

LIVERPOOL INVESTMENT LETTER

April 2022



Cardiff Business School

Ysgol Busnes Caerdydd

Julian Hodge Institute of Applied Macroeconomics



LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

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The Julian Hodge Institute was launched in autumn 1999 in a new collaboration between the Cardiff Business School of Cardiff University and Hodge. 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. The research has been particularly germane in recent years and has proved to be of significant social and political relevance as Europe has navigated the difficulties of the global financial crash, the Eurozone crisis and most recently the UK referendum on EU membership. The Liverpool Investment Letter is written by Patrick Minford, with the assistance of other members of the Group; in particular the emerging markets section is written by Anupam Rastogi, and the focus on Japan is written by Francesco Perugini. The Investment Letter is published monthly.

The Liverpool Research Group in Economics is pursuing a research programme involving the estimation and use of macroeconomic models for forecasting and policy analysis. The Group is now mainly based in Cardiff Business School, Cardiff University, and is indebted to the School and to the Hodge Foundation for their support. The Group's activities contribute to the programmes being pursued by the Julian Hodge Institute of Applied Macroeconomics. This Liverpool Investment Letter is typeset by David Meenagh and published on behalf of the group by Liverpool Macroeconomic Research Limited, which holds the copyright

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<p>The Treasury and Chancellor are victims of out-of-date thinking on fiscal policy, in comparing the situation in 1981 with that today. Inflation is now controllable by an independent Bank, whereas then it was out of control. Fiscal policy then had to underpin monetary credibility, which was utterly lacking. Today fiscal policy can be optimally managed to minimise necessary taxation, so supporting growth; and also to support demand when real interest rates lie below the growth rate as today. Current fiscal policy is damaging growth when tax-cuts could boost it with no risks to solvency.</p>	
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THE CURRENT TREASURY ORTHODOXY IS ROOTED IN A PAST THAT WAS ENTIRELY DIFFERENT

It would be a good idea to send top civil servants on expensive sabbaticals in academia, with a mission to catch up with the latest economic trends and thinking; it would be money well spent. Time and again we find our top mandarins in the grip of outdated thinking that they absorbed in their youthful progress climbing up the civil service tree. This happened in 1979 when the Treasury strongly opposed the move to monetarist thinking in the suppression of inflation. The head civil servants then had been brought up to think incomes and price controls administered via tripartite meetings of government, the CBI and the TUC, were the way to control inflation, permitting fiscal and monetary policy to stimulate growth and employment. Of course, events and the economic thinking of the time had shown this did not work; but they were too set in their intellectual habits to realise this, and it took a new government under Mrs. Thatcher to force them into the necessary radical policy change. Sadly, in the process most of these top civil servants had to be moved sideways or retired to make these changes possible.

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

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

Today interest rates are close to zero and there is no credibility problem for the Bank in controlling inflation; its problem until recently has mostly been too little inflation, while today's inflation comes from commodity supply bottlenecks due to the Covid cycle and most recently the war

Table 1: Summary of Forecast

	2018	2019	2020	2021	2022	2023	2024
GDP Growth ¹	1.3	1.4	-9.4	7.5	5.6	2.2	2.8
Inflation CPI	2.4	1.7	1.0	2.5	7.0	4.3	3.2
Wage Growth	3.0	3.5	1.6	5.8	6.7	4.6	4.3
Survey Unemployment	4.1	3.8	4.5	4.5	4.1	3.6	2.8
Exchange Rate ²	78.6	78.3	78.2	81.5	77.3	76.7	76.3
3 Month Interest Rate	0.4	0.8	0.2	0.1	1.5	2.4	2.9
5 Year Interest Rate	1.0	0.6	0.1	0.4	1.9	3.5	3.0
Current Balance (£bn)	-82.9	-89.1	-57.6	-63.8	-37.2	-24.9	-17.6
PSBR (£bn)	39.3	49.1	317.2	169.5	55.0	31.9	23.5

¹Expenditure estimate at factor cost

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

in Ukraine. Now by raising rates moderately it will have a strong dampening impact on inflation; if rates go even as high as 2%, the impact will be strongly deflationary. As for government borrowing, it can be done very cheaply with long rates at just over 1%, negative in real terms. There is no pressure on the government to cut its debt ratio; its solvency is assured, gilts are seen as a highly safe asset. Nor is there any need for borrowing to fall to buttress Bank anti-inflation credibility, as that is, as we have just seen, extremely strong.

There is therefore no parallel between the fiscal policy needs of 1981 and those of today. Then fiscal policy needed to tighten to underpin anti-inflation policy. Today fiscal policy needs to permit taxes to stay down to underpin growth, and monetary policy is easily capable of the necessary tightening to restrain inflation. Indeed, if fiscal policy promotes growth it will allow the Bank to raise interest rates further into more normal ranges, getting us well away from the dangerous zero interest rate region.

The key differences from Mrs. Thatcher's time are therefore first the inflation situation. Then there was an all-pervading inflation psychology, with expected inflation high and with a Bank of England both under political control and hostile to the use of restrictive monetary policy, instead committed to supporting industry with easy credit, and suggesting wage and price controls be used against inflation. To beat that inflation Mrs. Thatcher's government had to impose tight money and underpin its credibility with a tight fiscal policy — exhibited most clearly in the tough 1982 budget which provoked the famous letter from 364 economists. Today inflation expectations are well under control and an independent Bank is mandated by law to bring inflation back to 2% — something it has relentlessly achieved for several decades, and can reassert by moderate tightening today.

The second major difference lies in interest rates. In October 1981 the long-term (10 year) gilt yield was 16.3%; 1981 inflation was 11.9%. The real long run interest rate was therefore round about 4% — back then there were no index-linked gilts to give us a firm estimate. Today the 10-year index-linked gilt yield is minus 2.4%. What this means is

that savers are actually paying the government to borrow from them, paying them a negative amount of real resources. Of course, this is totally different from paying 4% a year in real resources. It means the government can invest in infrastructure and not merely gain the capital return on that but add into that the borrowing profit.

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

A further Treasury argument is that there will be a solvency problem over the next decades if we do not pay off debt soon. This argument is based on the fear that the economy will not produce enough growth and tax revenue to pay for future spending, so creating a spiralling debt ratio. However, this argument is self-defeating because the growth rate is itself affected by the tax rate. According to our UK regional growth model¹, which matches UK post-war data, growth responds sensitively to the business tax rate, and net UK tax revenue responds sensitively to growth. The result is that with the currently planned tax rises UK growth over the coming decade falls by 2.3 % p.a., with the North's falling more than the South's; whereas if the Treasury were to lower the tax rates in a supply-side-boosting £100 billion p.a. package, growth would be stimulated by a similar amount, again with a bigger effect on the North than the South. As for the debt ratio, even if we scale these growth effects down by over half to just 1% in each direction, the effect on the debt ratio by 2035 is minimal; it comes out at around 50% regardless, implying that raising taxes as planned cuts growth with no long-run lowering of the debt ratio because the extra taxes levied damage growth reducing tax revenues in a broadly offsetting way. Furthermore, actually cutting tax rates instead of raising them, would lead to offsetting rises in tax revenue due to higher growth. These projections are shown in the appendix below. They underline the 'tax-smoothing' role of public borrowing, in which you only raise taxes on the basis of the long run cost of financing public spending, meanwhile borrowing to iron out temporary spikes in net spending. This role does not threaten our solvency.

This picture of relatively undisturbed public finances changes radically if we use our Regional Growth model estimates for the growth effects of tax changes; these are the most likely estimates as they fit the UK facts on growth. The projections on these estimates — shown in the second half of the Appendix — that imply double the growth effects, show the debt ratio worsening disastrously (to 135% by 2035) under the currently planned tax rises, presaging a doom loop whereby the Treasury, frustrated by the low tax

receipts resulting from lower growth raises tax rates further, worsening debt even more and so on. Nor does the investment allowance against Corporation Tax help at all: it is no use when the incentive to innovate is destroyed by the high tax rate — without innovation and so rising productivity, there is no return to investment for the allowance to write off tax against. The mirror image of this situation is seen under our tax-cutting scenario where the debt ratio falls faster, reaching 50% by 2030; this leads to a virtuous circle where improving finances prompt further tax cuts and even better finances, and so on.

It follows that the effect of higher taxes is at best to leave the projected debt ratio largely unaffected but to reduce growth damagingly, and at worst to risk creating a vicious downward spiral or doom loop; whereas cutting taxes would raise growth beneficially while at worst leaving the projected debt ratio unaffected and at best reducing it faster, enabling a virtuous circle of higher growth and better finances. What this underlines is that the main job of fiscal policy is to underpin growth via supply-side policy on the tax rate. As for demand side fiscal policy, when the real interest rate, r , is below the growth rate, g , as now, the situation is one of 'dynamic inefficiency', where the cost in consumption lost in investing for growth is greater than its return on capital invested²; the government should run a fiscal deficit to increase national consumption and boost the economy on the demand side.

