LIVERPOOL INVESTMENT LETTER

May 2021

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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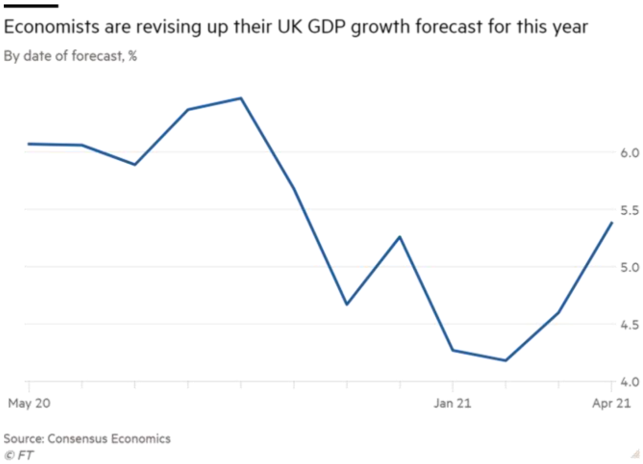
PROJECTING THE EFFECTS OF A FISCAL REFORM PACKAGE

With the rollout of the vaccine in the UK and its unprecedented efficiency, the economic forecasters are steadily raising their UK growth forecasts. The FT's chart below shows the evolving Consensus Economics forecast for YOY growth for 2021 — now up to 5.5% with various forecasters moving up to 7%, including most recently the Bank. This evolution reflects the higher than expected Q1 monthly GDP estimates, which show less effect of lockdown as 'workarounds' have got better.

Our own forecast has gone up as well. We now expect nearly 8% growth YOY in 2021. Correspondingly our PSBR forecast has come down.



In the same vein forecasts for the PSBR are coming down for the Consensus. The latest PSBR forecast average for 2022/23 is 6% of GDP. However, this still looks far too high — as do the OBR projections we reviewed last time. Our own forecast is shown below; in it by 2022/23 both the public spending rate and the net tax rate have returned to the normality of 2019/20, with the Covid effects well behind them. Consensus forecasters have assumed spending stays high even after Covid and revenues stay low. But the basis for this is weak in the extreme. Looking ahead, our baseline forecast is for the debt/GDP ratio to fall steadily to just over 50% with growth and inflation doing the work.

Table 1: Summary of Forecast

	2018	2019	2020	2021	2022	2023	2024
GDP Growth[1]	1.3	1.4	-9.9	7.9	8.2	2.6	1.8
Inflation CPI	2.4	1.8	1.0	1.6	5.0	4.0	3.0
Wage Growth	3.0	3.5	1.5	3.8	6.0	5.3	4.2
Survey Unemployment	4.1	3.8	4.5	6.1	5.2	3.6	2.8
Exchange Rate[2]	78.6	78.3	78.0	80.4	78.8	78.0	77.8
3 Month Interest Rate	0.4	0.8	0.2	0.2	1.5	4.5	5.0
5 Year Interest Rate	1.0	0.6	0.3	0.5	1.5	4.7	5.0
Current Balance (£bn)	-82.9	-89.1	-58.4	-49.3	-36.3	-24.4	-17.2
PSBR (£bn)	39.3	49.1	313.4	138.4	57.9	42.4	23.7

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

This paves the way for a fiscal policy that can continue to be supportive of the economy, and keeps taxes low, with definite scope for lowering in a supply-side package, as set out in the last Letter.

The prospects for inflation and interest rates

In its latest statement the Bank has said it expects little sustained inflation but will be vigilant. It certainly plans to keep interest rates low unless there is a sustained rise in inflation. With commodity prices in free rise as the world growth takes off post-Covid, inflation is likely to be strong and sustained. The labour market is likely to see rising wage growth, with vacancies soaring in a fast-recovering economy.

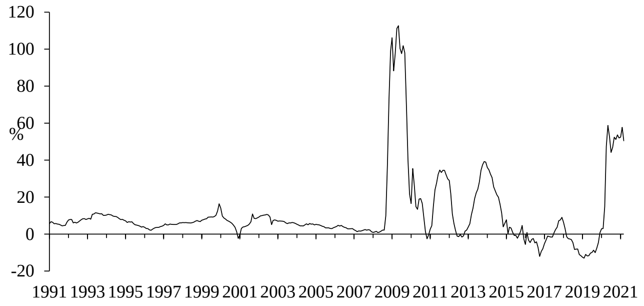
For all the Bank's announced reluctance, we see interest rates rising steadily in 2022. This will at last restore some monetary normality, with savings returns recovering to reasonable long-term rates.

Table 2: Basic Forecast

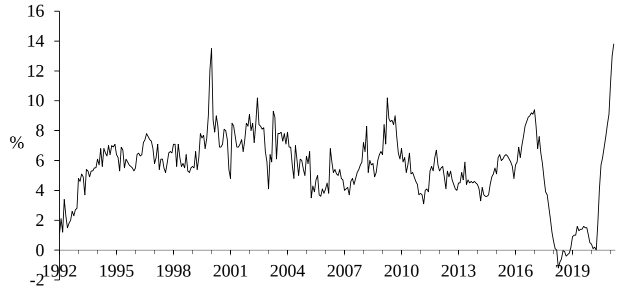
	Nom PSBR (£bn)	Nom GDP (£bn)	Nom Pub Spend (£bn)	PSBR/GDP %[1]	Spend/GDP %	Nom Debt (£bn)	Debt Interest (£bn)	Debt/GDP %	Net Taxes (£bn)	Net Tax Rate%
2019/20	49.1	2196.3	472.2	2.2	21.5	1621.0	48.1	73.8	471.2	21.5
2020/21	313.4	1990.9	475.8	16.1	23.9	1934.4	39.8	97.2	202.2	10.2
2021/22	138.4	2288.1	482.4	6.0	21.1	2072.8	42.6	90.6	386.6	16.9
2022/23	57.9	2545.4	557.8	2.3	21.9	2130.7	41.1	83.7	540.9	21.3
2023/24	42.4	2703.1	596.9	1.6	22.1	2173.1	42.9	80.4	597.5	22.1
2024/25	23.7	2842.0	635.8	0.8	22.4	2196.8	41.1	77.3	653.2	23.0
2025/26	2.6	2979.6	669.7	0.1	22.5	2199.4	44.6	73.8	711.7	23.9
2026/27	0.2	3132.4	715.9	0.0	22.9	2199.6	47.8	70.2	763.5	24.9
2027/28	0.1	3287.6	766.6	0.0	23.3	2199.7	50.9	66.9	817.4	25.9
2028/29	0.0	3454.3	822.1	0.0	23.8	2199.7	53.9	63.7	876.0	26.9
2029/30	0.0	3628.9	882.0	0.0	24.3	2199.7	56.7	60.6	938.7	28.0
2030/31	0.0	3811.9	946.4	0.0	24.8	2199.7	59.4	57.7	1005.8	29.1
2031/32	0.0	4012.4	1017.9	0.0	25.4	2199.7	61.9	54.8	1079.8	30.3
2032/33	0.0	4211.5	1091.8	0.0	25.9	2199.7	64.3	52.2	1156.1	31.5
2033/34	0.0	4430.6	1174.0	0.0	26.5	2199.7	66.6	49.6	1240.6	32.7
2034/35	0.0	4647.2	1258.5	0.0	27.1	2199.7	68.8	47.3	1327.2	34.0

[1]GDP at market prices (Financial Year)

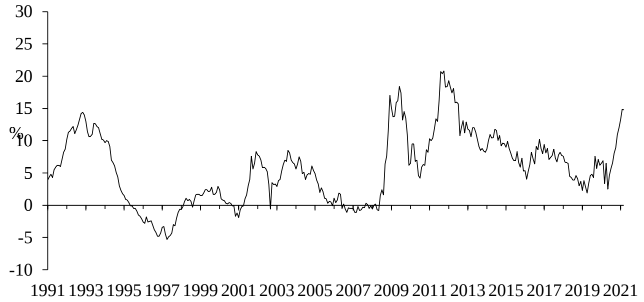
U.S.: Growth in M0 (Yr - on - Yr)



