# LIVERPOOL INVESTMENT LETTER

**October 2020**

Cardiff Business School
Ysgol Busnes Caerdydd

**Julian Hodge Institute of Applied Macroeconomics**

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LIVERPOOL RESEARCH GROUP IN 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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# LIVERPOOL INVESTMENT LETTER

## October 2020

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# WILL THE JOB MARKET DERAIL THE ONGOING RECOVERY

Plainly the latest restrictions against the Covid virus are a blow to the recovery which has been essentially V-shaped. In themselves however the latest localised lockdowns and the reversal of the 'return to work' are not big dampeners. Also, the Chancellor's additional job booster programme is a welcome successor to the furlough scheme ending at end October. It needs to be factored in alongside the existing universal benefit/tax credit scheme that boosts full-time employment. This already puts the taxpayer behind new jobs. The new scheme additionally subsidises part-time jobs where the worker does one third of hours; the employer pays 55% of full wages for this and the government adds another 22%, giving the worker 77% of full pay, close to the furlough 80%.

**Time for a more balanced policy on the virus**

Unfortunately, the government has lost its sense of direction about the virus, misled by the advice from its scientists in SAGE who persist in presenting the UK's currently rising infection cases as presaging fast rising hospital cases and deaths. Yet the latest evidence of 'second waves' from around the world, and our own modelling work, clearly shows that they are different — as I pointed out recently in the Telegraph[1]. The rate of death per infection has dropped hugely, so that deaths have not risen much in response to all the new 'cases' recorded. The same is true here; according to government data[2] hospitalisations and deaths per case have both fallen sharply. The figures bounce around randomly but the trends are very clear.

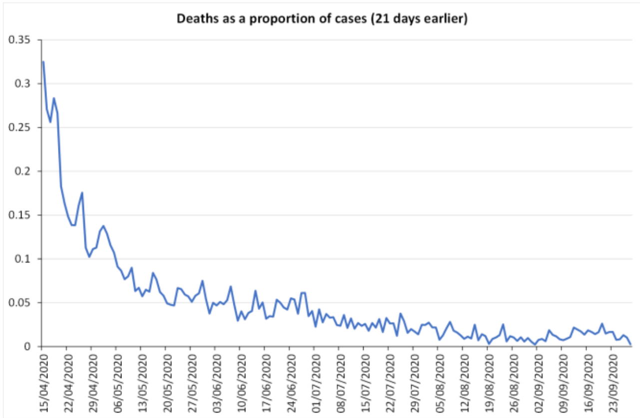
One reason seems to be that the tests may be over-recording cases, being triggered by 'dead viral load', according to the Oxford CEBM centre's Carl Heneghan[3]. In addition, those infected will now not include the many vulnerable people who sadly died in the original wave; mainly those infected will be young people reviving the economy, who are relatively robust to the virus. It is also possible that the viral loads being transmitted are smaller due to social distancing; also that the surviving viral mutations now infecting people are less virulent, due to evolutionary weeding out of those that died with their hosts or were killed by their surviving hosts' immune systems.

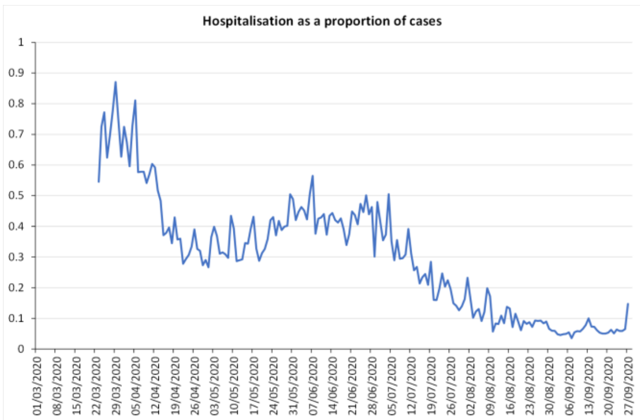
However one accounts for it, it is much less damaging than the original wave. But the government's science advisers are pushing for the same lockdown responses that were found to be both economically disastrous last time and not to give any

**Table 1: Summary of Forecast**

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|
| GDP Growth[1] | 1.8 | 1.3 | 1.4 | -6.6 | 6.2 | 2.9 | 3.1 |
| Inflation CPI | 2.6 | 2.4 | 1.8 | 1.7 | 2.0 | 2.0 | 2.0 |
| Wage Growth | 2.8 | 3.0 | 3.5 | 3.0 | 3.2 | 3.1 | 3.3 |
| Unemployment (%)[2] | 4.4 | 4.2 | 4.1 | 7.2 | 5.6 | 3.5 | 2.8 |
| Exchange Rate[3] | 77.4 | 78.6 | 78.1 | 78.9 | 77.9 | 77.7 | 77.6 |
| 3 Month Interest Rate | 0.4 | 0.7 | 0.8 | 0.4 | 1.9 | 4.5 | 5.0 |
| 5 Year Interest Rate | 0.6 | 1.0 | 0.6 | 0.4 | 2.6 | 5.0 | 5.0 |
| Current Balance (£bn) | -68.3 | -82.9 | -83.8 | -64.3 | -54.1 | -45.5 | -40.3 |
| PSBR (£bn) | 53.7 | 39.3 | 43.2 | 239.1 | 101.9 | 51.0 | 7.6 |

[1]Expenditure estimate at factor cost
[2]U.K. Wholly unemployed excluding school leavers (new basis)
[3]Sterling effective exchange rate, Bank of England Index (2005 = 100)




[1] https://www.telegraph.co.uk/politics/2020/09/23/another-lockdown-would-height-madness-must-resisted/

[2] https://coronavirus.data.gov.uk/

[3] https://www.bbc.co.uk/news/health-54000629

gain over social guidance as pursued in Sweden. That lesson needs to be absorbed; and current policy needs to adapt. Public acceptance of it is fraying, as could be seen from the crowded pavements outside the pubs closing at 10 pm.

The truth as usual with this new virus is that we do not know for sure what will happen. But this does not mean policy should blindly project the worst scenario as the most likely. Well crafted policy projects the most probable outcome and weighs up costs and benefits on that central scenario, while also protecting against the worst downside risks.

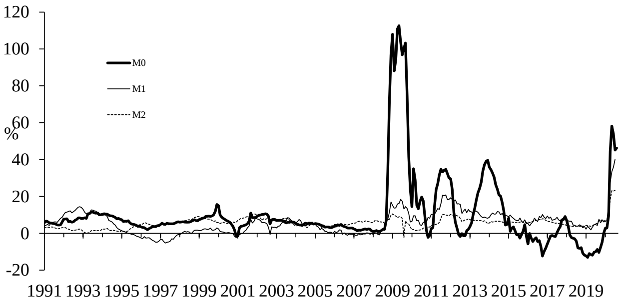
With deaths staying on a low trajectory much like those from the familiar annual flu epidemic, policy should now let activity by the young pursuing their jobs continue normally; this is both what they have shown they want, and is good for the economy. Sheltering policy — that protection against the downside — should be targeted on the vulnerable, who can be advised to take careful account of their own risks; and on the young, who can be told to stay away from the old and ill except with strong precautions — not that difficult to achieve through good communication. The current doom-laden broadcasts are both alienating those trying to get back to their normal life and earnings with its chosen risks, as well as inviting ridicule — as in a well-aimed recent sketch by John Bishop repeatedly performing 'Covid tests' of his senses of taste and smell with the help of a decent claret. We are not fools but by treating us as fools SAGE and the government are losing credibility — and not just with Tory backbenchers.

**Is the recovery holding up in spite of the policy?**

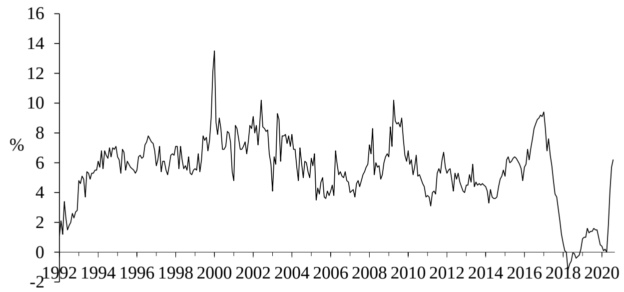
Up through August the recovery has been strong. The IHS Markit composite PMI hit 59.1 that month. Between April and July the economy grew 19%, recovering virtually all the 20% fall in April. Assuming an 8% growth rate in August, as suggested by the record PMI, by September GDP would have recovered to only 5% below its pre-Covid level last February.