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

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

¹Available at http://carbsecon.com/wp/E2020_14.pdf and forthcoming in Open Economies Review

²When $r=g$, there is 'dynamic efficiency' as follows: $r=g=(\text{rise in capital invested})/\text{capital}(K)=\text{Savings}/K$. Hence return on capital= $rK=\text{Savings}=\text{Consumption sacrificed}$. Thus the growth process, where capital and GDP are growing together at the same equilibrium rate, is generating a

return that desirably just equals the required sacrifice in consumption. When $r < g$ (as now), consumption should rise, savings fall (government should increase its deficit); when $r > g$ (as in 1980), consumption should fall and government cut its deficit. This criterion acts as a guide to fiscal demand stimulus or contraction.

APPENDIX on Fiscal/Debt projections under no-tax-change (Base Case), Planned tax-rise (Variant 1), and £100 billion Stimulus package (three quarters tax cut, one quarter spending rise)-Variant 2.

PART A assumes half the growth effects of tax estimated in the Cardiff Regional Growth Model.

PART B assumes the full effects estimated by it.

Public finance projections from 2025 to 2035

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

BASE Forecast

Public Finance Forecast

	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	49.1	2196.3	472.2	2.2	21.5	1621.0	48.1	73.8	471.2	21.5
2020/21	317.2	2006.2	481.1	15.8	24.0	1938.2	39.8	96.6	203.7	10.2
2021/22	169.9	2311.2	517.8	7.4	22.4	2108.1	42.6	91.2	390.5	16.9
2022/23	55.0	2579.1	562.0	2.1	21.8	2163.1	41.1	83.9	548.1	21.3
2023/24	31.9	2732.3	592.9	1.2	21.7	2195.0	42.9	80.3	603.9	22.1
2024/25	23.5	2903.4	646.8	0.8	22.3	2218.5	44.1	76.4	667.4	23.0
2025/26	3.8	3019.5	679.8	0.1	22.5	2222.3	45.2	73.6	721.2	23.9
2026/27	0.2	3140.3	734.4	0.0	23.4	2222.5	46.3	70.8	780.5	24.9
2027/28	0.2	3265.9	797.0	0.0	24.4	2222.7	47.3	68.1	844.2	25.9
2028/29	0.0	3396.6	864.8	0.0	25.5	2222.7	48.3	65.4	913.0	26.9
2029/30	0.0	3532.4	938.3	0.0	26.6	2222.7	49.2	62.9	987.5	28.0
2030/31	0.0	3673.7	1018.0	0.0	27.7	2222.7	50.1	60.5	1068.1	29.1
2031/32	0.0	3820.7	1104.4	0.0	28.9	2222.7	50.9	58.2	1155.3	30.3
2032/33	0.0	3973.5	1197.9	0.0	30.1	2222.7	51.7	55.9	1249.5	31.5
2033/34	0.0	4132.4	1299.1	0.0	31.4	2222.7	52.4	53.8	1351.5	32.7
2034/35	0.0	4297.7	1408.6	0.0	32.8	2222.7	53.2	51.7	1461.8	34.0

¹GDP at market prices (Financial Year)

Part A

Public finance projections from 2025 to 2035

	Nominal GDP growth	Tax rate	Pub Spend
Baseline above	4%	4%	-
Variant 1	3%	4% + £80b p.a.	same as baseline
Variant 2	5%	4% - £75b p.a.	baseline + £25b p.a.

Variant 1 Forecast

	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	49.1	2196.3	472.2	2.2	21.5	1621.0	48.1	73.8	471.2	21.5
2020/21	317.2	2006.2	481.1	15.8	24.0	1938.2	39.8	96.6	203.7	10.2
2021/22	169.9	2311.2	517.8	7.4	22.4	2108.1	42.6	91.2	390.5	16.9
2022/23	55.0	2579.1	562.0	2.1	21.8	2163.1	41.1	83.9	548.1	21.3
2023/24	31.9	2732.3	592.9	1.2	21.7	2195.0	42.9	80.3	603.9	22.1
2024/25	23.5	2903.4	646.8	0.8	22.3	2218.5	44.1	76.4	667.4	23.0
2025/26	-56.1	2990.5	679.8	-1.9	22.7	2162.4	45.2	72.3	781.1	26.1
2026/27	-36.0	3080.2	734.4	-1.2	23.8	2126.4	46.2	69.0	816.6	26.5
2027/28	-9.8	3172.6	797.0	-0.3	25.1	2116.6	47.1	66.7	853.9	26.9
2028/29	19.6	3267.8	864.8	0.6	26.5	2136.3	47.9	65.4	893.0	27.3
2029/30	52.9	3365.8	938.3	1.6	27.9	2189.1	48.7	65.0	934.2	27.8
2030/31	90.2	3466.8	1018.0	2.6	29.4	2279.4	49.6	65.7	977.4	28.2
2031/32	132.1	3570.8	1104.4	3.7	30.9	2411.4	50.5	67.5	1022.8	28.6
2032/33	178.9	3677.9	1197.9	4.9	32.6	2590.4	51.6	70.4	1070.5	29.1
2033/34	231.3	3788.3	1299.1	6.1	34.3	2821.7	52.9	74.5	1120.6	29.6
2034/35	289.8	3901.9	1408.6	7.4	36.1	3111.6	54.5	79.7	1173.3	30.1

¹GDP at market prices (Financial Year)

Variant 2 Forecast

	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	49.1	2196.3	472.2	2.2	21.5	1621.0	48.1	73.8	471.2	21.5
2020/21	317.2	2006.2	481.1	15.8	24.0	1938.2	39.8	96.6	203.7	10.2
2021/22	169.9	2311.2	517.8	7.4	22.4	2108.1	42.6	91.2	390.5	16.9
2022/23	55.0	2579.1	562.0	2.1	21.8	2163.1	41.1	83.9	548.1	21.3
2023/24	31.9	2732.3	592.9	1.2	21.7	2195.0	42.9	80.3	603.9	22.1
2024/25	23.5	2903.4	646.8	0.8	22.3	2218.5	44.1	76.4	667.4	23.0
2025/26	82.3	3048.6	704.8	2.7	23.1	2300.8	45.2	75.5	667.8	21.9
2026/27	54.1	3201.0	759.4	1.7	23.7	2354.9	46.4	73.6	751.7	23.5
2027/28	24.5	3361.0	822.0	0.7	24.5	2379.4	47.6	70.8	845.1	25.1
2028/29	-10.5	3529.1	889.8	-0.3	25.2	2368.9	48.8	67.1	949.1	26.9
2029/30	-51.6	3705.6	963.3	-1.4	26.0	2317.3	49.9	62.5	1064.8	28.7
2030/31	-99.7	3890.8	1043.0	-2.6	26.8	2217.7	50.9	57.0	1193.6	30.7
2031/32	-155.9	4085.4	1129.4	-3.8	27.6	2061.8	51.7	50.5	1337.0	32.7
2032/33	-221.5	4289.6	1222.9	-5.2	28.5	1840.3	52.2	42.9	1496.5	34.9
2033/34	-297.7	4504.1	1324.1	-6.6	29.4	1542.6	52.3	34.2	1674.1	37.2
2034/35	-386.1	4729.3	1433.6	-8.2	30.3	1156.5	52.0	24.5	1871.7	39.6

¹GDP at market prices (Financial Year)

Part B

Public finance projections from 2025 to 2035

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

Variant 1a Forecast

	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	49.1	2196.3	472.2	2.2	21.5	1621.0	48.1	73.8	471.2	21.5
2020/21	317.2	2006.2	481.1	15.8	24.0	1938.2	39.8	96.6	203.7	10.2
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2023/24	31.9	2732.3	592.9	1.2	21.7	2195.0	42.9	80.3	603.9	22.1
2024/25	23.5	2903.4	646.8	0.8	22.3	2218.5	44.1	76.4	667.4	23.0
2025/26	-33.7	2952.8	679.8	-1.1	23.0	2184.8	45.2	74.0	758.7	25.7
2026/27	10.4	3003.0	734.4	0.3	24.5	2195.2	46.2	73.1	770.2	25.6
2027/28	62.3	3054.0	797.0	2.0	26.1	2257.5	47.2	73.9	782.0	25.6
2028/29	119.1	3105.9	864.8	3.8	27.8	2376.6	48.2	76.5	793.9	25.6
2029/30	181.7	3158.7	938.3	5.8	29.7	2558.3	49.4	81.0	806.0	25.5
2030/31	250.4	3212.4	1018.0	7.8	31.7	2808.7	50.8	87.4	818.4	25.5
2031/32	325.9	3267.0	1104.4	10.0	33.8	3134.6	52.4	95.9	830.9	25.4
2032/33	408.7	3322.6	1197.9	12.3	36.1	3543.2	54.5	106.6	843.7	25.4
2033/34	499.5	3379.1	1299.1	14.8	38.4	4042.7	57.1	119.6	856.7	25.4
2034/35	599.1	3436.5	1408.6	17.4	41.0	4641.8	60.3	135.1	869.9	25.3

