# LIVERPOOL INVESTMENT LETTER

**March 2022**

Cardiff Business School
Ysgol Busnes Caerdydd

**Julian Hodge Institute of Applied Macroeconomics**

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

## March 2022

### CONTENTS

**Page**

**What is Going on in Trade?** 3

Trade figures clearly reveal the disruption due to bringing in new border rules, as was fully expected. However, this is the short term effect of Brexit, with no relevance to long term gains from opening up to free trade after 40 years of EU protectionism.

The Chancellor's Mais Lecture is wrong on the parallels with the Thatcher period. The inflation was deeply embedded, with strong expectations of continued Keynesian stimulus, which had to be broken by firm fiscal and monetary action. Today, as noted in the January Letter, the inflation figures are plainly alarming. But they largely come from a cycle-spike in commodity prices due to the Covid crisis which will be reversed as the cycle plays out; this is now overlaid by the Ukraine crisis effect on energy and other commodities. The Bank of England has huge firepower in the form of rising interest rates to dampen down this inflation, given high levels of private sector debt. The labour market is tight but workers are still returning from furlough and expectations of inflation are low, given the last decade of successful anti-inflation policy; the Bank will clearly succeed in getting it back down again. So a wage-sustained inflation is unlikely.

**Focus on Japan** 6

**Market Developments** 8
**Summary and Portfolio Recommendations**

**Indicators and Market Analysis**
**Foreign Exchange** 10
**Government Bond Markets** 11
**Major Equity Markets** 12
**Emerging Equity Markets** 13
**Commodity Markets** 18

**UK Forecast Detail** 19
**World Forecast Detail** 21

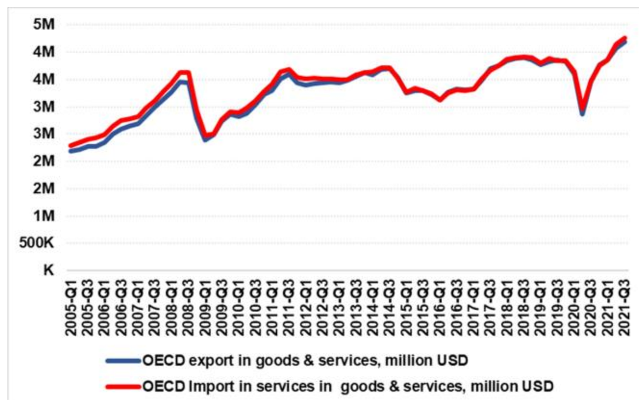
# WHAT IS GOING ON IN TRADE?

If we turn to trade, we find that since pre-Covid trade of all sorts, both exports and imports, fell off sharply in 2020 during Covid and hardly recovered in 2021. By area, trade with the EU went on falling in 2021; with the non-EU exports went on falling but imports bounced back.

**Table of Trade Movements (%) — 2020–21**

| Current prices — total, goods and services | 2020 | 2021 |
|---|---|---|
| Exports of Goods and Services | -14 | -2 |
| Imports of Goods and Services | -17 | 7 |
| | | |
| Volume — total, goods and services | | |
| Exports of Goods and Services | -14 | -1 |
| Imports of Goods and Services | -16 | 3 |
| | | |
| Volume — goods, by area | | |
| Exports to EU | -10 | -6 |
| Imports from EU | -12 | -7 |
| Exports to non-EU | -18 | 0 |
| Imports from non-EU | -13 | 16 |

Source: ONS trade statistics, December 2021



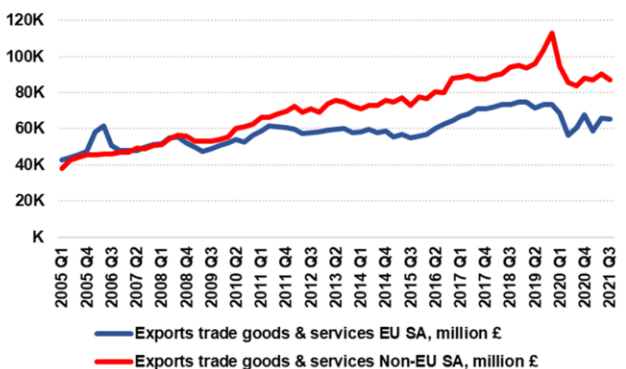
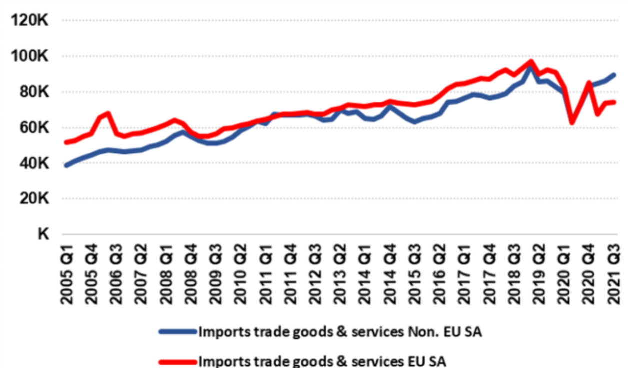




