.0	21.9	2354.9	61.4	80.0	676.6	23.0
2025/26	4.7	3061.6	674.1	0.2	22.0	2359.6	61.9	77.1	731.3	23.9
2026/27	0.2	3184.0	729.2	0.0	22.9	2359.8	62.3	74.1	791.3	24.9
2027/28	0.2	3311.4	793.3	0.0	24.0	2360.0	62.8	71.3	855.9	25.9
2028/29	0.0	3443.8	862.6	0.0	25.0	2360.0	63.2	68.5	925.7	26.9
2029/30	0.0	3581.6	937.7	0.0	26.2	2360.0	63.5	65.9	1001.3	28.0
2030/31	0.0	3724.8	1019.1	0.0	27.4	2360.0	63.9	63.4	1083.0	29.1
2031/32	0.0	3873.8	1107.1	0.0	28.6	2360.0	64.3	60.9	1171.4	30.3
2032/33	0.0	4028.8	1202.4	0.0	29.8	2360.0	64.6	58.6	1266.9	31.5
2033/34	0.0	4189.9	1305.4	0.0	31.2	2360.0	64.9	56.3	1370.3	32.7
2034/35	0.0	4357.5	1416.9	0.0	32.5	2360.0	65.2	54.2	1482.1	34.0

¹GDP at market prices (Financial Year)

If by contrast the growth-damaging tax rises in this Statement were removed, our Cardiff Model predicts 2% real growth and the debt/GDP trend is entirely healthy, falling to around 50% by the mid-2030s- Table 3, taken from our forecast Chapter 2 below.

Finally, we must repudiate another false basis for this Statement: that the swingeing tax rises and spending cuts are needed to ‘grip inflation’, to quote a favourite phrase of Mr. Sunak. This is quite wrong. The inflation we are currently still facing is the result of large commodity supply shocks that are now being steadily reversed, as supply bottlenecks are eased. The monetary causes of inflation- the excessive

money printing during Covid- have now been not just reversed but pushed into monetary overkill, with annual money supply growth now close to zero across the US, the EU and the UK. Forecasts of inflation for 2023 are now for about 5% in most developed economies. Thursday’s budget will make no difference to commodity prices. But it may worsen wage inflation by reducing people’s take home pay. So in this dimension too it is a mistake.

In conclusion, the Autumn Statement will cause major damage- worsening recession, damaging growth and even raising inflationary wage costs. It should be reversed as soon as possible.

Revisiting the short run effects of Brexit on trade, investment and GDP

There has been a lot of recent comment in the media recently to the effect that Brexit has damaged trade and the economy- for example, from LSE’s Dr. Swati Dhingra in oral evidence to the Commons Treasury Committee¹. Accordingly, we have looked for any such effect in UK data; it should show up as a statistically significant effect of the date of Brexit. We did this previously in the July 2022 Quarterly Bulletin, pp 9-11; here we update the data from 2005 to the latest for 2022. Of course the data has notoriously been highly volatile due to major shocks such as the financial crisis and Covid. This makes a detectable Brexit effect unlikely. Not surprisingly, we cannot find any significant effect of Brexit in any of these regressions. The Brexit effects ‘found’ by

¹ <https://committees.parliament.uk/committee/158/treasury-committee/publications/oral-evidence/> -Nov16

media commentators are therefore not soundly estimated and in the eye of these observers only.

As we have said in previous publications (e.g. Minford and Meenagh, 2020, After Brexit- what next? Edward Elgar) the effects of Brexit will come in over the long term as free trade agreements are completed and a new regulative environment established. In the short run we expect some minor disruption as existing relationships with the EU are remade

under UK independence; ‘minor’ because the Trade And Cooperation Agreement is intended by both the UK and the EU to maintain cooperation and avoid new trade barriers.

Variable definitions:

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, SA	ONS
Import EU	Imports trade goods & services EU, CP, SA	ONS
Import non-EU	Imports trade goods & services Non. EU, CP, SA	ONS
Independent Variable		
RXR	Effective Exchange rate index	BoE
UK GDP	GDP, CVM, SA	ONS
EU GDP	Millions of Chained 2010 Euros, Seasonally Adjusted	Eurostat
World import	Import trade in goods & services, 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	-

$$\ln(\text{Export EU}) = C + \beta_1 \ln(\text{EU GDP}) + \beta_2 \ln(\text{RXR}) + \beta_3 \text{Brexit departure dummy} + \beta_4 \text{Covid dummy} + \beta_5 \text{Covid recovery dummy}$$

$$\ln(\text{Export nonEU}) = C + \beta_1 \ln(\text{World import}) + \beta_2 \ln(\text{RXR}) + \beta_3 \text{Brexit departure dummy} + \beta_4 \text{Covid dummy} + \beta_5 \text{Covid recovery dummy}$$

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

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

Dependent Variable	Definition	Source
UK investment	Total gross fixed capital formation, CVM, SA	ONS
UK GDP	Gross domestic product, CVM, SA	ONS
Independent Variable		
OECD Investment	Total gross fixed capital formation, CVM, fixed PPP, SA	OECD
OECD GDP	Gross domestic product, CVM, fixed PPP, SA	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	-

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

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

Table 4 CP/deflator measure, OLS estimate results, 2005Q1 to 2022Q2,

	Export EU	Export non-EU	Import EU	Import non-EU
EU GDP	1.158* (0.197)			
Word import		0.612* (0.048)		
UK GDP			1.987* (0.113)	1.692* (0.119)
RXR	-0.105 (0.099)	-0.438* (0.102)	-0.835* (0.077)	-0.832* (0.082)
Brexit departure	0.028 (0.065)	0.097 (0.063)	-0.069 (0.055)	-0.001 (0.058)
COVID	-0.134 (0.075)	-0.076 (0.071)	0.055 (0.064)	0.039 (0.068)
COVID recovery	-0.09 (0.074)	-0.129* (0.067)	-0.049 (0.058)	-0.033 (0.062)

Note: *significant at the 5% level; Constant is not reported but included in the regression

Table 5 Current price measure, OLS estimate results, 2005Q1 to 2022Q2,

	Export EU	Export non-EU	Import EU	Import non-EU
EU GDP	1.104* (0.065)			
Word import		0.983* (0.037)		
UK GDP			1.201* (0.037)	1.027* (0.051)
RXR	-0.243* (0.108)	-0.642* (0.077)	-0.349* (0.054)	-0.414* (0.072)
Brexit departure	0.026 (0.065)	-0.032 (0.047)	-0.008 (0.033)	0.052 (0.044)
COVID	-0.075 (0.073)	-0.017 (0.054)	-0.092* (0.037)	-0.088 (0.049)
COVID recovery	-0.112 (0.073)	-0.157* (0.051)	-0.126* (0.035)	-0.098* (0.046)

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

Table 6 Investment GDP ratio, 2005Q1 to 2022Q

	UK Investment/GDP
OECD Investment/GDP	0.534* (0.154)
Brexit departure	0.007 (0.008)
COVID	-0.002 (0.009)
COVID recovery	-0.002 (0.008)

Table 7 GDP regression, CVM, 2005Q1 to 2022Q2

	UK GDP
OECD GDP	0.879* (0.049)
Brexit departure	0.032 (0.027)
COVID	-0.034 (0.032)
COVID recovery	0.003 (0.030)

Figure 1 UK Export, EU and Non.EU

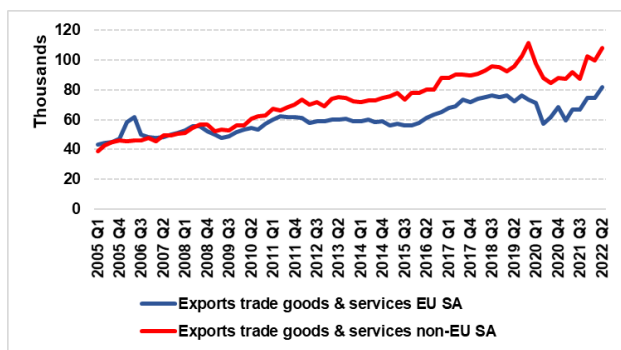


Figure 3 Investment-output ratio, UK and OECD

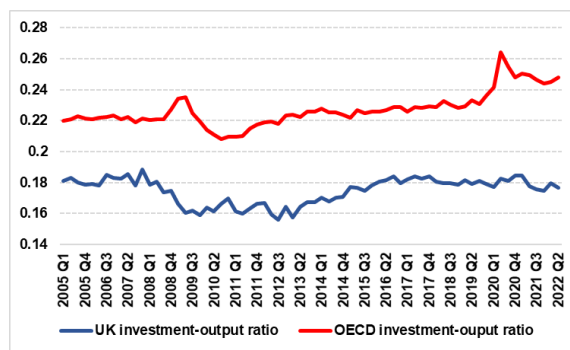


Figure 2 UK Import, EU and Non.EU

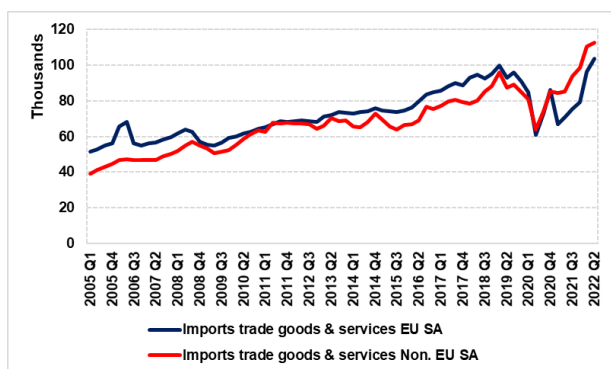
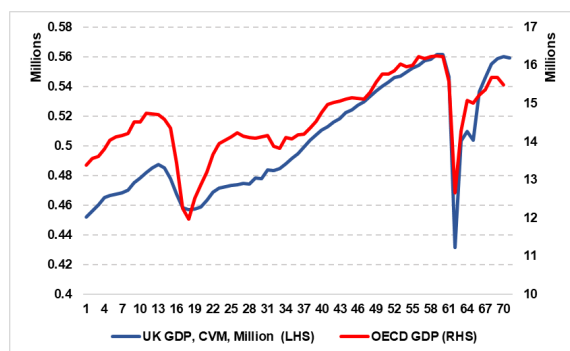


Figure 4 Output, CVM measure UK and OECD



THE UK ECONOMY

Vo Phuong Mai Le

Economic activity shrank in Q3. Real output fell 0.2% after rising 0.2% in Q2. The reduction was driven by a contraction and slower growth across all economic sectors. The production sector's output fell 1.5% (following -0.2% in Q2), while construction and services registered 0.6% and 0% growth (compared to 1.1% and 0.2% in Q2 respectively). On the expenditure side, the contraction was driven mainly by weak domestic demand with decreases in private consumption (-0.5%, compared to 0.1% in Q2) and investment (-3.4%, after -1.2% in Q2). This was partly offset by a strong net trade expansion due to the weaker pound sterling, with growth in exports of 8.0% (up from 3.6% in Q2) and fall in imports of 3.2% (compared to -1.5% in Q2).