The main concerns from forecasters are for the job market. We are forecasting that unemployment will hit 8.5% before year end. However, the UK labour market is highly flexible and wages will respond, encouraging job creation. In addition to the new support of part-time jobs by the Chancellor, regular tax credits support full-time jobs in the usual way. So, we expect unemployment to fall quite quickly from this autumn peak, assisted by the continued recovery in output.

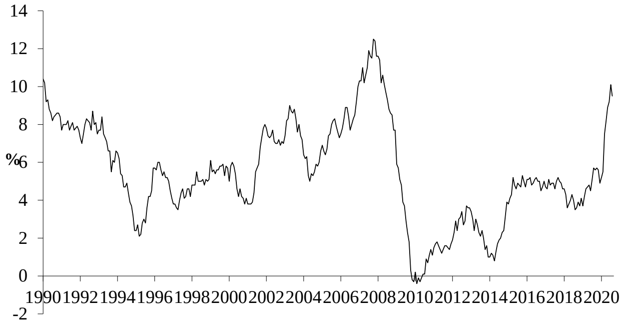
**U.S.: Growth in Monetary Aggregates (Yr - on - Yr)**



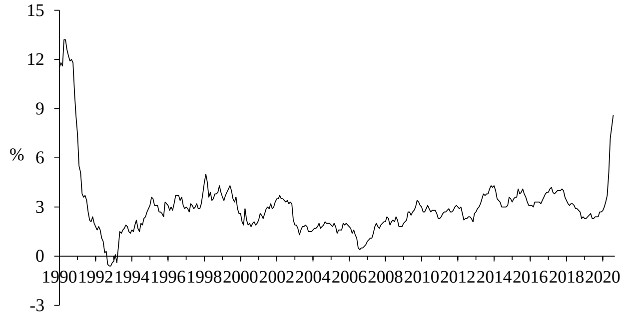

**UK: Notes and Coins in Circulation Growth**




**Eurozone M3 Growth**




**Japan: Growth of M2+CD's**



# FOCUS ON JAPAN

Francesco Perugini

## Prime Minister Shinzo Abe Resigned

On August 28th, the Prime Minister Shinzo Abe shocked the country by announcing his resignation, ending his term as the country's longest-serving leader. Abe cited worsening health conditions as the reason for his resignation — mirroring the end to his first stint as prime minister back in 2007 due to ulcerative colitis.

Abe became Prime Minister for the second time on December 26, 2012 — his first term was from 2006 to 2007. After sweeping to power in late 2012, Abe's eight-year tenure brought continuity to Japanese politics and saw the introduction of the "Abenomics" stimulus program — large-scale monetary easing, fiscal spending and structural reforms — aimed at reviving the economy and reigniting inflation. At the press conference at which he announced his intention to resign he said that he "shot the three arrows (of Abenomics) to defeat two decades of deflation and as a major policy agenda we have been aiming to create a market where people who wish to work can find jobs. Over 4 million jobs have been created."

As for the monetary policy arrow, Abe instructed the Bank of Japan (BOJ) to initiate expansive monetary policies through quantitative easing. That lowered the value of the yen, from ¥76.88 in 2012 to ¥120.18 by May 2013 for 1 US dollar. But by 2019, the yen strengthened against the dollar. One dollar could only purchase 110.5 Japanese yen. Making the yen cheaper should have increased exports. Their prices dropped in dollar terms, making them more competitively priced. But Japanese companies didn't increase exports as expected. Some companies didn't lower their foreign prices. They pocketed the profits instead. Others had already outsourced factories to lower-cost areas, so the devaluation didn't help. Still others weren't helped because they had moved production into their markets. For example, Toyota made nearly 2 million vehicles in the US in 2017. The devaluation hurt Japanese businesses that rely on imports. Their costs rose. It also hurt consumers, who had to pay more for imports.

Within his second arrow — expansive fiscal policy — Abe increased infrastructure spending. He promised to offset the rise in Japan's 235% debt-to-GDP ratio with a 10% consumer tax in 2014. It backfired when it briefly returned the economy to recession. In 2016, Abe spent another ¥28.1 trillion. Of that, ¥20.5 trillion was government loan programs. The rest went toward infrastructure construction including a magnetic levitation train.

For the third arrow — structural reforms — Abe promised to modernize Japan's agricultural industry. He said he would reduce tariffs and expand plot sizes. That put him up against the powerful rice lobby. But in 2015, the Central Union of Agricultural Cooperatives, also called JA-Zenchu, agreed to reduce its power over farmers. That allowed the government to promote more efficient production methods. Japan was also the first country to ratify the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. The massive trade deal includes 10 other countries from the Asia-Pacific region. They signed it after President Donald Trump pulled the US out of the agreement.

The economic policies of Abe achieved other mixed results. On the positive side economists recognized the fact that female participation in the workforce has been on the rise as the country has battled an acute labour shortage. The government's work style reform and other measures have attracted older people and women to the labour market, and the unemployment rate — which had been at more than 4% at the start of the Abe administration — has fallen to the 2% level. Still, Abe failed to deliver on his promises to bring the number of children on waiting lists for nursery schools to zero and working style reforms are still only half complete. Abe earnestly urged companies to raise wages so consumers would loosen their purse strings, in the hope of a pickup in consumption raising prices closer to the 2% inflation target. The BOJ is still far from that goal and only a 0.3% year-on-year rise in the consumer price index, excluding fresh foods, is projected for fiscal 2021. Takuya Hoshino, an economist at the Dai-ichi Life Research Institute, said Abe's efforts to boost employment were "in the right direction." "That said, when jobs created were in sectors that are in desperate need of labour and were taken by women who need to work part-time after raising kids or elderly people, we cannot expect sharp wage growth," he said.

Perhaps the most common criticism of Abe in Japan is that he never delivered on promises of structural reform. It is true he never did the most radical things, such as tearing up protections for salaried staff. But he did liberalise Japan's electricity market, open the country to Chinese tourists, cripple the agriculture lobby and sign two huge trade deals. He also accomplished some reforms such as corporate governance, utility de-regulation, but at the end of the day, the problem has been that there hasn't been enough structural reform, and the economy appeared fragile.

Where does that leave Japan today? There are many legacies from the prime minister, and certainly economic policy is one that stands out. In his inaugural news conference as prime minister, Abe's successor Yoshihide Suga reiterated that he will continue Abenomics. It is clear that he will not have an easy job, he has to fight the pandemic, while facing also stubborn challenges in foreign policy, public finance and economic growth.

# MARKET DEVELOPMENTS

The general recovery around the world has been impressive; the world economy has recovered to a few percent above the pre-Covid level already. This underpins equity prospects.

### Table 1: Market Developments

| | Market Levels | | Prediction for Aug/Sep 2021 | |
|---|---|---|---|---|
| | Sep 4 | Oct 5 | Previous Letter | Current View |
| **Share Indices** | | | | |
| UK (FT 100) | 5799 | 5943 | 7974 | 8172 |
| US (S&P 500) | 3427 | 3409 | 4188 | 4165 |
| Germany (DAX 30) | 12843 | 12828 | 21473 | 21449 |
| Japan (Tokyo New) | 1617 | 1637 | 1992 | 2017 |
| **Bond Yields (government)** | | | | |
| UK | 0.25 | 0.29 | 2.50 | 2.50 |
| US | 0.72 | 0.78 | 2.80 | 2.80 |
| Germany | –0.47 | –0.51 | –0.20 | –0.20 |
| Japan | 0.04 | 0.04 | 0.00 | 0.00 |
| UK Index Linked | –2.19 | –2.26 | 1.00 | 1.00 |
| **Exchange Rates** | | | | |
| UK ($ per £) | 1.32 | 1.30 | 1.32 | 1.32 |
| UK (trade weighted) | 78.93 | 77.43 | 78.0 | 78.0 |
| US (trade weighted) | 103.30 | 104.50 | 102.5 | 102.5 |
| Euro per $ | 0.85 | 0.85 | 0.85 | 0.85 |
| Euro per £ | 1.12 | 1.10 | 1.12 | 1.12 |
| Japan (Yen per $) | 106.33 | 105.65 | 112.5 | 112.5 |
| **Short Term Interest Rates** | | | | |
| UK | 0.83 | 0.83 | 2.00 | 2.00 |
| US | 0.24 | 0.23 | 1.80 | 1.80 |
| Euro | –0.47 | –0.50 | –0.30 | –0.30 |
| Japan | 0.50 | –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 | 2.5 | 2.0 | 33.00 | | 41.10 |
| US | 1.99 | 2.3 | 2.0 | 17.90 | –1.71 | 22.48 |
| Germany | 3.30 | 1.7 | 1.5 | 64.00 | –1.95 | 68.55 |
| Japan | 1.90 | 0.7 | 0.5 | 22.00 | –8.31 | 16.79 |
| UK indexed[2] | –2.31 | | 2.0 | 8.00 | | 7.74 |
| Hong Kong[3] | 2.60 | 4.0 | 2.0 | –25.00 | –1.71 | –18.11 |
| Malaysia | 3.30 | 2.0 | 2.0 | 21.00 | –1.71 | 26.59 |
| Singapore | 3.50 | 1.0 | 2.0 | –1.00 | –1.71 | 3.79 |
| India | 1.40 | 5.0 | 2.0 | –1.00 | –1.71 | 5.69 |
| Korea | 1.10 | 0.8 | 2.0 | –36.00 | –1.71 | –33.81 |
| Indonesia | 2.20 | 3.0 | 2.0 | 8.00 | –1.71 | 13.49 |
| Taiwan | 2.80 | 1.0 | 2.0 | 4.00 | –1.71 | 8.09 |
| Thailand | 3.20 | 1.5 | 2.0 | 10.00 | –1.71 | 14.99 |