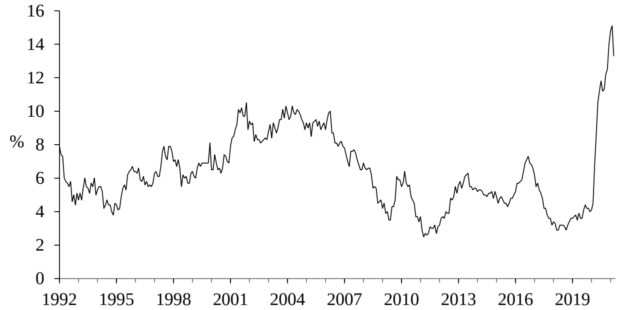
UK: Notes and Coins in Circulation Growth



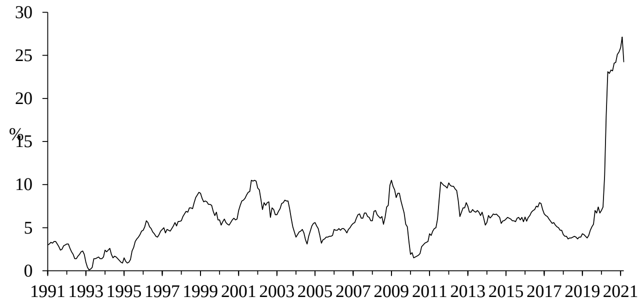
U.S.: Growth in M1 (Yr - on - Yr)



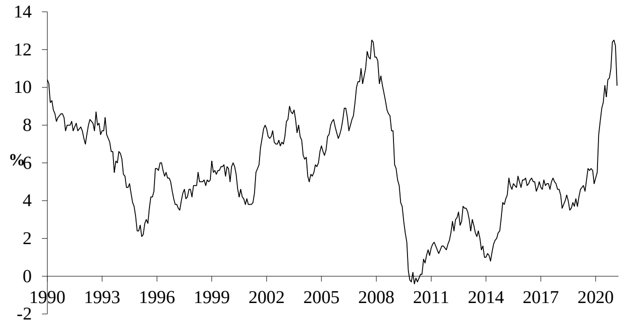
UK: M4 Growth



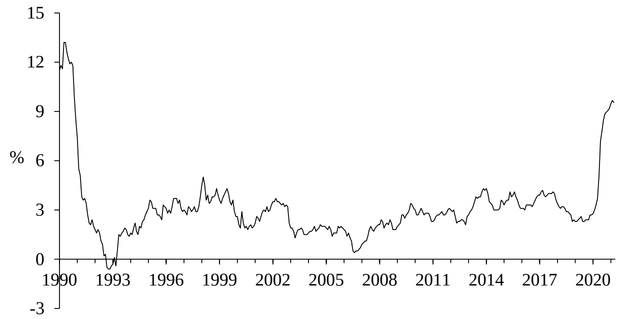
U.S.: Growth in M2 (Yr - on - Yr)



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

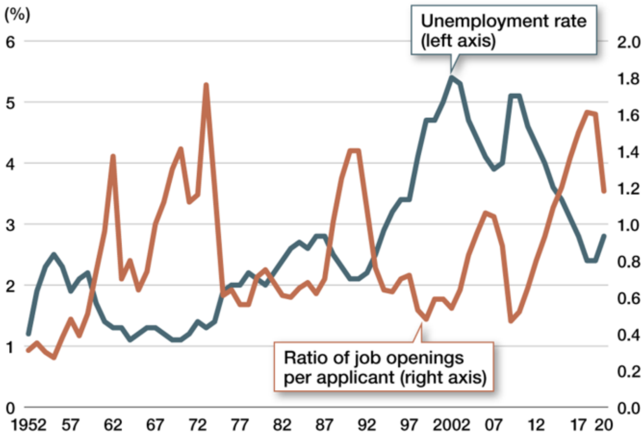
The pandemic hits the labour market

The Covid-19 pandemic has been having a severe impact on social and economic activity and its effects are noticeable in labour market data. Japan's labour market entered into the global pandemic from a position of strength. Indeed, the job-to-applicant ratio — one of the best indicators to monitor the demand/supply balance in the Japanese labour market — was near a historical peak, as the chart opposite shows. In other words, for every job seeker in 2019, there were 1.6 available positions. Covid-19 saw a sharp retrenchment of labour demand, as seen in most countries, but the ratio managed to stay above the important threshold of 1.0. This implies that Japan was able to avoid the severe shocks to employment as seen in other G-7 economies, notably the United States and Canada. Nevertheless, according to the Ministry of Health, Labour and Welfare Japan's average job availability ratio in fiscal 2020 posted the largest decline in nearly half a century. For the year ending in March, it dropped 0.45 point to 1.10, the sharpest decline since a 0.76 point drop in fiscal 1974 following the 1973 global oil crisis. It means there were 110 job openings for every 100 job seekers, indicating a tighter labour market. As a result, the number of job seekers in 2020 rose by 6.9% to 1.8 million, while job offers fell by 21% to 2.2 million. Among Japan's prefectures, Fukui had the highest ratio of job offers per applicant, at 1.62, while Okinawa had the lowest, at 0.79. In Tokyo, the ratio was 0.88, marking the sixth consecutive month, since July 2020, for the ratio to be under 1.0.

The average unemployment rate in 2020, meanwhile, rose to 2.8%, climbing for the first time in 11 years. The number of unemployed people increased 360,000 to 1.98 million, and that of people in work dropped 690,000 to 66.64 million. Nonregular workers decreased 970,000 to 20.66 million, the first fall since comparable data became available in fiscal 2014. They bore the brunt as more firms, especially in the services sector that is highly dependent on part-time employees, were forced to lay people off and refrain from offering contract renewals during the pandemic. Before the public health crisis, Japan had seen the number of nonregular workers increasing, with many women and elderly people entering the labour market to help mitigate severe labour shortages due to the rapid aging of the country's population.

The domestic employment situation began to worsen significantly around April last year, when the government declared its first state of emergency over the virus, covering the entire country for about a month through mid-May with requests for people to stay home and nonessential businesses to suspend operations. The measure led Japan's economy to contract an annualized real 29.3% in the April–June period in 2020 from the previous quarter, its worst recession on record. "The employment indices had been at quite good

Unemployment Rate and Ratio of Job Openings per Applicant



Created by *Nippon.com* based on data from the Ministry of Health, Labor, and Welfare (for ratio of job openings per applicant) and the Ministry of Internal Affairs and Communications (for unemployment rate). nippon.com

levels, but they began to deteriorate around the latter half of fiscal 2019 due to trade friction between the US and China, and the fallout from the pandemic accelerated their pace", said Yuriko Shimanaka, an economist at Mizuho Research & Technologies.

With a fourth wave of virus infections now sweeping the country, Prime Minister Yoshihide Suga declared on April 23 the country's third state of emergency over the virus for Tokyo and the western Japan prefectures of Osaka, Kyoto and Hyogo. The emergency measures stop short of a full lockdown, but they impose limits on restaurants and other businesses. The strictest rules will apply to places that sell alcohol or offer karaoke. They will be asked to close entirely, while many other establishments will close at 8 p.m. The new policies, which carry fines but largely rely on voluntary compliance, went into effect on April 28 and will run through to at least May 11. Shimanaka predicted the unemployment rate will worsen again due to the fresh emergency, possibly reaching 3.5% around September, while the job availability ratio would hover around 1.0.

According to official data from the Ministry of Health, Labour and Welfare, so far over 100,000 people in Japan have been dismissed or seen their employment contracts terminated without renewal due to the impact of the Covid-19 pandemic, a relative low number compared to the US or other EU countries, given the size of its labour market — the number of employed persons in Japan is around 69 million. Nonregular workers account for half of those who lost their jobs because of the pandemic. Observers say employment insecurity is likely to remain high especially among workers in the manufacturing, retail and restaurant industries, which have been hit hard by the pandemic.