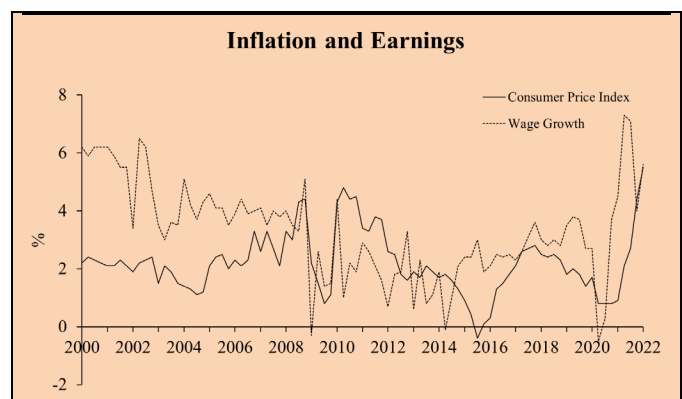
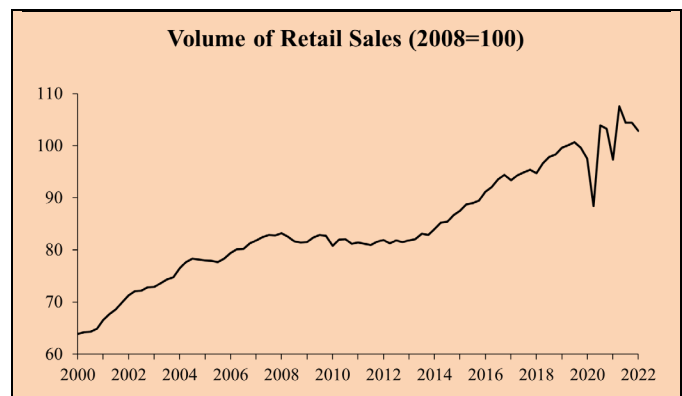
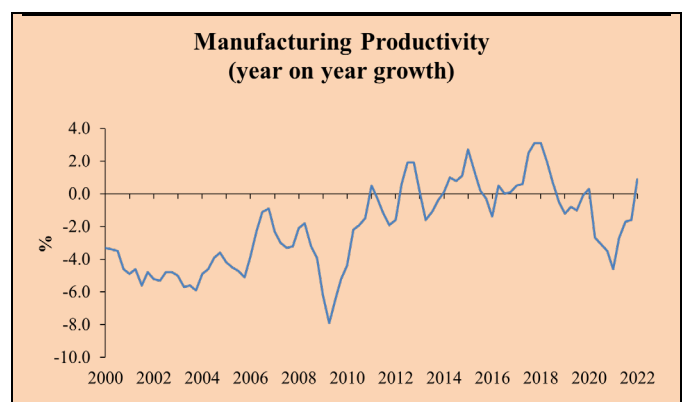
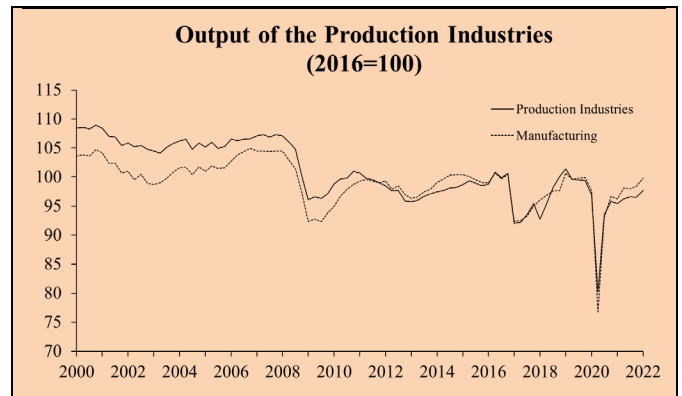
Labour market, costs and prices

Despite the economic contraction, the labour market remained robust, although there are signs of cooling down. According to the Office of National Statistics, the unemployment rate was 3.5% during the June-August period, down from 3.8% quarter to quarter. However, this drop was driven by higher inactivity, as the employment rate for June-August period of 75.5% was 0.3% lower than the previous quarter. The number of vacancies in Q3 fell by 46,000 on quarter to 1,246,000. This is the largest quarterly fall in vacancies since June-August 2020. Nominal wage growth was 6% in June-August, up from 5.5% in the previous 3 months, but well below the inflation rate.

Annual CPI has continued to surge. It rose 11.1% in October, up from 10.1% in September. High inflation is driven mainly by a higher pace increase in food prices (16.4%, up from 14.6% in September), housing (11.7% after 9.3% in September), restaurants and hotels (9.6%, up from 9.7% in September) and furniture and household goods (10.6%, from 10.8% in September). Core inflation- excluding food and energy- stayed at 6.5% in October, possibly marking its peak, as commodity prices fall back from their highs. Inflation is expected to remain over the 10% rate in the near term.

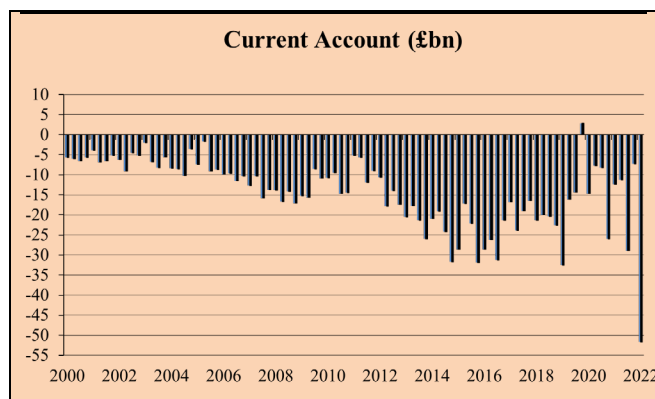
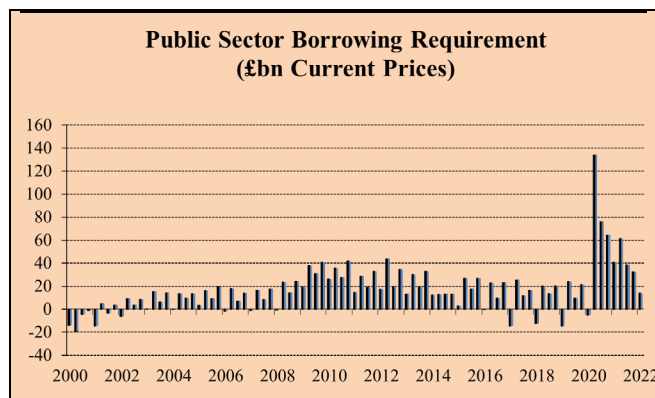
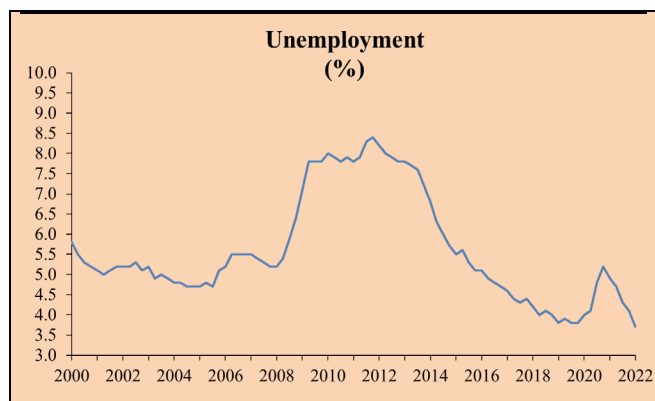
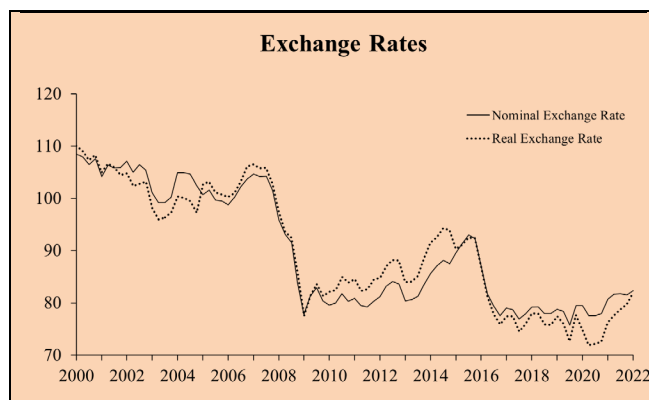
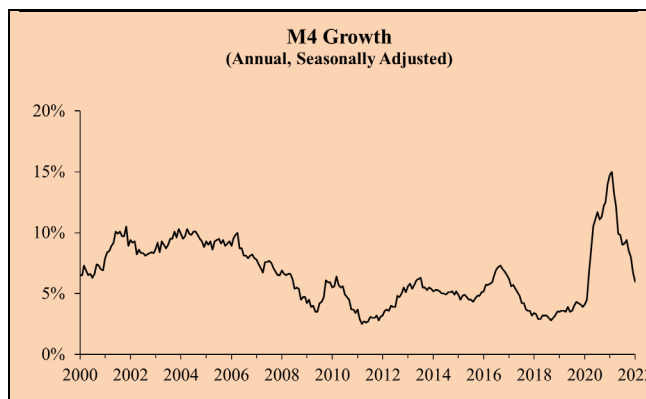
Fiscal and Monetary Developments

Looking ahead, the economy is expected to contract further in Q4 according to the latest data and surveys. The PMI Composite Output Index was 47.2 in October (down from 49.1 in September). This downturn is driven by a steep fall in output of all sectors. Service sector output records the fastest decline since January 2021 with the Services PMI Business Activity Index of 47.5 (down from 50.0 in September). The Manufacturing PMI was at 45.8, down from 48.4 in September. Consumer confidence of -47 (following September's -49) is persistently below the 0 threshold, indicating that consumers were pessimistic due to uncertainty induced by high energy and food prices, high



mortgage rates and the prospect of future tax rises and austerity measures.

Given the inflation outlook, at the November meeting the Bank of England tightened its monetary policy further. It raised Bank rate from 2.25% to 3%.