**Bonds: Contribution to £ yield of: –**

| | Redemption Yield | Changing Nominal Rates | Currency | Total |
|---|---|---|---|---|
| UK | 0.29 | –22.10 | | –21.81 |
| US | 0.78 | –20.18 | -1.71 | –21.11 |
| Germany | –0.51 | –3.07 | –1.95 | –5.53 |
| Japan | 0.04 | 0.35 | –8.31 | –7.93 |

**Deposits: Contribution to £ yield of:**

| | Deposit Yield | Currency | Total |
|---|---|---|---|
| UK | 0.83 | | 0.83 |
| US | 0.23 | –1.71 | –1.48 |
| Euro | –0.50 | –1.95 | –2.45 |
| Japan | –0.05 | –8.31 | –8.36 |

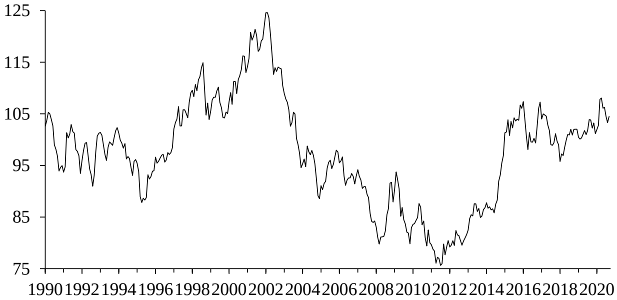
[1] Yields in terms of €s or $s can be computed by adjusting the £-based yields for the expected currency change.
[2] UK index linked bonds All Stocks
[3] Output based on China.

**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) | - | - | - | - | - | - |

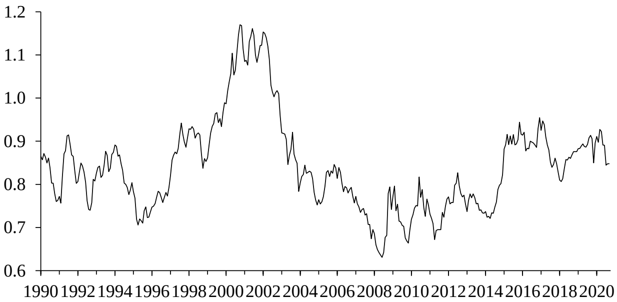
# INDICATORS AND MARKET ANALYSIS
# FOREIGN EXCHANGE MARKETS

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

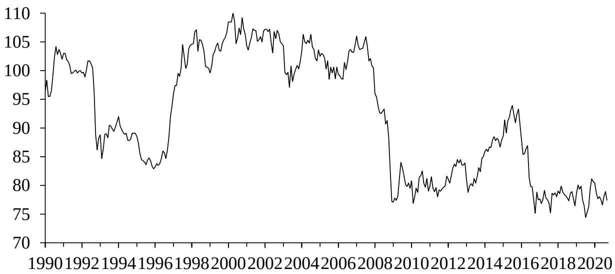



**UK: Dollars Per Pound Sterling**

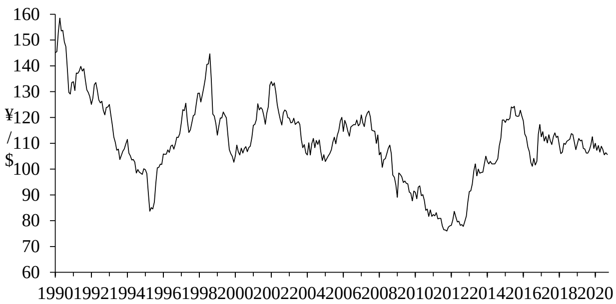

**Euro per US dollar**




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



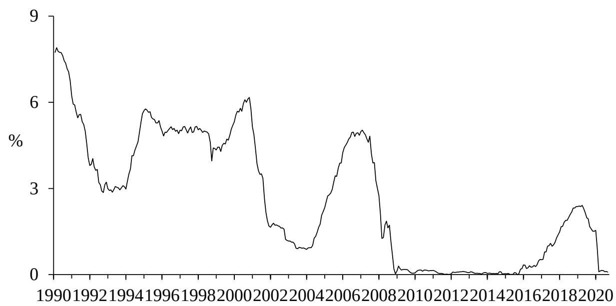

**Japan : Yen Per U.S. Dollar**



# GOVERNMENT BOND MARKETS

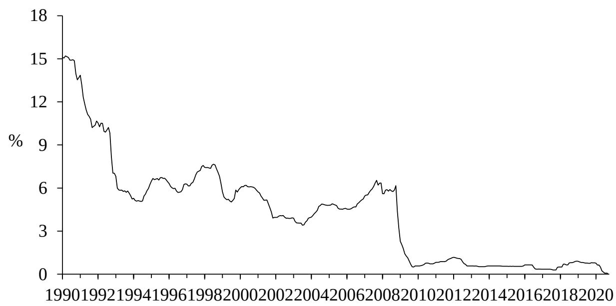
**U.S.: Yield on Long-Term Government Bonds**


