LIVERPOOL INVESTMENT LETTER

October 2022

Cardiff Business School
Ysgol Busnes Caerdydd

Julian Hodge Institute of Applied Macroeconomics

LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

Editorial and Research Direction: Patrick Minford[†].

Senior Research Associates: Kent Matthews[†], Anupam Rastogi, Peter Stoney.

Research Associates: Vo Phuong Mai Le[†], David Meenagh[†], Francesco Perugini, Yongdeng Xu[†], Zheyi Zhu[†].

[†] Cardiff Business School

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

ISSN 0951-9262

LIVERPOOL INVESTMENT LETTER

October 2022

CONTENTS

THE MARKETS SETTLE POST-BUDGET WEEK OF VOLATILITY

Volatility has stalked the UK markets this past week since the Truss/Kwarteng mini-budget., much to the delight of the many opponents of their policy revolution.

However, out of this volatility has come a useful rejuvenation of monetary policy, which previously looked a bit below the necessary potency to kill off inflation. Before last week it looked as if the Bank was a reluctant raiser of interest rates, partly due to too gloomy a view of growth, now revised up to +0.2% in the second quarter. It only raised interest rates by 0.5% at its last meeting, instead of the 0.75% generally felt to be necessary, and in line with actions by other central banks, notably the Fed and the ECB. As these two raced ahead, interest differentials against sterling rose and money flowed out of the UK accordingly, pushing the pound down. With the pound falling, the bond markets anticipated that the Bank would have to raise rates a lot and so long bond rates, which mirror expected short rates via arbitrage, spiked in line with these expectations.

However, the Bank has rightly fought back. Clearly it has an interest in the pound not falling too much because of its effect in raising inflation. In the past week it has signalled two key things via its statements and purchases of gilts to prevent financial instability. First, that it will probably raise rates in a considered way at its next meeting. Second, that gilt rates are expecting future rates that are far too high.

This will mark the end of the sterling 'crisis'. The pound has to be allowed to float to whatever value will get our balance of payments right over the long term. Whether this is up or down from now depends on two opposing forces: the extent to which the new supply-side policies boost productivity and so UK competitiveness versus the extent of the boost needed to correct the current imbalance. This can only be determined by the market and evolving events. We have learnt the hard way from the ERM episode that we do not want to fix the rate at some artificial target.

Out of all this turmoil therefore we have acquired a newly toughened but not stupidly tough monetary policy. It would have been stupid to go for, say, 5% interest rates. We can now see clearly from this week's mortgage market reaction to this prospect that it would massively overtighten monetary policy, crucifying the housing market and business lending. In fact, monetary policy has already tightened quite enough on the prospect of rates rising to a peak of around 3%. Money supply growth, a good indicator of tightness, has fallen to just over zero. If the Bank raises rates steadily to 3% as it has been quietly planning, this will do the job of seeing off inflation.

This partly also reflects what has been going on in the rest of the world where volatility has also taken a toll. The sharp rise in US and ECB interest rates, followed widely around the world, is tightening money worldwide, and together with the effects in China of zero Covid and real estate collapse is causing a sharp world slowdown, probably turning into outright recession. So commodity prices whose spiking has forced up inflation rates this year will reverse in the next year, pulling down inflation to around the 5% mark here and elsewhere.

Table 1: Summary of Forecast

	2018	2019	2020	2021	2022	2023	2024
GDP Growth[1]	1.3	1.4	-9.4	7.5	4.8	2.2	2.8
Inflation CPI	2.4	1.7	1.0	2.5	8.2	5.0	3.2
Wage Growth	3.0	3.5	1.6	5.8	5.9	4.1	3.5
Survey Unemployment	4.1	3.8	4.5	4.5	3.7	3.5	2.8
Exchange Rate[2]	78.6	78.3	78.2	81.5	80.2	78.3	77.8
3 Month Interest Rate	0.4	0.8	0.2	0.1	1.7	2.6	2.9
5 Year Interest Rate	1.0	0.6	0.1	0.4	2.3	3.1	3.0
Current Balance (£bn)	-82.9	-89.1	-53.8	-60.0	-80.2	-24.2	-14.7
PSBR (£bn)	39.3	56.9	309.4	144.1	125.5	124.4	30.8

[1]Expenditure estimate at factor cost
[2]Sterling effective exchange rate, Bank of England Index (2005 = 100)

A further contribution to falling inflation here will be made by the new supply-side and other fiscal policies. These by raising supply and lowering wage demands will reduce inflation; their effect on demand is pretty small, an expansion of only about 1% of GDP. And as we have seen via expectations of monetary reactions, they have also had a reducing effect. So much for the 'inflationary effect' of the mini-budget.

So, what then of the prospects for UK output? That mini-budget, so reviled by the current economic consensus, looks to have saved the day. Recession will be seen off by the modest injection of demand, turning fiscal policy around from a seriously contractionary stance. The supply-side reforms will also boost supply and so growth. The critics assert there is 'no evidence' that lower marginal tax rates and reduced regulation in the labour market and elsewhere boost growth. Yet then they are plainly ignorant of the UK data, which is well matched by just such a model of growth (see our working paper http://carbsecon.com/wp/E2020_14.pdf, forthcoming in Open Economies Review.) The match comes about because these policies were tried here before by Mrs. Thatcher's governments. It is no accident that the decade of strongest growth we have seen in the UK since 1970 is that of the 1980s when it reached nearly 3%.

A lot of ink was spilt attacking the abolition of the 45% top rate of income tax. The reasoning was that in these hard times it is wrong to cut tax on the rich — the IMF specifically singled out that for its attack, an extraordinary intrusion on a non-economic point. However, the essential point grasped by Mrs. Thatcher in the 1988 budget of Nigel Lawson which brought the top rate down to 40%, is that these higher rates just destroy entrepreneurial innovation and investment, so reduce the growth rate to everyone's loss and furthermore reduce tax revenue because there is less activity to tax; it even reduces the income tax paid by higher earners because they do less. The abolition of this 45% rate would still leave a high top rate of 40%, well above the US generally under 40%, where a lot of our investors come from and could choose instead of doing business here. It is a matter of much regret that the abolition of the 45% rate was abandoned in the face of mutiny by Tory MPs on the left of the party. In future reforms we would like to see this restored and the 40% top rate come down too.

Another criticism has been that the budget plans risk debt insolvency. However, this is wrong on two counts. First the Chancellor made it crystal clear that he would impose a long term rule on the debt/GDP ratio, that it should be trending downwards. This long term approach to debt is the correct one, as it does not interfere with optimal tax setting or the necessary fiscal demand response to the economy's fluctuations. Second, much written about the debt prospects ignored the huge cut in the debt value due to the inflation of some 15% we will have had by end 2023. This alone cuts the ratio by about 12% and more than compensates for the worst case scenario cost of extra borrowing. On my calculations the debt ratio comes down by end-2023. Maybe Liz Truss and Kwazi Kwarteng could have banged the drum harder on these points; and a thorough analysis by the OBR would be a useful thing to be brought in soon and in retrospect should have accompanied the mini-budget. But time was short, given the urgency needed in addressing all the issues the mini-budget had to deal with. With big policy changes mistakes are certain to happen; the Thatcher Medium Term Financial Strategy was dogged by errors and nothing went to plan, with the mob of 364 economists and their allies in high places denouncing it relentlessly. But the policy fundamentals on inflation were right, as they are today on growth. Mrs. Thatcher won through by sheer determination; Liz Truss must like her be the 'Lady not for turning'. She could also learn from Mrs. Thatcher's ability to spell out the fundamentals in plain terms, until events turn in her favour, as they will fairly soon.

It will certainly help growth here if the rest of the world grows too. I expect to see monetary policy ease in the US and the eurozone as inflation comes down. Undoubtedly the central bank panic caused by the soaring inflation this year has pushed monetary conditions much too tight. Money supply growth is now around 5% in both the US and the eurozone, implying that tight conditions already prevail, indeed probably overkill. So I expect to see those interest rates peaking and tumbling in 2023, which will help to get world growth going again. China's problems sadly look more intractable, so it will take longer to see recovery there.

In summary, I think that with this mini-budget the Truss/Kwarteng team made a good start, setting out a new growth-maximising approach to policy, which thereby maximises the welfare and living standards of UK citizens — axiomatically the central aim of policy. We know that growth can only come via a policy environment that encourages it by allowing entrepreneurial investors to make money from their innovation and investment. With that fuse lit, the government can then support growth further via better infrastructure, education/skills spending and much else. But the sine qua non is the revival of that entrepreneurial dynamism that we have lost in recent decades.

Overall, this outlook is promising; inflation down, interest rates peaking at moderate rates that still reward savings, and growth picking up. There is much more to do: trade with the non-EU world must be freed, our EU regulations must be reformed to give us the best international standards instead, and there is an agenda for tax lowering and simplification to be rolled out. But it has been a good start.