UK FORECAST DETAIL

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

	Inflation % ¹ (CPI)	Short Dated (5 Year) Interest Rates	3 Month Int. Rates	Nominal Exchange Rate (2005=100) ²	Real Exchange Rate ³	Real 3 Month Int. Rates % ⁴	Inflation (RPIX)	Real Short Dated Rate of Interest ⁵
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	-6.3	4.1	-5.7
2022	8.9	2.3	1.8	79.4	82.4	-5.3	11.4	-4.8
2023	5.0	3.1	3.0	78.1	83.6	-0.6	8.2	-0.5
2024	3.2	3.0	3.0	77.9	85.2	0.6	4.9	0.6
2019:1	1.8	0.9	0.9	79.0	75.4	-0.8	2.4	-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	1.4	-3.1
2021:2	2.1	0.9	0.1	81.7	77.6	-5.0	3.4	-4.2
2021:3	2.7	0.7	0.1	81.8	78.7	-6.5	4.5	-5.9
2021:4	4.4	0.9	0.2	81.5	79.7	-7.5	6.9	-6.8
2022:1	6.2	1.4	0.8	81.7	81.9	-8.2	8.4	-7.6
2022:2	9.2	2.1	1.4	79.3	81.8	-6.6	11.5	-5.9
2022:3	10.1	2.8	2.0	77.9	81.7	-4.5	12.4	-3.7
2022:4	10.1	3.0	3.0	78.8	84.1	-2.0	13.1	-2.0
2023:1	6.5	3.0	3.0	77.7	81.1	-1.2	11.0	-1.2
2023:2	5.4	3.1	3.0	77.5	82.6	-0.7	9.0	-0.6
2023:3	4.0	3.2	3.0	77.9	83.7	-0.4	6.4	-0.2
2023:4	4.0	3.2	3.0	79.2	87.0	-0.2	6.0	0.0
2024:1	3.5	3.0	3.0	77.9	83.5	0.2	5.5	0.2
2024:2	3.2	3.0	3.0	77.3	84.3	0.5	5.0	0.5
2024:3	3.0	3.0	3.0	77.3	84.5	0.8	4.6	0.8
2024:4	3.0	3.0	3.0	79.1	88.3	1.0	4.6	1.0

¹ Consumer's Expenditure Deflator

² Sterling Effective Exchange Rate Bank of England

³ Ratio of UK to other OECD consumer prices adjusted for nominal exchange rate

⁴ Treasury Bill Rate less one year forecast of inflation

⁵ Short Dated 5 Year Interest Rate less average of predicted 5 year ahead inflation rate

Labour Market and Supply Factors (Seasonally Adjusted)

	Average Earnings (1990=100) ¹	Wage Growth ²	Survey Unemployment Percent	Millions	Real Wage Rate ³ (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	314.5	5.8	3.6	1.0	151.0
2023	327.5	4.5	3.5	0.9	149.6
2024	338.9	3.2	2.8	0.7	150.0
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	307.5	6.2	3.8	1.1	150.7
2022:3	315.5	5.8	3.7	0.9	149.8
2022:4	317.2	5.8	3.7	0.9	147.8
2023:1	323.9	5.0	3.8	1.0	151.5
2023:2	321.0	4.4	3.6	1.0	149.2
2023:3	329.3	4.4	3.4	0.9	150.4
2023:4	329.9	4.0	3.2	0.9	147.4
2024:1	335.9	3.7	2.9	0.8	151.4
2024:2	331.3	3.2	2.8	0.7	150.0
2024:3	339.2	3.0	2.8	0.7	150.3
2024:4	339.8	3.0	2.8	0.7	148.5

¹ Whole Economy

² Average Earnings

³ Wage rate deflated by CPI

Estimates and Projections of the Gross Domestic Product¹ (£ Million 1990 Prices)

	Expenditure Index	£ Million '90 prices	Non-Durable Consumption ²	Private Sector Gross Investment Expenditure ³	Public Authority Expenditure ⁴	Net Exports ⁵	AFC
2019	167.8	803514.3	475369.3	308458.5	209136.4	-70959.7	118490.2
2020	149.3	715006.3	427575.8	246057.9	199232.3	-33095.4	124764.3
2021	160.5	768793.3	450341.3	280156.7	208540.0	-36924.4	133320.2
2022	167.9	803906.7	473783.5	275003.3	218570.5	-23805.2	139645.1
2023	167.5	802137.7	475227.7	259739.4	225319.8	-18605.7	139543.5
2024	171.0	818787.7	489583.1	255476.5	232155.8	-15890.2	142537.6
2019/18	1.4		0.3	3.1	3.0		3.0
2020/19	-11.0		-10.0	-20.8	-4.8		4.9
2021/20	7.5		6.4	16.8	5.2		7.2
2022/21	4.6		5.4	-1.0	4.8		4.7
2023/22	-0.2		0.3	-5.6	3.1		-0.1
2024/23	2.1		3.0	-1.5	3.0		2.7
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	164.1	196432.5	118032.8	72147.1	51656.8	-11632.2	33772.0
2020:2	129.3	154802.4	91565.8	47009.3	43743.5	429.6	27945.8
2020:3	150.4	180031.9	110000.6	58261.5	50863.3	-8224.8	30868.7
2020:4	152.9	183091.7	108001.6	67548.9	52999.1	-13722.4	31735.5
2021:1	151.5	181382.2	104673.5	64909.8	51080.6	-7817.8	31463.9
2021:2	160.8	192546.3	112096.6	63123.7	51382.5	-662.5	33394.0
2021:3	163.2	195423.4	116099.6	74733.3	52897.8	-14444.1	33863.2
2021:4	166.6	199441.4	117471.6	77389.9	53179.1	-14000.1	34599.1
2022:1	168.0	201169.5	118189.6	73166.3	53945.4	-9205.0	34926.8
2022:2	167.9	201024.3	118323.4	65976.9	54465.5	-2828.3	34913.2
2022:3	167.8	200923.2	118433.8	68620.1	54874.0	-6098.9	34905.8
2022:4	167.7	200789.7	118836.6	67240.0	55285.5	-5673.1	34899.3
2023:1	167.5	200544.9	118824.7	72117.9	55700.2	-11225.5	34872.4
2023:2	167.3	200293.2	118812.9	62928.0	56117.9	-2725.5	34840.1
2023:3	167.5	200534.2	118801.0	62334.6	56538.8	-2249.0	34891.2
2023:4	167.7	200765.4	118789.1	62358.9	56962.9	-2405.7	34939.8
2024:1	168.4	201620.4	120214.6	68758.7	57390.1	-9648.0	35095.0
2024:2	170.2	203747.3	121657.1	62191.5	57820.5	-2452.9	35468.9
2024:3	171.8	205713.1	123117.0	61979.5	58254.2	-1824.1	35813.5
2024:4	173.5	207706.9	124594.4	62546.8	58691.1	-1965.2	36160.2

¹ GDP at factor cost. Expenditure measure; seasonally adjusted

² Consumers expenditure less expenditure on durables and housing

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

⁴ General government current and capital expenditure including stock building

⁵ Exports of goods and services less imports of goods and services

Financial Forecast

	PSBR/GDP % ¹	GDP1 (£bn)	PSBR (£bn) Financial Year	Current Account (£ bn)
2019	2.8	2316.4	64.3	-63.3
2020	15.7	2076.8	312.5	-67.5
2021	5.6	2421.9	133.3	-45.6
2022	4.7	2685.5	72.3	-97.2
2023	4.5	2800.8	45.5	-24.2
2024	0.9	2976.7	26.8	-14.7
2020:1	-1.5	567.2	-8.5	-34.4
2020:2	4.1	563.7	23.3	-15.5
2020:3	2.3	574.7	13.5	-14.5
2020:4	4.0	598.6	23.9	1.0
2021:1	0.6	579.4	3.6	-12.3
2021:2	29.0	461.6	133.8	-5.4
2021:3	13.8	533.0	73.3	-14.0
2021:4	11.6	541.9	63.0	-35.8
2022:1	7.8	540.3	42.3	-12.3
2022:2	10.4	576.6	60.1	-6.9
2022:3	6.2	595.3	37.2	-23.1
2022:4	4.7	616.9	29.1	-3.2
2023:1	1.1	633.2	6.8	-43.9
2023:2	6.4	650.8	41.8	-33.8
2023:3	1.6	667.8	10.7	-10.1
2023:4	1.5	693.3	11.2	-9.5
2024:1	1.3	673.6	8.6	-9.6
2024:2	2.0	684.4	14.0	-9.8
2024:3	1.7	693.7	11.8	-3.3
2024:4	1.4	721.5	10.2	-1.5

¹GDP at market prices (Financial Year)

Public Finance Forecast-New post Truss baseline

	Nom PSBR (£bn)	Nom GDP (£bn)	Nom Pub Spend (£bn)	PSBR/GDP % ¹	Spend/GDP %	Nom Debt (£bn)	Debt Interest (£bn)	Debt/GDP %	Net Taxes (£bn)	Net Tax Rate%
2019/20	64.3	2316.4	514.6	2.8	22.2	1621.0	46.7	70.0	497.0	21.5
2020/21	312.5	2076.8	483.5	15.0	23.3	1933.5	39.9	93.1	210.9	10.2
2021/22	133.3	2421.9	481.2	5.5	19.9	2066.8	61.3	85.3	409.2	16.9
2022/23	72.3	2685.5	582.4	2.7	21.7	2139.1	60.6	79.7	570.7	21.3
2023/24	45.5	2800.8	603.7	1.6	21.6	2184.6	60.9	78.0	619.1	22.1
2024/25	26.8	2976.7	649.9	0.9	21.8	2211.4	61.1	74.3	684.2	23.0
2025/26	-31.7	3027.3	682.8	-1.0	22.6	2179.7	61.4	72.0	775.8	25.6
2026/27	12.7	3078.8	738.7	0.4	24.0	2192.4	61.6	71.2	787.7	25.6
2027/28	65.9	3131.1	803.8	2.1	25.7	2258.2	61.8	72.1	799.7	25.5
2028/29	124.1	3184.3	874.0	3.9	27.4	2382.4	62.1	74.8	811.9	25.5
2029/30	188.3	3238.5	950.2	5.8	29.3	2570.7	62.6	79.4	824.4	25.5
2030/31	258.8	3293.5	1032.6	7.9	31.4	2829.6	63.3	85.9	837.0	25.4
2031/32	336.1	3349.5	1121.7	10.0	33.5	3165.7	64.4	94.5	849.9	25.4
2032/33	421.1	3406.5	1218.1	12.4	35.8	3586.8	65.9	105.3	863.0	25.3
2033/34	514.2	3464.4	1322.5	14.8	38.2	4101.0	68.0	118.4	876.3	25.3
2034/35	616.3	3523.3	1435.4	17.5	40.7	4717.3	70.7	133.9	889.8	25.3

¹GDP at market prices (Financial Year)

THE WORLD ECONOMY

US

Following the economic contraction in the first half of 2022, growth recovery had returned in Q3, although it remained weak. Real GDP rose 0.65% in Q3, up from -0.15% in Q2. The expansion reflected increased private consumption (0.35%, after 0.5% in Q2) and net trade (as exports rose 3.6%, after 3.45% in Q2 and imports fell 1.7%, after rising 0.55% in Q2). These were partly offset by a decrease in investment (-2.1%, following -3.5% in Q2).

Labour market conditions remained strong, although they have cooled down. Total nonfarm payrolls increased by 261,000 in October, down from 315,000 in September, following a sharp fall in vacancies (down by 0.45 million from July to 10.7 million at end September). The unemployment rate was 3.7%, up from 3.5% in September. October average hourly earnings increased 4.7% from a year earlier, following a 5% rise in September.

The annual consumer price inflation rate eased to 7.7% in October, down from 8.2% in September. The slowdown was driven by a slower growth pace in energy prices (17.6%, down from 19.8% in September), food prices (10.9%, after 11.2% in September) and used cars and trucks (2%, after 7.2% in September). Core inflation, excluding food and energy, rose 6.3%, down from 6.6% in September.

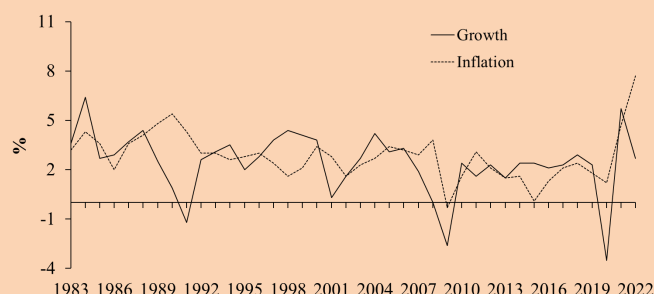
According to the recent data and surveys, GDP growth is expected to remain weak due to inflation uncertainty and a weaker global economic outlook. The private sector's output continued to decline at the start of Q4. The Flash PMI Composite Output Index was at 47.3 in October, down from 49.5 in September. Business activity fell further with the Flash Services Business Activity index at 46.6 (down from 49.3 in September). On the other hand, the manufacturing sector rose for the second month. The Flash Manufacturing Output Index was 50.7, following September's 50.6.