**U.S. : 3-Month Treasury Bill**

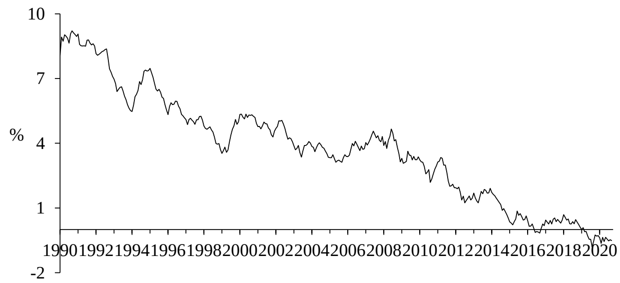



**U.K.: Yield on Long-Term Government Bonds**

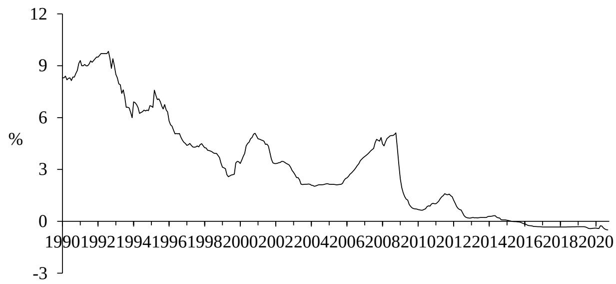

**U.K. : 3-Month Certificate LIBOR Rate**



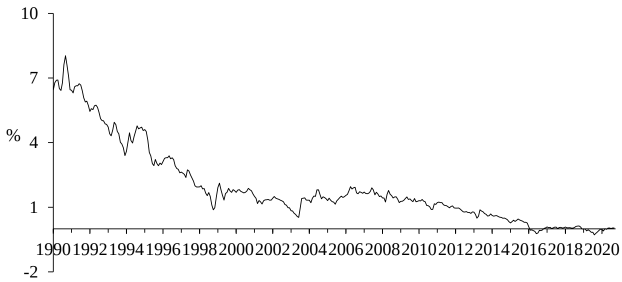

**Germany: Yield on Public Authority Bonds**



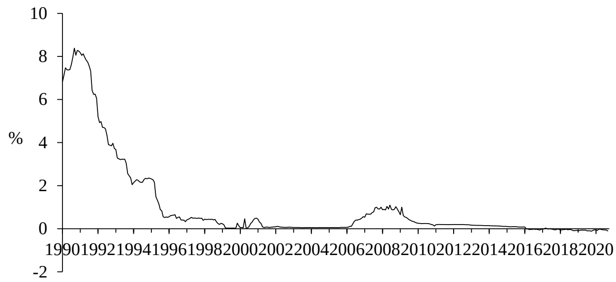

**Germany : 3-Month Interbank Deposit Rate**




**Japan: Yield on Long-Term Government Bonds**

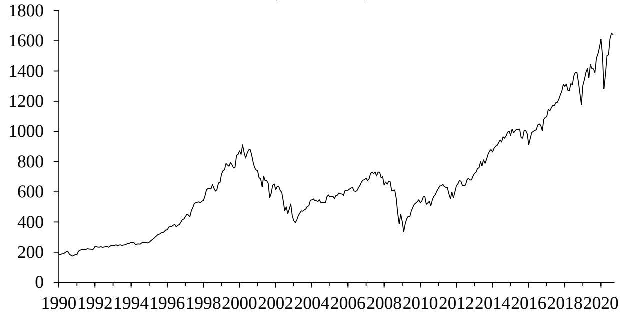



**Japan : 3-Month Money Market Rate**

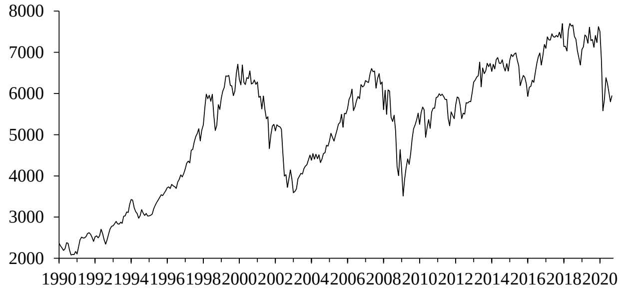


# MAJOR EQUITY MARKETS

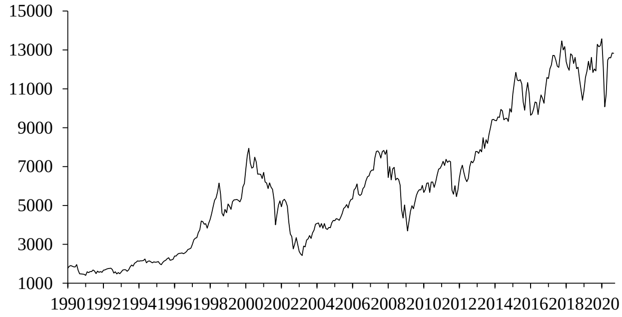
**U.S. : S & P 400 Industrial**
**(1985=100)**




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




**Germany : DAX 30**




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

# EMERGING MARKETS

Anupam Rastogi

## India

India would witness the worst recession in FY 2020–21 since it became independent in 1947. The economy is likely to shrink about 6% but the government is hopeful that the economy will bounce back smartly next year. We are going to maintain our forecast at –6% and +5% in FY2020–21 and FY 2021–22 respectively.

The Indian manufacturing sector continued to move in the right direction, with PMI data for September highlighting many positives. Due to loosened Covid-19 restrictions, factories went full steam ahead for production, supported by a surge in new orders.

Data released in September shows the recovery gaining momentum. Power demand is now back to pre-Covid levels. Fuel consumption, especially gasoline used for private vehicles, is also rising.

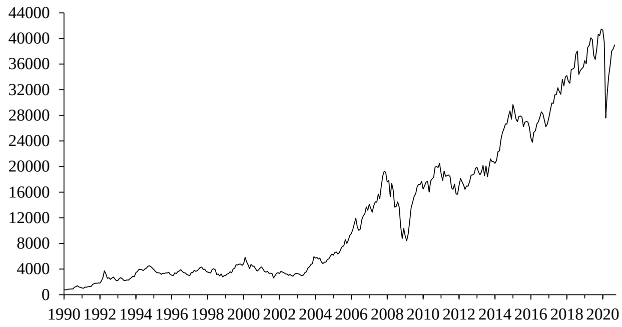
The phased unlocking of the economy over the past four months has seen an easing in restrictions on a wide array of economic activities. The seasonal cumulative rainfall during current year's southwest monsoon season up to September 16, 2020 was ~7% higher than the long period average, which shall keep rural demand buoyant. India Inc.'s business sentiment has improved and next year's economic growth hinges on an effective vaccine and mass inoculation, which shall take time. However, supply distortions remain due to coronavirus cases rising domestically. It is unlikely there will be another lockdown in India as government is encouraging economic activity to start at normal pace despite large number of Corona cases.

Headline CPI inflation touched 6.7% in August 2020 — marking the fifth consecutive month of over 6% — the upper bound of the central bank's target range. This does not leave any space to ease monetary policy further. The Reserve Bank of India (RBI) will keep rates on hold until early next year in a delicate balancing act between curbing high inflation and lifting the economy from its worst recession on record.

The country's current account surplus jumped to an all-time high of $19.8 billion (3.9% of GDP) for the April–June period — the first quarter of FY21 — due to a collapse in imports.

A current account surplus, even though it is brought about by a decline in economic activity, is good from a macroeconomic standpoint, as it reduces pressure on the rupee. However, the drop in imports is also a sign of weak domestic demand.

**India: BSE Sensitive**




We expect a current account surplus of 1.1% of GDP in FY21 vs. a deficit of 0.9% of GDP in FY20 — the first surplus on an annual basis in the last 17 years.

The Indian rupee's modest depreciation against the dollar in September came after its strongest year-to-date gain in August. Factors that weighed on the rupee include the dollar rebound, and net outflows from equities led by the global stock correction. The Sensex's decline in September was the largest since the 23.1% plunge in March, and Indian equities recorded a net outflow of USD 0.7 billion from USD 6.1 billion of inflows in August.

The government has turned the crisis into an opportunity to undertake structural reforms. The government has brought in several systemic reforms on labour, agriculture, banking sector, power, etc. The agriculture sector market-friendly reforms are likely to have far reaching consequences in the sector.

India is planning to offer incentives worth 1.68 trillion rupees ($23 billion) to attract companies to set up manufacturing in the country. The government will offer production-linked incentives to automobile manufacturers, solar panel makers, and specialty steel to consumer appliance companies. Textile units, food processing plants and specialized pharmaceutical product makers are also being considered. The incentive program, being spearheaded by the country's policy planning body, uses the template of a scheme implemented earlier this year to draw businesses away from China. About two dozen companies including Samsung Electronics Co., Hon Hai Precision Industry Co., known as Foxconn and Wistron Corp. pledged $1.5 billion of investments to set up mobile-phone factories in the country after authorities offered to pay them an amount equivalent to 4%–6% of their incremental sales over the next five years.

As we predicted earlier, India is all set to have maximum number of Covid-19 cases in the world. But, the mortality rate is remarkably low and its R (reproduction) value has fallen to 0.97 now.

| | **18–19** | **19–20** | **20–21** | **21–22** | **22–23** |
|---|---|---|---|---|---|
| GDP (%p.a.) | 6.8 | 4.2 | -6.0 | 5.0 | 5.5 |
| WPI (%p.a.) | 3.9 | 3.6 | 5.5 | 5.0 | 5.0 |
| Current A/c(US$ bill.) | -70.0 | -20.0 | 0.6 | 2.0 | -10.0 |
| Rs./$(nom.) | 79.5 | 73.0 | 75.0 | 76.0 | 77.0 |

## China

China's economy has recovered well from the pandemic shock. The country's manufacturing industry climbed to 51.5 in September and activity in the services sector has also strengthened to 55.9 from August's 55.2. However, there is some uncertainty related to consumer spending. The spending pattern would become clear as the national Golden Week holiday begins from October 1st. Consumption during this period will be key to gauge the fourth quarter growth rate. The steady improvement in economic activity came as a result of resumption in operations and strong exports as economies around the world gradually reopen.

Beijing's new "dual circulation" strategy, which aims to make domestic consumption a bigger driver of growth and reduce China's reliance on foreign markets is yet to play out. Many of the products made purely for exports, such as Christmas decorations and other low-cost, labour-intensive commodities, simply aren't needed domestically in significant quantities.

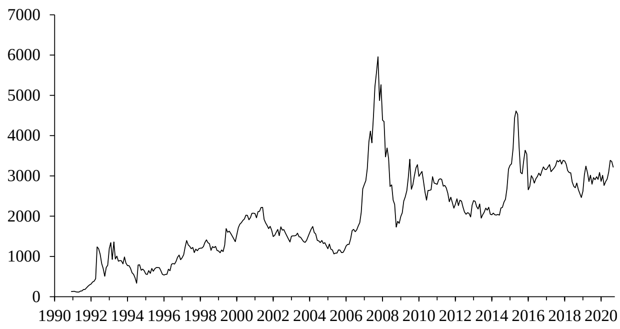
The Political Bureau of the Communist Party of China (CPC) Central Committee has formulated the 14th Five-Year Plan (2021–25) for Economic and Social Development, and set targets for 2035.