**Table 1: Summary of Forecast**

| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|
| GDP Growth[1] | 1.3 | 1.4 | -9.9 | 7.5 | 5.6 | 2.2 | 2.8 |
| Inflation CPI | 2.4 | 1.7 | 1.0 | 2.5 | 7.0 | 4.3 | 3.2 |
| Wage Growth | 3.0 | 3.5 | 1.6 | 5.8 | 6.7 | 4.6 | 4.3 |
| Survey Unemployment | 4.1 | 3.8 | 4.5 | 4.5 | 4.9 | 3.6 | 2.8 |
| Exchange Rate[2] | 78.6 | 78.3 | 78.2 | 81.5 | 77.3 | 76.7 | 76.3 |
| 3 Month Interest Rate | 0.4 | 0.8 | 0.2 | 0.1 | 1.5 | 2.4 | 2.9 |
| 5 Year Interest Rate | 1.0 | 0.6 | 0.1 | 0.4 | 1.9 | 3.5 | 3.0 |
| Current Balance (£bn) | -82.9 | -89.1 | -57.6 | -63.8 | -37.2 | -24.9 | -17.6 |
| PSBR (£bn) | 39.3 | 49.1 | 317.2 | 169.5 | 55.0 | 31.9 | 23.5 |

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




How can we account for these movements? It appears there has been substantial short run disruption to trade from Brexit. This is not surprising; when border arrangements are changed, paperwork and other border requirements have to be adjusted and in the short run this is disruptive, as firms adjust to the new needs. This will apply both to EU trade and to non-EU exports (which switch from being EU exports to being UK exports); the only border arrangements that will not change are for non-EU imports. This last has been the only trade that has bounced back in 2021, suggesting that only Covid was involved with them. We have done a more sophisticated exercise statistically, relating these trade figures over the past thirty years to their relevant drivers, as well as to the recent effects of Covid and Brexit; the conclusion is the same.

Of course, this was the disruption that Remain advocates warned would happen and should be avoided. However, the Leave camp never denied that there would be such short run disruption. Its argument was that this would be ironed out over time: trade is a repetitive process and once the new formalities are mastered, trade should resume its old levels, given that there is an FTA with the EU and all the FTAs between the EU and non-EU are in the process of being rolled over to the UK. The Leave case was built on the long term gains, including those from free trade while retaining free trade with the EU. Over the longer term as more FTAs are signed with non-EU countries, creating widening free trade outside the EU, we will see trade switching towards the non-EU and away from the EU; import prices will also come down, creating more competition in the home market and

driving up home productivity — the main source of the gains from free trade.

**The Chancellor's Mais Lecture — Wrong on the Thatcher parallels**

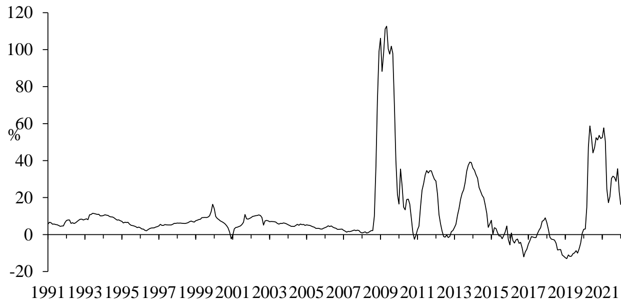
In his generally excellent Mais lecture on Wednesday February 24th the Chancellor set out his vision for the UK economy. He aims for freeing up markets, improving regulation, and cutting taxes to incentivise investment, training and R&D. So far so good. But he argues that in the short term it is right to raise taxes to reduce debt. He says that Mrs. Thatcher's government did this before cutting taxes later and cites this as a supportive precedent.