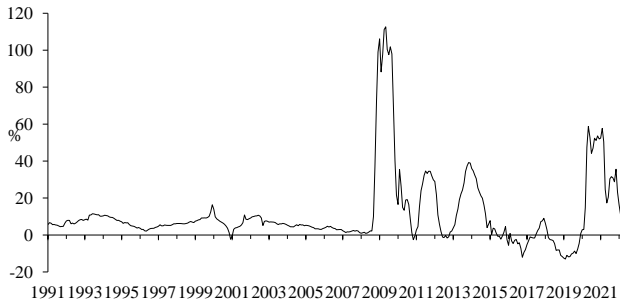
¹GDP at market prices (Financial Year)

Variant 2a Forecast

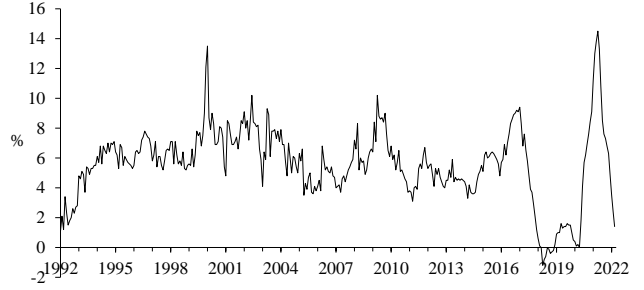
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2021/22	169.9	2311.2	517.8	7.4	22.4	2108.1	42.6	91.2	390.5	16.9
2022/23	55.0	2579.1	562.0	2.1	21.8	2163.1	41.1	83.9	548.1	21.3
2023/24	31.9	2732.3	592.9	1.2	21.7	2195.0	42.9	80.3	603.9	22.1
2024/25	23.5	2903.4	646.8	0.8	22.3	2218.5	44.1	76.4	667.4	23.0
2025/26	58.9	3086.3	704.8	1.9	22.8	2277.4	45.2	73.8	691.2	22.4
2026/27	1.2	3280.8	759.4	0.0	23.1	2278.6	46.4	69.5	804.6	24.5
2027/28	-65.3	3487.4	822.0	-1.9	23.6	2213.3	47.5	63.5	934.8	26.8
2028/29	-146.1	3707.1	889.8	-3.9	24.0	2067.2	48.4	55.8	1084.3	29.2
2029/30	-243.5	3940.7	963.3	-6.2	24.4	1823.7	49.1	46.3	1255.9	31.9
2030/31	-360.5	4189.0	1043.0	-8.6	24.9	1463.3	49.4	34.9	1452.9	34.7
2031/32	-500.6	4452.9	1129.4	-11.2	25.4	962.6	49.1	21.6	1679.1	37.7
2032/33	-667.8	4733.4	1222.9	-14.1	25.8	294.8	48.1	6.2	1938.8	41.0
2033/34	-866.7	5031.6	1324.1	-17.2	26.3	-571.9	46.1	-11.4	2236.9	44.5
2034/35	-1102.6	5348.6	1433.6	-20.6	26.8	-1674.5	43.0	-31.3	2579.2	48.2

¹GDP at market prices (Financial Year)

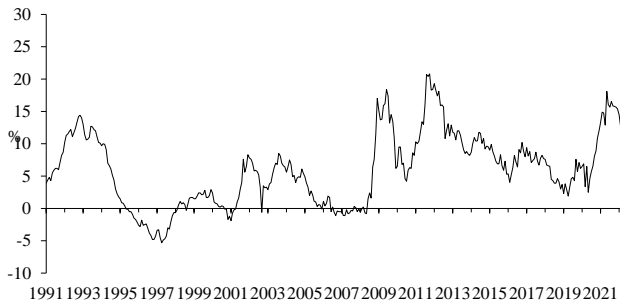
U.S.: Growth in M0 (Yr - on - Yr)



UK: Notes and Coins in Circulation Growth



U.S.: Growth in M1 (Yr - on - Yr)



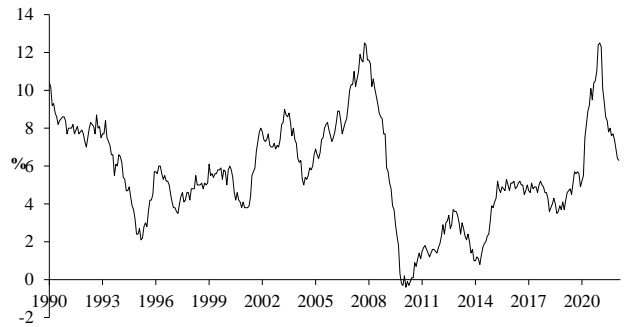
UK: M4 Growth



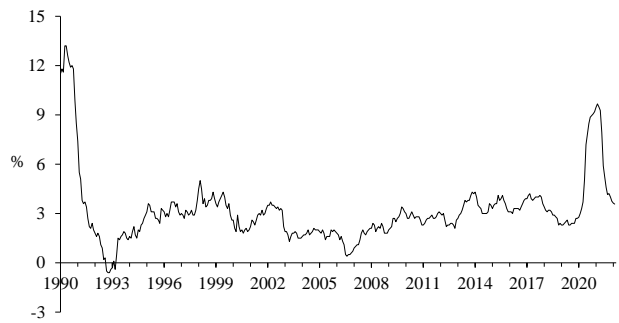
U.S.: Growth in M2 (Yr - on - Yr)



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

The Economic Impact on Japan of the War in Ukraine

The war in Ukraine is causing tremendous human suffering and material damage. Western countries responded with sanctions that are having major consequences for the Russian economy, its financial system and its currency. Many companies have also independently decided to end their relationship with, or activities in, Russia. In other words, the war is also a financial and economic shock that has broad implications. Japan is also being economically affected by the war, though with lower intensity compared to most of the Western countries.

The economic consequences for Japan are most noticeable in energy prices. Their upward movement was initially driven by a sharp rise in demand following the relaxation of COVID-19-related restrictions and lagging energy supplies. Rising geopolitical tensions and the military invasion of Ukraine are now causing uncertainty concerning energy supply, resulting in steep additional price increases for oil and gas.

The war is also having an impact on commodity prices. This is because Russia and Ukraine play an important role as major suppliers in a number of commodity markets. Both countries together account for about 30% of global exports of wheat, 20% for corn, mineral fertilizers and natural gas, and 11% for oil. In addition, supply chains around the world are dependent on exports of metals from Russia and Ukraine. Russia is a key supplier of palladium, used in catalytic converters for cars, and nickel, used in steel production and the manufacture of batteries. Russia and Ukraine are also sources of inert gases such as argon and neon, used in the production of semiconductors, and large producers of titanium sponge, used in aircraft. Both countries also have globally important reserves of uranium. The prices of many of these commodities have increased sharply since the onset of the war, even in the absence of any significant disruption of production or export volumes.

In addition, the geopolitical situation also intensifies bottlenecks in the supply and transportation of other raw materials and commodities, which have not yet recovered from the COVID-19-related restrictions. As a result, many products have continued to rise in price, which is reflected in high inflation. All in all, the economic picture has changed dramatically over a short time.

As a result, in the past few weeks Prime Minister Fumio Kishida instructed ministers to begin work on developing a new stimulus package by late April to soften the blow to households from rising energy, commodity and grain prices. The package is also aimed at helping Japan's economy recover from the COVID-19 pandemic and will focus on

four areas — higher crude oil prices, stable food supplies, funding support for small and midsized companies and assistance to people in need — according to Kishida, who delivered his directive at a Cabinet meeting.

So far, Japan has enacted a record ¥107.60 trillion spending (about 20% of GDP) budget for the FY2022 to support the economy, with a deficit of 6% of GDP. To finance the stimulus, Kishida instructed the ministers to tap ¥5 trillion set aside in the fiscal 2022 budget for the government's pandemic response, as well as ¥500 billion in reserve funds allocated for other emergency spending needs. Kishida told parliament that the first priority is to deliver the spending plan as soon as possible and use the reserve funds for the to-be-compiled stimulus package.

As a key item that could go into the package, Kishida has floated the idea of distributing a one-off ¥5,000 payment to pensioners whose public pension benefits is set to fall by 0.4% in April from a year earlier. But opposition lawmakers have criticized it as an attempt to woo senior voters ahead of the Upper House election this summer. "We are entering a critical phase in reviving an economy damaged by COVID-19," Kishida said during a recent session of the House of Councillors. "We must take steps with agility to ensure a recovery in economic and social activities from the pandemic and address the impact of surging crude oil and other prices due to the situation in Ukraine," he said.

Kishida has also announced a one-month extension of subsidies to oil wholesalers to lower retail gasoline prices until the end of April. Another contentious point is whether the government should reactivate a provision that would allow for a temporary cut in gasoline taxes as the prime minister vowed to consider "all possible options" in responding to the surge in energy costs.