People say that Liz Truss has very little time to get this agenda done and to show the fruits of it in higher growth. Her MPs are restive and worried about Labour's poll lead. What's new here? Margaret Thatcher was also threatened with party mutiny as she brought in her monetarist reforms in her first Parliament; the 'men in grey suits' were regularly said to be about to lead her away because her policies, what with high unemployment and tight money, would make her too unpopular for re-election. But in 1983 she swept in again, because she conquered inflation. Liz Truss faces just the same threats and she too, by delivering recovery from the present acute crisis through policies that do not court short term popularity, will be seen to have succeeded and will then be rewarded with election victory. The British people admire the lonely bravery of the leader who gets results and does not weakly pander to short term polls.

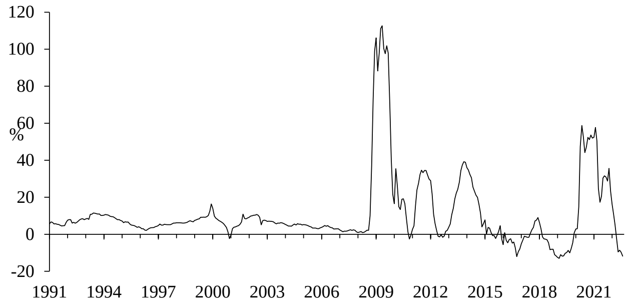
We do not need a return to 'austerity'

An old Tory reflex when attacked for lack of fiscal solidity, as happened last week, is to move to 'austerity' policies on public spending. This happened after the financial crisis under the Cameron/Osborne regime. It is important it is not repeated today, for several reasons. Fiscal policy needs to be supportive currently. Also, most public services are important for supporting growth and are degraded by austerity. Finally, it is unnecessary for achieving the long term debt/GDP ratio downward trend that is now the new 'fiscal rule'. For example, even if growth achieves no more than the past 30-year trend of 2%, the table of projections below show the ratio falling to around 50% by 2035 on current unchanged policies. Any increase in growth will simply increase the speed of fall in the ratio.

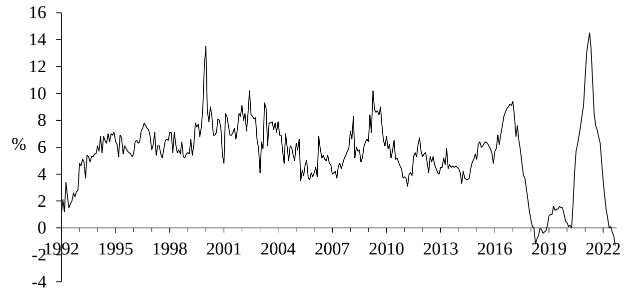
Table 2: Basic Forecast – Public Finances without tax increases

	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	314.3	2073.1	484.9	15.7	23.4	1935.3	39.9	93.4	210.5	10.2
2021/22	133.7	2409.2	479.5	5.7	19.9	2069.0	61.3	85.9	407.1	16.9
2022/23	124.9	2687.9	635.5	4.7	23.6	2193.9	60.6	81.6	571.2	21.3
2023/24	124.3	2854.2	694.2	4.4	24.3	2318.2	61.0	81.2	630.9	22.1
2024/25	31.4	3015.3	663.1	1.0	22.0	2349.6	61.4	77.9	693.1	23.0
2025/26	4.7	3135.9	691.9	0.1	22.1	2354.3	61.9	75.1	749.0	23.9
2026/27	0.2	3261.3	748.4	0.0	22.9	2354.5	62.3	72.2	810.5	24.9
2027/28	0.2	3391.8	814.2	0.0	24.0	2354.7	62.7	69.4	876.7	25.9
2028/29	0.0	3527.5	885.1	0.0	25.1	2354.7	63.1	66.8	948.2	26.9
2029/30	0.0	3668.6	962.1	0.0	26.2	2354.7	63.5	64.2	1025.6	28.0
2030/31	0.0	3815.3	1045.4	0.0	27.4	2354.7	63.9	61.7	1109.3	29.1
2031/32	0.0	3967.9	1135.6	0.0	28.6	2354.7	64.2	59.3	1199.8	30.3
2032/33	0.0	4126.6	1233.2	0.0	29.9	2354.7	64.5	57.1	1297.7	31.5
2033/34	0.0	4291.7	1338.8	0.0	31.2	2354.7	64.8	54.9	1403.6	32.7
2034/35	0.0	4463.4	1453.0	0.0	32.6	2354.7	65.1	52.8	1518.1	34.0

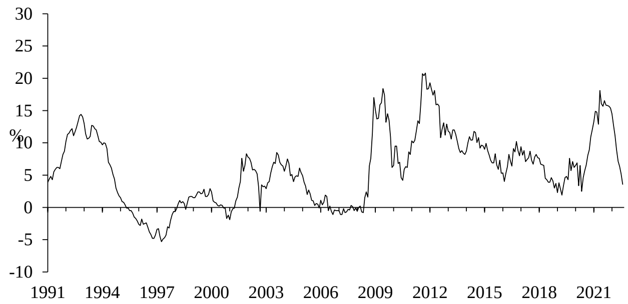
U.S.: Growth in M0 (Yr - on - Yr)



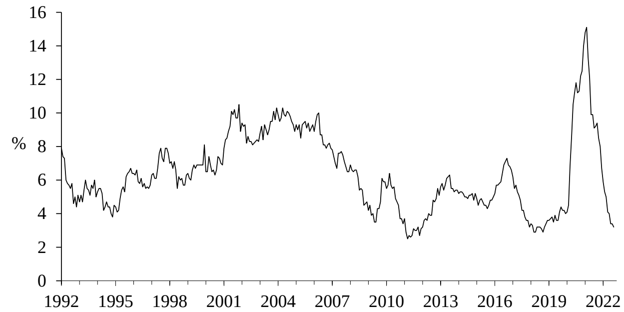
UK: Notes and Coins in Circulation Growth



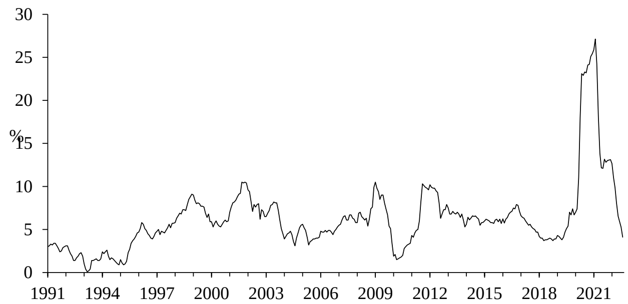
U.S.: Growth in M1 (Yr - on - Yr)



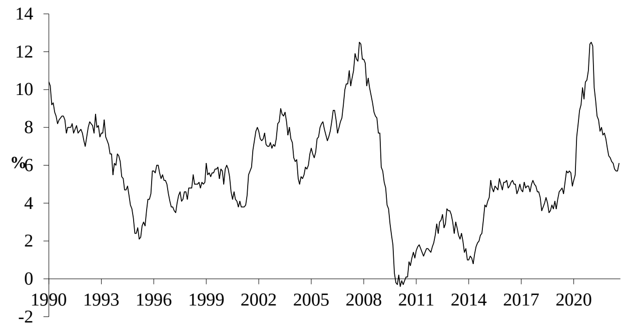
UK: M4 Growth



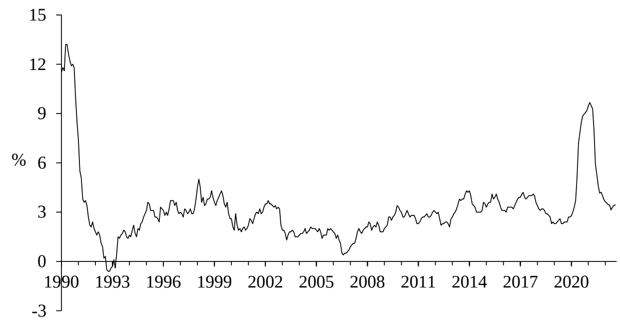
U.S.: Growth in M2 (Yr - on - Yr)



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

Japan Intervened in the FOREX Market

Late last month the Bank of Japan (BOJ) stuck to its dovish monetary policy with a surprising move to intervene in the currency market, and support the yen, reportedly selling $20 billion buying yen. This intervention was the first since 1998 and comes amid rising inflation and the sharp fall in the yen's value against the dollar. "In principle, exchange rates should be decided in the markets, but we cannot tolerate repeated rapid fluctuations by speculative moves", Finance Minister Shunichi Suzuki said at a press conference after the intervention. He also added that the government will closely monitor the situation and will take necessary actions against excessive rate swings.

The intervention came as a surprise, as many economists have said it would be difficult for Japan to engage in a meaningful intervention, as the impact of such a move by Japan alone is seen as limited and comes with the risk of backfiring. They have also said it would be tough to get the US on board because the weakening of the dollar will hinder efforts by the US to stave off inflation.

Meanwhile, in a widely expected move, the BOJ announced that it will continue its ultraloose monetary policy that includes setting a short-term interest rate at minus 0.1% and purchasing Japanese government debt to defend the 0.25% cap for 10-year JGB yields. The Japanese central bank once again manifested its commitment to lean in the opposite direction of the many foreign counterparts that have embarked on a rate hike campaign. "I believe we won't be introducing a rate hike anytime soon," BOJ Governor Haruhiko Kuroda told a news conference after the BOJ policy meeting. "We have decided to continue the monetary easing after thoroughly discussing what the most effective monetary policy is by analyzing the Japanese economy, price trends and future development in depth", he added.