Given the inflation situation, the Federal Reserve decided to tighten monetary policy further. It raised the target range for the federal funds rate to 3.75-4%. In addition, it decided to continue reducing its holdings of Treasury securities, agency debt and agency mortgage-backed securities.

Japan

The economic recovery has halted due to the COVID restrictions during the summer and uncertainty from price increases. Real GDP fell 0.3% in Q3, after a strong growth of 1.1% in Q2. The downturn was driven by net trade. It subtracted 0.7 percentage points from the quarterly growth (after 0.2% in Q2), as imports growth surged 5.2% (after 0.8% in Q2) and exports rose 1.9% (after 1.8% in Q2). In addition, although domestic demand grew, its growth was at a slower pace across all its components - private demand

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



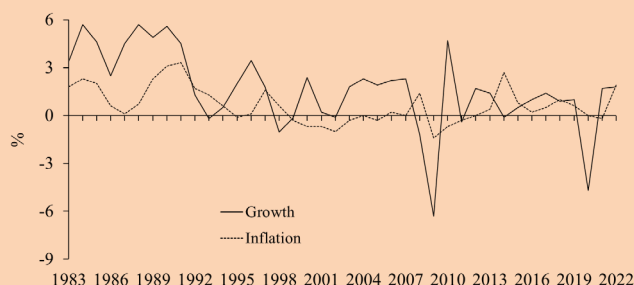
US

	2019	2020	2021	2022	2023	2024
Real GDP Growth (% p.a.)	2.2	-2.8	5.9	1.7	0.2	1.6
Inflation (% p.a.)	1.8	1.2	4.7	8.0	3.9	2.4
Real Short Int. Rate	0.3	-4.6	-7.1	-1.6	0.2	0.6
Nominal Short Int. Rate	1.5	0.4	0.1	2.2	3.5	3.0
Real Long Int. Rate	-1.8	-3.1	-2.2	1.2	1.2	1.0
Nominal Long Int. Rate	1.9	0.9	1.6	3.8	3.5	3.3
Real Ex. Rate (2000=100) ¹	93.5	96.3	97.6	95.5	98.5	97.0
Nominal Ex. Rate ²	117.1	118.7	116.1	128.3	128.0	128.5

¹The 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.

² 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

	2019	2020	2021	2022	2023	2024
Real GDP Growth (% p.a.)	-0.4	-4.6	1.7	1.5	1.5	1.2
Inflation (% p.a.)	0.5	0.0	-0.2	2.2	1.6	0.7
Real Short Int. Rate	0.1	0.3	-2.9	-0.9	-0.6	-0.8
Nominal Short Int. Rate	0.1	0.1	0.1	0.1	0.1	0.1
Real Long Int. Rate	-0.6	-0.8	-1.1	-0.8	-0.5	-0.5
Nominal Long Int. Rate	0.0	0.0	0.1	0.2	0.3	0.4
Real Ex. Rate (2000=100) ¹	77.0	77.8	71.0	59.9	59.2	59.3
Nominal Ex. Rate	109.10	106.60	110.45	133.10	136.20	137.80

¹The 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.

rose 0.4% (down from 1.0% in Q2) and public demand rose 0.2% (down from 0.8% in Q2). at a slower pace across all its components - private demand rose 0.4% (down from 1.0% in Q2) and public demand rose 0.2% (down from 0.8% in Q2).

According to the recent data and surveys, signals for the Q4 economic prospects are mixed. The Flash Composite Output Index was 51.7 in October, up from 51.0 in September, indicating a further rise in private sector output in October. Within this, the services sector continues to expand (with the Services Business activity Index at 53.0 in October vs. 52.2 in September), while manufacturing contracted, but at a slower pace, with the Manufacturing Output Index at 48.7 vs September's 48.3. Industrial production declined 1.6% month-on-month in October, after a 3.4% growth in September. The consumer confidence index dropped to 29.9 in October (down from 30.8 in September); this is the lowest level since August 2020, putting private consumption at a low ebb.

Annual consumer price inflation remained unchanged at 3.0% in September, its highest level since September 2014. The main drivers are high food prices (4.2%, after 4.7% in August), fuel, light, and water charges (14.9%, after 15.6%), electricity (21.5%, unchanged from August), gas (19.4%, after 20.1%) and a weaker yen. Core inflation, excluding food and energy, also picked up to 3.0% in September, from August's 2.0%. Inflation expectations rose for both firms and households.

Assessing the inflation and economic outlook, in the October meeting the Bank of Japan decided to maintain its accommodative monetary policy stance aiming to achieve the inflation target of 2%. 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. This loose monetary policy has driven the yen down against the US dollar, with a year-on-year depreciation of 23.6% to October.

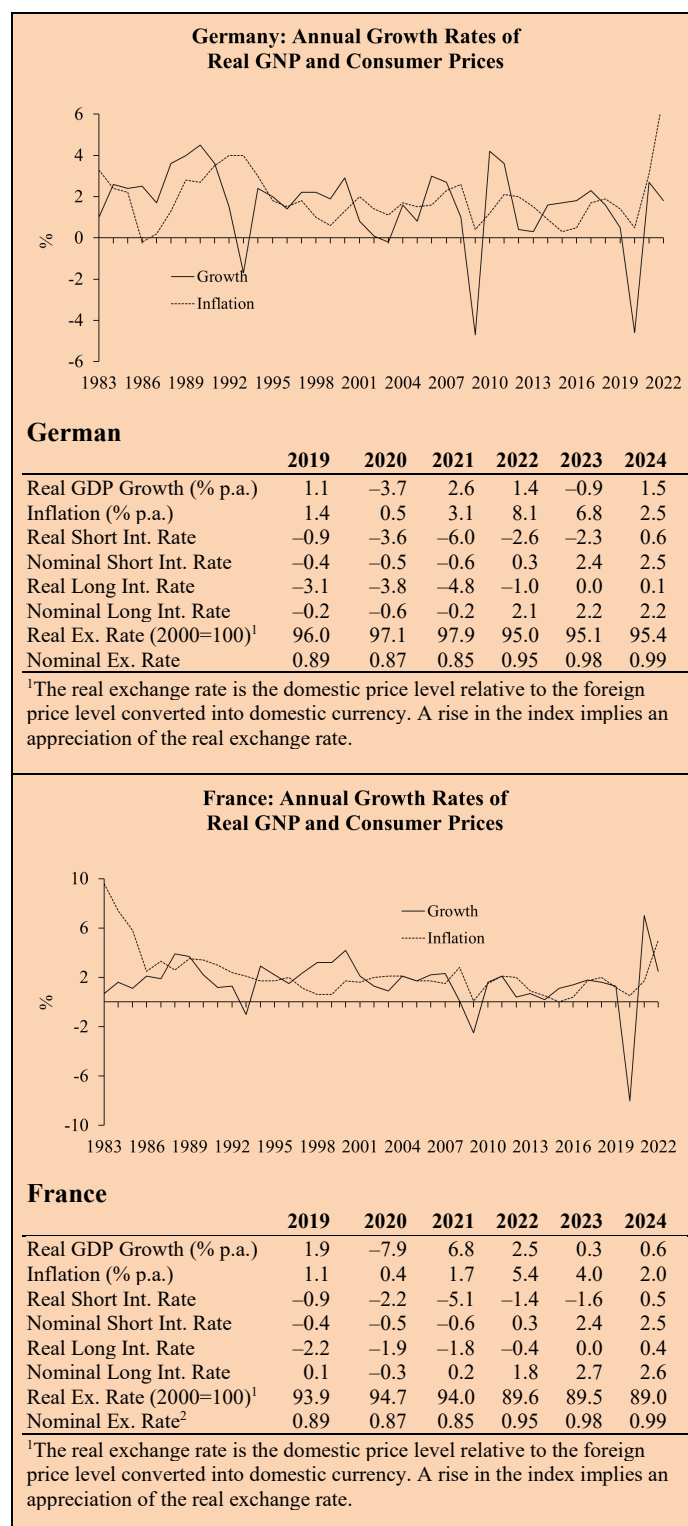
Germany

The economy showed its resilience and expanded. Real GDP rose 0.3%, after 0.1% in Q2. However, according to the recent data and surveys, the economic prospects for Q4 are gloomy. The private sector contracted further in October. The Flash PMI Composite Output Index fell to 44.1, from September 45.7. This was the lowest reading since the initial Covid shutdown in 2020. The downturn happened across all sectors. Manufacturing shrank at the fastest pace for 29 months (the Manufacturing output PMI fell to 42.5 from September's 47.0). Services activity continued to fall too; its PMI activity index fell to 44.9 from 45 in September. The Ifo Business Climate indicator was 84.3 in October (down from 84.4 in September, below the 100-threshold for growth). The GfK consumer climate index is -41.9 in November, up from the lowest level ever of -42.5 in

France

The economy continued to expand, but at a slower pace. Real GDP rose 0.2% in Q3, after 0.5% in Q2. The growth was driven by fixed investment (1.3%, up from 0.4% in Q2) and

September, indicating that consumers expect the German economy to enter recession.

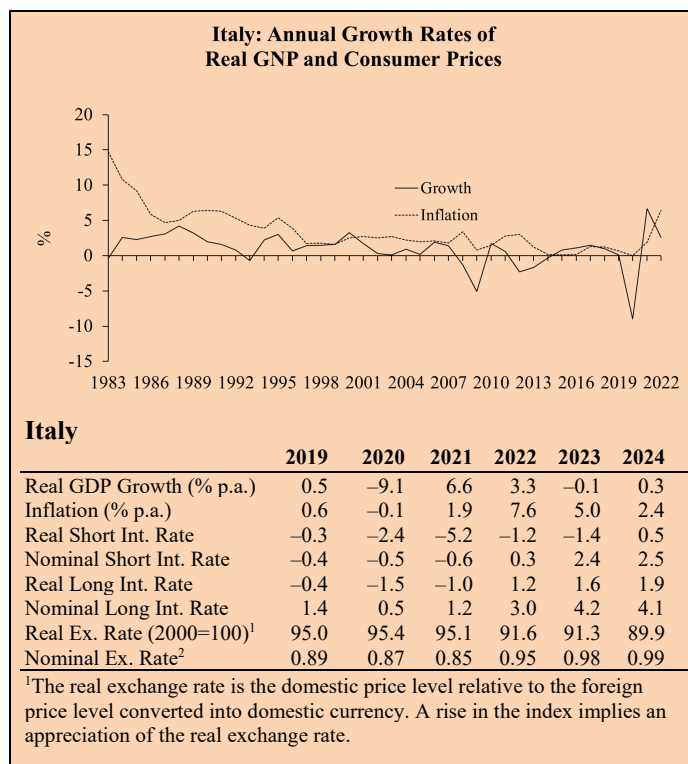


government spending (0.5%, up from -0.1% in Q2). Private consumption stagnated after rising 0.3% in Q2 and net trade contributed negatively to growth as exports grew (0.7%, after 1.3% in Q2) less than imports (2.2%, after 1.2% in Q2).