As Kishida aims to achieve wealth redistribution as part of his push for a new form of capitalism, the government is also expected to prepare steps that will make it easier for smaller firms to pass on higher costs to consumers. Calls have grown within the ruling coalition for the government to take further steps to ease the pain increasingly felt by consumers, with the yen's recent weakness magnifying the impact by raising import costs.

Japan's relatively slow economic recovery and low inflation have bolstered the case for the Bank of Japan to keep its monetary easing for an extended period, in sharp contrast to the US Federal Reserve, which has apparently entered a rate hike cycle to fight inflation. The divergent policy paths have weakened the yen against the dollar, with the BOJ making a rare move into the bond markets to keep 10-year Japanese government bond yields from rising above its implicit upper limit. "Stability in the currency markets is important and

rapid movements are not desirable,” Chief Cabinet Secretary Hirokazu Matsuno said at a news conference. “We will closely watch developments in currency markets, including

the yen’s recent depreciation, and their impact on the economy,” Matsuno said.

MARKET DEVELOPMENTS

With western central banks raising interest rates, the inflation spurred by supply shortages due to Covid and the Ukraine war will be reversed in the next two years.

The post-Covid recovery will continue, supported by the run down of Covid savings. This should underpin the equity market.

Table 1: Market Developments

	Market Levels		Prediction for Mar/Apr 2023	
	Feb 28	Mar 04	Previous Letter	Current View
Share Indices				
UK (FT 100)	7458	7614	13462	13743
US (S&P 500)	4374	4525	6653	6883
Germany (DAX 30)	14461	14424	26738	26671
Japan (Tokyo New)	1887	1949	2636	2723
Bond Yields (government)				
UK	1.30	1.73	2.00	2.00
US	1.77	2.64	2.00	2.30
Germany	0.01	0.66	0.00	0.20
Japan	0.16	0.25	0.10	0.10
UK Index Linked	-2.19	-2.04	1.00	1.00
Exchange Rates				
UK (\$ per £)	1.34	1.31	1.30	1.30
UK (trade weighted)	82.51	81.73	78.8	78.7
US (trade weighted)	103.51	102.68	100.5	100.5
Euro per \$	0.89	0.91	0.88	0.88
Euro per £	1.19	1.20	1.20	1.20
Japan (Yen per \$)	115.18	123.30	110.5	110.5
Short Term Interest Rates				
UK	0.63	0.63	1.00	1.00
US	0.38	0.93	1.00	1.00
Euro	-0.53	-0.45	-0.50	-0.50
Japan	-0.05	0.00	0.00	0.00

Table 2: Prospective Yields¹

Equities: Contribution to £ yield of:						
	Dividend Yield	Real Growth	Inflation	Changing Dividend Yield	Currency	Total
UK	3.60	3.5	5.0	72.00		84.10
US	1.99	3.2	4.0	44.90	-3.58	50.51
Germany	3.30	3.1	2.8	79.00	0.30	88.50
Japan	1.90	2.3	0.4	37.00	7.17	48.77
UK indexed ²	-2.19		5.0	16.00		18.97
Hong Kong ³	2.60	5.2	4.0	5.00	-3.58	13.22
Malaysia	3.30	4.5	4.0	64.00	-3.58	72.22
Singapore	3.50	3.8	4.0	45.00	-3.58	52.72
India	1.40	5.5	4.0	22.00	-3.58	29.32
Korea	1.10	3.0	4.0	4.00	-3.58	8.52
Indonesia	2.20	5.3	4.0	49.00	-3.58	56.92
Taiwan	2.80	3.3	4.0	45.00	-3.58	51.52
Thailand	3.20	4.2	4.0	41.00	-3.58	47.42
Bonds: Contribution to £ yield of: –						
	Redemption Yield	Changing Nominal Rates	Currency	Total		
UK	1.73	-2.66				-0.93
US	2.64	3.41	-3.58			2.47
Germany	0.66	4.60	0.30			5.56
Japan	0.25	1.46	7.17			8.88
Deposits: Contribution to £ yield of:						
	Deposit Yield	Currency	Total			
UK	0.63		0.63			
US	0.93	-3.58	-2.65			
Euro	-0.45	0.30	-0.15			
Japan	0.00	7.17	7.17			

¹ Yields in terms of €s or \$s can be computed by adjusting the £-based yields for the expected currency change.

² UK index linked bonds All Stocks

³ Output based on China.

Table 3: Portfolio(%)

	Sterling Based Investor		Dollar Based Investor		Euro Based Investor	
	March Letter	Current View	March Letter	Current View	March Letter	Current View
UK Deposits (Cash)	5	5	5	5	1	1
US Deposits	-	-	-	-	-	-
Euro Deposits	-	-	-	-	-	-
Japanese Deposits	-	-	-	-	-	-
UK Bonds	-	-	-	-	-	-
US Bonds	-	-	-	-	-	-
German Bonds	-	-	-	-	-	-
Japanese Bonds	-	-	-	-	-	-
UK Shares	19	19	14	14	17	17
US Shares	14	14	19	19	16	16
German Shares	14	14	14	14	21	21
Japanese Shares	9	9	9	9	11	11
Hong Kong/Chinese Shares	4	4	4	4	4	4
Singaporean Shares	4	4	4	4	4	4
Indian Shares	4	4	4	4	4	4
Thai Shares	3	3	3	3	3	3
South Korean Shares	4	4	4	4	4	4
Taiwanese Shares	4	4	4	4	3	3
Brazilian Shares	4	4	4	4	3	3
Chilean Shares	4	4	4	4	3	3
Mexican Shares	4	4	4	4	3	3
Peruvian shares	4	4	4	4	3	3
Other:						
Index-linked bonds (UK)	-	-	-	-	-	-

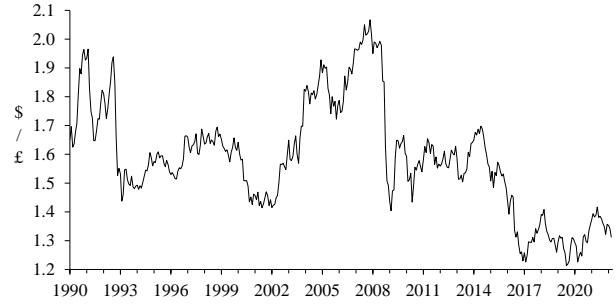
INDICATORS AND MARKET ANALYSIS

FOREIGN EXCHANGE MARKETS

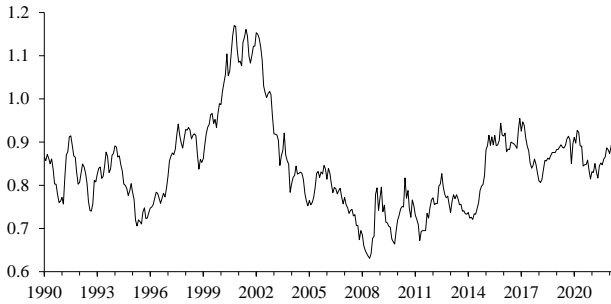
**US : Trade Weighted Index
(Bank of England 1990 = 100)**