Kuroda reiterated the importance of ultraloose policy to sustain Japan's economic recovery, saying the central bank's goal is to achieve 2% inflation backed by a healthy cycle of price and wage hikes, not the current temporary cost-push inflation. "There's absolutely no change to our stance of maintaining easy monetary policy for the time being. We won't be raising interest rates for some time", Kuroda said after the policy decision.

The BOJ's decision in the currency market came after the US Federal Reserve delivered its third straight rate increase of 75 basis points and signalled more hefty hikes ahead, underscoring its resolve not to let up in its battle against inflation and giving a further boost to the dollar. Japan also stood alone among major economies in keeping short-term rates in negative territory after the Swiss National Bank raised its policy rate by 75 basis points, ending years of negative rates aimed at taming the appreciation of its currency. The expanding monetary policy divergence between the BOJ and other central banks is the main reason for the acceleration in the weakening of the yen's value. The fast falling yen has increasingly become a headache for the Japanese economy, as it has jacked up import costs on top of high commodity prices, which have prompted a slew of companies to pass on costs to consumers. Indeed, Japan's consumer prices other than fresh food jumped 2.8% year-on-year in August, the fastest pace in 31 years excluding the impact of sales tax hikes.

Meanwhile, with the weaker yen pushing import goods prices higher the government is expected to mitigate negative shocks from the price increase through fiscal support. The industry ministry announced that the gasoline subsidy for oil distributors is set to increase to 36.7 yen per liter. The temporary subsidy program was introduced in January and has been extended several times since then. Economists at ING Tokyo expect the subsidy programs for oil and food, and some cash transfer programs targeting low-income households, to continue.

The BOJ faces the formidable task of justifying its dovish stance. Its ultralow rate policy is intended to support the still slow economic recovery from the COVID-19 fallout and to achieve inflation supported by robust wage growth. But the policy also risks a further slide in the yen, inflating import costs. The country's headline inflation rate has stayed above the 2% target for five months in a row, hitting households, despite the central bank's view that it should be temporary. Japan's economy has "picked up" with progress in the resumption of economic activity and will likely continue its recovery as the impact of COVID-19 and supply constraints wane, the BOJ said. It warned of downside risks from surging commodity prices, saying that "extremely high uncertainties" remain over the outlook.

Overseas economies have been recovering moderately, but slowdowns have been observed in advanced economies; the post-meeting statement said that aggressive rate hikes will hamper growth amid growing market concerns. A weak yen cuts both ways as it boosts the overseas profits of Japanese exporters in yen terms but creates headaches for resource-scarce Japan, which relies heavily on energy and other materials imports. Further yen-buying, dollar-selling intervention by Japanese authorities soon looks likely. However, given the BOJ determination to keep interest rates so far below other world rates, it looks unlikely to have much effect.

MARKET DEVELOPMENTS

In spite of the general slowdown in output and rising real interest rates, the returns on equities continue to dominate those on bonds and cash.

Table 1: Market Developments

	Market Levels		Prediction for Aug/Sep 2023	
	Sep 08	Oct 05	Previous Letter	Current View
Share Indices				
UK (FT 100)	7262	7086	10908	10644
US (S&P 500)	3997	3738	5656	5353
Germany (DAX 30)	12904	12670	21460	21071
Japan (Tokyo New)	1930	1930	2596	2596
Bond Yields (government				
UK	3.07	3.97	3.50	3.50
US	3.28	3.69	2.80	2.80
Germany	1.71	1.92	0.80	0.80
Japan	0.25	0.25	0.20	0.20
UK Index Linked	–0.36	–0.22	1.00	1.00
Exchange Rates				
UK ($ per £)	1.15	1.14	1.28	1.20
UK (trade weighted)	77.13	77.02	78.4	78.4
US (trade weighted)	110.35	113.15	100.5	100.5
Euro per $	1.00	1.00	0.95	0.98
Euro per £	1.15	1.15	1.22	1.18
Japan (Yen per $)	143.98	144.46	120.5	140.0
Short Term Interest Rates				
UK	0.63	0.63	2.50	2.50
US	2.76	3.80	2.40	2.40
Euro	0.54	1.22	0.20	0.20
Japan	0.05	–0.05	0.10	0.10

Table 2: Prospective Yields [1]

Equities: Contribution to £ yield of:

	Dividend Yield	Real Growth	Inflation	Changing Dividend Yield	Currency	Total
UK	2.10	2.2	4.0	44.00		52.30
US	2.00	2.3	3.2	36.00	–5.24	32.09
Germany	2.10	2.5	2.8	61.00	–2.68	63.02
Japan	1.90	1.8	0.7	32.00	–1.99	43.15
UK indexed[2]	–0.36		4.0	16.00		19.65
Hong Kong[3]	2.60	4.0	3.2	–7.00	–5.24	–8.61
Malaysia	3.30	5.4	3.2	73.00	–5.24	73.49
Singapore	3.50	3.0	3.2	37.00	–5.24	35.29
India	1.40	6.4	3.2	32.00	–5.24	31.69
Korea	1.10	2.3	3.2	–2.00	–5.24	–6.71
Indonesia	2.20	5.3	3.2	49.00	–5.24	48.29
Taiwan	2.80	3.0	3.2	42.00	–5.24	39.59
Thailand	3.20	4.0	3.2	53.00	–5.24	51.99

Bonds: Contribution to £ yield of:

	Redemption Yield	Changing Nominal Rates	Currency	Total
UK	3.07	–4.26		–1.19
US	3.28	4.77	–5.24	–3.36
Germany	1.71	9.13	–2.68	5.47
Japan	0.25	0.54	–1.99	7.55

Deposits: Contribution to £ yield of:

	Deposit Yield	Currency	Total
UK	0.63		0.63
US	2.76	–5.24	–8.65
Euro	0.54	–2.68	–4.84
Japan	0.05	–1.99	6.80

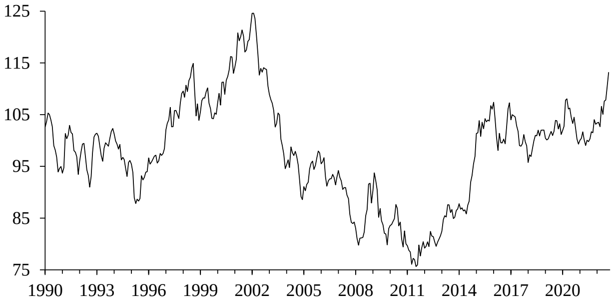
[1] Yields in terms of €s or $s can be computed by adjusting the £-based yields for the expected currency change.
[2] UK index linked bonds All Stocks
[3] Output based on China.

Table 3: Portfolio(%)

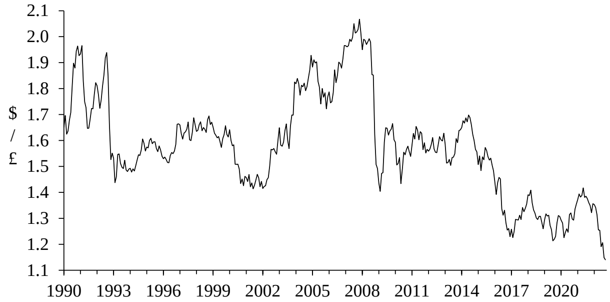
	Sterling Based Investor		Dollar Based Investor		Euro Based Investor	
	September Letter	Current View	September Letter	Current View	September Letter	Current View
UK Deposits (Cash)	5	5	5	5	1	1
US Deposits	-	-	-	-	-	-
Euro Deposits	-	-	-	-	-	-
Japanese Deposits	-	-	-	-	-	-
UK Bonds	-	-	-	-	-	-
US Bonds	-	-	-	-	-	-
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

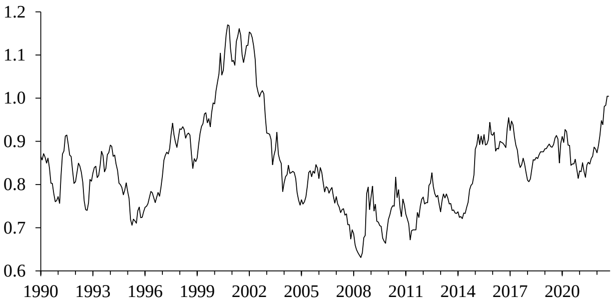
US : Trade Weighted Index
(Bank of England 1990 = 100)