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

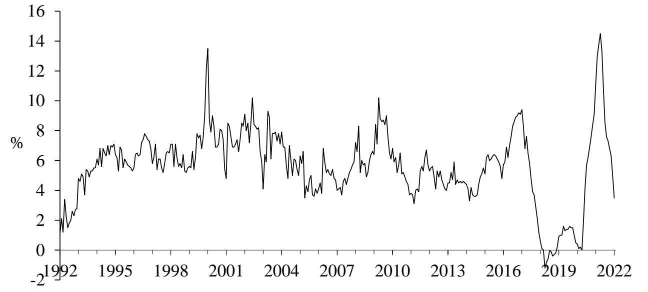
Today interest rates are close to zero and there is no credibility problem for the Bank in controlling inflation; its problem until recently has mostly been too little inflation, while today's inflation comes from commodity supply bottlenecks due to the Covid cycle. Now by raising rates moderately it will have a strong dampening impact on inflation; if rates go even as high as 2%, the impact will be strongly deflationary. As for government borrowing, it can be done very cheaply with long rates at just over 1%, negative in real terms. There is no pressure on the government to cut its debt ratio; its solvency is assured, gilts are seen as a highly safe asset. Nor is there any need for borrowing to fall to buttress Bank anti-inflation credibility, as that is, as we have just seen, extremely strong.

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

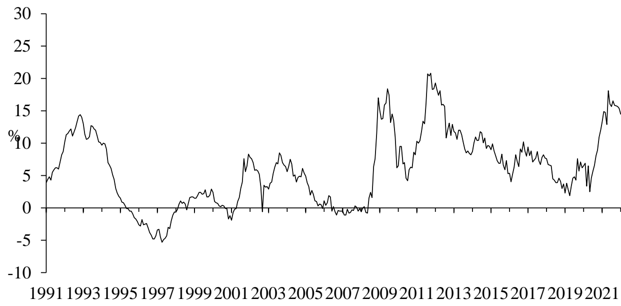
**U.S.: Growth in M0 (Yr - on - Yr)**




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



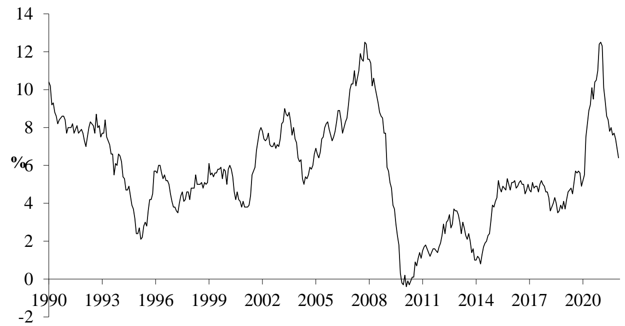

**U.S.: Growth in M1 (Yr - on - Yr)**



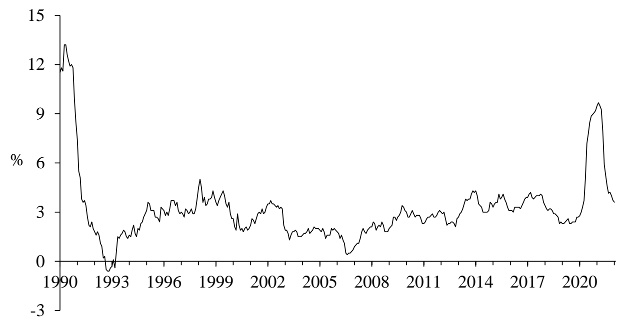

**UK: M4 Growth**

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

**Eurozone M3 Growth**




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



# FOCUS ON JAPAN

Francesco Perugini

## Japan's economy ends 2021 near pre-covid level

The Japanese economy grew a real 1.3% from the previous quarter in the October–December quarter of last year. The strong quarter capped Japan's first year of economic growth since 2018 — the Japanese economy expanded 1.7% in real terms following a 4.5% decline in 2020. It was a rare bright spot for an economy that had been struggling with slow growth even before the virus hit, amid slumping demand for exports and trade frictions between the US and China. However, given that the US, Chinese and European economies have already returned to their pre-pandemic levels, it is clear that Japan's recovery in 2021 was weak: real GDP in 2021 was just 2% above where it was 14 years earlier in 2007 just before the global financial cataclysm. Japan had already been shrinking in 2019 even before COVID hit.

Looking at demand components, in the final quarter of 2021 private consumption rose the most — 2.7% on the previous quarter — with more people going to restaurants and bars and taking trips after the state of emergency was fully lifted on October 1, as the number of new coronavirus cases remained at low levels. During most of the previous quarter, Tokyo, Osaka, and some other areas were under the state of emergency due to a resurgence of infections. People were asked to stay at home, and restaurants and bars were requested to close early and refrain from serving alcohol. The autumn was "a very good time for Japan's economy thanks to the good vaccine rollout," said Naohiko Baba, chief Japan economist at Goldman Sachs, adding that "finally, Japan's economy started to reopen." In the reporting quarter, car purchases also expanded in line with a recovery of vehicle output as the effects of a global semiconductor shortage and parts supply disruptions in Southeast Asia caused by the pandemic eased.