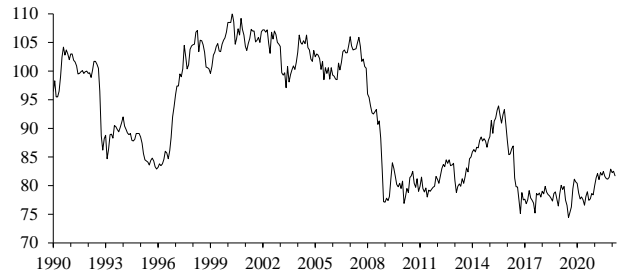
UK: Dollars Per Pound Sterling



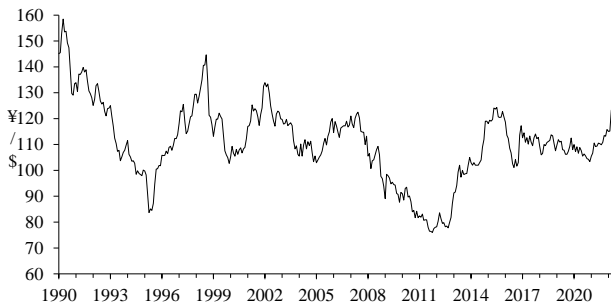
Euro per US dollar



**UK: Trade-Weighted Index
(Bank of England 1990 = 100)**



Japan : Yen Per U.S. Dollar

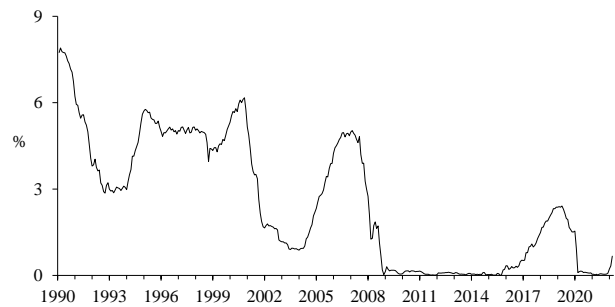


GOVERNMENT BOND MARKETS

U.S.: Yield on Long-Term Government Bonds



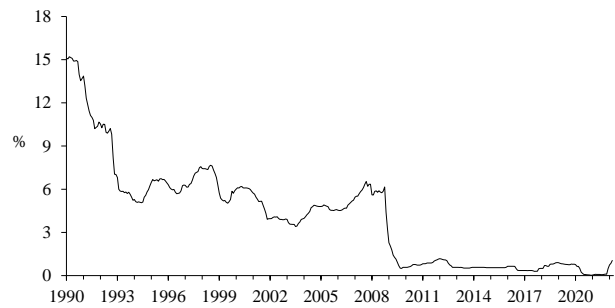
U.S. : 3-Month Treasury Bill



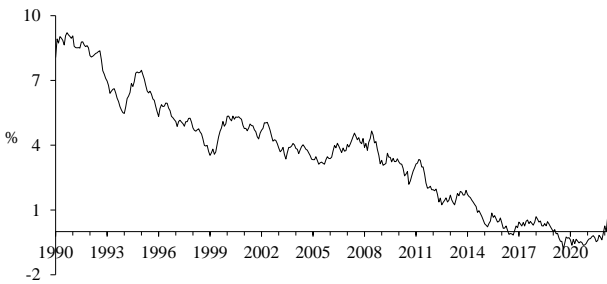
U.K.: Yield on Long-Term Government Bonds



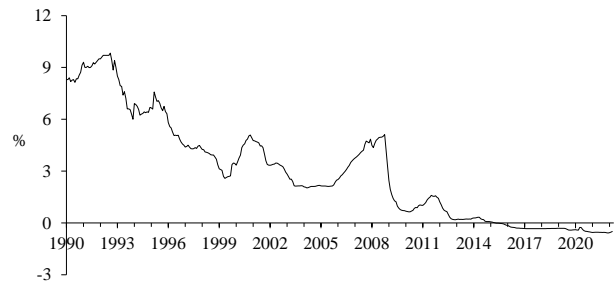
U.K. : 3-Month Certificate LIBOR Rate



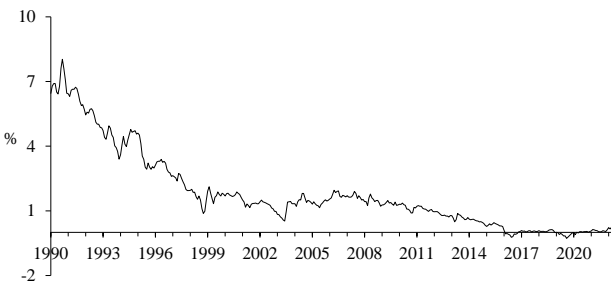
Germany: Yield on Public Authority Bonds



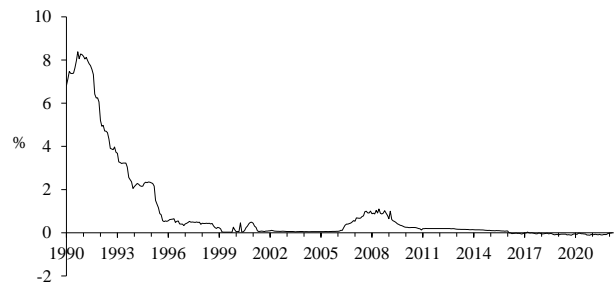
Germany : 3-Month Interbank Deposit Rate



Japan: Yield on Long-Term Government Bonds

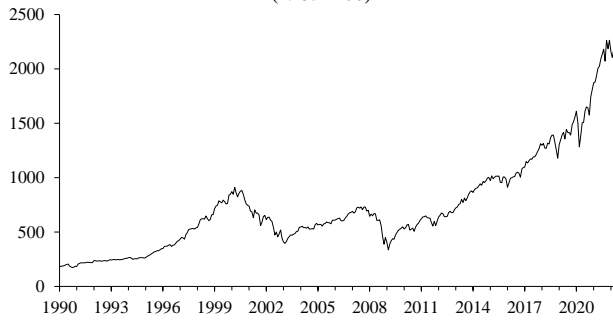


Japan : 3-Month Money Market Rate

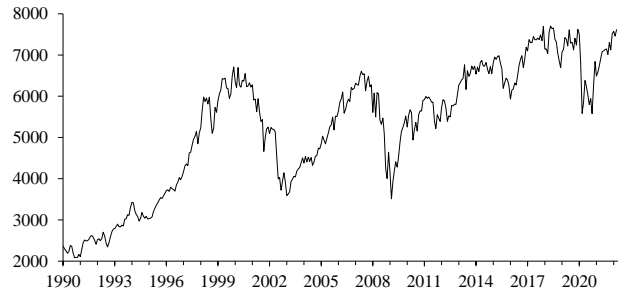


MAJOR EQUITY MARKETS

**U.S. : S & P 400 Industrial
(1985=100)**



**U.K. : FTSE-100 Index
(10 April 1962=100)**



Germany : DAX 30



**Japan : Tokyo S.E. New
(1985=100)**



EMERGING MARKETS

Anupam Rastogi

India

In March and the coming few days, a host of foreign luminaries have made a bee-line for Delhi, keen on making India choose their side in the Ukraine conflict. On the one hand, the foreign ministers of Russia and China visited India. On the other, emissaries from Japan, Germany, the UK, and the US have visited India. India's dependence on Russia for arms and the rising costs of the oil import bill has forced India to remain neutral. While realpolitik dictates maintaining a discreet silence on the invasion, quietly buying cheap oil from Russia will yield only short-term benefits. In the longer term, India aspires to ally with the US to fend off China. Friendship with the US is a must to become 'self-sufficient' in producing modern warfare systems. The share of the US in the global economy is falling steadily, while that of China is rising. The same goes for the US share of international trade. Yet, the US is still the predominant power in military and financial muscle, and the dollar is still king.

In the immediate future, to control domestic inflation emanating from high crude oil prices, India is buying Russian Urals grade crude oil at discounts of as much as \$35 a barrel on prices before the war. The deal will make the oil trade viable even at a higher freight. Russia has also offered rupee-ruble-denominated payments using Russia's messaging system SPFS, making trading more attractive for India. This was on the agenda when Russian Foreign Minister Sergei Lavrov visited India. India seeks to push for more significant exports of medicines, engineering goods, and chemicals to Russia to narrow its trade gap created by oil and arms purchases.

In the whole deal, India sees an opportunity. It wants to push for the US and other Western investments in the modernization and indigenization of India's defence industrial base in the long run and control inflation in the coming 5–6 months.

The Indian economy is all set to grow at 7.5% in the current fiscal year 2022–23 after achieving a growth rate of 8.9% in the previous fiscal year. Higher prices of fuels and items such as edible oils are likely to compress disposable incomes in the mid to lower-income segments, constraining the demand revival in FY2023. Credit rating agencies are becoming a little cautious about India's economic growth, mainly due to the increase in crude oil prices, leading to high inflation and twin deficits, namely, fiscal deficit and current account deficit.

Goods and Services Tax collection reached an all-time high of Rs 1.42 trillion in March. The robust collection of indirect taxes could be attributed to the government's tightened

India: BSE Sensex



compliance measures and crackdown on GST evaders and fake bills. Net direct tax collection rose 50% to Rs 13.81 trillion in FY22. It has exceeded budget and revised estimates. No slippage in tax collection means that the fiscal deficit will remain contained.

Consumer price inflation has already exceeded the central bank's targets. Producer prices were rising at the start of the year, and the outbreak of the Russia-Ukraine war has amplified the trend. The oil price increased roughly 10% in the last and the first week of March and April. Hence, average consumer inflation is likely to remain at 6.5% in fiscal 2023.

The rise in inflation in India will compel the central bank to signal a neutral stance in its April 8 review meeting and eventually increase the repo rate in the upcoming monetary policy. The central bank will likely raise the repo rate by at least 50–75 basis points through the fiscal year 2023 and another 50 basis points in fiscal 2024.

India's current account deficit widened to 2.7% of GDP in Q3FY22 compared to 1.3% in the previous quarter. The higher trade deficit was due to a surge in imports and higher investment income outflows. At the same time, imports continued to expand owing to surging commodity prices, resilient demand during the festive season and easing of restrictions. The exports could not keep pace with imports because many advanced economies continue to have restrictions. The capital account recorded a surplus of US\$23bn — a contraction of 43% QoQ, weighed down heavily by foreign portfolio outflows. This resulted in the Balance of Payment (BoP) surplus falling to a 12-quarter low of US\$0.5bn in Q3FY22.

A security partnership forged to counter China's expansion is helping to boost trade ties between India, Australia, Japan, and the US, despite recent tensions over India's relationship with Russia.