The document will be deliberated at the Fifth Plenary Session of the 19th CPC Central Committee in Beijing from October 26 to 29, where the leaders are expected to discuss and approve China's economic and social development blueprint for 2021–2025. It is likely that the Committee may decide not to set hard growth targets this time. China is all set to focus on structural and quality optimization in the face of what could be the "toughest years" ahead. The "dual circulation" strategy is a promo of the same.

China's growth this year shows a doubling down on state-managed solutions, not real reform. State-owned entities, or SOEs, drove China's investment-led recovery. In the first half of 2020, fixed-asset investment grew by 2.1% among SOEs and decreased by 7.3% in the private sector. Finished product inventory for domestic private firms rose sharply in the same period — a sign of sales difficulty — while SOE inventory decreased slightly, showing the uneven nature of China's growth.

Perhaps the most significant demonstration of mistrust in markets is the "internal circulation" program first floated by President Xi Jinping in May. On the surface, this new initiative is supposed to expand domestic demand to complement, but not replace, external demand.

**China: SSE Composite Index**




In May, China scrapped a numerical economic growth target in 2020 for the first time in decades, amid a heavy blow from the coronavirus crisis. In the second quarter, China's economy grew by 3.2%, reversing a 6.8% contraction in the first quarter.

China is set to graduate to the class of high-income countries within five years as its average gross national income nears the World Bank threshold of US$15,000.

The consumer price index (CPI) hit 2.4% year-on-year, moderating from a 2.7% gain in July, in line with forecasts. The easing could also be attributed to a high base comparison.

China's current account is expected to show a small surplus in 2020. It was equivalent to 1.2% of GDP in the first six months of the year.

China's yuan just had its best quarter in 12 year. The onshore renminbi gained almost 4% in the three-month period ending September 30, the most since early 2008, while its offshore counterpart advanced more than 4%. The yuan rallied below 6.8 a dollar to hit its strongest levels since May 2019. With the yield on Chinese 10-year government bonds above 3%, the yield advantage over U.S. Treasury's has hit record highs above 2.4 percentage points. A steady stream of foreign money into Chinese markets in recent years has been spurred partly by China's inclusion in various influential stock and bond indexes.

China's success in fighting the coronavirus and its economic fallout has fuelled speculation that the yuan could become a new sanctuary for the risk-averse. But despite the yuan's growing influence, barriers remain to its wider use. While global reserves in the Chinese currency have grown to 2.1%, up from 1.4% two years ago, the dollar remains dominant; more than 60% of holdings are still denominated in the US currency, according to the International Monetary Fund.

From 2010 to 2019, China's flagship Shanghai Composite Index suffered a lost decade, even as the economy grew apace and stock benchmarks elsewhere surged. It has changed now.

Since November, eight Chinese companies that originally went public on the New York Stock Exchange or the Nasdaq Stock Market have added listings in Hong Kong, raising a total of $25.6 billion. These companies, with a combined market capitalization of nearly $1 trillion, include e-commerce giant Alibaba Group Holding Ltd. and Yum China Holdings Ltd., China's biggest restaurant operator. For China, a substantial locally listed tech sector is also a status issue. "There's clearly a sense in Beijing that the time is right for them to claim their rightful place in the world, and financial markets are a very visible part of that" stated Mr. Gatley, of Gavekal.

Continued tension between China and the US portends big shifts for global businesses as they rethink supply chains and technological systems in an increasingly divided world. It would also push allies into choosing between the two poles.

TikTok, WeChat and Huawei are just the beginning. What comes next has the potential to reshape the global economy for decades to come. Trump's moves to prevent some of China's biggest companies from accessing the private data of Americans are part of a broader effort to create "clean networks" the Communist Party can't touch. Even with an administration change in January, friction between China and the U.S. would remain high. The US would expand the American-government-backed campaign to compete in strategic high-tech sectors such as artificial intelligence, quantum computing and the next-generation 5G wireless standard. These policies are meant to curb Chinese economic power and influence, and reduce interdependence.

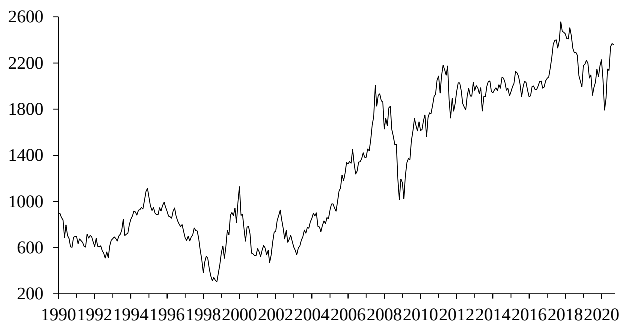
China is buying time before it goes for a showdown with India. The two countries have held seven rounds of meeting of senior commanders, supposedly to work towards early and complete disengagement of the troops along the Line of Actual Control in accordance with the existing bilateral agreements and protocols, and fully restore peace and tranquillity. China has realized that India has changed, and China's thinking on India has changed after a 'fist' fight with Indian soldiers in the last June and India's military presence in the so-called disputed border areas.

| | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|
| GDP (%p.a.) | 6.6 | 6.1 | 2.0 | 5.5 | 5.5 |
| Inflation (%p.a.) | 2.2 | 2.3 | 2.0 | 2.0 | 1.8 |
| Trade Balance(US$ bill.) | 50.0 | 40.0 | 20.0 | 40.0 | 40.0 |
| Rmb/$(nom.) | 6.8 | 7.1 | 7.3 | 7.2 | 7.2 |

## South Korea

We maintain our growth projection for South Korea for two reasons. Based on historical experiences, households and companies tend to reduce debt and increase savings after a massive virus outbreak or an economic crisis due to anxiety about the future. First, if companies experience massive layoff and sales plunge, many people turn super-savers. Another reason is the way South Korea has handled the Covid-19 pandemic. There is no doubt that South Korea has succeeded in managing the coronavirus. Its success is based

**Korea: Composite Index**




on technology, extensive testing, centralized control and communication — and a constant fear of failure. The hyper connectivity in Korea helps the government to blast text alerts to citizens if infections occurred in their area. Health officials have unfettered access to individuals' private mobile data, and GPS history. Except an individual's name, data contains details such as gender, age and workplace that could identify a patient.

The government now offers anonymous testing and leaves out identifying information and specific names of places visited in contact-tracing disclosures. The reduction in mortality rate comes at the expense of disruption in economic activity at any point of time.

Korea's negative growth of two percent would still be the mildest among the 37 OECD members and second among G20 economies after China.

Inflation was forecast to hover below the central bank's target of 2%. The Bank of Korea (BOK) is expected to maintain its accommodative monetary stance and may cut rates by another quarter-percentage, if required. The policy rate is currently set at a record low of 0.5%.

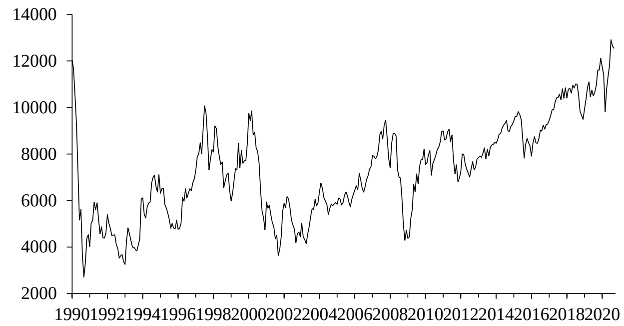
South Korea's current account surplus hit a nine-month high in July as imports declined more than exports due to subdued local demand from the protracted Covid-19 impact. In the January–July period, however, Korea's current account surplus reached $26.6 billion, narrowing from $29.2 billion in the same period a year ago.

The South Korean won is mixed in the middle of the trading week as inflation and manufacturing data drive one of the worst-performing Asian currencies this year. Although the won has recovered against the US dollar since June, the currency has come under a lot of pressure based on the recession and a coronavirus resurgence in September.

| | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|
| GDP (%p.a.) | 2.7 | 1.8 | -1.0 | 2.0 | 2.2 |
| Inflation (%p.a.) | 1.5 | 0.4 | -0.5 | 0.2 | 1.2 |
| Current A/c(US$ bill.) | 86.0 | 60.0 | 38.0 | 40.0 | 40.0 |
| Won/$(nom.) | 1130 | 1200 | 1230 | 1260 | 1260 |

## Taiwan

Taiwan: Weighted TAIEX Price Index




The government expects GDP to grow 1.6% in the current year as Taiwan has robust external finances, strong macroeconomic policy framework, competitive business environment and high governance standards.