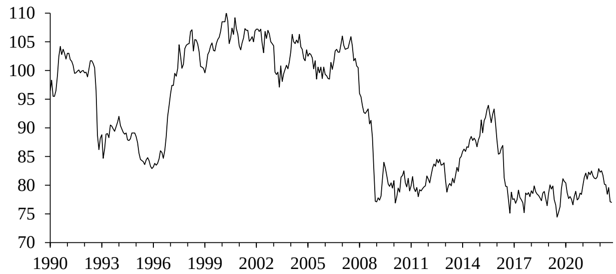
UK: Dollars Per Pound Sterling



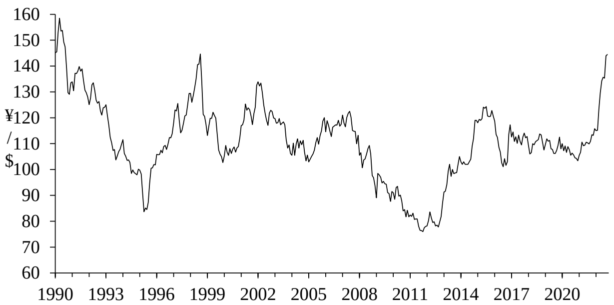
Euro per US dollar



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



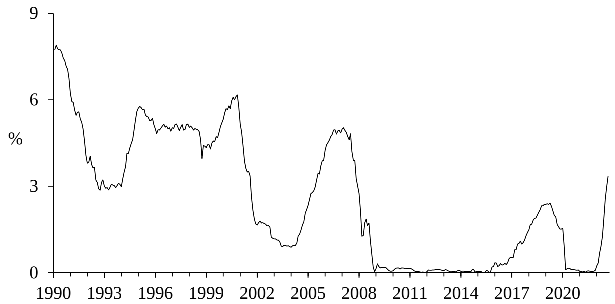
Japan : Yen Per U.S. Dollar



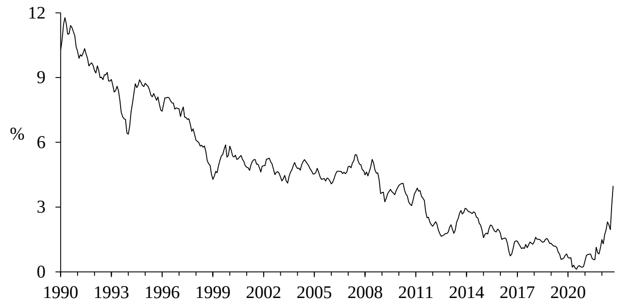
GOVERNMENT BOND MARKETS

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

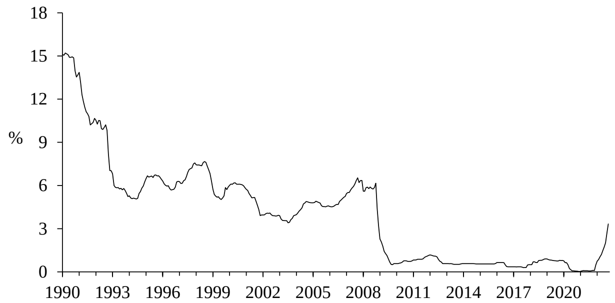
U.S. : 3-Month Treasury Bill



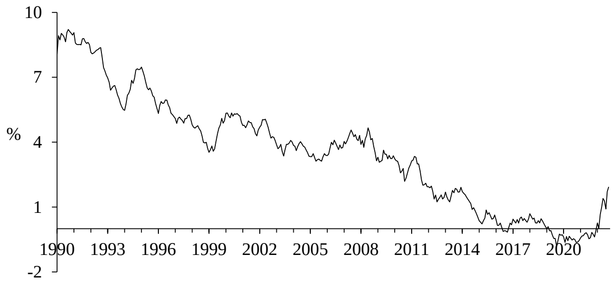
U.K.: Yield on Long-Term Government Bonds



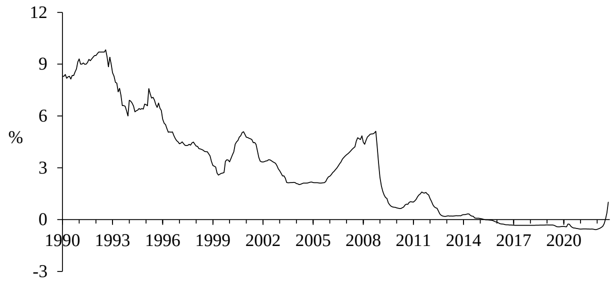
U.K. : 3-Month Certificate LIBOR Rate



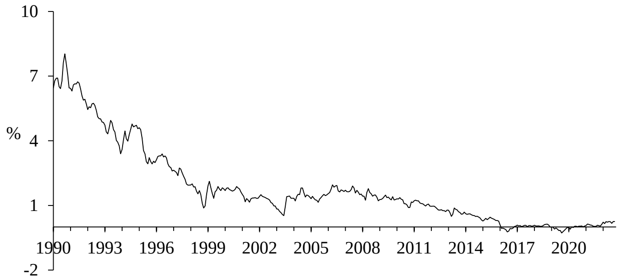
Germany: Yield on Public Authority Bonds



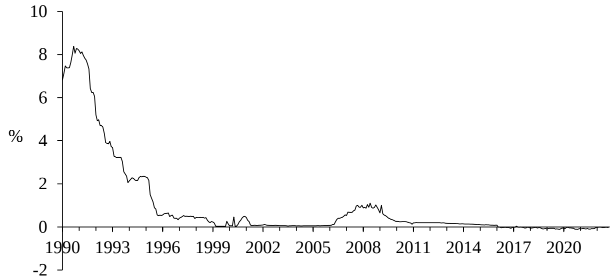
Germany : 3-Month Interbank Deposit Rate



Japan: Yield on Long-Term Government Bonds

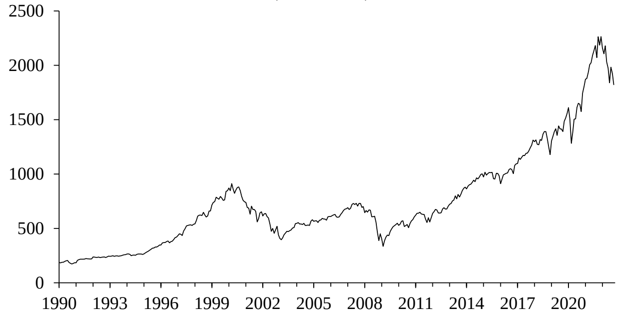


Japan : 3-Month Money Market Rate

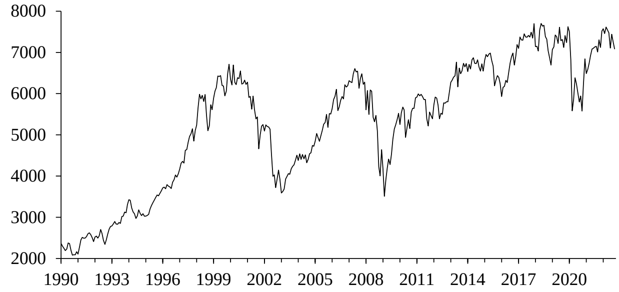


MAJOR EQUITY MARKETS

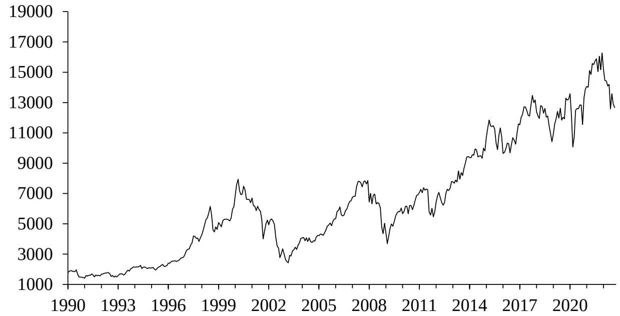
U.S. : S & P 400 Industrial
(1985=100)



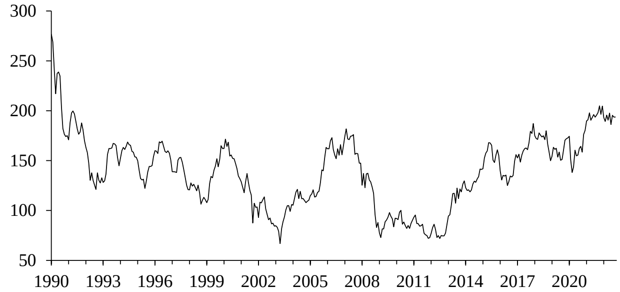
U.K. : FTSE-100 Index
(10 April 1962=100)



Germany : DAX 30



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



EMERGING MARKETS

Anupam Rastogi

India

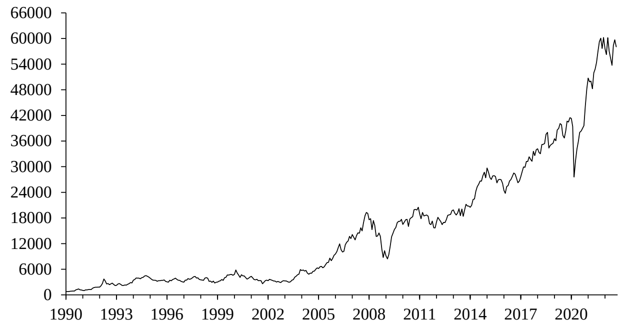
Our analysis of the Indian economy, published in the September 2022 letter, finds broad support from multilateral agencies, credit rating agencies, and investment bankers. Almost all expect the Indian economy to grow around 7% in 2022 and 2023. We maintain our cautious forecast of the GDP growth of 6.5% for the next three years. India will get affected as world trade shrinks and will leave its mark on Indian development in the coming quarters. Above normal monsoon, however, will keep domestic growth buoyant. The economic growth will get a boost from expansionary government expenditure on infrastructure without sacrificing fiscal prudence. The fiscal position of India is improving as indirect tax collection is growing above 35% as economic activities accelerate after Covid 19.