Economists believe that labour market conditions will not improve before next year. Norinchukin Research Institute economists have projected the pace of economic recovery will be “stop and go” until herd immunity is attained around the end of this year. Some economists see a slightly faster recovery, with the economy reaching the pre-pandemic level in the first quarter of 2022. Takuto Murase, senior economist at the Japan Research Institute, expects the economy to show clearer signs of a gradual recovery once the vaccination of people aged 65 and older is complete. “Once the more than 36 million people in that demographic go out and spend more, personal consumption should be given a significant boost over time”, he says.

Still, the return of Japan’s economy to pre-pandemic levels will be about a year behind the US, as the vaccine rollout in Japan — one of the slowest among developed countries — is putting it at a disadvantage when it comes to achieving a speedy economic recovery. In contrast to the US, where the total number of Covid-19 vaccination doses has topped 150 million, the figure in Japan only topped 1 million recently, which bodes ill for a swift rebound for its economy.

MARKET DEVELOPMENTS

Rising interest rates will reduce equity prices for businesses like new tech with uncertain future profits. But general equities will benefit from the strong growth recovery.

Table 1: Market Developments

	Market Levels Apr 1	May 4	Prediction for Apr/May 2022 Previous Letter	Current View
Share Indices				
UK (FT 100)	6737	6923	10530	10821
US (S&P 500)	4020	4165	5471	5668
Germany (DAX 30)	15107	14856	24791	24379
Japan (Tokyo New)	1972	1898	2311	2225
Bond Yields (government				
UK	0.80	0.82	0.50	0.50
US	1.73	1.60	1.30	1.30
Germany	–0.33	–0.23	–0.20	–0.20
Japan	0.12	0.09	0.00	0.00
UK Index Linked	–2.14	–2.14	1.00	1.00
Exchange Rates				
UK ($ per £)	1.38	1.39	1.30	1.30
UK (trade weighted)	82.11	81.06	80.0	80.0
US (trade weighted)	101.68	100.15	102.5	102.5
Euro per $	0.85	0.83	0.88	0.88
Euro per £	1.18	1.15	1.14	1.14
Japan (Yen per $)	100.60	109.20	107.5	107.5
Short Term Interest Rates				
UK	0.83	0.83	0.30	0.30
US	0.25	0.21	1.00	1.00
Euro	–0.49	–0.49	–0.50	–0.50
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	3.60	2.4	1.9	52.00		59.90
US	1.99	2.2	2.0	31.90	6.37	44.46
Germany	3.30	1.6	1.5	61.00	0.86	68.26
Japan	1.90	0.6	1.6	15.00	7.82	26.92
UK indexed[2]	–2.02		2.0	8.00		7.76
Hong Kong[3]	2.60	5.5	2.0	5.00	6.37	21.47
Malaysia	3.30	6.9	2.0	85.00	6.37	103.57
Singapore	3.50	5.0	2.0	54.00	6.37	70.87
India	1.40	5.0	2.0	14.00	6.37	28.77
Korea	1.10	2.0	2.0	–9.00	6.37	2.47
Indonesia	2.20	4.8	2.0	41.00	6.37	56.37
Taiwan	2.80	2.9	2.0	38.00	6.37	52.07
Thailand	3.20	4.1	2.0	51.00	6.37	66.67

Bonds: Contribution to £ yield of: –

	Redemption Yield	Changing Nominal Rates	Currency	Total
UK	0.82	3.18		4.00
US	1.60	3.05	6.37	11.02
Germany	–0.23	–0.31	0.86	0.32
Japan	0.09	0.89	7.82	8.80

Deposits: Contribution to £ yield of:

	Deposit Yield	Currency	Total
UK	0.83		0.83
US	0.21	6.37	6.58
Euro	–0.49	0.86	0.37
Japan	–0.05	7.82	7.77

[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.

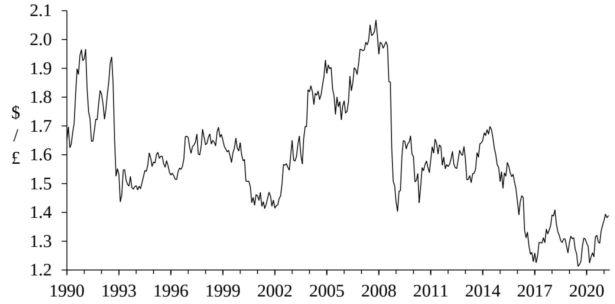
Table 3: Portfolio(%)

	Sterling Based Investor		Dollar Based Investor		Euro Based Investor	
	April Letter	**Current View**	**April Letter**	**Current View**	**April 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)	-	-	-	-	-	-

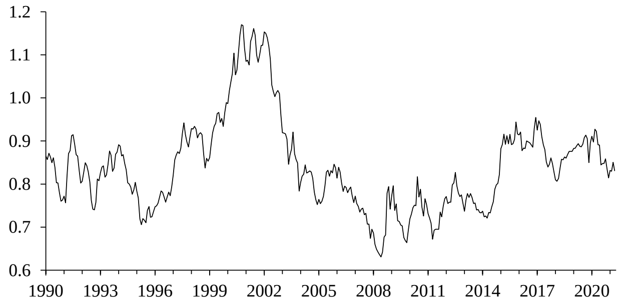
INDICATORS AND MARKET ANALYSIS
FOREIGN EXCHANGE MARKETS