Taiwan's competitiveness in the global high-tech manufacturing supply chain would push the economy's growth further in 2021, in line with our growth projection of 3.2%. Given exposures to both, mainland China value chains and markets, Taiwan is vulnerable to abrupt changes in global trade policies and its political relations with China. But neither of them is ready to rock the boat. Fiscal policy has become more expansionary with government efforts to cushion the economy from the coronavirus shock.

The central bank kept the benchmark discount rate at 1.125%, where it has stood since March when it lowered the rate to a historic low. The central bank also lowered its 2020 core inflation forecast to 0.24% from 0.36% predicted in June.

Exports of merchandise and services in 2020 are expected to fall 2% and imports are expected to fall 3.4% due to border controls. A growing current account surplus has appreciated the Taiwan dollar. It may reach NT$28.5 to a US dollar in 2021 on the back of a weakening US dollar.

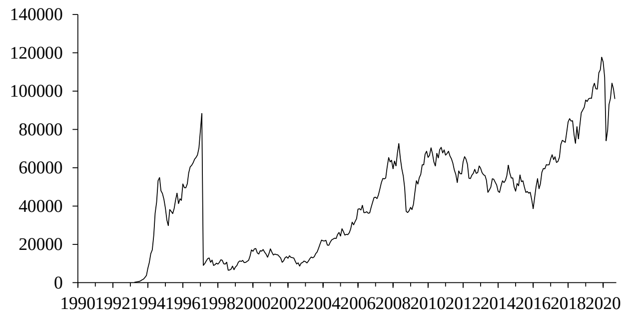
Taiwan's success in public health is reflected in a large spike on the country's stock market. The Taiwan Stock Exchange (TAIEX) has actually risen about 800 points since the first case of COVID-19 was identified in Taiwan in January of this year.

China's threats of invasion has led President Tsai Ing-wen to reduce the island's economic dependence on China in favour of America.

| | **18** | **19** | **20** | **21** | **22** |
|---|---|---|---|---|---|
| GDP (%p.a.) | 2.6 | 2.0 | 1.6 | 3.2 | 2.2 |
| Inflation (%p.a.) | 1.2 | 1.0 | -1.0 | 1.0 | 1.0 |
| Current A/c(US$ bill.) | 68.0 | 70.0 | 71.0 | 70.0 | 60.0 |
| NT$/$(nom.) | 29.8 | 31.0 | 29.0 | 28.5 | 31.0 |

## Brazil

Brazil: Bovespa




We maintain our growth forecast of Brazil's 2020 GDP to shrink 5.5% due to steady opening of the economy despite the virus's continuous spread. The rebound in retail suggests that cash-transfer initiatives of the government, called Bolsa Familia, has supported the vulnerable population and the reopening of the economy has helped to support domestic demand. The risk of an intensification in the virus spreading is there, but we do not see an economic shutdown of the economy now.

Brazilian consumer price inflation, as measured by the IPCA index, was 0.24% in August. Consumer price inflation at 2.44% over the past 12 months, is not high for the Brazilian economy. But food prices have increased much more and have a disproportional impact on the poorest families. Brazil's central bank left its benchmark Selic lending rate unchanged at 2%, a record low amid concerns about the government's fiscal situation and, as the country's economy recovers more quickly than expected from the coronavirus crisis.

Brazil posted a current account surplus of $3.72 billion in the month of August, much larger than what was expected in the current situation.

The pandemic has transformed Mr. Bolsonaro from a fiscal bulldog to a fiscal dove as his government began in April doling out generous cash payments, called Bolsa Familia, to millions of poor to help them ride out the economic storm. This has made him popular among people. Last month, the government cut the size of the emergency handouts in half, but Mr. Bolsonaro wants to expand the cash-transfer initiatives of his government. The emergency grant was fundamental in preventing Brazil from social convulsion and a social collapse. The government has spent some $57 billion in cash this year. The monthly aid for informal workers benefited some 67 million people, or about 32% of all Brazilians, and actually lifted large swathes of the population out of poverty.

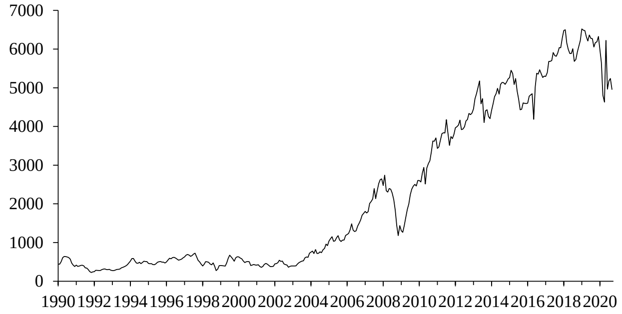
Brazil's real is the world's worst-performing major currency and would remain under pressure due to the lenient fiscal policy of the government.

| | **18** | **19** | **20** | **21** | **22** |
|---|---|---|---|---|---|
| GDP (%p.a.) | 1.1 | 0.8 | -5.5 | 2.0 | 2.5 |
| Inflation (%p.a.) | 3.8 | 4.3 | 2.2 | 2.5 | 2.0 |
| Current A/c(US$ bill.) | -14.6 | -36.0 | -40.0 | -40.0 | -36.0 |
| Real/$(nom.) | 3.8 | 4.2 | 5.5 | 5.7 | 5.8 |