In the October–December period, exports grew 1.0%, marking the first rise in two quarters, pushed up by brisk shipments of chip-making equipment and construction machinery. Imports decreased 0.3%, down for the second straight quarter, partly due to a drop in the government's procurement of COVID-19 vaccines, which also brought down government spending by 0.3%.

Business investment, a key pillar of domestic demand, rose 0.4% on the back of solid demand for digital- and semiconductor-related investment, following a 2.4% decline in the July–September period. Also, private residential investment fell 0.9%, decreasing for the second straight quarter, and public investment dropped 3.3%, down for the fourth quarter in a row, both partly affected by a surge in construction and manpower costs, a government official told reporters.

Looking forward, however, many analysts predict that the economy could contract in the current January–March period due to the rapid spread of the highly contagious Omicron variant of the coronavirus since around the end of last year, cooling consumer sentiment again. Shinichiro Kobayashi, a senior economist at Mitsubishi UFJ Research and Consulting Co., cited rising prices in Japan as well as possible aggressive interest rate hikes by the US Federal Reserve that could be followed by rate increases by other central banks as major risk factors for the Japanese economy. He also said that consumer spending in this year's first quarter is "highly likely to shrink from the October–December period due to Omicron", even if the number of virus infections subsides in March. Takeshi Minami, chief economist at Norinchukin Research Institute is also worried about the COVID-19 effects. "The economy will likely stall in January–March, or it could even contract, depending on how the Omicron variant affects service-sector consumption," he said.

Bank of Japan (BOJ) Governor Haruhiko Kuroda instead highlighted escalating tensions in Ukraine as a fresh risk to the central bank's forecast for a moderate economic recovery. "Heightening tensions in Ukraine could have unfavourable effects on global and Japanese growth if they spark a surge in fuel and commodity prices," Kuroda told parliament recently. Hiroshi Shiraishi, senior economist at BNP Paribas Securities, also expects economic growth to slow in January–March, or even decline. "The economy's recovery could delay into later this year as the Ukraine crisis may drive up fuel costs and dampen corporate appetite for capital expenditure," he said. "There's not much left for the government and the central bank to do in terms of new stimulus measures. Both fiscal and monetary policy have reached a limit."

Other observers are more optimistic about future economic growth. "In the medium term, there's a lot of potential for Japan's economy to accelerate," said Izumi Devalier, the head of Japan economics at Bank of America. Devalier remains sanguine that consumer sentiment will rebound as the virus recedes. "What we've noticed is every time the virus ebbs, every time a virus wave peaks out and you have a reduction in virus risk, consumer spending surges quite strongly," she said.

To put the economy on a sustainable growth path, the new elected Prime Minister Fumio Kishida has drawn up his first economic stimulus measures in which he incorporated the launch of a so-called "New Form of Capitalism". His new economic program has already taken shape with a record economic stimulus package that dwarfed anything announced by his predecessors. The biggest supplementary budget in history amounting to Y36 trillion yen (6.7% of nominal GDP) for fiscal year 2021, a national budget plan

allocating Y107 trillion (19.8% of GDP) for fiscal year 2022 and a fiscal year 2022 tax reform plan. Official data also shows a fiscal deficit of 10.2% of GDP in fiscal year 2020, 7.2% in fiscal year 2021 and 3.3% in fiscal year 2022. However, so far the new economic stimulus has failed to generate much positive effect on the economy. If Kishida aims at revitalizing the economy and win the Upper House election next July, he must address both cyclical and structural challenges.

# MARKET DEVELOPMENTS

With commodity prices attacking corporate margins, now further pushed up by the Ukraine crisis, equity returns are coming under pressure, with rising interest rates adding to the strains. Nevertheless, the effective end of Covid will continue to have a positive effect; the Ukraine crisis is likely to continue for some time but its intensity should subside soon, as Russia is forced by sanctions and popular resistance in both Russia and Ukraine to end its aggression. 2022–4 should see continued recovery in output and profits across most of the world.