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

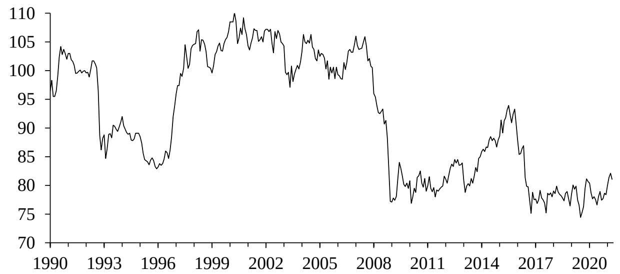
UK: Dollars Per Pound Sterling



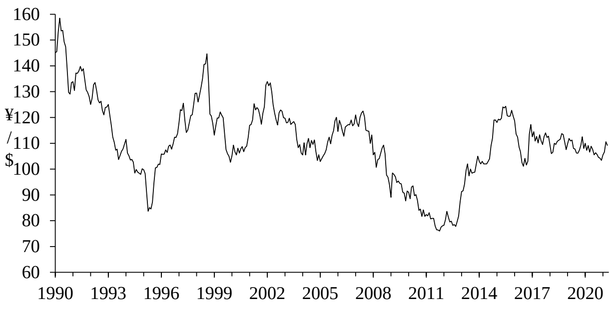
Euro per US dollar



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



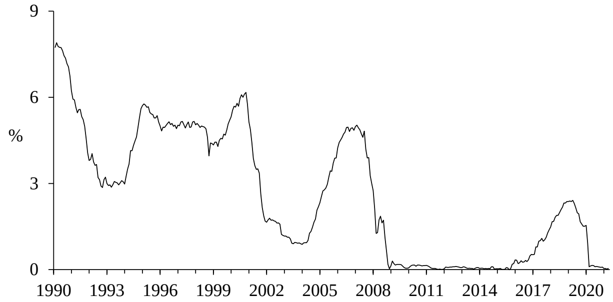
Japan : Yen Per U.S. Dollar



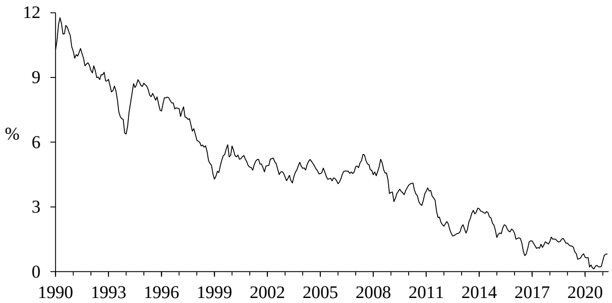
GOVERNMENT BOND MARKETS

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

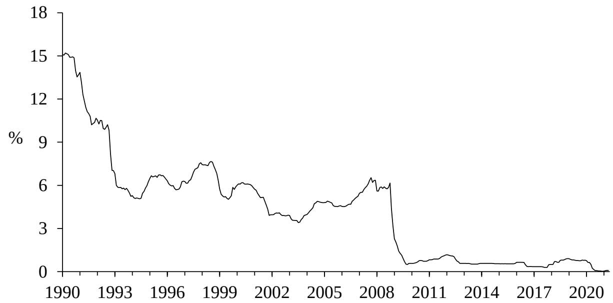
U.S. : 3-Month Treasury Bill



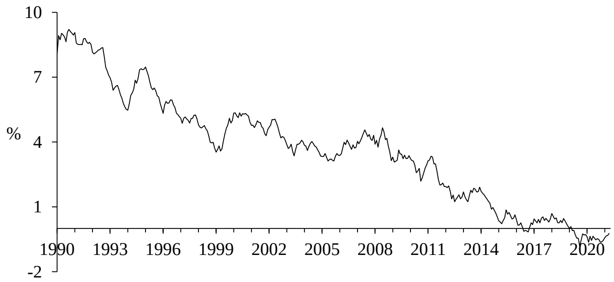
U.K.: Yield on Long-Term Government Bonds



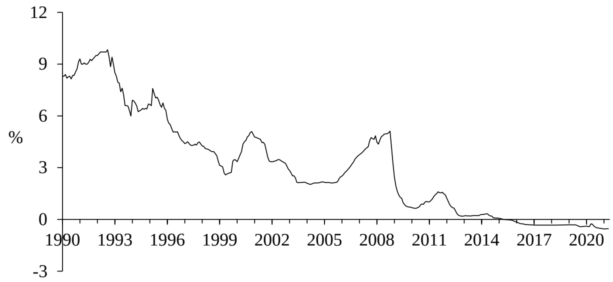
U.K. : 3-Month Certificate LIBOR Rate



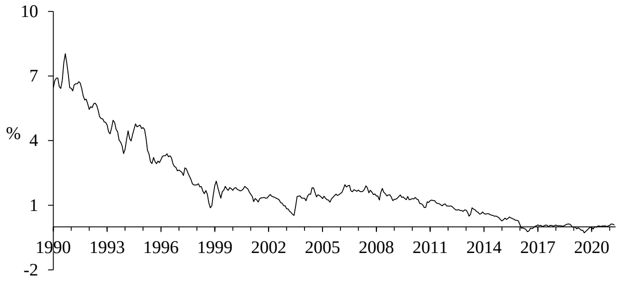
Germany: Yield on Public Authority Bonds



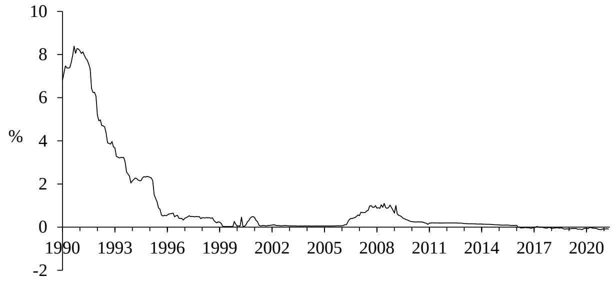
Germany : 3-Month Interbank Deposit Rate



Japan: Yield on Long-Term Government Bonds

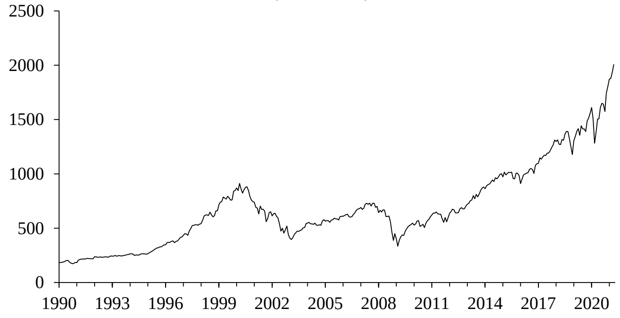


Japan : 3-Month Money Market Rate

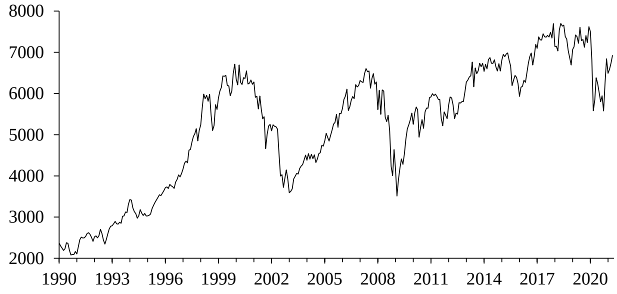


MAJOR EQUITY MARKETS

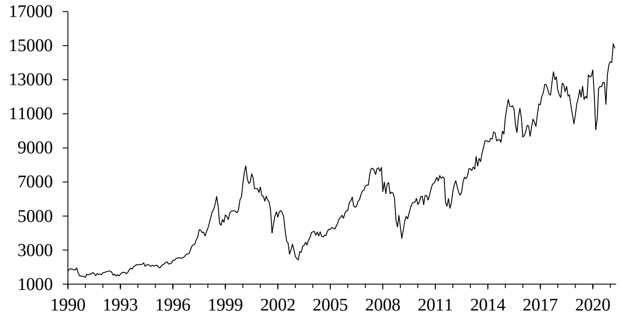
U.S. : S & P 400 Industrial (1985=100)



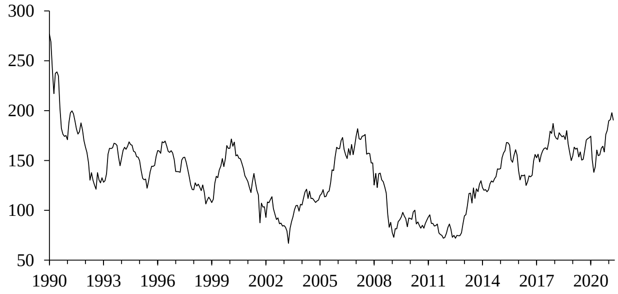
U.K. : FTSE-100 Index (10 April 1962=100)



Germany : DAX 30



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



EMERGING MARKETS

Anupam Rastogi

India

India is now the global hotspot of covid infections. India reported 357,229 new infections on May 4th, the lowest in the last seven days, having declined from a global record above 400,000. There were 3,449 deaths, down from 3,689. The second wave of Covid-19 infections is still spreading across the country, and state after state is announcing restrictions, but it seems that the worst is over. The outbreak is no longer concentrated in a few states or even in urban areas as was earlier thought.

As noted in last month's letter, India has decided to vaccinate all its population above 18 years of age. Everyone appears unanimous in their views that vaccination is what will provide protection to India and its economy from the third wave. Vaccination is the best defence against any nasty surprises as of now.

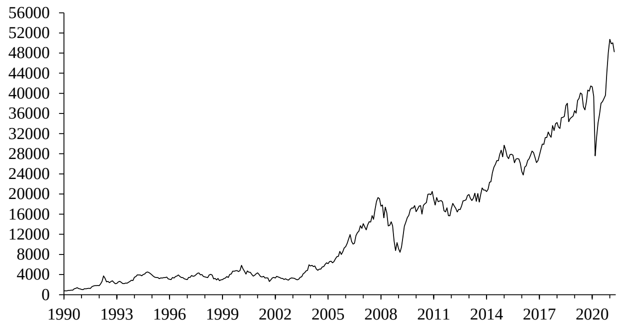
As of now only 2% of the population is vaccinated and it will take time to vaccinate even half of the population. The Serum Institute of India (SII) has announced that the capacity increase to 100 million doses monthly from around 60-70 million now will happen only by July. Other companies are now seeking to ramp up production, but shortages of the necessary raw materials pose a challenge. The U.S., U.K., France and Germany have pledged to provide various forms of aid. But some public-health experts say most Indian states lack the cold storage and distribution networks needed to ramp up vaccinations even if production were to increase sharply.