S&P Global Ratings projected India's economic growth at 7.3% in the current fiscal year with downside risks and inflation to remain above 6% until the end of 2022.

The Indian economy grew at a four-quarter high of 13.5% in Q1 FY23 but missed market and RBI estimates. The headline CPI inflation snapped a three-month declining trend to climb back to 7% in August 22, breaching the central bank's upper tolerance of 6% for the eighth month in a row. The merchandise trade deficit narrowed marginally but remained elevated at US$28bn in August. On the positive side, the South-West monsoon this year has recorded a 7% surplus vis-à-vis the long period average till September 25.

India's consumer price index in August increased 7.0% from a year earlier, above the central bank's inflation target range of 2% to 6%. Inflation remaining above the upper limit of the RBI's target range has led the central bank to tighten its monetary policy. India's central bank raised its key interest rate by half a percentage point to rein in inflation and protect an economic recovery by its currency's decline against the U.S. dollar. The Reserve Bank of India raised its overnight lending rate to 5.9% from 5.4%, the fourth increase since it began raising rates following an unscheduled meeting in May, prompted by global inflationary pressures exacerbated by Russia's invasion of Ukraine. We believe there will be a similar increase — the last one in this cycle — in December, bringing the rate to 6.4%. The Monetary Policy Committee remains hawk-eyed, and while the policy rate may have risen to 5.9%, it's still in 'withdrawal of accommodation' mode. Real rates — minus inflation, that is — are still negative. The central bank's view is that having witnessed the major shocks of the coronavirus pandemic and the conflict in Ukraine, the global economy is now amid a third major shock arising from aggressive monetary policy tightening from advanced economies' spillover effects on the rest of the world.

India: BSE Sensex



India's current account deficit widened to $23.9 billion, or 2.8% of gross domestic product, in the first quarter of the current fiscal year due to a higher trade deficit. Underlying the current account deficit in Q1 of 2022–23 was the widening of the merchandise trade deficit to $68.6 billion from $54.5 billion in Q4 of 2021–22 and an increase in net outgo of investment income payments. The trade deficit during the first six months of the fiscal year widened to USD 149.47 billion against USD 76.25 billion during April–September 2021–22.

The rupee has been renewing record lows against the dollar in recent sessions. It was recently trading around 81.50 rupees against the dollar. The Indian rupee has depreciated less than the basket of global currencies over the past month. There is likely to be more currency volatility as global monetary policy tightens. The IMF estimated that the ratio of India's foreign reserves to short-term external debt is greater than two, which indicates a substantial buffer against capital outflows. The rupee's depreciation has been aggravated since September 21, when the Federal Reserve signalled a longer-than-expected U.S. rate hike cycle. The Indian currency has shed 1.7% since then.

The Indian stock market is roaring, outperforming its emerging-market peers, even as recession fears grip the world amid rising debt costs and stubborn inflation. Foreign investors have started returning to Indian markets. The relentless plunge in China's stocks has burnished the appeal of their biggest emerging-market rival, India, spurring a divergence that's rarely been seen before. The MSCI India Index rallied almost 10% in the just-ended quarter, compared with a 23% slump for the MSCI China Index. The 33-percentage point outperformance by the India gauge is the biggest since March 2000. With its rising market clout, India's weight in the MSCI Emerging Markets Index has increased by almost seven percentage points in the two years through September. Meanwhile, that of Chinese and Hong Kong stocks combined has fallen by more than 10 points. In the longer term, China's decoupling with the U.S. may also pave the way for Indian firms to boost their presence worldwide. However, months of outperformance have made

Indian stocks the most expensive in Asia on an earnings-based valuation. It has yielded caution from some investors, with the Reserve Bank of India's interest-rate hikes also a factor that could weigh on the market outlook

Under a 100-trillion-rupee ($1.2 trillion) mega project called PM Gati Shakti (loosely translated as strength of speed), Modi's administration is creating a digital platform that combines 16 ministries. The portal will offer investors and companies a one-stop solution for the design of projects, seamless approvals and a more straightforward estimation of costs. The government thinks quality infrastructure is the key to kick-starting several economic activities and creating employment on a large scale. Without modern infrastructure, all-round development cannot happen in India.

China and India are amid a geopolitical split. President Xi Jinping and Prime Minister Narendra Modi have not met or spoken since a military stand-off began in the disputed Himalayan border region in May 2020. There were no one-on-one talks at the 22nd Meeting of the Council of Heads of State of the Shanghai Cooperation Organisation in Samarkand. Chinese Foreign Minister Wang Yi and his Indian counterpart S. Jaishankar had a similar awkward encounter when photos were taken at a BRICS gathering in New York in the last week of September. Again, there was no bilateral meeting.

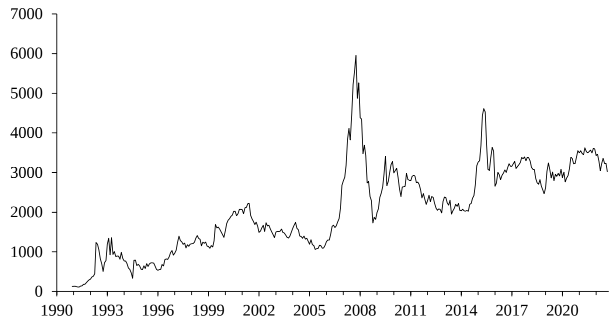
	20–21	**21–22**	**22–23**	**23-24**	**24-25**
GDP (%p.a.)	-6.6	8.7	6.5	6.5	6.5
WPI (%p.a.)	5.5	6.0	6.5	5.3	5.0
Current A/c(US$ bill.)	35.0	-42.0	-100.0	-90.0	-80.0
Rs./$(nom.)	75.0	74.5	78.5	79.0	80.0

China

The 20th National Congress of the Communist Party — one of the most important political events of the year — is set to begin in China on October 16, 2022. President Xi Jinping is widely expected to take an unprecedented third term. However, the 'seven up, eight down' rule will force retirements. The rule says that if a Politburo Standing Committee member is 68 or older at the time of a party congress, he must retire, but if he is 67 or younger, he may still enter the committee. President Xi Jinping is expected to name He Lifeng as his new top economic adviser. He, who's known Xi for more than four decades, runs the NDRC and has vowed to put growth ahead of other policy goals. He's seen as a successor to Liu He.

Chinese economic activity remained feeble in September, with the services sector slipping into contraction, offering new evidence of the damage that Beijing's Covid-prevention measures and a deepening real estate slide are inflicting on the country's economy. Activity in the services sector, which includes the retail, catering and transport industries, was hammered as authorities across China tightened Covid-19 restrictions ahead of the key political gathering in October.

China: SSE Composite Index



The services sector fell to 48.9 in September from 51.9 the previous month. The decline in the services sector dragged the broader official nonmanufacturing purchasing managers index down to 50.6 in September, from 52.6. China's September official purchasing managers index is 50.1. It is the first time since June when the index was above 50, indicating expansion in the activity. But, Caixin's privately compiled manufacturing PMI, which focuses more on private and export-oriented firms, weakened further. Both the official and Caixin factory indexes showed declines in new export orders.

The World Bank expects China to expand by 2.8% in 2022. That is down from a 4.3% forecast in June, making the World Bank gloomier on China's prospects this year than the International Monetary Fund. The World Bank has joined many other investment bankers, such as Goldman Sachs Group and Standard Chartered.

We maintain our forecast of 3% this year and in 2023 amid the country's zero-COVID policy and ongoing property crisis. We believe that China's slowdown is engineered by a structural transformation of the economy and a marked shift in the ideological underpinnings of governance. President Xi Jinping is prepared to forgo growth in cementing political power and pursuing his dream of national rejuvenation. Since the days of Deng Xiaoping, economic growth has mattered more than anything for China's leaders. The 10% annualized growth from 1980 to 2010 was seen as the antidote to the relative stasis of the Mao Zedong era when the economy grew by only about 6%. But under President Xi Jinping, the pendulum has swung back, with a 6.6% average growth from 2013 to 2021, closer to the trajectory under Mao than Deng.

The new governance policy suggests that by staying the course of hyper-growth for too long, China became increasingly afflicted with the "four uns" of former premier Wen Jiabao – an unstable, unbalanced, uncoordinated economy and ultimately unsustainable.

Equally important is President Xi's fixation on national rejuvenation, an outgrowth of his "Chinese dream" that has led to a more muscular Chinese foreign policy, in contrast to Deng's "hide and bide" approach. Not by coincidence, this has fuelled the trade and tech wars with the United States, given rise to China's "unlimited" partnership with Russia and stoked tensions over Taiwan. All of these point to the unwinding of globalization, which has benefited China more than any other country.