**Table 1: Market Developments**

| | Market Levels | | Prediction for Feb/Mar 2023 | |
|---|---|---|---|---|
| | Feb 7 | Feb 28 | Previous Letter | Current View |
| **Share Indices** | | | | |
| UK (FT 100) | 7573 | 7458 | 12920 | 13462 |
| US (S&P 500) | 4484 | 4374 | 6766 | 6653 |
| Germany (DAX 30) | 15207 | 14461 | 26368 | 26738 |
| Japan (Tokyo New) | 1926 | 1887 | 2427 | 2636 |
| **Bond Yields (government** | | | | |
| UK | 1.49 | 1.30 | 2.00 | 2.00 |
| US | 1.96 | 1.77 | 2.00 | 2.30 |
| Germany | 0.27 | 0.01 | 0.00 | 0.20 |
| Japan | 0.22 | 0.16 | 0.10 | 0.10 |
| UK Index Linked | –2.10 | –2.19 | 1.00 | 1.00 |
| **Exchange Rates** | | | | |
| UK ($ per £) | 1.35 | 1.34 | 1.30 | 1.30 |
| UK (trade weighted) | 82.28 | 82.51 | 78.8 | 78.7 |
| US (trade weighted) | 103.38 | 103.51 | 100.5 | 100.5 |
| Euro per $ | 0.87 | 0.89 | 0.88 | 0.88 |
| Euro per £ | 1.18 | 1.19 | 1.14 | 1.20 |
| Japan (Yen per $) | 115.06 | 115.18 | 107.5 | 110.5 |
| **Short Term Interest Rates** | | | | |
| UK | 0.63 | 0.63 | 1.00 | 1.00 |
| US | 0.31 | 0.38 | 1.00 | 1.00 |
| Euro | –0.50 | –0.53 | –0.50 | –0.50 |
| Japan | 0.00 | –0.05 | 0.00 | 0.00 |

**Table 2: Prospective Yields** [1]

**Equities: Contribution to £ yield of:**

| | Dividend Yield | Real Growth | Inflation | Changing Dividend Yield | Currency | Total |
|---|---|---|---|---|---|---|
| UK | 3.60 | 3.5 | 5.0 | 72.00 | | 84.10 |
| US | 1.99 | 3.2 | 4.0 | 44.90 | −1.36 | 52.73 |
| Germany | 3.30 | 3.1 | 2.8 | 79.00 | –0.19 | 88.01 |
| Japan | 1.90 | 2.3 | 0.4 | 37.00 | 2.75 | 44.35 |
| UK indexed[2] | –2.19 | | 5.0 | 16.00 | | 18.81 |
| Hong Kong[3] | 2.60 | 5.2 | 4.0 | 5.00 | –1.36 | 15.44 |
| Malaysia | 3.30 | 4.5 | 4.0 | 64.00 | –1.36 | 74.44 |
| Singapore | 3.50 | 3.8 | 4.0 | 45.00 | –1.36 | 54.94 |
| India | 1.40 | 5.5 | 4.0 | 22.00 | –1.36 | 31.54 |
| Korea | 1.10 | 3.0 | 4.0 | 4.00 | –1.36 | 10.74 |
| Indonesia | 2.20 | 5.3 | 4.0 | 49.00 | –1.36 | 59.14 |
| Taiwan | 2.80 | 3.3 | 4.0 | 45.00 | –1.36 | 53.74 |
| Thailand | 3.20 | 4.2 | 4.0 | 41.00 | –1.36 | 49.64 |

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

| | Redemption Yield | Changing Nominal Rates | Currency | Total |
|---|---|---|---|---|
| UK | 1.30 | −7.03 | | –5.73 |
| US | 1.77 | –5.35 | –1.36 | –4.95 |
| Germany | 0.01 | –1.88 | –0.19 | –2.06 |
| Japan | 0.16 | 0.61 | 2.75 | 3.52 |

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

| | Deposit Yield | Currency | Total |
|---|---|---|---|
| UK | 0.63 | | 0.63 |
| US | 0.38 | –1.36 | –0.98 |
| Euro | –0.53 | –0.19 | –0.72 |
| Japan | 0.05 | 2.75 | 2.70 |

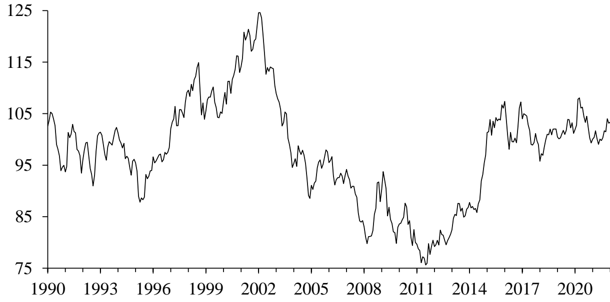
[1] Yields in terms of €s or $s can be computed by adjusting the £-based yields for the expected currency change.
[2] UK index linked bonds All Stocks
[3] Output based on China.