Fierce new Covid-19 waves are also inundating other developing countries, placing severe strain on their health-care systems and prompting appeals for help. Nations ranging from Laos to Thailand in Southeast Asia, and those bordering India such as Bhutan and Nepal, have been reporting significant surges in infections in the past few weeks.

Medical experts are ransacking the inventory of new variants to explain India's hellish Covid explosion. It seems that there is a long way to go before the world comes to grips with this virus. As India's experience shows that humility is one clear lesson of the pandemic that other nations would do well to heed.

A nationwide lockdown has been avoided. As the wave spreads, the Indian economy will likely see a sequential contraction in the April–June quarter. IHS Markit data showed purchasing managers' index (PMI) for April rose marginally to 55.5 from seven-month low of 55.4 in March. A reading above 50 indicates expansion, while below this threshold points to contraction. For the ninth month in a row, the headline manufacturing PMI has managed to stay in the expansion zone. But, it is achieved on a very favourable base effects, the year-on-year numbers are deceptive. For FY22 (April 21 to March 22), year-on-year growth could be 10% even if activity remains constant at current levels, given the 8% contraction in the economy last year. We are a little more optimistic and maintain our previous forecast of 11% growth for FY22.

India: BSE Sensitive



This second wave of virus cases may delay the recovery, but it is unlikely that economic recovery would get derailed. The second wave is likely to affect domestic demand for discretionary consumption and financial performance of listed companies show that the strong firms have become stronger.

Fortunately for the country, the Southwest monsoon may be 103% of long-period average. This will keep consumer inflation under control. Gains in wholesale inflation last month showed higher commodity prices and firmer input costs may feed into retail prices, which are already inching toward the RBI's upper tolerance limit of 6%. In India, consumer price index (CPI) inflation stood at 5.52% in March compared to 5.03% in February and 4.06% in January. The rise in CPI inflation was driven by an increase in fuel and transportation costs along with an increase in some components of the food basket.

Nevertheless, policy makers are likely to overlook inflation concerns for now to support a nascent economic revival. The RBI, which cut interest rates by 115 basis points last year, left its main repurchase rate unchanged at 4% this month, while retaining its pledge to keep rates lower for longer.

The government has limited fiscal headroom, having pencilled in a near-record borrowing of 12.1 trillion rupees ($162 billion) this year to spur spending in the economy. The RBI has stood pat since cutting interest rates to a record low last year. The RBI separately formalized a quantitative easing program, aimed at keeping borrowing costs in check. It has announced a Government Securities Acquisition Programme, or GSAP, to keep borrowing costs in check.

For the whole fiscal year ended on March 31, the goods exports were down 7.3% to $291 billion while imports fell 18% to $398 billion from a year earlier.

Preliminary trade data showed non-petroleum exports and non-oil non-gold imports rising by 19.4% and 6.5%, respectively, compared to April 2019. (Using 2019 numbers gives a better sense since the country was completely shut down in April 2020). While that is promising, near-term demand concerns as well as rising inflation still persist.

The Indian rupee has turned into Asia's worst-performing currency from being the best in the previous quarter. It is poised for more losses as a resurgence in coronavirus cases to a record threatens to hamstring the economy. The outflows by foreign portfolio investors have placed an additional pressure on the rupee. Between the months of October and February, FPIs pumped in Rs 1.94 trillion as the economic recovery was gaining momentum. Depreciation of rupee increases the rupee cost of imported commodities and this may transmit into a broad-based rise in price levels in the country. We expect the Reserve Bank of India to defend the rupee using its massive foreign reserves.

The election results announced on May 2 gave Prime Minister Narendra Modi's party a win in Assam and Puducherry. He could not win West Bengal where he campaigned hard. His party also lost in Tamil Nadu and Kerala. The prime minister is also under fire for over-promising on India's vaccination rollout, both domestically and globally, after he dubbed the South Asian nation the "pharmacy to the world" last October. Yet it is far from guaranteed that the current crisis will cost Modi at the ballot box in 2024. His popularity is dented but still remains the most popular leader in the country.

	19–20	**20–21**	**21–22**	**22–23**	**23-24**
GDP (%p.a.)	4.0	-7.5	11.0	5.5	6.0
WPI (%p.a.)	3.6	5.5	5.0	5.0	4.8
Current A/c(US$ bill.)	-20.0	35.0	-20.0	-10.0	-10.0
Rs./$(nom.)	73.0	75.0	74.0	76.0	78.0

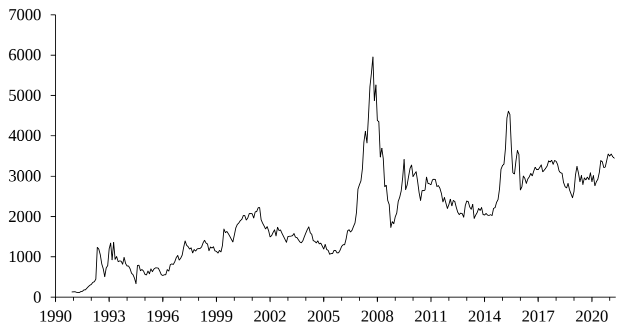
China

China has officially set a modest growth target of above 6% for 2021, but it is widely expected to expand more than 6% after 2.3% growth in 2020. We forecast a growth rate of 7.5% for 2021.

Beijing has warned that uncertainties related to the pandemic, which has claimed more than 3 million lives worldwide, continue to overshadow the economic outlook.

The Caixin/Markit Manufacturing Purchasing Managers' Index (PMI) rose to 51.9 in April from an 11-month low of 50.6 in March. The 50-mark separates growth from contraction on a monthly basis. China's economy grew by 18.3% in the first quarter of 2021 compared to a year ago but slowed to 0.6% versus the fourth quarter 2020. Some of the strength of April month may be exaggerated by the comparison with April 2020, when the country was still struggling to recover and reopen after a lockdown to contain the world's first coronavirus cases. Confidence among small and medium-sized enterprises picked up for a second month in a survey of more than 500 companies by Standard Chartered. Millions of small and medium businesses in China are still struggling to recover from the pandemic's impact, becoming the weak link in China's economic recovery. They account for 80% of urban jobs and at least half of China's tax revenue. Close to 19% of China's small businesses shut down last year. The Covid-19 epidemic is still spreading globally, the international landscape is complicated and severe, the foundation for domestic economic recovery is not yet solid, and some service industries and small and micro enterprises are still facing more difficulties in their production and operation.

China: SSE Composite Index



China's producer prices climbed 4.4% from a year earlier in March after gaining 1.7% in February in March on surging commodity costs, adding to worries over rising global inflation as the pandemic recedes. The consumer price index increased 0.4% after falling for two straight months.

As the world's biggest exporter, China's rising prices threaten to stoke inflation around the world, adding to volatility in financial markets. Beneath the upswing in China's inflation in March was a telling divergence — prices tied to commodities were major drivers, while those linked to household demand were relatively stable. There are two implications — industrial firms stand to gain from higher factor-gate prices, and consumers aren't quite back on their feet. The inflation data show consumption remains subdued, giving the central bank reason not to tighten monetary policy anytime soon. China's central bank has rolled out a raft of measures, including cuts in interest rates and reserve ratios since early 2020 to support the virus-hit economy, but it shifted to a steadier stance as the recovery solidified.

China's current account is expected to remain in a reasonable surplus in 2021 as demand for the country's goods will likely keep the trade balance in surplus even as trade in services gradually returns to normal with vaccine rollouts.

The US did not name China as a currency manipulator this year. A move that allowed the U.S. to sidestep a fresh clash with Beijing. However, as China grows in economic and military power, the U.S.'s control of the global financial system reveals Beijing's weakness in global leadership. China sought ways to counteract U.S. sanctions after the Trump administration targeted Chinese officials and companies over policies from the South China Sea to Xinjiang. Hong Kong's leader can't access a bank account and a top executive at Huawei Technologies Co. is detained in Canada. Even China's state-run banks are complying with U.S. sanctions.