Australia and Japan announced a flurry of new investments in India in recent days. India and Australia signed a

comprehensive interim free-trade agreement that will provide zero-duty exports to 100% tariff lines from India to the Australian market, benefiting labour-intensive sectors besides providing greater access to the services space.

While economic connections have grown, the defence now connects Japan and India. The priority for Tokyo has been to increase security cooperation because of shared concerns about China’s military rise. In 2020, Japan and India signed an agreement to share military supplies, and they have expanded joint military training. “The Quad countries have accepted India’s position,” Barry O’Farrell, Australian high commissioner to India, said in a briefing. “We understand that each country has bilateral relationships.”

	20–21	21–22	22–23	23–24	24–25
GDP (%p.a.)	-6.9	8.9	7.5	6.4	6.5
WPI (%p.a.)	5.5	6.0	6.5	6.0	5.5
Current A/c(US\$ bill.)	35.0	-35.0	-30.0	-30.0	-30.0
Rs./\$(nom.)	75.0	74.5	77.0	79.0	80.0

China

Beijing’s Covid Zero strategy is falling apart. A new wave of virus cases is highlighting the failure of the policy. China’s response will impact its population of more than 1.4 billion and a world economy affected by the increase in commodities prices from the war in Ukraine.

The lockdown of Shanghai is the latest blow to the country’s ambitious growth target in a politically sensitive year for leader Xi Jinping. Since March 28, Shanghai entered a phased lockdown, and lockdown in various parts of the country is becoming contentious with the public. Beijing is unlikely to abandon its Covid Zero strategy. Shanghai contributes about 3.8% of the national GDP and accounts for one-fifth of the country’s external trade. An extended lockdown of the city has economic consequences. The Communist Party’s Politburo discussed the issue in a surprise meeting but did not disclose its plans to tackle Covid-19, the economic slowdown, or the conflict in Ukraine.

We maintain our last forecast of GDP growth in 2022 as we had considered that there would be many cases after the winter Olympics, and economic activity would be adversely affected. China’s cabinet and the central bank have acknowledged risks to the economy from Covid and the war in Ukraine. China’s official manufacturing purchasing managers’ index (PMI) fell to 49.5 in March, down 50.2 in February. The non-manufacturing PMI, which measures business sentiment in the services and construction sectors, fell to 48.4 from 51.6 in February. We expect the central bank to ease monetary policy, make it more forward-looking, targeted, and autonomous and unclog its transmission. Besides monetary measures such as cutting reserve-requirement ratios and interest rates, there is also hope the government will roll back its regulatory campaign against the nation’s tech giants and even loosen some of the restrictions weighing on the property market.

China: SSE Composite Index



In 2021, China’s economy grew by 8.1% to about USD 18 trillion — stated to be the best in a decade. The pace of the growth was well above the government target of above 6% in 2021.

China’s factory-gate prices grew at their slowest pace in eight months in February as consumer price inflation stayed flat, leaving room for the central bank to ease monetary policy to boost demand.

The producer price index rose 8.8% from a year earlier in February, decelerating from a 9.1% increase in January. China’s consumer price index, a main gauge of inflation, rose 0.6% on a month-over-month basis in February. It is expected to increase moderately in 2022, and the growth of the producer price index, which gauges factory-gate prices, will gradually slow in China this year.

Chinese exports in January and February rose a combined 16.3% on surging global demand and a spike in trade with Russia in the run-up to the war in Ukraine. The war in Ukraine will soon start to weigh on net trade due to softer foreign demand and a higher import bill. The trade surplus could narrow to \$240 billion this.

China is attempting to buy oil in yuan rather than dollars, and now it may have found a willing seller. Saudi Arabia, which sells a quarter of its exports to China, is considering making these sales in yuan. The US geopolitical hegemony is based on the petrodollar — with 80% of global oil transactions denominated in dollars. China has pushed for greater adoption of the yuan and recently held talks with Saudi Arabia for a yuan-based oil deal.

The war in Ukraine and Russia’s effective exclusion from the global currency system is an opportunity for China to raise the yuan’s profile. According to the IMF, the dollar has lost ground in its share of international currency reserves. The dollar’s dominance has been dented due to central banks looking to diversify their holdings. The dollar share of international reserves has declined over the past two decades as central banks look to diversify their holdings into the Chinese yuan and other currencies.

China and Russia are actively exploring a coalition in which they are united by shared grievances against the US, as propagated by Zbigniew Brzezinski, the strategic theorist who was national security adviser to President Jimmy Carter in the late 1970s.

Beijing might provide help for a Russian tech sector cut off from the West. Beyond that, the Chinese probably figure they benefit from a prolonged U.S.-Russian confrontation because American military resources are diverted away from Asia and toward Europe. At present, the West’s strategy is designed to steer clear of direct combat between Russia and members of the North Atlantic Treaty Organization while crippling Russia’s economy. The weaponization of the economic system suits China.

China wants to take advantage of the Ukraine crisis. China would like to emerge from the Ukraine crisis with a parallel inter-country payment system with the yuan as an acceptable reserve currency. The Chinese state knows that an internationalised currency requires open financial markets, which would radically weaken its control over China’s economy and society. Nevertheless, it wants to offer China’s Cross-border Interbank Payment System (Cips — an alternative to the Swift system) and digital currency (the e-CNY) for trade between China and its many trading partners. The e-CNY might also become a significant reserve currency in the long run. Two monetary systems might emerge — a western and a Chinese one — operating in different ways and overlapping uncomfortably.

	20	21	22	23	24
GDP (%p.a.)	2.2	8.1	5.2	5.0	4.5
Inflation (%p.a.)	2.5	1.8	2.0	2.0	1.5
Trade Balance(US\$ bill.)	60.0	80.0	60.0	52.0	45.0
Rmb/\$(nom.)	6.7	6.4	6.3	6.3	6.2

South Korea

South Korea’s GDP expanded by 4.2% in 2021, led by consumption and services. The outlook for 2022 is also bright, and it is expected to grow by 3% in 2022. Consumer confidence rose 0.1 points to 103.2 on an index measuring sentiment. A reading above the 100 thresholds indicates positive sentiments.

Inflation expectations among South Korean consumers reached the highest level since 2014 as the war in Ukraine exacerbated supply chain snags and rising energy costs. South Korea is reviewing whether to cut fuel taxes further as inflationary pressure has built up amid surging energy costs. Rising inflation has added pressure on the Bank of Korea to rein in inflation, which hit a faster-than-expected 3.7% last month, and break a potential cycle of wage and price increases. It held its benchmark rate last month at 1.25%. The central bank’s next meeting is scheduled for April 14. After confirmation from parliament, the new Governor Chang-yong Rhee will take over from Governor Lee Ju-yeol. The BOK has raised rates three times since August and

Korea: Composite Index



Taiwan: Weighted TAIEX Price Index



expects inflation to stay above its 2% target for a considerable time this year.

Spiralling international energy prices have undermined the trade balance of South Korea. It will have a trade deficit in the first quarter of 2022. Considering the current situation, the current account surplus will be smaller than expected.

President-elect Yoon wants to deepen military cooperation with the US, but its economy is heavily reliant on China, which has used its trading leverage to oppose closer U.S.-South Korean defence ties, such as the deployment of the US Terminal High Altitude Area Defence (Thaad) missile-defence system. Mr. Yoon hasn’t ruled out additional Thaad deployments. And he has called for closer collaboration with “the Quad,” whose members — the US, Japan, Australia, and India — all are interested in checking China’s attempts to establish regional hegemony.

	20	21	22	23	24
GDP (%p.a.)	-0.9	4.2	3.0	2.5	2.3
Inflation (%p.a.)	0.5	2.5	3.2	2.5	2.0
Current A/c(US\$ bill.)	70.0	91.0	50.0	40.0	35.0
Won/\$(nom.)	1070	1150	1250	1300	1310

Taiwan

The ongoing war between Russia and Ukraine may not affect the GDP growth of Taiwan, but the continued lockdown in Shanghai and other cities of China may. We maintain our GDP forecast for 2022 to be 4.4% and 3.2% in 2022 and 2023, respectively.

The annual consumer price index (CPI) increase will likely remain elevated at around 2.2% as supply chains get disrupted, and commodities prices remain high. The government has had state-run companies absorb some of the

increases in the prices of crude oil, natural gas, and other energy inputs rather than pass them on to consumers. The wholesale price index rose 11.54% in February from a year earlier, slightly higher than the 10.97% rise in January. Taiwan’s central bank surprised markets by raising its benchmark interest rate by 25 basis points on March 17 to 1.375%, the biggest increase since 2007. The central banks’ move will stabilize domestic consumer prices and dampen inflation expectations in the market.

On the issue of monetary policy, Taiwan’s central bank would keep pace with expected US interest rate hikes this year to avoid capital outflows or inflows of hot money due to rate differences.