**Table 3: Portfolio(%)**

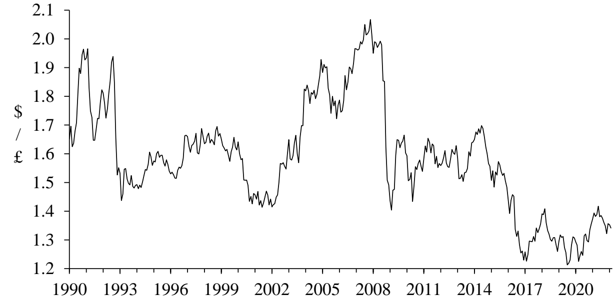
| | Sterling Based Investor | | Dollar Based Investor | | Euro Based Investor | |
|---|---|---|---|---|---|---|
| | February Letter | Current View | February Letter | Current View | February Letter | Current View |
| UK Deposits (Cash) | 5 | 5 | 5 | 5 | 1 | 1 |
| US Deposits | - | - | - | - | - | - |
| 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

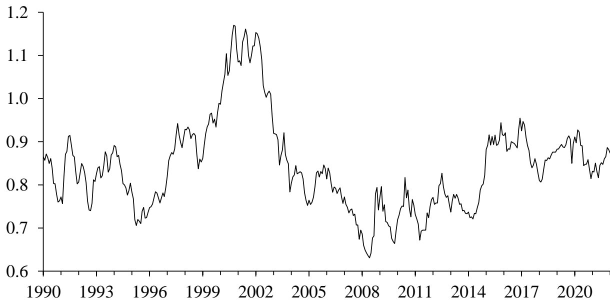
**US : Trade Weighted Index**
**(Bank of England 1990 = 100)**



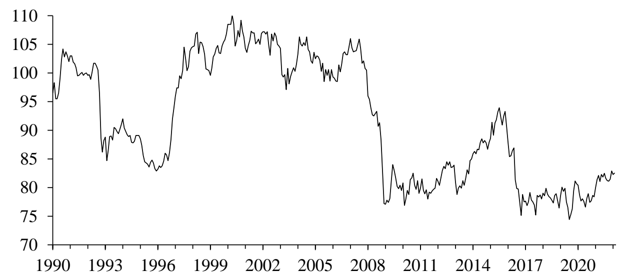

**UK: Dollars Per Pound Sterling**




**Euro per US dollar**




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

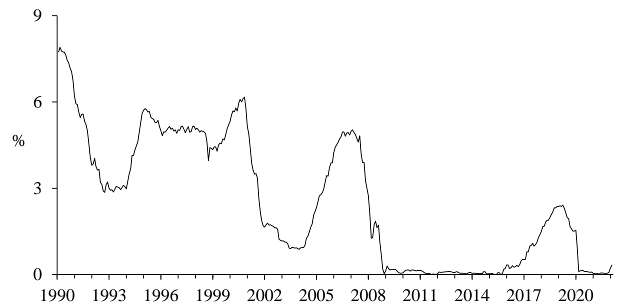



**Japan : Yen Per U.S. Dollar**

# GOVERNMENT BOND MARKETS

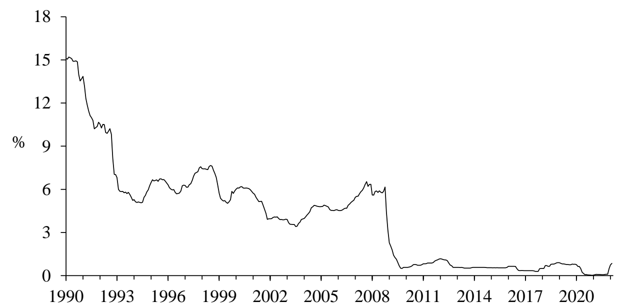
**U.S.: Yield on Long-Term Government Bonds**

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

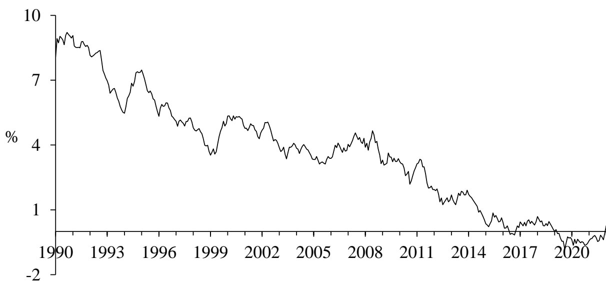



**U.K.: Yield on Long-Term Government Bonds**

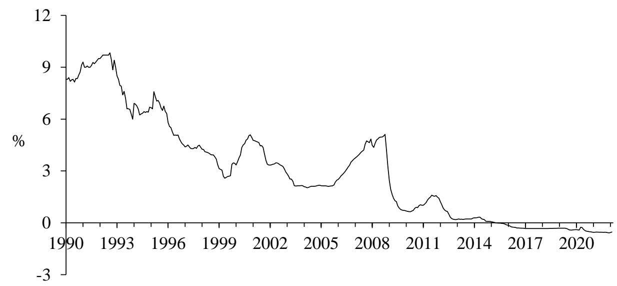
**U.K. : 3-Month Certificate LIBOR Rate**