China's development of the digital yuan — also known as the e-CNY — is on the radar of the US authorities. Widespread use of the digital yuan could potentially give China's central bank more data on financial transactions than the big tech giants, allowing the Communist Party to both strengthen its grip on power and fine-tune policies to bolster the economy.

The idea is as China has the ability to monitor transactions involving the digital currency, it may be easier to retaliate against anyone who rebuffs Beijing on sensitive issues like Taiwan, Xinjiang and Hong Kong. However, Chinese policy makers have emphatically denied that the digital yuan is meant to challenge the dollar, with People's Bank of China Deputy Governor Li Bo is on record that the motivation for the e-CNY is primarily for domestic use. Former PBOC governor Zhou Xiaochuan downplayed the risks of the technology to the global financial system at the Boao Forum, saying the digital yuan will be used mainly for small retail payments.

China's digital currency is as much about data as it is about money. Foreign firms that use the digital yuan "might end up handing over to the Chinese government lots of real-time data that it could not access efficiently through conventional banking technology." That's one reason the Biden administration is starting to study whether China's development of a digital currency will make it harder for the U.S. to enforce sanctions. The digital yuan, which could see a wider roll out at the 2022 Winter Olympics in Beijing, is also spurring the U.S. to consider creating a digital dollar.

The latest Chinese census, which was completed in December but has yet to be made public, is expected to report the total population of the country at less than 1.4bn. In 2019, China's population was reported to have exceeded the 1.4bn mark. For the first time the People's Bank of China has recommended that Beijing should completely abandon birth control policies or lose its economic edge over the United States.

	19	20	21	22	23
GDP (%p.a.)	6.1	2.0	7.5	5.2	5.0
Inflation (%p.a.)	2.9	2.5	1.8	2.0	2.0
Trade Balance(US$ bill.)	40.0	60.0	50.0	40.0	42.0
Rmb/$(nom.)	7.1	6.7	6.3	6.2	6.0

Korea: Composite Index

South Korea

Momentum of South Korea's economic growth continues in the first quarter, as exports recover on the back of global demand and the government's continued support for ailing small businesses. The finance ministry expects the economy to grow more than 3.2% as demand for Korean exports rise as the US and China grow rapidly.

GDP expanded 1.8% year-on-year in the January–March period after shrinking a revised 1.2% three months earlier. Growth was driven by exports and facility investment, which rose 1.9% and 6.6% quarter-on-quarter, respectively. Private consumption grew a slower 1.1% on-quarter, after shrinking 1.5% in the previous three months.

The country's benchmark consumer price index (CPI) in April remained almost flat after a 1.1% gain in the previous month. South Korea's central bank kept its policy rate unchanged at a record-low 0.50%, amid concerns about the resurgence of local Covid-19 cases weighing on the economy. The Bank of Korea is widely expected to maintain its accommodative stance for the rest of the year.

South Korea's exports surged 41% year on year in April, boosted by an increase in working days and a rebound from the early pandemic. The shipments of semiconductors and autos led the gain.

The Korean won remained steady and the stock market index Kopsi hovered around 3200. There is expectation in the market that it may be included in the MSCI World Index, which represents large and mid-cap equity performance across 24 developed nations. If included, it could bump up to 4,035.

	19	20	21	22	23
GDP (%p.a.)	1.8	-1.0	3.0	2.2	1.5
Inflation (%p.a.)	0.4	0.5	1.0	1.2	1.0
Current A/c(US$ bill.)	60.0	70.0	60.0	40.0	10.0
Won/$(nom.)	1200	1070	1100	1100	950

Taiwan

Taiwan's 3.1% GDP growth in 2020 put it first among economies in the Asia Pacific, followed by Vietnam with 2.9% growth and China with 2.3% growth. Its growth rate in 2021 will be more than 4%. For the time being we are cautious in our forecast and expect the economy to grow 4.6% in 2021. The consumer confidence index this month edged up 0.76 points to 77.28, the highest since April last year, as people grew more optimistic about stock investments and the employment outlook.

Taiwan's consumer price index (CPI), a main gauge of inflation, is expected to rise 1% in 2021 and 2022 as global raw material prices are on the rise.

Taiwan's exports of merchandise and services may clock more than 5.5%, while imports growing at 4.9% in the current year.

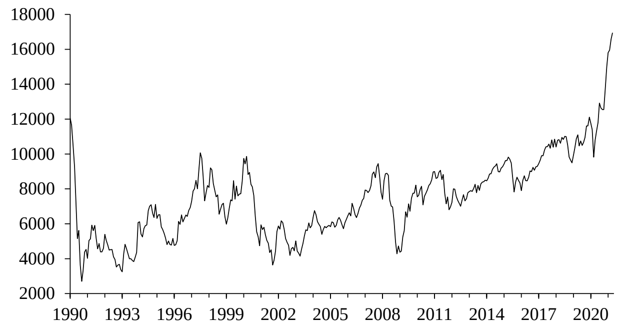
Taiwan has denied that it uses foreign exchange rates to gain an unfair trade advantage as the U.S. Treasury said Taiwan tripped its thresholds for possible currency manipulation under a 2015 U.S. trade law, but refrained from formally branding them as manipulators.

U.S. Secretary of State Antony Blinken has warned China against encroaching on Taiwan. He warned China that it would be a serious mistake for it to try to change the existing status quo by force as many political scientists have pointed out that Taiwan could be the next target of China after imposing strict laws in Hong Kong.

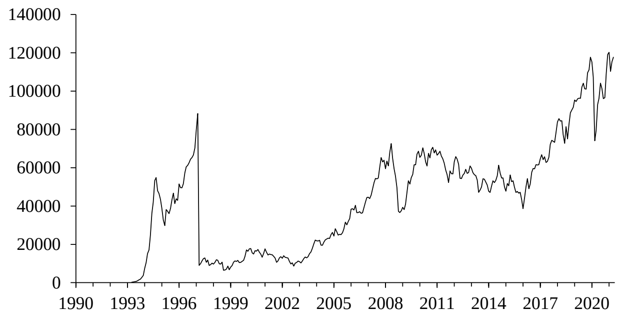
The worst drought in half a century is hitting Taiwan. The drought impacts semiconductor producers, which require voluminous quantities of water to churn out chips. Drought's impact has been modest as the government creates exceptions for these manufacturers. But officials have warned that the water shortage could worsen without adequate rainfall.

	19	**20**	**21**	**22**	**23**
GDP (%p.a.)	2.0	3.1	4.6	3.5	3.0
Inflation (%p.a.)	1.0	-1.0	1.0	1.0	1.0
Current A/c(US$ bill.)	70.0	71.0	90.0	100.0	65.0
NT$/$(nom.)	31.0	29.0	28.5	27.5	27.0

Taiwan: Weighted TAIEX Price Index



Brazil: Bovespa



Brazil

Brazil's GDP growth is expected to get a boost from its accession to the Organization for Economic Cooperation and Development (OECD). According to a study published by the Institute for Applied Economic Research (IPEA) per capita economic growth may increase by 0.4% per year as the OECD would stimulate capital flows, investment and international trade. This will take place in the medium term. For the current year we keep our growth rate unchanged at 3%.

Brazil's 12-month inflation rate rose 0.6% in the month through mid-April as the price of fuel increased less rapidly than in the previous month. Consumer inflation is running at 6.17% from a year earlier. The inflation outlook is easing a little. But the central bank chief Roberto Campos Neto has repeatedly defended the bank's planned strategy of raising borrowing costs aggressively at the start of the tightening cycle to avoid having to raise them too much in the end, and to keep 2022 inflation expectations in check. The bank's rate-setting committee known as 'Copom' meets on May 4–5 and is widely expected to repeat last month's landmark 75 basis point hike, which would lift the benchmark Selic rate to 3.50%.

Brazil posted a current account deficit of $4 billion in March, the fourth deficit in a row. But, the deficit in the 12 months to March was worth 1.24% of gross domestic product. The foreign direct investment (FDI) in March was $6.9 billion — marginally lower than the central bank forecast of $7.5 billion. Growing FDI would help the Brazilian real if the rising coronavirus infections are brought under control.