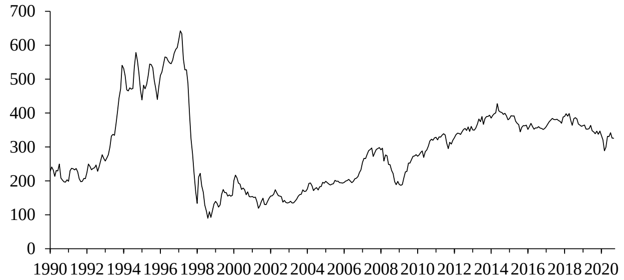
## Other Emerging Markets

**Hong Kong: FT-Actuaries**

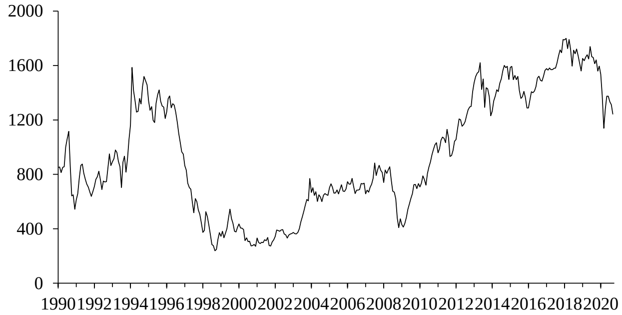

**Indonesia: Jakarta Composite**



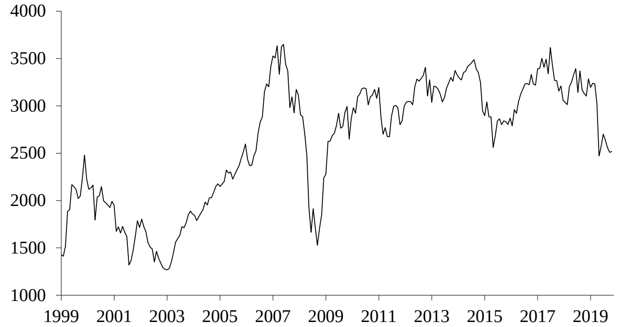

**Malaysia: FT-Actuaries (US$ Index)**



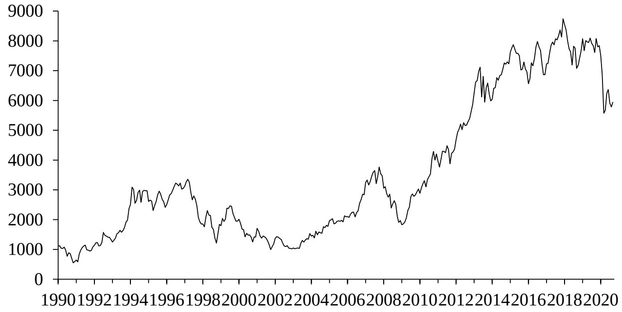

**Thailand: Composite Index**




**Singapore: Straits Times Index**

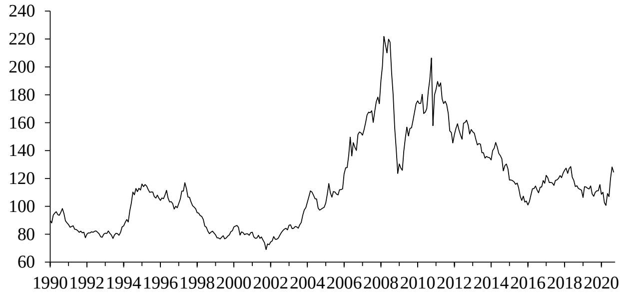



**Philippines: Manila Composite**

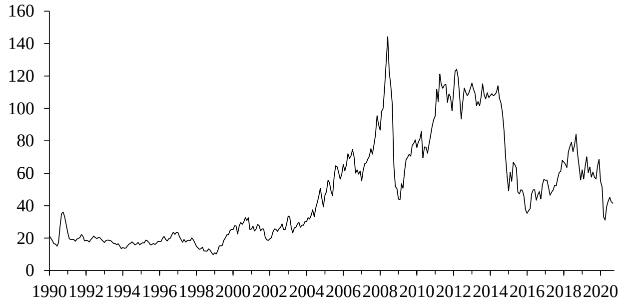


# COMMODITY MARKETS

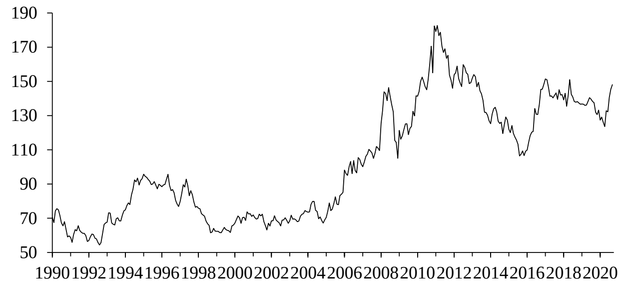
**Commodity Price Index (Dollar)**
**(Economist, 2015 = 100)**



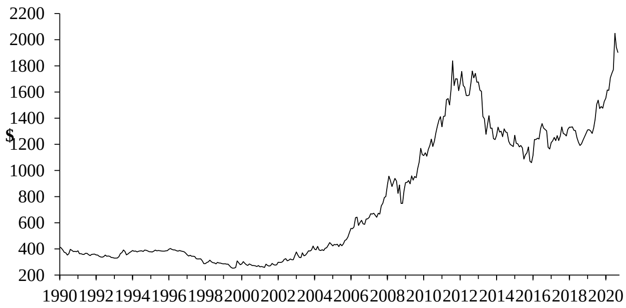

**Oil Price: North Sea Brent (in Dollars)**



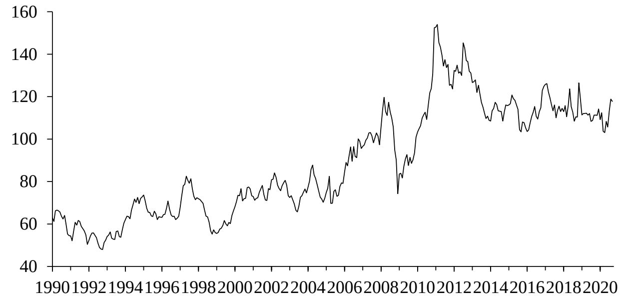

**Commodity Price Index (Sterling)**
**(Economist, 2015 = 100)**




**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] |
|---|---|---|---|---|---|---|---|---|
| 2018 | 2.4 | 1.0 | 0.7 | 78.6 | 76.9 | -1.4 | 3.3 | -1.0 |
| 2019 | 1.8 | 0.6 | 0.8 | 78.1 | 75.9 | -0.9 | 2.5 | -1.1 |
| 2020 | 1.7 | 0.4 | 0.4 | 78.9 | 77.0 | -1.8 | 2.2 | -1.2 |
| 2021 | 2.0 | 2.6 | 1.9 | 77.9 | 76.3 | -1.0 | 2.8 | 1.0 |
| 2022 | 2.0 | 5.0 | 4.5 | 77.7 | 76.6 | 2.2 | 2.8 | 3.0 |
| 2023 | 2.0 | 5.0 | 5.0 | 77.6 | 76.8 | 2.9 | 2.7 | 3.0 |
| | | | | | | | | |
| 2019:1 | 1.8 | 0.9 | 0.9 | 78.8 | 77.4 | -0.5 | 2.4 | -0.9 |
| 2019:2 | 2.0 | 0.7 | 0.8 | 78.4 | 76.0 | -0.5 | 3.0 | -1.1 |
| 2019:3 | 1.8 | 0.4 | 0.8 | 75.8 | 72.7 | -1.4 | 3.0 | -1.4 |
| 2019:4 | 1.4 | 0.5 | 0.8 | 79.5 | 77.7 | -1.3 | 1.7 | -1.2 |
| | | | | | | | | |
| 2020:1 | 1.7 | 0.4 | 0.7 | 79.2 | 77.5 | -1.4 | 2.2 | -1.4 |
| 2020:2 | 1.5 | 0.3 | 0.4 | 79.0 | 76.9 | -1.8 | 1.8 | -1.6 |
| 2020:3 | 1.7 | 0.3 | 0.3 | 78.7 | 76.8 | -1.8 | 2.2 | -1.7 |
| 2020:4 | 1.8 | 0.5 | 0.3 | 78.6 | 76.8 | -2.4 | 2.4 | -1.5 |
| | | | | | | | | |
| 2021:1 | 2.0 | 1.8 | 1.5 | 77.6 | 76.0 | -1.1 | 2.7 | -0.2 |
| 2021:2 | 2.0 | 2.0 | 1.7 | 78.2 | 76.5 | -1.1 | 2.8 | 0.0 |
| 2021:3 | 2.0 | 2.5 | 2.0 | 78.0 | 76.5 | -1.2 | 2.8 | 0.5 |
| 2021:4 | 2.1 | 4.0 | 2.5 | 77.7 | 76.3 | -0.5 | 3.0 | 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) |
|---|---|---|---|---|---|
| 2018 | 266.6 | 3.0 | 4.2 | 1.1 | 142.8 |
| 2019 | 275.0 | 3.5 | 4.1 | 1.1 | 145.3 |
| 2020 | 283.3 | 3.0 | 7.2 | 2.3 | 147.2 |
| 2021 | 292.3 | 3.2 | 5.6 | 1.7 | 148.9 |
| 2022 | 301.4 | 3.1 | 3.5 | 1.0 | 150.5 |
| 2023 | 311.3 | 3.3 | 2.8 | 0.7 | 152.4 |
| | | | | | |
| 2019:1 | 273.4 | 3.4 | 3.9 | 1.0 | 144.9 |
| 2019:2 | 273.5 | 4.0 | 4.0 | 1.1 | 144.4 |
| 2019:3 | 275.5 | 3.7 | 4.2 | 1.2 | 146.0 |
| 2019:4 | 277.6 | 2.7 | 4.3 | 1.2 | 145.9 |
| | | | | | |
| 2020:1 | 280.8 | 2.7 | 4.4 | 1.2 | 146.4 |
| 2020:2 | 282.0 | 3.1 | 9.4 | 3.1 | 146.7 |
| 2020:3 | 283.8 | 3.0 | 7.8 | 2.5 | 147.8 |
| 2020:4 | 286.7 | 3.3 | 7.3 | 2.4 | 148.0 |
| | | | | | |
| 2021:1 | 289.4 | 3.1 | 6.6 | 2.1 | 147.9 |
| 2021:2 | 290.8 | 3.1 | 5.8 | 1.8 | 148.3 |
| 2021:3 | 292.9 | 3.2 | 5.3 | 1.6 | 149.6 |
| 2021:4 | 296.1 | 3.3 | 4.7 | 1.4 | 149.8 |