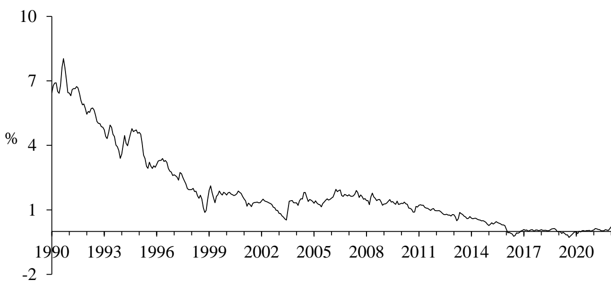

**Germany: Yield on Public Authority Bonds**



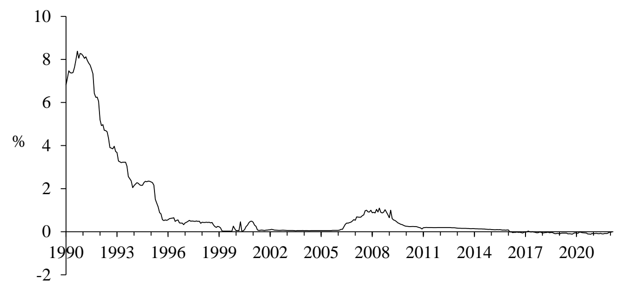

**Germany : 3-Month Interbank Deposit Rate**




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

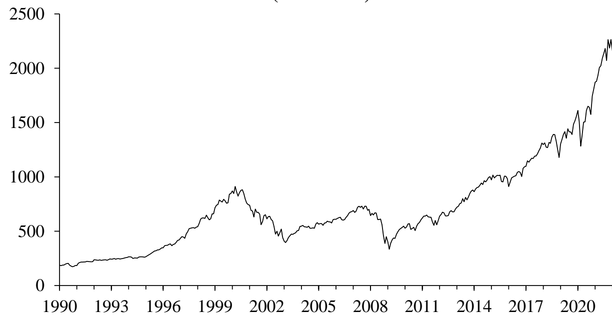



**Japan : 3-Month Money Market Rate**

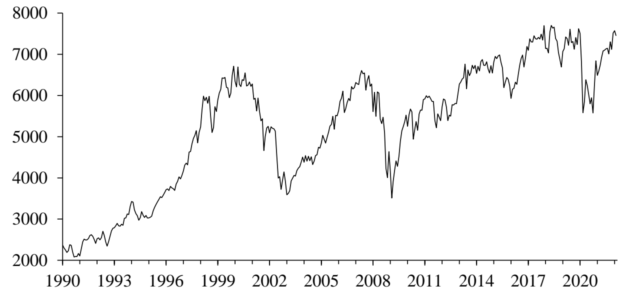


# MAJOR EQUITY MARKETS

**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

Global events seem to be getting ahead of us. Writing is on the wall that the world economic order has changed. Economic development built on liberal values, encouraged by world trade, has given way to an 'Autarkic Order.' Political alignments have changed, and so would be economic priorities.

Prime Minister Narendra Modi's party looks set to retain power in four out of five provincial elections. The most important is Uttar Pradesh which is a crucial state. The perception that he would continue beyond 2024 is strengthening and winning in Uttar Pradesh show that handling of Covid-19 and reaching out to poor people during that time is paying a handsome dividend to the party. Indian voters remain loyal to the prime minister, and his popularity remains intact ahead of general elections in 2024.

India's responses to the Ukraine crisis were dictated by its dependence on Russia for arms and, now, providing a backstop to China's expansion on the world stage. It skilfully balanced its interests in the Sino-Ukraine conflict. On the broader geopolitical realm is its position vis-à-vis the U.S. and China. This would become clear as it pushes its financial infrastructure, the revival of barter trade with Russia, and the development of defence industries capable of exporting arms.