Brazil reported approximately 3,000 deaths per day in the first week of May, pushing the total to more than 400 thousand since the pandemic started a little over a year ago. It is the second highest tally globally, trailing only the U.S.

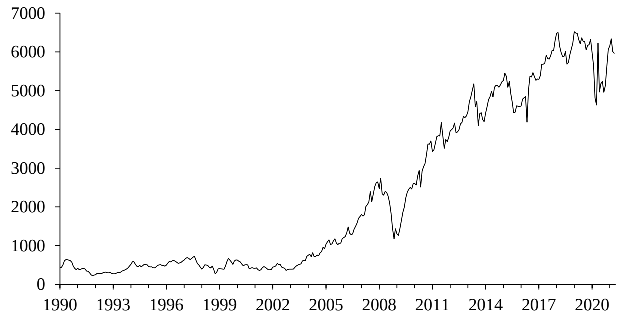
President Bolsonaro is able to strike a deal on a budget bill that would allow it to recreate a job protection program and give financial support to small companies hammered by the pandemic. His popularity is declining. A possible new presidential run by leftist Luiz Inacio Lula da Silva gained impetus after Brazil's top court backed a ruling that threw out all criminal convictions against him. Lula is still a popular yet polarizing figure, with a recent poll showing half of respondents may vote for him as a candidate next year compared to 38% for incumbent Jair Bolsonaro.

	19	**20**	**21**	**22**	**23**
GDP (%p.a.)	0.8	-4.5	3.0	2.5	3.0
Inflation (%p.a.)	4.3	4.5	4.0	4.0	4.0
Current A/c(US$ bill.)	-36.0	-7.6	-20.0	-26.0	-22.0
Real/$(nom.)	4.2	5.5	5.8	5.5	5.3

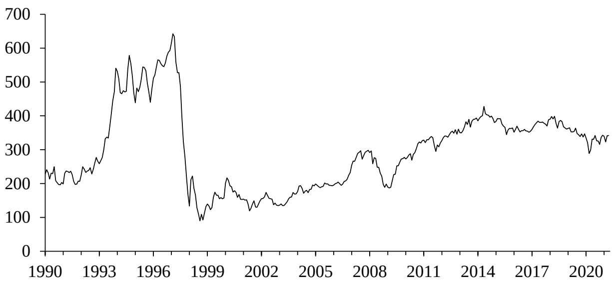
Other Emerging Markets

Hong Kong: FT-Actuaries

Indonesia: Jakarta Composite

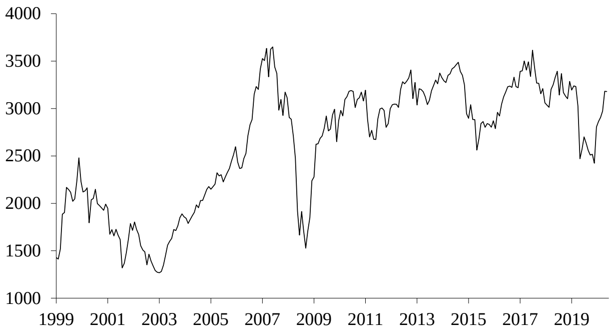


Malaysia: FT-Actuaries (US$ Index)

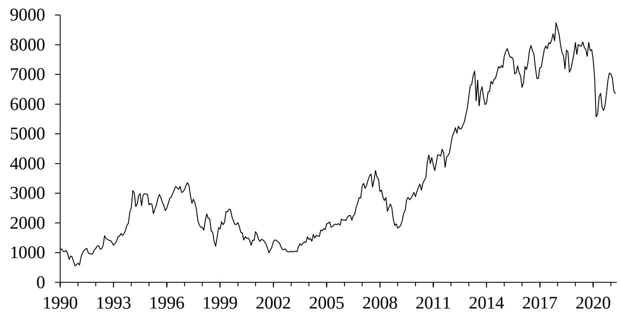


Thailand: Composite Index

Singapore: Straits Times Index

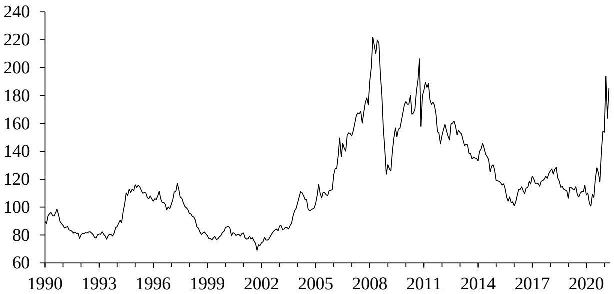


Philippines: Manila Composite

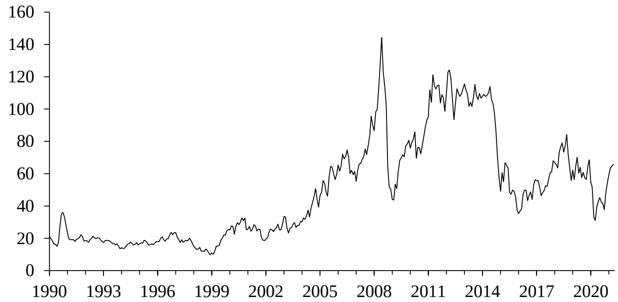


COMMODITY MARKETS

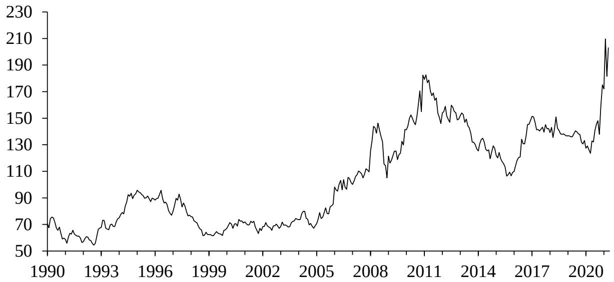
**Commodity Price Index (Dollar)
(Economist, 2015 = 100)**



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	0.3	0.2	78.0	72.8	-1.0	1.6	-0.9
2021	1.6	0.5	0.2	80.4	76.1	-3.6	2.3	-3.3
2022	5.0	1.5	1.5	78.8	77.6	-2.8	6.1	-2.9
2023	4.0	4.7	4.5	78.0	78.9	1.1	5.5	1.4
2024	3.0	5.0	5.0	77.8	80.0	2.6	4.6	2.6
2020:1	1.7	0.4	0.6	79.5	74.9	-0.2	2.7	-0.4
2020:2	0.8	0.0	0.1	77.6	71.9	-0.9	1.3	-1.0
2020:3	0.8	0.4	0.1	77.3	72.2	-1.2	1.1	-0.9
2020:4	0.8	0.4	0.1	77.6	72.3	-1.5	1.1	-1.2
2021:1	0.9	0.5	0.5	80.2	75.8	-2.1	1.1	-2.1
2021:2	1.6	0.5	0.1	80.6	75.9	-3.3	3.0	-2.9
2021:3	1.8	0.6	0.1	79.9	75.9	-4.1	2.5	-3.6
2021:4	2.0	0.6	0.2	80.8	77.0	-4.8	2.6	-4.4
2022:1	4.9	1.0	1.0	78.8	77.3	-3.8	5.4	-3.8
2022:2	5.0	1.5	1.5	79.0	77.3	-3.0	6.5	-3.0
2022:3	5.0	1.6	1.7	78.4	77.3	-2.6	6.3	-2.7
2022:4	5.1	2.0	2.0	79.2	78.4	-2.0	6.3	-2.0