Consumer prices rose 2.5% in August compared with a year earlier, down from July's 2.7%. Producer-price inflation also slowed to 2.3% in August from 4.2% in July. The unexpected slowdown in consumer prices was driven primarily by food prices and falling fuel prices. The government took steps to boost the pork supply by releasing stocks from its reserves, easing a sharp run-up in pork prices. Prices for fruit and vegetables also rose less than expected.

China's overall trade surplus narrowed for the first time since February, edging down to $79.4 billion in August, compared with a record $101.3 billion in July. China's imports also weakened further in August, as consumer confidence remains feeble while the jobless rate among young people rose to a record high. China's exports grew by 7.1% in August. It is half of July's growth rate. Slowing economic activity globally is weighing on overseas demand for Chinese goods. China's trade surplus is set to top a record $1 trillion this year, but that won't be enough to prevent the yuan from sliding against the surging dollar as business confidence wanes.

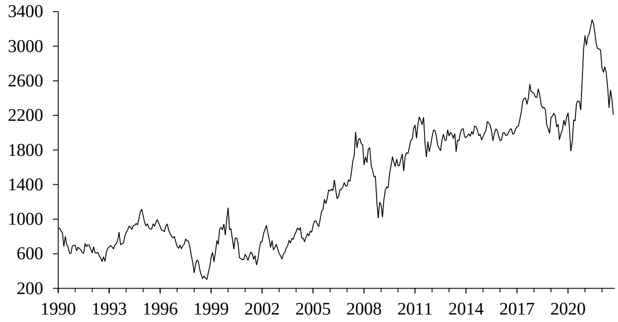
China's currency hit its weakest ever offshore trading level against the U.S. dollar, with the yuan falling below 7.2 to the dollar for the first time since a separate system for trading the currency outside mainland China was launched over a decade ago. China's central bank has intervened in the currency market to support the yuan. While a historic rally in the dollar has been the chief reason for the yuan's weakness, China's slackening economy and interest-rate cuts by its central bank have also contributed to the currency's depreciation. The People's Bank of China has taken multiple steps to support the yuan this year, raising foreign-currency reserve requirements and making it costlier for traders and institutions to bet against the yuan using forward contracts.

China has $3 trillion of foreign-currency reserves to support the yuan. Selling foreign currency and buying yuan would push up the yuan's value. China's foreign-exchange reserves have fallen by almost $200 billion since the end of 2021. This fall is mainly due to a rising dollar weakening the dollar value of holdings in other currencies rather than interventions by China in the currency market.

China's securities regulator has told investment banks operating in the country to avoid publishing politically sensitive research ahead of the October meeting of the Communist Party.

	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	7.1	7.0	7.0

Korea: Composite Index



South Korea

The adverse impact of the relentless appreciation of the U.S. dollar and elevated crude oil prices weakened economic indicators across the board. Merchandise export growth slowed to 6.6% year on year in August and a 28.2% jump in imports. It has caused a simultaneous decline in industrial production, retail sales and equipment investment month after month. High raw-materials costs are stoking inflation for commodity importers such as South Korea. Further, a sharp depreciation of the local currency, the won, against the U.S. dollar since the beginning of 2022 continues to lift the import bill and push inflation. South Korea's GDP fell by 2.6% quarter-on-quarter after rising by 1.4% in Q1 2022. We maintain our forecast of 2.4% growth in GDP in 2022 and 2023.

South Korean consumers' inflation expectations fell in September for a second month after six months of rises. The survey suggests a median answer of 4.2% for consumer inflation for the coming 12-month period. After inflation hit a 24-year high of 6.3% in July, the Bank of Korea raised its benchmark interest rate to 2.5%. But its policy rates remain far below those in many other emerging markets, and it would be hard for the central bank to tighten policy considerably without causing domestic financial strain. South Korea's distinctive problems of its own — high household and corporate debt levels limit the ability of its central bank to tighten policy aggressively to quell inflation and bolster the currency. Household debt is above 104% of gross domestic product, according to the Institute of International Finance.

South Korea's exports grew at the slowest pace in nearly two years in September. We expect Korean exports to decline further from weaker external demand and base effects. Imports slowed to 18.6% in September from a 28.2% gain in August. That brought the trade balance to a $3.77 billion deficit, marking a sixth consecutive month in the red. It is the longest string of trade deficits since 1997.

The continuous appreciation of the dollar, fuelled by rapid Federal Reserve tightening, has weakened the South Korean won to levels last hit during the global financial crisis. The dollar has gained nearly 17% against the won so far this year. Investors are pulling back from countries that don't offer investors substantially higher interest rates than the U.S., adjusted for inflation. Foreigners own the smallest share of the country's stock market since the depths of the global financial crisis. As of July, foreigners had withdrawn $12.5 billion from South Korean stocks in the previous six months, bringing net withdrawals to nearly $43 billion since the onset of the pandemic.

The won depreciated to a new high of 1,441 won per dollar. It was the first time since the 2009 global financial crisis that the exchange rate soared past the 1,440 won mark. South Korea sold dollars in the second quarter to stem currency weakness that threatened to further fuel inflation. According to the Bank of Korea's quarterly intervention data, authorities sold a net $15.4 billion in the foreign exchange market in the three months through June.

	20	**21**	**22**	**23**	**24**
GDP (%p.a.)	-0.9	4.1	2.4	2.4	2.3
Inflation (%p.a.)	0.5	2.5	5.0	3.5	3.0
Current A/c(US$ bill.)	70.0	91.0	50.0	40.0	35.0
Won/$(nom.)	1070	1150	1300	1350	1400

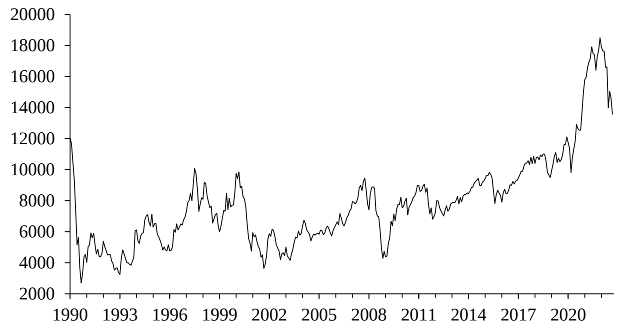
Taiwan

The export-oriented economy of Taiwan is facing headwinds. The inventory adjustments by its companies abroad have led to fewer orders, which has made Taiwan's private sector cautious about investments. The demand compression worldwide is being felt by Taiwan. Taiwan's central bank lowered its 2022 gross domestic product growth forecast by 0.24 percentage points to 3.51%. Their forecast is in line with our forecast of 3.5%. We are going to maintain our forecast for 2022 and 2023. The central bank expects the economy to grow 2.90% in 2023. We are marginally more optimistic than the bank because there will be a recovery in private consumption. Fitch Ratings has affirmed Taiwan's Long-Term Foreign-Currency Issuer Default Rating (IDR) at 'A.A.' with a Stable Outlook. Taiwan's ratings are underpinned by its robust external finances, demonstrated fiscal prudence, high governance standards and competitive business environment.

In August, Taiwan's consumer price index rose 2.7%. The central bank decided to raise its key interest rates by 12.5 basis points, with the discount rate rising to 1.625%. In contrast, the rate of accommodations with collateral will grow to 2.0%, and the rate on accommodations without collateral will rise to 3.875%. It is the third rate hike since March 2022.

Demand compression in major export markets like China and Europe is affecting the country's exports. Taiwan's

Taiwan: Weighted TAIEX Price Index



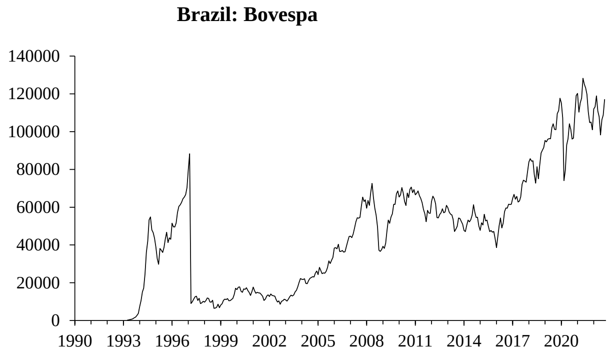
exports in August rose just 2% annually and could worsen as the year progresses.

The Taiwan dollar depreciated to the weakest level in more than five years due to persistent equity outflows and the surging strength of the U.S. dollar. The geopolitical tensions with China have also changed the sentiments of investors. Taiwan's central bank said that in the first half of this year, it sold a net $8.25 billion to intervene in the foreign exchange market to try and arrest the Taiwan dollar's devaluation. The Taiwan dollar has depreciated 13% against the U.S. dollar this year. However, it has been relatively stable against other major currencies. The panic among the bankers led the central bank to suggest that some currency control would benefit the country. The bank later diluted its governor's suggestion by saying that it assumes capital outflows are short-term, driven by cross-Strait tensions and the U.S. rate hikes, so it will use management tools to ensure financial market stability.