Taiwan’s exports grew for a 20th consecutive month in February, up more than 34% from a year earlier, on the back of increasing global demand amid an economic recovery. Taiwan’s imports in February rose 35.3% from a year earlier to US\$31.64 billion with a trade surplus of US\$5.81 billion, an increase of US\$1.40 billion. In the first two months of this year, the country’s exports hit US\$77.43 billion, up 24.8% from a year earlier. Imports reached US\$66.70 billion, up 29.4% from a year earlier, with the trade surplus rising by US\$210 million to US\$10.73 billion.

A potential easing of geopolitical tensions will boost the Taiwan dollar, a proxy for the risks stemming from the war in Ukraine, given the tense relationship between Taiwan and China.

The war in Ukraine has reignited debate in Taiwan about military conscription and the island’s civil defence as it stares down the threat of invasion from China. Lessons could be learnt by both Taiwan and China from watching how the war in Ukraine and the diplomatic response to it unfold. For all the similarities between Ukraine and Taiwan, there are significant differences. At the top of the list are the parties involved: A conflict over Taiwan is likely to include direct US involvement. There is no indication that war over Taiwan is imminent. Still, if one broke out, it could pit the world’s two largest militaries against each other, with the world’s two largest economies hanging in the balance. This China does not want.

	20	21	22	23	24
GDP (% p.a.)	3.1	6.5	4.4	3.2	2.8
Inflation (% p.a.)	-1.0	2.6	2.2	1.8	1.6
Current A/c(US\$ bill.)	71.0	90.0	100.0	65.0	60.0
NT\$/\$(nom.)	29.0	27.5	27.5	27.0	27.0

Brazil

We maintain our forecast for GDP growth in 2022 to 1%, which is lower than the government estimate of 1.5%. The Brazilian Central Bank has kept its GDP growth forecast for 2022 at 1%. The forecast for GDP growth for 2023 is 2%.

Inflation in Brazil grew more than expected in the month to mid-March, underscoring across-the-board price pressures despite aggressive monetary tightening led by the central

Brazil: Bovespa



bank. Brazil’s official IPCA-15 consumer price index rose 0.95% in the month, down from 0.99% in February.

The government has revised its estimate of consumer price inflation to 6.55% in 2022, up from 4.7% in November, while keeping the forecast at 3.25% for 2023. Our forecast is slightly different from the official estimates as we expect currency appreciation will help contain inflation. The agribusiness and services sectors are growing well as the covid pandemic is contained. The chairman of the Central Bank, Roberto Campos Neto, opined that the war in Ukraine could be positive for the Brazilian economy in the long run, with expected hikes in commodity prices. He said the conflict could force a redesign of global supply chains.

Brazil’s central bank raised its benchmark interest rate in mid-March. It signalled multiple increases to come this year amid the uncertainty and risks to inflation caused by Russia’s invasion of Ukraine.

The bank raised its benchmark Selic rate by one percentage point to 11.75%, leaving the lending rate at its highest level since 2017. The bank began the current tightening cycle early last year when the Selic was at a record low of 2% and has now raised it at nine consecutive meetings.

Brazil posted a \$4 billion trade surplus in February, the most robust performance for the month since 2017. Exports surged 32.6% from February 2021 to \$22.9 billion, benefiting from a 22.6% expansion in volumes and a 13.5% increase in prices. In the same period, Imports rose 22.9% to \$18.9 billion as a 30.9% rise in prices more than compensated for a decline of 2.5% in the volume of goods purchased by Brazil.

Notwithstanding the uncertainties regarding upcoming elections, and the war in Ukraine, the Brazilian Real appreciated against the US Dollar. It is on par with the pre-pandemic level seen in early March 2020. The Brazilian currency continues to have the best performance in 2022, gaining 18% in value against the dollar this year as foreign investors keep piling into the nation’s local assets, lured by high-interest rates and the rally in commodity prices. There is still time for the carry trade to outperform as policymakers are waiting for more data before making drastic changes to the interest rate trajectory. The local benchmark stocks index return in dollar terms has jumped more than 30% this year.

Liverpool Investment Letter — April 2022

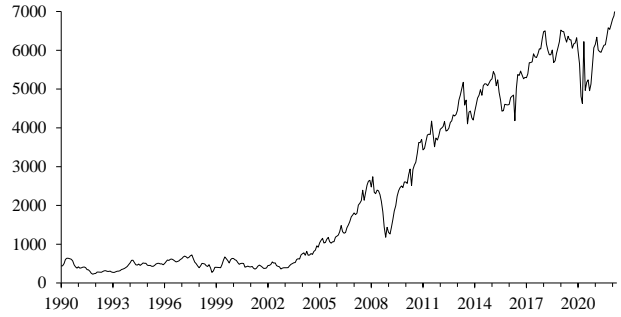
	20	21	22	23	24
GDP (%p.a.)	-3.9	4.6	1.0	2.0	2.0
Inflation (%p.a.)	4.5	8.5	6.0	4.0	4.0
Current A/c(US\$ bill.)	-7.6	-10.0	-10.0	-12.0	-20.0
Real/\$ (nom.)	5.5	5.3	4.8	4.9	4.9

Other Emerging Markets

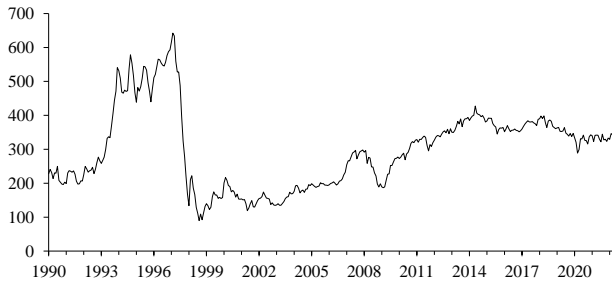
Hong Kong: FT-Actuaries



Indonesia: Jakarta Composite



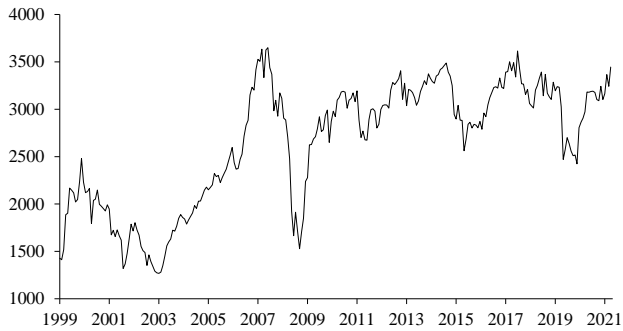
Malaysia: FT-Actuaries (US\$ Index)



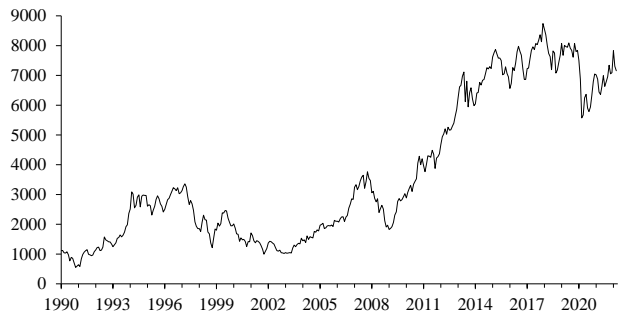
Thailand: Composite Index



Singapore: Straits Times Index



Philippines: Manila Composite

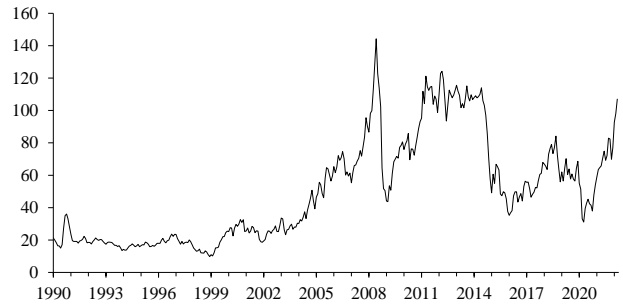


COMMODITY MARKETS

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



Oil Price: North Sea Brent (in Dollars)



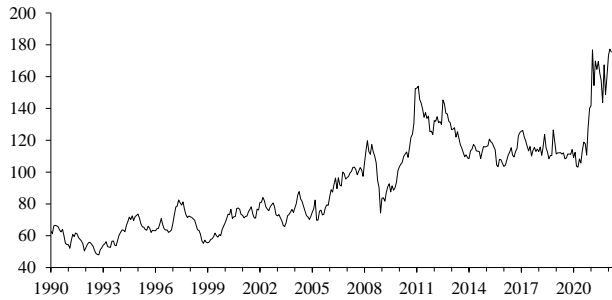
Commodity Price Index (Sterling)
(Economist, 2015 = 100)



Gold Price (in Dollars)