Recent data and surveys signal a difficult Q4. According to the Flash PMI Composite Output Index (50, down from 51.2), the private sector stagnated at the start of the quarter. This is the lowest level since March 2021. The manufacturing sector remained the weakest sector, although at a slower pace, it continued to contract. The Manufacturing PMI was 44.2, following 43.3 in September. In contrast, services sector's activity has been growing. The Flash Services PMI Activity Index was 51.3, following 52.9 in the previous month.

Italy

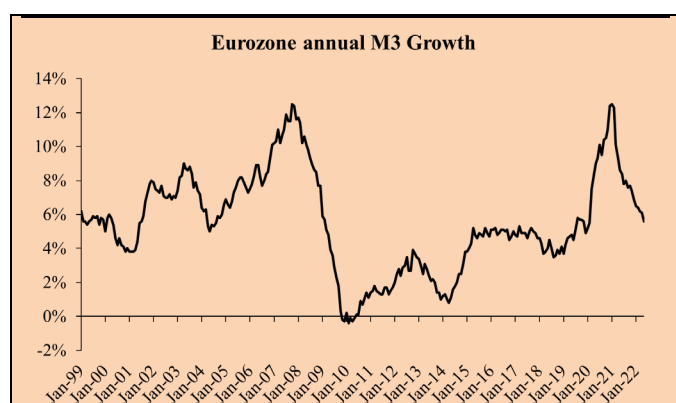
The recovery decelerated in Q3. Real GDP rose 0.5%, down from 1.1% in Q2. Moreover, the available data and surveys indicate a difficult quarter ahead. Continuous output contraction was registered across all sectors of the economy. The Manufacturing PMI fell to 46.5 in October from 48.3 in September, a fourth consecutive decline. The Services PMI Business Activity Index fell from 48.8 to 46.4 in October, signalling the fastest rate of decline since January 2021. The Construction PMI was at 48.1, following 46.7 in September. Consumers remained pessimistic about conditions, with the consumer confidence index falling to 90.1 from September 94.8.



Euro-zone monetary policy

The annual Harmonized Index of Consumer Price (HICP) Inflation rate continued to rise. It was 10.7% in October, up from 9.9% in September. The main factors causing this rise continued to be a further acceleration for energy (41.9%, from 40.7% in September) and food, alcohol, and tobacco (13.1%, up from 11.8% in September). Core HICP, excluding energy and food, rose 5% in October, compared to 4.8% in September, so it has still not peaked.

Given the high inflation, at the October meeting the European Central Bank decided to take further steps to tighten its monetary policy. It decided to raise the three key interest rates by 75 basis points. Therefore, since 2 November, the interest rates on the main refinancing operations, marginal lending facility and deposit facility became 2%, 2.25% and 1.50%, respectively. It tightened the terms and conditions of the targeted longer-term refinancing operations. It lowered the interest rate paid on minimum reserves by 50 basis points, bringing it in line with the deposit facility rate.



WORLD FORECAST DETAIL

Growth Of Real GNP

	2019	2020	2021	2022	2023	2024
U.S.A.	2.2	-2.8	5.9	1.7	0.2	1.6
U.K.	1.4	-9.4	7.5	4.6	-0.2	2.1
Japan	-0.4	-4.6	1.7	1.5	1.5	1.2
Germany	1.1	-3.7	2.6	1.4	-0.9	1.5
France	1.9	-7.9	6.8	2.5	0.3	0.6
Italy	0.5	-9.1	6.6	3.3	-0.1	0.3

Growth Of Consumer Prices

	2019	2020	2021	2022	2023	2024
U.S.A.	1.8	1.2	4.7	8.0	3.9	2.4
U.K.	1.7	1.0	2.5	8.9	5.0	3.2
Japan	0.5	0.0	-0.2	2.2	1.6	0.7
Germany	1.4	0.5	3.1	8.1	6.8	2.5
France	1.1	0.4	1.7	5.4	4.0	2.0
Italy	0.6	-0.1	1.9	7.6	5.0	2.4

Real Short-Term Interest Rates

	2019	2020	2021	2022	2023	2024
U.S.A.	0.3	-4.6	-7.1	-1.6	0.2	0.6
U.K.	-0.7	-1.3	-5.8	-5.3	-0.6	0.6
Japan	0.1	0.3	-2.9	-0.9	-0.6	-0.8
Germany	-0.9	-3.6	-6.0	-2.6	-2.3	0.6
France	-0.9	-2.2	-5.1	-1.4	-1.6	0.5
Italy	-0.3	-2.4	-5.2	-1.2	-1.4	0.5

Nominal Short-Term Interest Rates

	2019	2020	2021	2022	2023	2024
U.S.A.	1.5	0.4	0.1	2.2	3.5	3.0
U.K.	0.8	0.2	0.1	1.8	3.0	3.0
Japan	0.1	0.1	0.1	0.0	0.1	0.1
Germany	-0.4	-0.5	-0.6	0.3	2.4	2.5
France	-0.4	-0.5	-0.6	0.3	2.4	2.5
Italy	-0.4	-0.5	-0.6	0.3	2.4	2.5

Real Long-Term Interest Rates

	2019	2020	2021	2022	2023	2024
U.S.A.	-1.8	-3.1	-2.2	1.2	1.2	1.0
U.K.	-0.4	-1.4	-5.7	-4.8	-0.5	0.6
Japan	-0.6	-0.8	-1.1	-0.8	-0.5	-0.5
Germany	-3.1	-3.8	-4.8	-1.0	0.0	0.1
France	-2.2	-1.9	-1.8	-0.4	0.0	0.4
Italy	-0.4	-1.5	-1.0	1.2	1.6	1.9

Nominal Long-Term Interest Rates

	2019	2020	2021	2022	2023	2024
U.S.A.	1.9	0.9	1.6	3.8	3.5	3.3
U.K.	0.6	0.1	0.4	2.3	3.1	3.0
Japan	0.0	0.0	0.1	0.2	0.3	0.4
Germany	-0.2	-0.6	-0.2	2.1	2.2	2.2
France	0.1	-0.3	0.2	1.8	2.7	2.6
Italy	1.4	0.5	1.2	3.0	4.2	4.1

Index Of Real Exchange Rate (2010=100)¹

	2019	2020	2021	2022	2023	2024
U.S.A.	117.1	118.7	116.1	128.3	128.0	128.5
U.K.	99.5	99.6	103.4	109.0	110.6	110.4
Japan	77.0	77.8	71.0	59.9	59.2	59.3
Germany	96.0	97.1	97.9	95.0	95.1	95.4
France	93.9	94.7	94.0	89.6	89.5	89.0
Italy	95.0	95.4	95.1	91.6	91.3	89.9

¹ 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)

	2019	2020	2021	2022	2023	2024
U.S.A. ¹	122.52	124.77	119.77	127.34	126.90	127.40
U.K.	1.28	1.29	1.37	1.22	1.21	1.24
Japan	109.10	106.60	110.45	133.10	136.20	137.80
Eurozone	0.89	0.87	0.85	0.95	0.98	0.99

¹ 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

India's forex reserves and buoyant tax revenue is benefitting the economy immensely. The government is all set to go for an investment-led growth strategy in the defence and high-tech sector which will also generate permanent jobs for youth in India.

India's economy appears to be a bright spot compared with other countries bracing for a sharp slowdown and possibly recession. It could expand by 6.8% in the financial year ending in March 2023, the International Monetary Fund estimates. For the next year, 2023, India has been projected to grow at 6.1%. The World Bank forecasted the real gross domestic product (GDP) to grow 6.5% in the fiscal year 2022–23. We maintain our forecast of 6.5% for the next three years.

The Indian service sector has overcome many adversities in recent months, with the latest PMI data continuing to show a strong performance despite some loss of growth momentum in September. The seasonally adjusted S&P Global India Manufacturing Purchasing Managers' Index (PMI) stood at 55.3 in October, marginally up from 55.1 in September.

The economy seems perched on solid ground. Bank credit is growing year-on-year in all sectors. Non-food credit growth has been increasing by double digits. Crude oil prices have recently fallen substantially from their peak, which will help to reduce the current fiscal deficit. Indirect tax collection has remained buoyant and may exceed budget estimates. It is mainly due to small and medium-scale businesses adopting technological solutions. The easing of commodity prices bodes well for the nation as it will help to lower inflation and assist corporations in reducing their input costs, thereby improving their margins and earnings profitability. Further, the supply-side challenges are gradually resolving, and the worst seems to be behind the India Inc. margins trajectory.

In October, the Consumer Price Index (CPI) stayed above the outer band of 6% since January and is expected to remain so for some time. "The fight against inflation will be dogged and prolonged, given the long and variable lags with which monetary policy operates, and fraught with uncertainties," according to the central bank. The central bank has raised interest rates four times this year. The RBI's Monetary Policy Committee will meet on November 3, an unscheduled meeting. Any raise in interest rate is not expected after the meeting. The meeting is called as the central bank must send the government a formal statement if the inflation does not continuously remain within the 4% to 6% band for three months.

India: BSE Sensex



The Sino-US rivalry is pushing the China+1 strategy all over the world. India is keen to exploit the opportunity. It is inviting more multinationals to set up businesses in India. China's loss will be India's gain, not just in economic terms but also politically. The U.S. government's latest National Security Strategy says, "As India is the world's largest democracy and a major defence partner, the United States and India will work together, bilaterally and multilaterally, to support our shared vision of a free and open Indo-Pacific."

India's current account deficit likely widened to about 5% of gross domestic product (GDP) in the September quarter due to high oil imports and slowing export volumes. It is double the 2.5% level that is considered sustainable. We believe that softness in commodity prices and foreign direct investments will reduce the deficit for the year as a whole.

India's foreign exchange reserves remain at \$533 billion — a respectable 8.6 months of goods import cover — even after a fall of about \$100 billion since the start of the year. On the other hand, the trade and current account deficits have widened sharply, pointing towards a balance-of-payments deficit which could linger for the foreseeable future. After remaining relatively stable for a couple of months, the rupee has weakened 4.5% against the U.S. dollar since early September. What is unique about forex depreciation is that it supports growth while reducing imports. By simultaneously making exports competitive and imports expensive, it tends to lower the trade deficit over time.

The Indian stock market is almost at its peak now despite the exit of foreign portfolio funds. The main reason was that domestic investors were ready to buy when foreign investors were selling. Since 2015, retirement and pension funds have been allowed to invest in equities. Their portfolio has as much as 25% in Indian stocks. It has triggered a \$2 billion buy from retirement funds every month, creating a domestic pool of risk capital. The emphasis on production-linked incentives has altered India's ability to withstand oil prices and the U.S. recessions. India no longer relies on FPIs to fund deficits. It is the FDI which supports the trade deficit. Finally, the cut in corporate tax rates introduced during the Covid period has been untouched. Our estimates suggest that

corporate profits ratio to GDP may surpass 7% in the next 3–4 years.

The rupee hit a record low of 83.3 per dollar in the last week of October. The RBI intervened in both the spot and forward markets to reduce the volatility in the market. The central bank believes that the rupee should find its level. However, it should be done in an orderly fashion.

India is talking with about a dozen smaller countries as the government seeks to expand bilateral trades through bespoke rupee accounts and internationalize indigenous payment modes. The object is to bypass the dollar-denominated transactions through baby steps and create an alternative payment ecosystem other than the global SWIFT platform. The Unified Payments Interface (UPI) developed by the National Payment Corporation of India is the country's flagship payment system and has earned accolades worldwide. African countries such as Djibouti, Zimbabwe, Malawi, Ethiopia and Sudan are settling their trade with India in Indian rupees.