The U.S. president reconfirmed that the U.S.-China relationship is based on a clash of ideologies that pits the U.S. and China's militaries. In his U.N. address, Mr Biden said the different international strategies of the U.S. and China are part of "the contest between democracy and autocracy." A day later, China's foreign minister Mr Wang rejected the democracy-autocracy formulation as a "false narrative" and said U.S. perception of China merely reflects anxiety in Washington due to waning confidence in its system. One cannot support Mr Biden's argument better than this.

	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	30.0	30.5	30.5

Brazil



Brazilian President Jair Bolsonaro proved all political pundits wrong. He has managed a runoff election against Luiz Inacio Lula da Silva on October 30. Lula received 48% votes to Bolsonaro's 43%. The tally leaves Lula without the simple majority needed for victory and sets the two up for a face-off in a divisive election campaign. Bolsonaro's politics appealed to many on a God-fearing, business-friendly platform promising to be tough on graft and crime. Despite the outcome on October 30, Bolsonaro's unexpectedly strong showing means his political influence will endure, with many of his right-wing and centrist allies winning key congress and local government races.

The strength of Brazil's economy and new job creation in recent months has come as a surprise. The Brazilian economy has surprised on the upside, growing 2.4% in the first six months of this year. We expect the economy to grow 2.6% in the current year and 2% next year. Services-sector growth has been strong, boosted by an increase in aid payments by the government to poorer families, increased purchasing power as inflation slows, and employment growth. The Bolsonaro economic team says that in a second term, it will work for lower tax rates and a simplified tax system, more privatization and a restructured electricity market. It wants Brazil to join the Organization for Economic Cooperation and Development, the club of developed nations. Lula also wants faster growth, but his way to get there is by giving the state a more prominent role in the economy. He opposes privatization and favours protectionism.

Brazil's 12-month inflation rate reached an almost 19-year high of 12.13% in April and has since slowed, most recently to 8.73% in August. Prices declined in July and August from the previous month, primarily because of the lower taxes on fuel and other products. Twelve-month inflation in Brazil has receded to 8.73%. Brazil's central bank left its benchmark lending rate unchanged for the first time since early 2021 but said it remained ready to resume rate increases if inflation doesn't slow as expected. The bank left the Selic rate at 13.75% after raising it at 12 consecutive policy meetings starting in March 2021. The bank's monetary policy committee, or Copom, is alert for signs that may prevent inflation from coming under control. In particular, U.S. monetary policy could force Brazil's central bank to notch rates higher if the Fed tightens more than expected.

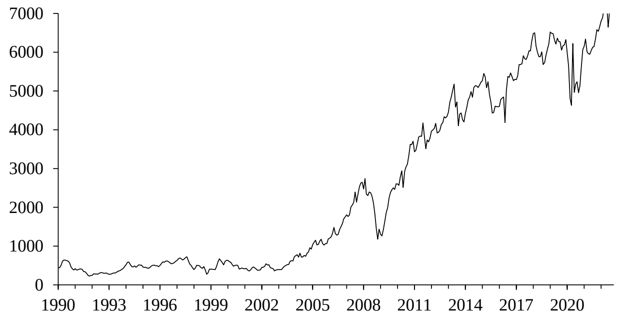
The Brazil real started the year as one of the best-performing currencies, driven higher by rising commodity markets, renewed interest from investors pulling funds from Russian assets and a sharp rise in Brazil's key interest rate from 2% to 11.75% in just a year.

	20	**21**	**22**	**23**	**24**
GDP (%p.a.)	-3.9	4.6	2.6	2.0	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

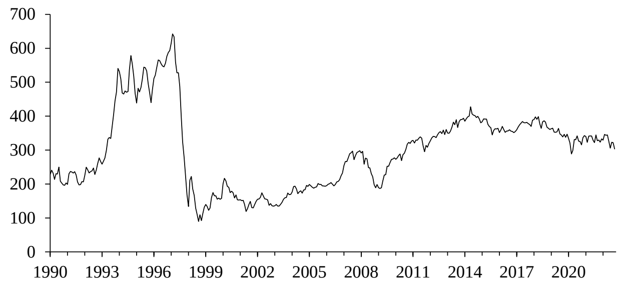
Other Emerging Markets

Hong Kong: FT-Actuaries

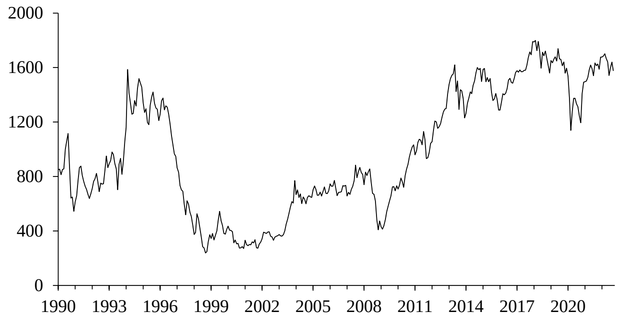
Indonesia: Jakarta Composite



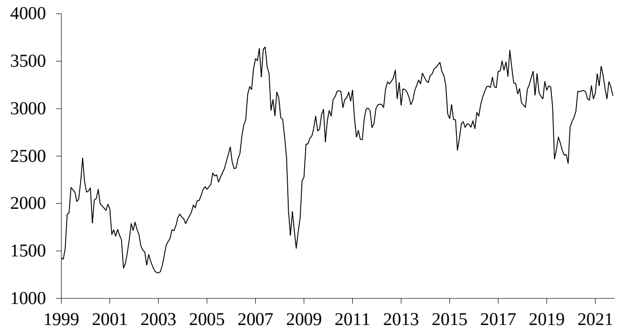
Malaysia: FT-Actuaries (US$ Index)



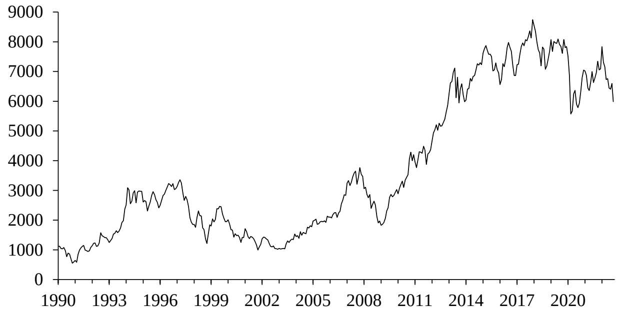
Thailand: Composite Index



Singapore: Straits Times Index

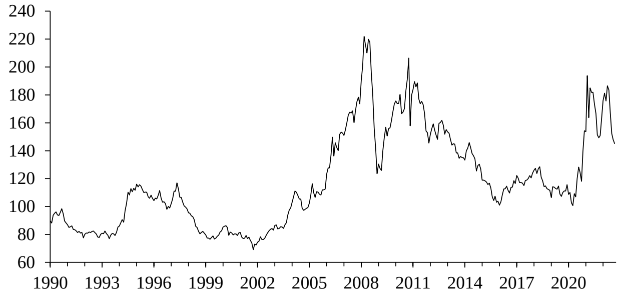


Philippines: Manila Composite

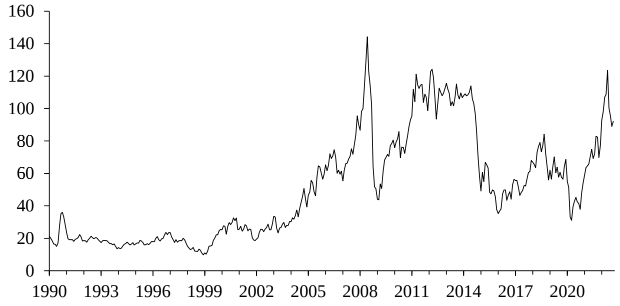


COMMODITY MARKETS

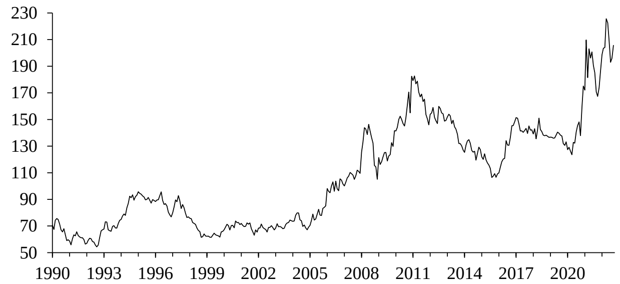
Commodity Price Index (Dollar)
(Economist, 2015 = 100)



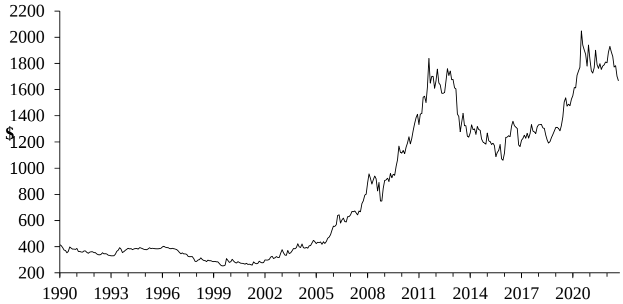
Oil Price: North Sea Brent (in Dollars)