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



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	-5.6	4.0	-5.3
2022	7.0	1.9	1.5	77.3	77.6	-4.0	8.7	-3.5
2023	4.3	3.5	2.4	76.7	78.9	-1.1	5.7	0.0
2024	3.2	3.0	2.9	76.3	80.0	0.5	4.3	0.6
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	-2.7	1.1	-2.7
2021:1	0.9	0.2	0.1	80.6	76.2	-3.9	1.4	-3.8
2021:2	2.1	0.4	0.1	81.7	77.6	-5.2	3.4	-4.9
2021:3	2.7	0.3	0.1	81.7	78.7	-6.3	4.5	-6.1
2021:4	4.4	0.6	0.1	81.9	80.2	-6.9	6.7	-6.4
2022:1	6.9	0.7	0.3	77.8	77.4	-6.2	9.0	-5.8
2022:2	7.1	1.7	1.7	77.7	77.3	-4.2	8.7	-4.2
2022:3	7.0	2.2	1.8	76.9	77.3	-3.3	8.5	-2.9
2022:4	7.0	3.0	2.0	76.9	78.4	-2.3	8.5	-1.3

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	Unemployment (New Basis) Percent ³	Millions	Real Wage Rate ⁴ (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	296.1	5.8	4.5	1.3	154.5
2022	314.8	6.7	4.1	1.1	154.0
2023	328.4	4.3	3.6	1.0	154.0
2024	341.1	4.1	2.8	0.7	155.4
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	154.0
2021:1	292.1	4.5	4.9	1.4	155.3
2021:2	289.7	7.3	4.7	1.3	153.4
2021:3	298.4	7.1	4.3	1.3	155.5
2021:4	301.1	4.5	4.1	1.2	153.6
2022:1	311.7	6.7	4.0	1.1	155.0
2022:2	309.3	6.8	4.1	1.1	152.9
2022:3	318.3	6.7	4.1	1.1	155.0
2022:4	319.9	6.7	4.1	1.1	153.1

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	152.0	728097.3	427575.8	258732.0	199232.3	-33095.4	124347.4
2021	163.3	782161.7	452309.6	292118.7	208538.0	-36908.1	133896.5
2022	172.3	825357.2	479861.8	289024.0	218557.2	-23886.6	138199.2
2023	176.1	843295.7	494513.6	282408.2	225319.4	-18612.0	140333.5
2024	181.0	866882.8	509517.7	285194.7	232155.8	-15890.3	144095.1
2019/18	1.4		0.3	3.1	3.0		-0.1
2020/19	-9.4		-10.1	-16.2	-4.8		4.9
2021/20	7.5		6.8	15.8	5.2		7.7
2022/21	5.6		6.2	-0.3	4.8		3.2
2023/22	2.2		3.1	1.2	3.1		1.5
2024/23	2.8		3.0	1.7	3.0		2.7
2020:1	163.4	195632.5	118032.8	72147.1	51656.8	-11632.2	34572.0
2020:2	131.6	157502.4	91565.8	47009.3	43743.5	429.6	25245.8
2020:3	155.3	185971.2	109964.7	64749.1	50846.1	-8204.0	31384.7
2020:4	157.9	188991.2	108012.5	74826.5	52985.9	-13688.8	33144.9
2021:1	155.5	186205.9	106678.2	68183.6	51087.4	-7838.9	31904.4
2021:2	163.9	196217.8	112089.9	66707.0	51382.2	-672.0	33289.3
2021:3	166.4	199176.5	116084.7	78828.1	52892.3	-14394.2	34234.4
2021:4	167.5	200561.5	117456.8	78400.1	53176.1	-14003.1	34468.4
2022:1	169.2	202535.5	118569.8	73860.3	53932.3	-9285.7	34541.2
2022:2	172.2	206121.1	119522.6	69230.1	54465.4	-2829.4	34267.6
2022:3	173.5	207696.3	120433.1	73370.9	54873.9	-6098.3	34883.3
2022:4	174.6	209004.2	121336.4	72562.6	55285.5	-5673.1	34507.2

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	GDP ¹ (£bn)	PSBR (£bn) Financial Year	Current Account (£ bn)
2019	2.2	2196.3	49.1	-89.1
2020	15.8	2006.2	317.2	-57.6
2021	7.4	2311.2	169.9	-63.8
2022	2.1	2579.1	55.0	-37.9
2023	1.2	2732.3	31.9	-25.5
2024	0.8	2903.4	23.5	-18.1
2020:1	-0.9	549.4	-5.0	-18.7
2020:2	30.6	437.6	133.8	-11.9
2020:3	14.6	519.2	76.0	-12.3
2020:4	12.2	525.7	64.3	-14.8
2021:1	8.2	523.6	43.0	-11.3
2021:2	11.1	554.9	61.6	-13.9
2021:3	7.1	568.4	40.1	-24.0
2021:4	5.8	582.1	33.9	-14.6
2022:1	5.7	605.7	34.2	-15.0
2022:2	2.1	625.2	13.2	-19.3
2022:3	2.3	638.1	14.5	-6.9
2022:4	2.1	654.1	13.7	3.3

¹ GDP at market prices (Financial Year)

WORLD FORECAST DETAIL

Growth Of Real GNP

	2018	2019	2020	2021	2022	2023
U.S.A.	3.0	2.2	-3.5	5.7	3.7	1.5
U.K.	1.3	1.4	-9.4	7.5	5.6	2.2
Japan	0.6	0.0	-4.7	1.7	2.8	0.8
Germany	1.3	0.6	-4.6	2.7	3.5	1.7
France	1.8	1.8	-8.0	7.0	3.8	1.1
Italy	0.9	0.3	-9.0	6.7	4.1	1.3

Growth Of Consumer Prices

	2018	2019	2020	2021	2022	2023
U.S.A.	2.4	1.8	1.2	4.7	7.2	2.6
U.K.	2.5	1.8	1.0	2.5	7.0	4.3
Japan	1.0	0.5	0.0	-0.2	3.0	0.7
Germany	1.8	1.4	0.5	3.1	5.4	1.9
France	1.9	1.3	0.5	1.7	4.6	1.5
Italy	1.2	0.6	-0.1	1.9	4.6	1.3

Real Short-Term Interest Rates

	2018	2019	2020	2021	2022	2023
U.S.A.	0.6	0.3	-4.6	-7.1	-1.0	-0.3
U.K.	-1.4	-0.2	-2.3	-6.9	-2.8	-1.9
Japan	-0.4	0.1	0.3	-2.9	0.4	0.4
Germany	-1.7	-0.9	-3.6	-6.0	-1.4	-1.3
France	-1.6	-0.9	-2.2	-5.1	-1.0	-0.9
Italy	-0.9	-0.3	-2.4	-5.2	-0.8	-0.7

Nominal Short-Term Interest Rates

	2018	2019	2020	2021	2022	2023
U.S.A.	2.4	1.5	0.4	0.1	1.6	2.3
U.K.	0.4	0.8	0.2	0.1	1.5	2.4
Japan	0.1	0.1	0.1	0.1	1.1	1.1
Germany	-0.3	-0.4	-0.5	-0.6	0.5	0.6
France	-0.3	-0.4	-0.5	-0.6	0.5	0.6
Italy	-0.3	-0.4	-0.5	-0.6	0.5	0.6

Real Long-Term Interest Rates

	2018	2019	2020	2021	2022	2023
U.S.A.	0.9	0.7	-3.8	-5.6	0.4	0.7
U.K.	-0.8	-0.4	-2.4	-6.6	-2.4	-0.8
Japan	-0.5	0.0	0.2	-2.9	0.4	0.4
Germany	-1.2	-0.7	-3.7	-5.6	-0.9	-0.7
France	-1.2	-0.8	-1.5	-4.3	0.0	0.1
Italy	2.2	1.4	-1.4	-3.4	1.2	1.6

Nominal Long-Term Interest Rates

	2018	2019	2020	2021	2022	2023
U.S.A.	2.7	1.9	0.9	1.6	3.0	3.3
U.K.	1.0	0.6	0.1	0.4	1.9	3.5
Japan	0.0	0.0	0.0	0.1	1.1	1.1
Germany	0.2	-0.2	-0.6	-0.2	1.0	1.2
France	0.1	-0.3	0.2	0.3	1.5	1.6
Italy	2.8	1.4	0.5	0.9	2.5	2.9

Index Of Real Exchange Rate (2000=100)¹

	2018	2019	2020	2021	2022	2023
U.S.A.	93.5	96.3	97.6	95.5	98.5	97.0
U.K.	77.4	78.6	78.3	78.2	77.6	78.9
Japan	57.8	59.4	60.6	54.8	52.1	51.5
Germany	96.5	94.8	95.8	96.6	94.3	93.8
France	97.4	95.6	96.4	95.7	93.2	93.1
Italy	102.8	100.4	100.9	100.5	100.0	99.5

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)

	2018	2019	2020	2021	2022	2023
U.S.A. ¹	112.01	115.73	117.78	113.13	111.49	112.10
U.K.	1.34	1.28	1.28	1.38	1.35	1.35
Japan	112.10	110.40	109.02	106.78	115.10	114.80
Eurozone	0.85	0.89	0.88	0.85	0.88	0.88

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