Australia and India have been working toward a free-trade deal, and the two countries could reach an interim agreement soon. A free-trade agreement with the U.K. is likely to be finalized soon.

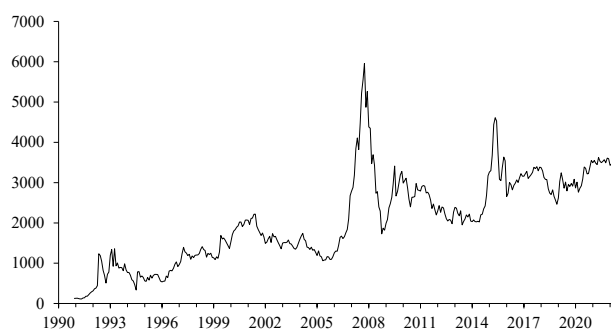
	20–21	21–22	22–23	23–24	24–25
GDP (%p.a.)	-6.6	8.7	6.5	6.5	6.5
WPI (%p.a.)	5.5	6.0	6.5	5.3	5.0
Current A/c(US\$ bill.)	35.0	-42.0	-100.0	-90.0	-80.0
Rs./\$(nom.)	75.0	74.5	81.0	83.0	85.0

China

Economic war on China is on. Based on classified information, the U.S. government has banned computer chips, semiconductors, and related technology exports and access to technology innovation to China. In the long run, the diminished flow of tech competency and ideas will sap China's innovative capabilities. It will have far-reaching economic consequences. It is a very consequential economic policy of the U.S. towards China and the rest of the world as it would decide the place of the dollar and the response of capitalist countries towards non-capitalist countries. The gloom is best described by Ren Zhengfei, founder of tech giant Huawei Technologies Co. He said that the next decade would be "a very painful historical period" due to the pandemic, the war in Ukraine and a "blockade" by the U.S. on some Chinese companies. The priority is to "survive and earn a little money where we can".

Since 1980, after the death of Mao Zedong, there has been a duopoly of power in China until the 20th National Congress of the Chinese Communist Party (CCP) concluded in October 2022. The power was well distributed between the two factions of the party — the Communist Youth League and the hardliner factions. In the 20th National Congress of

China: SSE Composite Index



the CCP, Xi Jinping, who belongs to the hardliner faction, solidified his power and confirmed his ideological view of China's future. Xi let the world know that China wouldn't change course, even as it faces "dangerous storms" in a more hostile world. He declared the "rejuvenation of the Chinese nation is now on an irreversible historical course." He signalled no change in direction for two main risk factors dragging down China's economy — strict Covid rules, which he briefly praised, and housing market policies. The Covid rules ensure complete control of the government over its citizen's day-to-day activities. His housing market policies are to change the demographic imbalance that one child policy of China created in the last forty years. The zero covid policy is put in place to correct the demographic imbalance. To encourage more young men to marry, the cost of housing must be brought down within the means of an average young man, as social norms dictate that a man marries when he has his own home.

President Xi Jinping had a clear message for those who want to thwart China's rise: You will fail. The message for the United States is that China will do its own thing. His speech recognizes that, in a way, it is in competition with the U.S. China still wants to participate in this global society, but China wants to be rule makers, not just rule takers. His mantra of common prosperity was highlighted many times. That means the policy goal is the redistribution of income, while the increase in wealth is still a medium-term goal.

Beyond that, it revealed little about how China will deal with its faltering economy. Growth is slowing, and increasing autocracy will only aggravate long-run problems. The drags it places on economic growth will mount and compound as Beijing tightens its grip.

Mr Xi's regime has throttled back free enterprise, undercutting what brought China prosperity. Tighter controls are squeezing private entrepreneurship, innovation and capital mobility. The government's increasing ownership of industry and bureaucratic allocation of national resources are generating inefficiencies and excesses. For one, China's income per capita reached more than \$12,550

in 2021 — about double the level in 2012 when he took the helm, and at the very edge of high-income status according to the World Bank's definition. Mr Xi's speech was notable for re-emphasizing the importance of the real economy — meaning manufacturing and bricks-and-mortar services. The digital economy is mentioned mainly as an endnote to the section on industrial modernization in the context of the need to further integrate it with the real economy and the so-called Internet of Things.

He said China wouldn't change course even as it faces "dangerous storms" in a more hostile world. Instead, Xi offered China's model as an alternative to the U.S. and its allies, vowing to overcome the Biden administration's efforts to hobble the nation's development by depriving it of chips and other advanced technology.

Mr Xi's prioritization of politics over economic goals is clouding China's long-term growth prospects. He wants to double the size of China's economy by 2035 — a goal requiring China's economy to grow an average of 5.5% annually. This goal is likely to be missed due to Mr Xi's insistence on greater state control at the expense of China's more dynamic private sector. That shift is a reversal of former leader Deng Xiaoping's "reform and opening" process starting in 1978. It's helping Mr Xi achieve political objectives, including redirecting capital into industries Beijing sees as strategically significant as U.S.-China tensions deepen, like artificial intelligence.

Many in the U.S. feel China will overtake America as the world's largest economy in 10–15 years. Just like the overblown estimation of Japan's juggernaut taking over the U.S. as the world's largest economy in the 1980s never materialized, China's overtaking the U.S. is unlikely to happen. More so due to Xi's economic policies, which are stumbling blocks for innovation and wealth creation. But his policies are in line with his political objectives.

China's gross domestic product grew by 3.9% in the three months that ended September 30 from a year earlier. Growth in fixed-asset investment, including infrastructure projects, remained steady, expanding by 5.9% during the first nine months of the year compared with a year earlier. Growth is expected to be below 5% each year through 2024. We will maintain our forecast of 3% in 2022 and 2023. The International Monetary Fund cut its growth forecast for China this year and next, saying it expects the economy to expand by 3.2% in 2022. At the Communist Party congress, top officials were prepared to accept slower economic growth rates to meet broader development goals, such as nurturing high-tech industries and redistributing wealth more evenly. China's housing slump intensified in October. New home sales dropped 28.4% from a year earlier to 556.1 billion yuan (\$76.2 billion). The recession has widened from September's 25.4% slump.

The official purchasing managers index for manufacturing fell to 49.2 from 50.1 in September. The official nonmanufacturing PMI, which includes services and construction, also slipped into contraction, falling to 48.7 from 50.6 in September. The October gauge for services alone fell to 47 from 48.9.

Consumer prices in China rose 2.8% in September at their fastest annual pace in more than two years, driven by a sharp rise in food prices, especially pork. That compared with a 2.5% yearly rise in consumer prices in August. It is the fastest inflation rate since April 2020 but remains within the authorities' goal of keeping consumer-price inflation below 3%.

China's central bank held its key policy rates steady. The People's Bank of China injected 500 billion yuan (\$69.6 billion) of liquidity via its medium-term lending facility (MLF). It carries an interest rate of 2.75%, unchanged from the last operation, and a tenure of one year. Unlike Western central banks, the PBOC has been easing its monetary stance this year by cutting rates and releasing liquidity into the financing system to stimulate a slowing Chinese economy.

China's export growth slowed further in September as weakening global demand continued to weigh on a key pillar of the world's second-largest economy. Exports rose 5.7% from a year earlier in September, lagging after a 7.1% increase in August. China's imports in September only increased by 0.3% from a year earlier. China recorded an \$84.74 billion trade surplus in September. In the first nine months, China's exports grew 12.5% from the same period a year earlier, compared with a 13.5% increase in January–August. Imports increased 4.1% on year in the January–September period, compared with the 4.6% growth in the January–August period. That put China's trade surplus in the first nine months of the year at \$645.2 billion.

China's foreign-exchange reserves fell for a second month in September amid U.S. dollar strength. The country's forex reserves stood at \$3.029 trillion at the end of September, down \$25.9 billion from a month earlier.

According to the Bank for International Settlements the Chinese yuan has passed the Australian, Canadian and Swiss currencies to become the world's 5th most traded. This year, the yuan was involved in 7% of all trades, with overall daily transactions climbing 14% to \$7.5 trillion. Meanwhile, the U.S. dollar maintained the top spot among global currencies and was involved in 88% of all trades — a share that has changed little over the past decade. The euro, pound and yen also held their positions in the next three spots.

This year, a 13% rally in the dollar has pushed the yuan close to the weak end of its trading band, raising the spectre of a repeat experience in 2012. Back then, China's currency frequently hit the limit of the set range, fuelling a drop in

liquidity which led to a virtual standstill in trading in the foreign exchange market. There are signs that China is already stepping up the defence of its currency, with traders saying state-owned banks sold dollars. The yuan is on track to log its worst year since 1994 — when China devalued its currency by 33% overnight as part of market reforms.

China's yuan tumbled to its lowest level in nearly 15 years on October 25 as investors fled Chinese assets amid fears about Xi Jinping's dramatic move to tighten his grip on power in a major reshuffle of Communist Party leaders. Several senior officials who backed market reforms and opened up the economy were missing from the new top team, stirring concerns about the country's future direction and its relations with the United States.

Even if Mr Xi is bad for China's economic prospects, that doesn't make him an unalloyed positive for U.S. geostrategic interests. China led by someone who doesn't listen to other voices, "could very well lead to a higher likelihood of conflict," said Matthew Turpin, a visiting fellow at the Hoover Institution. He served on former President Donald Trump's National Security Council. As Russian President Vladimir Putin shows, economically weakened leaders can still be unpredictable and dangerous.

	20	21	22	23	24
GDP (%p.a.)	2.2	8.1	3.0	3.0	4.0
Inflation (%p.a.)	2.5	1.8	2.5	2.5	1.5
Trade Balance(US\$ bill.)	60.0	80.0	150.0	82.0	80.0
Rmb/\$(nom.)	6.7	6.4	7.2	7.3	7.3

South Korea

A frequent victim of global market turbulence is South Korea. It suffered a near sovereign default during the late 1990s Asia financial crisis and massive capital outflow during the 2008–2009 global financial crisis. The slowdown of the Chinese economy and demand compression in the developed economies have exposed the underbelly of the Korean economy. It is facing challenges of sustained high inflation, rapidly rising interest rates worldwide and continuing global supply-chain disruptions that have depleted demand at home and abroad.

South Korea's economy slowed but remained more robust than expected in the third quarter of its resilient exports despite weaker private and government spending. The economy expanded 3.1% in the third quarter, faster than the prior quarter's 2.9% growth. The Bank of Korea (BoK) lowered its GDP growth forecast to 2.6% while raising its inflation estimate to 5.2% for 2022. Based on the grim outlook for consumption and exports, we expect the economy to stand still next year. We maintain our forecast of GDP growth of 2.4% in 2022 and zero growth rate in 2023.

South Korea's annual consumer price index (CPI) rose 5.7% in October from a year earlier. The rate had slowed in

September to 5.6% from 5.7% in August, compared with a near 24-year high of 6.3% in July. The BoK expects consumer price inflation to remain high, around the 5–6% range "for a considerable time" as the rising dollar acts as additional inflationary pressure. It anticipates further rate hikes by the U.S. Fed ahead. We maintain our forecast of inflation of 5% in the current year as the crude oil prices are softening and 3.5% in 2023 due to a rapid fall in commodity prices worldwide.

its headline interest rate by 50 basis points (bps) to 3% in mid-October, its second-ever hike of that size, following its first 50 bps hike in July. The BoK had said it was expected to return to 25 bps hikes then. According to the Bank, "The Board judges that the policy response should be strengthened, as additional inflationary pressures and the risks to the foreign exchange sector have increased affected by the rising Korean won to U.S. dollar exchange rate, while inflation has remained high." However, the swap markets expect the Bank of Korea to take its policy rate to 3.5% in the next six months, a 14-year high, as the U.S. Fed's benchmark peaks around 5% in early 2023.