1 Whole Economy
2 Average Earnings
3 Wholly unemployed excluding school leavers as a percentage of employed and unemployed, self employed and HM Forces
4 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 |
|---|---|---|---|---|---|---|---|
| 2018 | 165.5 | 792330.9 | 445721.1 | 307723.0 | 201029.6 | -41308.9 | 120833.9 |
| 2019 | 167.8 | 803514.4 | 450773.6 | 292071.6 | 205398.3 | -40522.1 | 104207.0 |
| 2020 | 156.8 | 750778.9 | 422139.3 | 240438.5 | 206633.2 | -38602.0 | 79830.1 |
| 2021 | 166.0 | 794785.5 | 447070.2 | 256907.5 | 207875.4 | -32873.3 | 84194.3 |
| 2022 | 170.7 | 817684.4 | 453552.8 | 270703.1 | 209119.3 | -29141.1 | 86549.7 |
| 2023 | 176.0 | 842924.6 | 460358.0 | 287932.7 | 210372.2 | -26815.4 | 88922.9 |
| | | | | | | | |
| 2018/17 | 1.3 | | 1.0 | 2.3 | 0.2 | | -4.6 |
| 2019/18 | 1.4 | | 1.1 | -4.7 | 2.2 | | -12.4 |
| 2020/19 | -6.6 | | -6.3 | -15.3 | 0.6 | | -4.1 |
| 2021/20 | 6.2 | | 6.1 | 8.3 | 0.6 | | 6.1 |
| 2022/21 | 2.9 | | 1.4 | 5.4 | 0.6 | | 2.7 |
| 2023/22 | 3.1 | | 1.5 | 6.4 | 0.6 | | 3.0 |
| | | | | | | | |
| 2019:1 | 167.5 | 200481.1 | 112289.5 | 83278.3 | 52683.0 | -18452.8 | 29316.9 |
| 2019:2 | 167.1 | 200009.6 | 112720.4 | 81082.1 | 50775.9 | -13738.5 | 30830.3 |
| 2019:3 | 168.3 | 201443.7 | 113162.0 | 72473.6 | 51076.1 | -12057.3 | 23210.7 |
| 2019:4 | 168.4 | 201579.9 | 112601.6 | 55237.5 | 50863.3 | 3726.5 | 20849.0 |
| | | | | | | | |
| 2020:1 | 164.9 | 197481.6 | 111026.5 | 70478.2 | 52999.1 | -16221.6 | 20800.6 |
| 2020:2 | 145.3 | 173993.2 | 99094.4 | 48913.3 | 51084.8 | -6531.1 | 18568.2 |
| 2020:3 | 151.8 | 181697.2 | 101536.5 | 58727.3 | 51380.8 | -10262.3 | 19685.1 |
| 2020:4 | 165.1 | 197607.0 | 110482.0 | 62319.7 | 51168.6 | -5587.1 | 20776.2 |
| | | | | | | | |
| 2021:1 | 165.8 | 198469.1 | 112273.3 | 69471.6 | 53317.1 | -15598.6 | 20994.3 |
| 2021:2 | 165.9 | 198582.2 | 111099.5 | 62447.0 | 51391.3 | -5280.0 | 21075.6 |
| 2021:3 | 166.0 | 198749.7 | 111236.0 | 64731.7 | 51690.8 | -7856.1 | 21052.7 |
| 2021:4 | 166.2 | 198984.5 | 112461.4 | 60257.2 | 51476.2 | -4138.6 | 21071.7 |

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 | Debt Interest (£bn) | Current Account (£ bn) |
|---|---|---|---|---|---|
| 2018 | 1.9 | 2092.5 | 39.3 | 22.4 | -82.9 |
| 2019 | 2.0 | 2127.5 | 43.2 | 24.0 | -83.8 |
| 2020 | 12.4 | 2030.1 | 239.1 | 25.0 | -64.3 |
| 2021 | 4.7 | 2203.2 | 101.9 | 27.4 | -54.1 |
| 2022 | 2.2 | 2316.3 | 51.0 | 31.0 | -45.5 |
| 2023 | 0.4 | 2436.6 | 7.6 | 33.8 | -40.3 |
| | | | | | |
| 2019:1 | -2.8 | 520.1 | -14.7 | 6.1 | -34.5 |
| 2019:2 | 4.5 | 532.3 | 23.8 | 6.0 | -27.3 |
| 2019:3 | 1.8 | 531.3 | 9.4 | 6.0 | -15.6 |
| 2019:4 | 4.0 | 536.5 | 21.3 | 6.0 | -6.3 |
| | | | | | |
| 2020:1 | -2.1 | 527.5 | -11.2 | 6.0 | -29.6 |
| 2020:2 | 28.6 | 467.1 | 133.6 | 6.1 | -12.2 |
| 2020:3 | 14.3 | 487.2 | 69.9 | 6.2 | -11.1 |
| 2020:4 | 8.0 | 534.4 | 42.6 | 6.3 | -11.4 |
| | | | | | |
| 2021:1 | -1.3 | 541.4 | -7.0 | 6.3 | -29.2 |
| 2021:2 | 8.0 | 541.9 | 43.2 | 6.5 | -10.3 |
| 2021:3 | 3.6 | 544.7 | 19.6 | 6.7 | -6.0 |
| 2021:4 | 8.3 | 549.2 | 45.4 | 7.0 | -8.5 |

1 GDP at market prices (Financial Year)

# WORLD FORECAST DETAIL

**Growth Of Real GNP**

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| U.S.A. | 2.2 | 2.9 | 2.3 | –6.5 | 6.0 | 2.5 |
| U.K. | 1.8 | 1.4 | 1.4 | –6.4 | 6.0 | 2.9 |
| Japan | 2.2 | 0.3 | 1.0 | –6.0 | 2.3 | 1.0 |
| Germany | 2.5 | 1.5 | 0.5 | –6.5 | 5.8 | 2.0 |
| France | 2.4 | 1.7 | 1.3 | –8.1 | 2.1 | 2.0 |
| Italy | 1.7 | 0.8 | 0.2 | –9.9 | 6.4 | 1.9 |

**Growth Of Consumer Prices**

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| U.S.A. | 2.1 | 2.4 | 1.8 | 2.0 | 2.0 | 2.0 |
| U.K. | 2.6 | 2.4 | 1.8 | 1.7 | 2.0 | 2.0 |
| Japan | 0.5 | 1.0 | 0.6 | 0.7 | 0.5 | 0.5 |
| Germany | 1.5 | 1.8 | 1.4 | 1.4 | 1.5 | 1.7 |
| France | 1.0 | 1.9 | 1.2 | 1.2 | 1.3 | 1.5 |
| Italy | 1.2 | 1.2 | 0.7 | 0.9 | 1.0 | 1.3 |

**Real Short-Term Interest Rates**

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| U.S.A. | –1.5 | 0.1 | 0.1 | –0.3 | 0.0 | 0.0 |
| U.K. | –1.7 | –1.4 | –0.9 | –1.8 | –1.0 | 2.2 |
| Japan | –1.0 | –0.7 | –0.8 | –0.5 | –0.4 | –0.4 |
| Germany | –2.1 | –1.7 | –1.8 | –1.9 | –2.0 | –2.0 |
| France | –2.2 | –1.5 | –1.7 | –1.7 | –1.8 | –1.9 |
| Italy | –1.5 | –1.0 | –1.4 | –1.4 | –1.6 | –1.7 |

**Nominal Short-Term Interest Rates**

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|
| U.S.A. | 0.9 | 1.9 | 2.1 | 1.7 | 2.0 | 2.0 |
| U.K. | 0.4 | 0.7 | 0.8 | 0.4 | 1.9 | 4.5 |
| Japan | 0.0 | –0.1 | –0.1 | 0.0 | 0.1 | 0.1 |
| Germany | –0.3 | –0.3 | –0.4 | –0.4 | –0.3 | –0.1 |
| France | –0.3 | –0.3 | –0.5 | –0.4 | –0.3 | –0.1 |
| Italy | –0.3 | –0.3 | –0.5 | –0.4 | –0.3 | –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. | –1.5 | –1.0 | –1.1 | –1.2 | 1.0 | 3.0 |
| Japan | –0.6 | –0.5 | –0.6 | –0.6 | –0.5 | –0.4 |
| Germany | –1.3 | –1.1 | –1.9 | –2.1 | –1.9 | –1.7 |
| France | –0.6 | –0.5 | –1.2 | –1.5 | –1.4 | –1.3 |
| Italy | 1.1 | 1.6 | 0.9 | 0.1 | 0.1 | 0.2 |

**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 | 0.4 | 2.6 | 5.0 |
| Japan | 0.1 | 0.1 | –0.1 | –0.1 | 0.0 | 0.1 |
| Germany | 0.3 | 0.4 | –0.3 | –0.4 | –0.2 | 0.0 |
| France | 0.8 | 0.8 | 0.2 | 0.0 | 0.1 | 0.2 |
| Italy | 2.1 | 2.6 | 2.1 | 1.3 | 1.4 | 1.5 |

**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 | 75.9 | 77.0 | 76.3 | 76.6 |
| 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 | 106.53 | 105.84 | 104.43 |
| U.K. | 1.29 | 1.34 | 1.28 | 1.26 | 1.28 | 1.30 |
| Japan | 112.10 | 110.40 | 109.02 | 108.90 | 109.50 | 109.30 |
| Eurozone | 0.89 | 0.85 | 0.89 | 0.92 | 0.91 | 0.90 |

[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