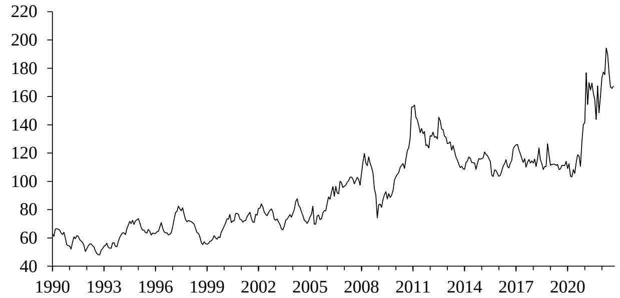
Commodity Price Index (Sterling)
(Economist, 2015 = 100)



Gold Price (in Dollars)



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



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	1.7	-1.4
2021	2.5	0.4	0.1	81.5	78.2	-5.8	4.2	-5.2
2022	8.2	2.3	1.7	80.2	82.7	-5.3	11.4	-4.6
2023	5.0	3.1	2.6	78.3	83.3	-1.0	8.1	-0.5
2024	3.2	3.0	3.0	77.8	84.2	0.6	4.9	0.6
2021:1	0.9	0.6	0.1	80.7	76.2	-3.6	1.6	-3.1
2021:2	2.1	0.9	0.1	81.7	77.6	-5.0	3.5	-4.2
2021:3	2.7	0.7	0.1	81.8	78.7	-6.5	4.6	-5.9
2021:4	4.4	0.9	0.2	81.5	79.7	-7.5	7.0	-6.8
2022:1	5.5	1.4	0.8	82.3	81.9	-7.7	8.5	-7.1
2022:2	7.9	2.1	1.4	80.1	81.5	-6.4	11.6	-5.7
2022:3	9.3	2.8	2.0	79.3	82.8	-4.5	12.5	-3.7
2022:4	10.1	3.0	2.5	79.1	84.6	-2.5	13.1	-2.0
2023:1	6.5	3.0	2.5	79.3	82.6	-1.7	11.0	-1.2
2023:2	5.4	3.1	2.5	78.9	83.4	-1.2	9.0	-0.6
2023:3	4.0	3.2	2.5	78.3	83.7	-0.9	6.4	-0.2
2023:4	3.9	3.2	3.0	76.7	83.5	-0.2	6.0	0.0

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]	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	295.0	5.8	4.5	1.3	154.5
2022	312.4	5.9	3.7	1.1	151.0
2023	325.2	4.1	3.5	1.0	149.6
2024	336.5	3.5	2.8	0.7	150.0
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	315.0	5.6	3.7	1.1	149.8
2022:4	318.7	6.3	3.7	1.1	147.8
2023:1	320.6	3.9	3.8	1.1	151.5
2023:2	321.1	4.4	3.6	1.0	149.2
2023:3	328.9	4.4	3.4	0.9	150.4
2023:4	330.3	3.6	3.2	0.9	147.4

1 Whole Economy
2 Average Earnings
3 Wage rate deflated by CPI

Estimates and Projections of the Gross Domestic Product[1] (£ 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	163.5	783000.8	452313.8	292986.2	208533.4	-36884.7	133947.9
2022	171.3	820457.5	480576.8	282925.1	218565.6	-23844.3	137765.7
2023	175.1	838711.8	494494.3	277901.0	225310.6	-18634.4	140359.7
2024	180.0	862097.6	509517.5	279277.4	232155.7	-15889.1	142963.9
2019/18	1.4		0.3	3.1	3.0		-0.1
2020/19	-9.4		-10.1	-16.2	-4.8		4.9
2021/20	7.5		6.8	16.0	5.2		7.7
2022/21	4.8		6.4	-3.1	4.8		2.9
2023/22	2.2		2.9	-1.7	3.1		1.9
2024/23	2.8		3.0	0.7	3.0		1.9
2021:1	155.9	186597.5	106673.9	68534.3	51081.5	-7820.5	31871.7
2021:2	163.9	196206.0	112092.7	66778.3	51382.3	-668.1	33379.2
2021:3	166.4	199160.9	116084.7	78815.1	52892.3	-14394.2	34237.0
2021:4	167.9	201036.4	117462.5	78858.5	53177.3	-14001.9	34460.0
2022:1	169.5	202910.4	119289.5	72775.0	53945.4	-9205.5	33894.0
2022:2	169.3	202649.3	119521.4	65615.0	54462.4	-2866.9	34082.6
2022:3	172.4	206438.5	120432.8	71956.2	54873.8	-6097.4	34726.9
2022:4	174.1	208459.3	121333.2	72578.9	55284.0	-5674.6	35062.2
2023:1	174.5	208864.6	122246.4	76966.0	55700.2	-11225.3	34822.7
2023:2	174.8	209297.5	123160.0	67700.1	56116.4	-2756.3	34922.7
2023:3	175.1	209610.5	124085.8	66265.5	56538.3	-2249.7	35029.4
2023:4	176.2	210939.2	125002.0	66969.5	56955.7	-2403.2	35584.8

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	2.6	2196.3	56.9	-89.1
2020	15.4	2007.9	309.4	-53.8
2021	6.2	2311.2	144.1	-60.0
2022	4.8	2599.6	125.5	-80.2
2023	4.5	2759.2	124.1	-24.2
2024	1.0	2943.8	30.8	-14.7
2021:1	7.8	525.3	40.8	-12.4
2021:2	11.1	555.3	61.4	-11.3
2021:3	6.9	568.5	39.3	-28.9
2021:4	5.4	584.2	31.4	-7.3
2022:1	2.0	603.2	12.1	-51.7
2022:2	8.1	619.0	50.1	-18.3
2022:3	3.9	648.6	25.3	-6.1
2022:4	5.2	670.6	35.0	-4.1
2023:1	2.3	661.5	15.1	-9.6
2023:2	5.3	674.3	35.5	-9.8
2023:3	5.0	685.2	34.2	-3.3
2023:4	4.5	703.9	31.9	-1.5

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	3.2	2.2
U.K.	1.3	1.4	–9.4	7.5	4.8	2.2
Japan	0.6	0.0	–4.7	1.7	2.1	1.8
Germany	1.3	0.6	–4.6	2.7	2.2	2.5
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	7.0	3.2
U.K.	2.5	1.7	1.0	2.5	8.2	5.0
Japan	1.0	0.5	0.0	–0.2	1.6	1.0
Germany	1.8	1.4	0.5	3.1	6.3	2.7
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	–1.6	0.2
U.K.	–1.4	–0.7	–1.3	–5.8	–5.3	–1.0
Japan	–0.4	0.1	0.3	–2.9	–0.9	–0.6
Germany	–1.7	–0.9	–3.6	–6.0	–2.6	–2.3
France	–1.6	–0.9	–2.2	–5.1	–1.4	–1.6
Italy	–0.9	–0.3	–2.4	–5.2	–1.2	–1.4

Nominal Short-Term Interest Rates

	2018	2019	2020	2021	2022	2023
U.S.A.	2.4	1.5	0.4	0.1	1.6	2.6
U.K.	0.4	0.8	0.2	0.1	1.7	2.3
Japan	0.1	0.1	0.1	0.1	0.1	0.1
Germany	–0.3	–0.4	–0.5	–0.6	0.1	0.4
France	–0.3	–0.4	–0.5	–0.6	0.1	0.4
Italy	–0.3	–0.4	–0.5	–0.6	0.1	0.4

Real Long-Term Interest Rates

	2018	2019	2020	2021	2022	2023
U.S.A.	–0.9	–1.8	–3.1	–1.9	0.0	0.4
U.K.	–0.8	–0.4	–1.4	–5.2	–4.6	–0.5
Japan	–0.6	–0.6	–0.8	–0.9	–0.6	–0.6
Germany	–2.6	–3.1	–3.8	–3.2	–1.7	–1.4
France	–1.8	–2.2	–1.9	–1.8	–0.4	0.0
Italy	1.1	–0.4	–1.5	–1.0	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	2.6	2.8
U.K.	1.0	0.6	0.1	0.4	2.3	3.1
Japan	0.0	0.0	0.0	0.1	0.2	0.2
Germany	0.2	–0.2	–0.6	–0.2	0.5	0.7
France	0.1	–0.3	0.2	0.3	1.0	1.4
Italy	2.8	1.4	0.5	0.9	2.4	2.8

Index Of Real Exchange Rate (2010=100)[1]

	2018	2019	2020	2021	2022	2023
U.S.A.	113.7	117.1	118.7	116.1	128.3	128.0
U.K.	99.8	99.5	99.6	103.4	102.2	102.4
Japan	74.8	77.0	77.8	71.0	59.9	59.2
Germany	97.4	96.0	97.1	97.9	95.0	95.1
France	95.3	93.9	94.7	94.0	89.6	89.5
Italy	97.0	95.0	95.4	95.1	91.6	91.3

[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]	118.56	122.52	124.77	119.77	126.54	126.10
U.K.	1.33	1.28	1.29	1.37	1.20	1.23
Japan	110.01	109.10	106.60	110.45	131.10	130.50
Eurozone	0.85	0.89	0.87	0.85	0.95	0.96

[1] The series for the USA is a nominal broad U.S dollar index (2010=100); the series for the UK is $ per £

* Forecasts based on the Liverpool World Model