South Korea's exports are all set to fall in October, shrinking for the first time in nearly two years in the face of a global economic slowdown and rising interest rates. During the first 20 days of October, exports shrank 5.5%, as sales to China — South Korea's biggest trading partner — dropped 16.3%. Meanwhile, imports were expected to extend their gains to a 23rd month with a growth of 7.2%. It is much smaller than the 18.6% increase in September and the weakest since January 2021.

The South Korean won (KRW) has shed 18% against the U.S. dollar (USD) since the start of the year by the end of September and continue to slide. Weakness in the KRW can be mainly attributed to a broad USD strength. The won slumped to 1,421.60 per dollar by October 31. It may weaken to 1,500 by year's end as the yield gap widens with the U.S. dollar. The slowdown in Korean exports and dwindling foreign reserves are adding to bearish sentiment for the won.

According to President Yoon, the government will strengthen the safety valve by improving the dollar supply-demand situation in the foreign exchange market. The

government is also planning to re-activate a stock market stabilization fund to spur foreign investment in local stock and bond markets.

	20	21	22	23	24
GDP (%p.a.)	-0.9	4.1	2.4	0.0	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	1450	1350	1400

Taiwan

No other country will pay a heavier price for the change in the Chinese Communist Party's (CCP) political ambitions than Taiwan. Many in Taiwan described the sight of top Communist Party leaders failing to respect their elders and being unexpectedly led away as symbolic of hard-liners politics taking over in Beijing.

China's heavy emphasis on national security during the party congress, and its firm opposition against Taiwanese independence, have led to a gloomier outlook for cross-strait relations. The CCP has amended its charter to include the phrase "firmly oppose Taiwan independence," amplifying language that had previously only called for strengthening unity among all Chinese nationals. The party shuffled China's political and military leadership, elevating an army commander familiar with Taiwan to a top spot within the Chinese equivalent of the Pentagon. Gen. He Weidong, the former commander of the Chinese military's Eastern Theatre Command, which oversees forces closest to Taiwan, is now vice chairman of the Central Military Commission. The appointment marks an unusually rapid rise for Gen. He, who will serve as one of Mr Xi's two deputies running the People's Liberation Army. Defence analysts believe that Beijing is impatient to take control of Taiwan. The original Chinese language communique suggests that China will be willing to use force if Taiwan opposes peaceful unification with the mainland.

Ma Xiaoguang, China's Taiwan Affairs Office spokesman, said, "We are closer, more confident and capable of realizing the goal of the great rejuvenation of the Chinese nation than at any time in history." He restated Beijing's determination to "resolutely defeat any interference by external forces and separatist acts by the forces of 'Taiwan independence.'"

We expect a military showdown between China and the U.S. in the next 18 to 24 months.

Taiwanese President Tsai Ing-wen, well aware of the looming crisis, said during a National Day address that armed confrontation between the island and China is 'not an option while also offering to work with Beijing to reduce tensions. Taiwanese national security officials feel that with public frustration growing in China over the government's zero-tolerance Covid policies and faltering economy,

Korea: Composite Index



Beijing might use the cross-strait dispute to distract the country's 1.4 billion people from domestic problems. Mr Chiu, the Taiwanese defence minister, said that Taiwanese forces would continue to prepare for war. Taiwan's military is exploring options for extending conscription, with a decision expected to be announced by the end of the year. Meanwhile, the island's forces have been carrying out more live-fire drills.

Mr Xi has defied Washington on the militarization of disputed islands in the South China Sea, on the imprisoned ethnic minority Uyghurs in the restive northwest region of Xinjiang, and cracked down on Hong Kong. His sharpened rhetoric on Taiwan suggests he wants to expedite efforts to take control of the island by force if necessary.

Taiwan's economy grew 4.1% from July to September, compared with a year earlier, up from 3.05% in the second quarter. Although better than expected, demand for Taiwan's hi-tech exports is undermined by global inflation and Covid disruptions in mainland China. One silver lining is that eased concerns over COVID-19 boosted growth in private consumption. The change was primarily due to recovery in consumption such as retail, dining out, recreation and transportation, compared with last year's low base due to Covid-19 outbreaks. We maintain our GDP growth forecast of 3.5% and 3% in 2022 and 2023, respectively.

Taiwan's inflation rose 2.75% in September from a year earlier. It was below 3% for the second month in a row. The inflation rate hit a nearly 14-year high of 3.59% in June. We maintain our forecast of a rise in the consumer price index of 2.5% in 2022 and 2023.

Export orders continued to decline in September. In September, orders fell 3.1% from the same month a year ago, mainly driven by a decline in shipments bound for mainland China. The gloomier picture is set to continue as China's growth rate declines in the coming months. In the first nine months of this year, Taiwan's trade surplus was US\$40.70 billion, down 13.3% year-on-year.

The Taiwanese dollar has depreciated to NT\$32.3 to a U.S. Dollar. The central bank spent US\$8.25 billion to support the

N.T. dollar in the first six months of this year, with the volume expected to pick up considering the local currency's downward trajectory. Last month, the nation's foreign exchange reserves posted their most significant decline in 12 years to an 18-month low of US\$541.11 billion, as capital flight persisted and the central bank intervened to support the local currency, according to the central bank. It is the fourth monthly decline in Taiwan's foreign exchange reserves, the most prolonged fall since four months in 2008, during the global financial crisis.

TSMC was supposed to be a shield for Taiwan from China's invasion. It is losing its position and rapidly expanding its production capabilities elsewhere. TSMC's factory under construction in Japan is part of boosting production capacity in a U.S. ally. The plant is set to focus on less-advanced chips commonly used in autos and components like sensors, and it is scheduled to ship products in late 2024. A company called Japan Advanced Semiconductor Manufacturing, majority-owned by TSMC, is building the plant. TSMC is the exclusive producer of the most advanced semiconductors that power Apple's iPhones, AMD's advanced CPUs and Qualcomm's snapdragon chip used in many Android phones.

	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	32.0	32.5	32.5

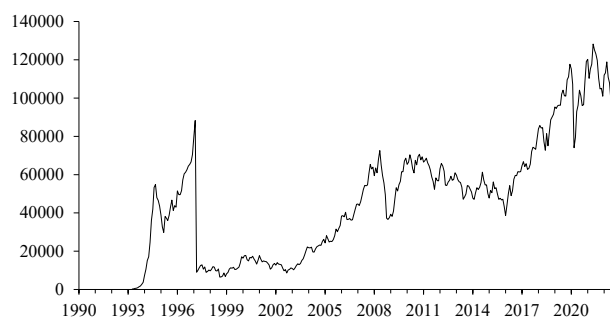
Taiwan: Weighted TAIEX Price Index



Brazil

Brazilians elected Luiz Inácio “Lula” da Silva to the presidency again. He won by a slender margin of less than 2% of the vote. Bolsonaro's shoot-from-the-lip rhetoric didn't help, and he was wildly unpopular with women. While Amazon deforestation continued during his presidency, its pace was faster in Lula's first four-year term. Yet Mr Bolsonaro was tagged as an enemy of the rain forest. The fear that the transfer of power would turn ugly has been set to rest. Bolsonaro has publicly announced that he would “continue to fulfil all the commandments of our constitution”. He did not explicitly concede defeat, but he signalled his intention to cooperate with the transfer of

Brazil: Bovespa



power. His chief of staff, Ciro Nogueira, said he would work with the new government and is waiting for Lula da Silva's transition team to begin the handover.

Brazil's economy is set to grow 2.8% this year and will slow down to 1% in 2023. The central bank's string of rate increases is having the intended effect of weaker demand for credit-sensitive items. Fiscal policy is likely to turn expansionary under Lula. But Brazil has limited fiscal space. Thankfully Lula understands that all policies must be fiscally sustainable and that large budget deficits will backfire in his attempt to be progressive on social issues. We expect him to maintain some fiscal consistency in his policies. Additional fiscal stimulus could support demand, making inflation more persistent. As of now, it is not clear what Lula would do with Brazil's own budget rule, which, as it stands, constrains his campaign promises.

Brazil's headline inflation rate has slowed recently, helped by tax cuts for fuels and certain other products and lower oil prices. The 12-month rate fell to 7.2% in September, the lowest level since April last year, after reaching an almost 19-year high of 12.13% in April 2022. We expect an average of 8% for 2022 and 5.5% for next year. The central bank's monetary policy committee (Copom) will react if inflation heats up again. They will consider the potential pressure on prices stemming from increased spending. With economic growth expected to slow and other central banks raising rates, the expectation is that consumer price increases will continue to moderate.

The Central Bank of Brazil left its key Selic rate at 13.75% for the second consecutive meeting. The committee had raised the rate at 12 meetings in a row before the September conclave, lifting the Selic from a record low of 2%. The Copom said it would raise rates again if the situation changes. The central bank has remained fiercely independent and tackled inflation with a fair bit of zeal. The basic Selic interest rate is expected to remain unchanged from 13.75 % until the end of the year, and we expect it to decrease gradually throughout 2023 to reach 11.25%. The central bank targets for inflation are 3.5% in 2022 and 3.25% in 2023.

A tighter monetary policy is helping the Brazilian real against the U.S. dollar. The central banks moved quickly to

tackle rampant inflation months before the U.S. Federal Reserve tightened its monetary policy, which sent currencies tumbling elsewhere. The real against the U.S. dollar is not expected to change significantly, assuming the central bank maintains a positive real interest rate. Commodity prices also help the real. Commodity prices have soared again this year, but the trend is likely more ephemeral. Continuing deflation of the Chinese property market and a slowdown of major world economies do not bode well for iron-ore demand.