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	279.5	1.6	4.5	1.3	149.8
2021	290.0	3.8	6.1	1.9	153.1
2022	307.5	6.0	5.2	1.6	154.7
2023	323.8	5.3	3.6	1.0	156.7
2024	337.5	4.2	2.8	0.7	158.5
2020:1	279.7	2.7	4.0	1.1	150.0
2020:2	270.1	-0.5	4.1	1.2	145.9
2020:3	279.6	0.5	4.8	1.4	149.4
2020:4	288.6	3.8	5.2	1.5	154.1
2021:1	292.6	4.6	5.3	1.6	155.5
2021:2	280.2	3.7	6.1	1.9	149.0
2021:3	288.6	3.2	6.9	2.2	151.4
2021:4	298.6	3.5	6.3	2.0	156.3
2022:1	309.5	5.7	5.8	1.8	156.9
2022:2	297.4	6.2	5.2	1.6	150.7
2022:3	306.1	6.1	5.0	1.5	153.0
2022:4	317.0	6.2	4.7	1.4	158.1

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	151.3	724355.9	419988.4	261719.7	199161.5	-33375.3	123138.4
2021	162.2	776817.5	440070.8	287688.0	211550.0	-29532.9	132958.4
2022	175.5	840426.3	466407.5	313298.4	224220.2	-23605.6	139894.2
2023	179.9	861371.5	480436.0	311846.7	230959.3	-18606.2	143264.3
2024	183.6	879481.0	494662.6	308857.5	237826.1	-15888.6	145976.6
2019/18	1.4		0.3	3.1	3.0		-0.1
2020/19	-9.9		-11.7	-15.0	-4.8		3.9
2021/20	7.9		5.7	12.6	6.6		8.0
2022/21	8.2		6.0	8.6	6.0		5.2
2023/22	2.6		3.0	-0.3	3.0		2.4
2024/23	1.8		3.0	-2.0	3.0		1.9
2020:1	163.4	195632.5	118032.8	72147.1	51656.8	-11632.2	34572.0
2020:2	132.0	158002.4	91565.8	47009.3	43743.5	429.6	24745.8
2020:3	153.9	184260.6	99906.5	74429.8	50861.9	-9722.9	31214.7
2020:4	155.7	186460.4	110483.3	68133.6	52899.3	-12449.8	32606.0
2021:1	154.3	184789.4	105316.5	73605.8	51097.1	-12799.0	32431.0
2021:2	158.1	189305.3	107090.8	65942.4	51381.6	-3100.0	32009.5
2021:3	165.4	197989.7	108892.7	76843.9	52892.3	-6663.8	33975.4
2021:4	171.0	204733.1	118770.8	71295.9	56179.0	-6970.0	34542.6
2022:1	173.0	207097.2	111593.0	87052.7	54146.4	-11003.1	34691.8
2022:2	175.1	209586.4	113522.4	79269.9	54465.4	-2829.7	34841.6
2022:3	176.4	211185.9	115432.9	80068.8	56071.4	-5098.5	35288.7
2022:4	177.5	212556.7	125859.2	66907.0	59537.0	-4674.4	35072.1

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	2.3	2166.6	49.1	-89.1
2020	16.2	1990.9	313.4	-58.4
2021	6.1	2288.1	138.4	-49.4
2022	2.3	2545.4	57.9	-36.4
2023	1.6	2703.1	42.4	-24.6
2024	0.8	2842.0	23.7	-17.4
2020:1	-0.9	542.0	-5.0	-18.7
2020:2	27.3	431.7	118.0	-11.9
2020:3	14.4	508.7	73.5	-15.5
2020:4	13.7	510.9	70.2	-12.3
2021:1	10.2	496.0	50.6	-21.8
2021:2	8.6	513.6	43.9	-19.5
2021:3	6.6	544.1	36.1	-9.1
2021:4	5.7	568.5	32.6	-0.8
2022:1	4.7	590.7	27.8	-17.9
2022:2	4.7	595.7	28.3	-19.7
2022:3	4.3	607.4	26.0	-5.8
2022:4	3.0	616.5	18.5	4.5

1 GDP at market prices (Financial Year)

WORLD FORECAST DETAIL

Growth Of Real GNP

	2017	2018	2019	2020	2021	2022
U.S.A.	2.3	3.0	2.2	–3.5	5.7	4.0
U.K.	1.8	1.3	1.4	–9.9	7.9	8.2
Japan	2.2	0.3	0.7	–5.3	2.7	2.3
Germany	2.6	1.3	0.6	–5.4	3.5	3.8
France	2.4	1.8	1.5	–9.3	5.5	3.7
Italy	1.7	0.9	0.3	–9.0	4.1	4.0

Growth Of Consumer Prices

	2017	2018	2019	2020	2021	2022
U.S.A.	2.1	2.4	1.8	1.2	2.4	5.0
U.K.	2.6	2.4	1.8	1.0	1.6	5.0
Japan	0.5	1.0	0.5	0.0	0.0	0.5
Germany	1.5	1.8	1.4	0.5	2.0	1.6
France	1.0	1.8	1.1	0.5	1.0	1.1
Italy	1.2	1.2	0.6	0.0	0.8	0.9

Real Short-Term Interest Rates

	2017	2018	2019	2020	2021	2022
U.S.A.	–1.0	0.6	–0.5	–1.6	–1.0	0.0
U.K.	–2.0	–1.1	–0.2	–1.4	–4.8	–2.5
Japan	–0.9	–0.4	0.1	0.0	–0.4	–0.5
Germany	–2.1	–1.7	–0.9	–1.9	–2.2	–1.9
France	–2.1	–1.4	–0.9	–1.2	–2.0	–1.7
Italy	–1.5	–0.9	–0.2	–0.8	–1.5	–1.4

Nominal Short-Term Interest Rates

	2017	2018	2019	2020	2021	2022
U.S.A.	1.4	2.4	1.5	0.4	1.0	2.0
U.K.	0.4	0.7	0.8	0.2	0.2	1.5
Japan	0.1	0.1	0.1	0.0	0.1	0.1
Germany	–0.3	–0.3	–0.4	–0.4	–0.5	–0.1
France	–0.3	–0.3	–0.4	–0.4	–0.5	–0.1
Italy	–0.3	–0.3	–0.4	–0.4	–0.5	–0.1

Real Long-Term Interest Rates

	2017	2018	2019	2020	2021	2022
U.S.A.	0.4	0.9	0.1	0.3	0.8	1.0
U.K.	–1.2	–0.7	–2.3	–2.8	–2.7	–1.1
Japan	–0.6	–0.6	–0.6	–0.5	–0.6	–0.7
Germany	–1.2	–1.4	–1.9	–2.3	–2.2	–2.0
France	–0.6	–0.7	–1.4	–1.9	–1.7	–1.6
Italy	0.9	1.8	0.2	–0.6	–0.5	–0.3

Nominal Long-Term Interest Rates

	2017	2018	2019	2020	2021	2022
U.S.A.	2.4	2.9	2.1	2.3	2.8	3.0
U.K.	0.6	1.0	0.6	0.3	0.5	1.5
Japan	0.1	0.0	0.0	0.1	0.1	0.1
Germany	0.4	0.2	–0.2	–0.5	–0.3	0.0
France	0.8	0.7	0.1	–0.3	0.0	0.2
Italy	1.9	2.8	1.4	0.7	0.9	1.2

Index Of Real Exchange Rate(2000=100)[1]

	2017	2018	2019	2020	2021	2022
U.S.A.	94.5	93.5	96.3	96.2	95.5	94.9
U.K.	75.5	76.9	73.8	72.8	76.1	77.6
Japan	58.3	57.8	56.3	54.2	51.4	48.0
Germany	94.3	96.5	95.6	94.1	92.2	90.0
France	95.3	97.4	96.3	94.5	92.1	89.4
Italy	101.2	102.8	104.5	105.2	103.8	101.7

[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)

	2017	2018	2019	2020	2021	2022
U.S.A.[1]	101.68	10.96	104.31	106.43	101.34	100.53
U.K.	1.29	1.34	1.28	1.28	1.36	1.38
Japan	112.14	110.43	109.03	106.79	104.70	103.90
Eurozone	0.89	0.85	0.89	0.88	0.83	0.82

[1] The series for the USA is a trade weighted index (1990=100); the series for the UK is $ per £

* Forecasts based on the Liverpool World Model