	20	21	22	23	24
GDP (%p.a.)	-3.9	4.6	2.8	1.0	2.0
Inflation (%p.a.)	4.5	8.5	8.0	5.5	4.0
Current A/c(US\$ bill.)	-7.6	-10.0	-10.0	-12.0	-20.0
Real/\$(nom.)	5.5	5.3	5.2	5.0	5.0

Other Emerging Markets

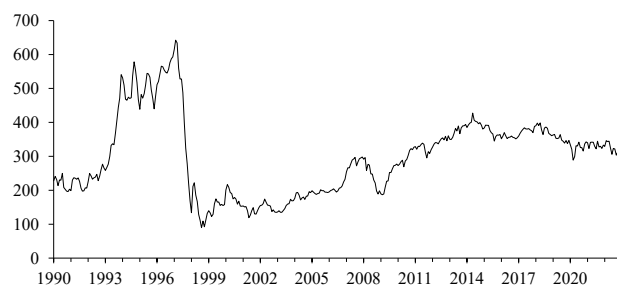
Hong Kong: FT-Actuaries



Indonesia: Jakarta Composite



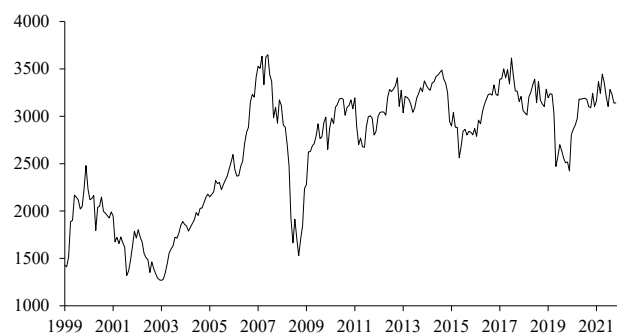
**Malaysia: FT-Actuaries
(US\$ Index)**



Thailand: Composite Index



Singapore: Straits Times Index



Philippines: Manila Composite

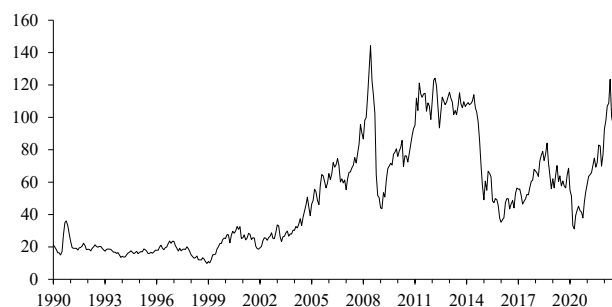


COMMODITY MARKETS

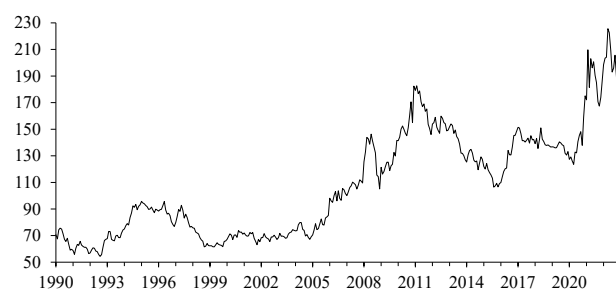
Commodity Price Index (Dollar)
(Economist, 2015 = 100)



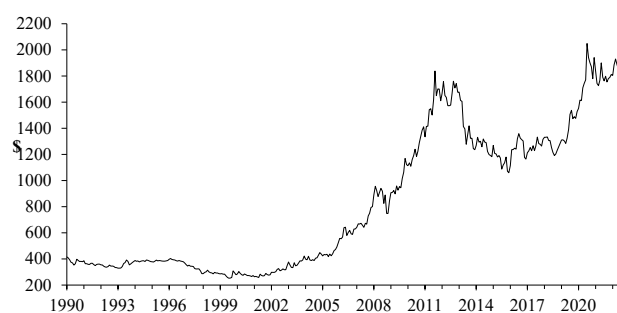
Oil Price: North Sea Brent (in Dollars)



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



Gold Price (in Dollars)



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



WHAT WENT WRONG WITH LIZ TRUSS'S PROGRAMME?

Patrick Minford

We are about to have yet another Conservative Prime Minister who will need to plot a policy course over the coming two years. Before anything is planned, however, we need to understand just why the programme on which Conservative members elected Liz Truss came apart when put into practice.

The Truss government policies used the concept of long term sustainability to replace the short term fiscal rules previously in use; this was a new approach which permitted both tax reform and active fiscal policy. The concept was correct; fiscal solvency commits a government to 'balancing the books' in the long term. In practice this translates into projecting the debt/GDP ratio as falling over the next decade or so to a sustainable and moderate level. However this has to be demonstrated to occur with the planned policies being followed; whatever assurances are given about the future, demonstration with plausible arithmetic is necessary.

However, the policies were not demonstrated to satisfy it by the Treasury after Mr. Kwarteng's mini-budget; there were no Treasury projections verifying that the sustainability condition was met, and their absence, together with no explanation of how tax cuts would improve the supply-side and dampen wage demands, fuelled fears that the Budget would stoke inflation. This meant that when a variety of attacks on the budget's sustainability were made, Mr. Kwarteng had no ready answer other than an assurance that he would ensure it was met via future policies (eg on spending). These assurances were not regarded as sufficient and market opinion, already made anxious by fast-rising US interest rates, became increasingly nervous, precipitating the rise in gilt yields with a rising risk-premium, and the resulting political crisis as mortgage rates rose.

This was the first and probably the main reason why the Truss policies crashed and burned: terrible implementation, connived at by the civil servants involved. The Budget speech itself was clear enough, especially to supporters of the new policies; but it was provocative to their numerous opponents and failed to give a full explanation of how the new long term fiscal rules would work out.

Detailed projections for the public finances and associated other forecasts, should have been routinely done by Treasury officials, even if normally done by the OBR. Using the OBR itself was ruled out by its hostility and the lack of time to get it onside after all the implied arguments/adjustments needed for agreement/sign off. But the Treasury civil servants/economists could have updated the last OBR workings from March - no doubt with informal consultations with OBR staff- and produced some respectable financial projections implementing the new long term rules- viz that

the debt/GDP ratio would come down over time. They knew from our recent Centre for Brexit Policy Report (<https://centreforbrexipolicy.org.uk/publications/delivering-a-new-growth-strategy-for-britains-economy/>) what we thought these would look like and could have tried to replicate that with their more detailed calculations OBR-style.

But instead there was nothing. On the Treasury Budget website one finds a long piece of text, more or less replicating the Chancellor's speech; no arithmetic or projections, just an elegant essay.

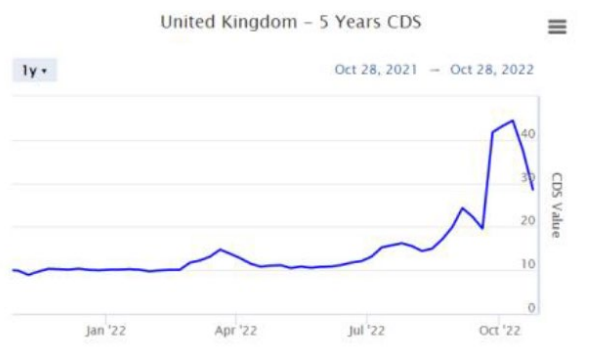
The result should have been obvious to anyone. Kwarteng would emerge into a world of enemies with their knives out, shorn of any defensive armour against the accusations that he was wrecking the finances. In short order the IFS/Citibank partnership produced their own 'Green Budget' projections 'showing' that there was a huge fiscal hole looking five years ahead. To manufacture this result they used the easiest means- simply assuming the economy would tank. This of course destroys tax revenues. But even the OBR never used such output projections for the medium term assessments they made, because these are supposed to look at the trend behaviour of the economy and abstract from business cycle fluctuations. Hence the IFS Green Budget was basically fraudulent in that it substituted a forecast of a recession followed by long stagnation for a medium term trend value of output in examining the trends in the public finances. This method is quite wrong as it effectively means that you kick the economy with tax increases and spending cuts when it is down; which runs counter to good economic evaluation of trend prospects.

But it was open season for doubters of the government arithmetic because there was none. An MP with no economics was quoted as saying you could see it was no good using 'the back of a fag packet'.

To these and similar assertions in many major organs of financial opinion such as the FT and the Economist, all viciously opposed to the new policies, the Chancellor had no answer because the Treasury provided none for him to quote.

The Bank's mistakes turned the Treasury's presentational errors into a debacle

The package could still have survived until Oct 31 when due to be followed by a full Budget complete with OBR arithmetic. Indeed although there was plainly a fall in government's fiscal credibility, it was not massive, as can be seen from the 5-year CDS market rates, which peaked at only just over 40 basis points. Had the Bank pursued the right monetary policies, the Truss plan could have survived.



Source: worldgovernmentbonds.com

But instead it made egregious mistakes. First, the day before before the mini-budget which had been widely trailed, and whose contents it could easily anticipate it raised interest rates by a weak 0.5%, seen as inadequate to get on top of inflation given much tougher moves by the Fed and the ECB. This created market perceptions that the Bank would allow inflation to remain uncomfortably high. The consensus market view discussed above was that the new fiscal policies would push UK inflation up sharply necessitating much higher interest rates from the Bank.

Gilt rates rose sharply too on the back of these market expectations. The Bank should have resisted this rise because it caused a major unplanned tightening of monetary conditions: the rise in interest rates the market now expected to counteract what it saw as too loose a budget, translated into both these higher gilt yields and also higher mortgage rates. A sensible monetary policy plan, which the Bank may well have had, but should have made clear through its statements, would be to raise rates to the 3-4% range which would be tight enough to crush inflation given the worldwide slowdown and falling commodity prices. But gilt rates went well above this range, reaching 5% at one point. Because this caused the crisis in leveraged pension funds, the Bank was forced to intervene with gilt purchases (QE) at this point, the end of September; and it successfully pushed gilt rates down. But an extraordinary failure to follow through occurred in the week ending Oct 14 when the Governor announced its cessation by the end of the week. Hence there was no ongoing effort to reduce the tightening that was badly hurting the housing market and so to support government policy; indeed the Bank made clear informally that it thought the mini-budget pushed up inflation, forcing it to tighten policy more than it planned- see its chief Economist's speech on Sept 28th. Thus it too opposed the government's policies, and effectively reinforced the market expectations of much higher rates, even though these were plainly excessive.

The net effect was a huge unintended monetary tightening via long term rates that could have been subdued by Bank QE. This would have given Mr. Kwarteng time to have a second attempt at his Budget plans. As it was this tightening

was lethal politically through the effects on the mortgage market and voter sensitivity to this. Had the Bank cooperated with the Chancellor over policy as it did during Covid, the economic outcome would have been very different. What the Bank should have done to keep monetary policy at its required tightness was to raise Bank Rate, signalling its tough approach to inflation, while at the same time buying gilts in the market (i.e. resuming Quantitative Easing, QE) until long term rates settled at the level of 3-4% which would be about right in the longer term for seeing off inflation while not crashing the economy. Meanwhile it should have deferred its plans for selling off its gilts until rates had settled down at these appropriate levels.

Thus it was that the Bank gave the coup de grace to the Truss programme by the pursuit of bad monetary policies.

Could Liz Truss have fought back and still implemented her policies?

In spite of this massive opposition and the mistakes in both Treasury communication and Bank monetary policy, Liz Truss could still have delivered her programme. She needed to survive until the new fiscal arithmetic agreed with the OBR was to be unveiled. This date could have been brought forward and also the contents leaked ahead of time to calm market opinion. Then she needed to force the Bank to use QE to bring down the long term interest rates in the market until the new budget arithmetic had settled market opinion down; the Treasury has ample power to instruct the Bank on gilt purchases, much as it did during the Covid period. As noted above at the start of this piece, the main market problem was not fear of default but fear of much higher interest rates; these fears could have been quashed by the Bank.

But by sacking Kwasi Kwarteng as Chancellor and appointing Jeremy Hunt, an ally of the wide opposition both in and outside Parliament, she in effect gave up on her policies and it was only a matter of time before she would be forced to resign, defined as she was by those policies. In a Telegraph article at the time (<https://www.telegraph.co.uk/news/2022/10/14/tax-u-turn-insane-suicidal/>) I argued that these actions of hers were 'suicidal', as sadly they proved to be.

The reversal of Liz Truss's policies in the Autumn Statement will worsen recession and stunt growth, as we explain in this Bulletin. Monetary policy will now need to be sharply revised as well. The new government must learn from all these mistakes as it creates its new policy programme.