Nevertheless, India is not insulated from the economic fallout of this conflict. The flare-up in crude oil, metals, and food grain prices will translate into a trade shock. The impact of high oil prices is already seen in February's widening trade deficit. This was mainly because of weak exports and a surge in imports of oil and gold. An increase of $10/bbl in the price of crude oil raises India's current account deficit by $10 billion (about 0.3% of GDP), a decline in GDP growth by 0.1%, and an increase in inflation by 0.1%. The current account deficit, up to 2.5%, does not harm the INR, but beyond that, it has to take a hit on its currency. With foreign exchange reserves of USD632 billion and expected bumper wheat production, India seems to keep its economy on the growth path.

The government estimates an 8.9% growth for the year to March 31st of 2022. We maintain our 7.5 and 6.4% GDP growth forecast for the next two fiscal years. The impact of the third wave on the Indian economy turned out to be far less severe than the previous two waves. But, an increase in crude prices would impact growth and inflation in the coming months. A neutral La Nina during the initial phase of the four-month monsoon season this year that starts from June could mean there would be one less reason to worry about the prospects of the monsoon and GDP growth this

**India: BSE Sensex**

year. A more accurate weather prediction of El Nino will be made around late May or early June.

India's fiscal deficit is expected to hit 6.9% of gross domestic product, or $210.12 billion, this financial year and 6.4% next year as the government continues to try to spend its way out of the pandemic-induced downturn.

The RBI's 4.5% inflation projection for fiscal 2023 might prove a bit optimistic even if the disruptions from the Ukraine crisis fade quickly. The retail inflation rate currently stands at 6.01%. We expect inflation to breach the central bank's inflation target and come out to be 6.5%. For fiscal 2024, we forecast inflation to be 6%.

The Reserve Bank of India's rate-setting panel has continued with its accommodative stance and holds interest rates as it takes a dovish view on inflation. Tightening of monetary policy is expected only later this year as the altered geopolitical situation solidifies.

Higher crude prices have a negative influence on the current account deficit. India recorded a six-fold increase in defence exports between 2017 and 2021, growing from 15.2 billion rupees to 84.4 billion rupees. India may make barter trade with Russia for its food and chemical needs. India's arms imports have dropped by over 30%. Overall, the impact of the Ukraine crisis on CAD will be muted.

Indian markets are somewhat isolated from the crisis. Indian equities moved in tandem with the broader E.M. pack, with modest selling in January that intensified in February amid rising geopolitical tensions. The INR is expected to depreciate at a measured pace on the central bank's currency support.

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

## China

China's role in the new world order will be very different from the one envisaged by President Xi Jinping a few months ago. Ties between Russia and China, taken as a "marriage of convenience," will reshape global politics. The weakening of the Sino-Russian relationship crafted in 1972 to neutralize Soviet power was anchored on the policy that national sovereignty and territorial integrity are paramount. This is also known as the One China policy. The approach is credited with reducing the likelihood that Beijing would seek to recapture the self-governed island of Taiwan by military force: Even though the Shanghai Communiqué was more of an agreement to disagree, it provided the foundation for China's economic growth in the last five decades without questioning its national sovereignty and territorial integrity. President Xi Jinping feels that successive U.S. administration's actions have eroded the U.S. commitment to the One China policy.

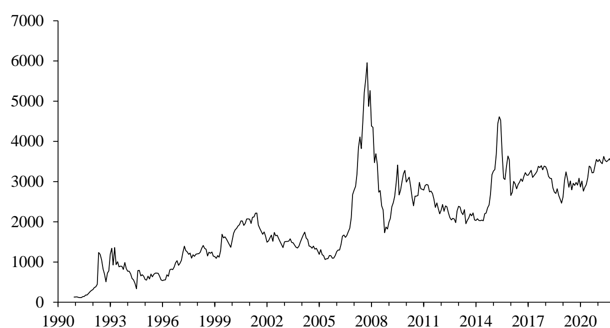
China strongly feels that the U.S. is building a Pacific version of NATO. Foreign Minister Wang Yi is on record that the "real goal" of the U.S.'s Indo-Pacific strategy was to form Asia's answer to the North Atlantic Treaty Organization while describing ties between China and Russia as "rock solid."

China has set an economic growth target for the year of around 5.5%, the lowest level in more than a quarter-century of economic planning, reflecting heightened domestic and global uncertainties in a pivotal political year for leader Xi Jinping. Inflation risks will push the People's Bank of China to support the nation's collapsing housing market by allowing looser lending. President Xi has an incentive to ensure stability because in the twice-a-decade party leadership reshuffle later this year, he's expected to seek a precedent-defying third term in power. The plenum will be held in late October or early November.

The lower GDP target indicates policy makers' concerns about the impact of government-engineered slowdowns in the property and technology sectors and rising geopolitical uncertainty with the chaos in Ukraine. Domestic consumption will slow down as China's government has committed to boosting military spending by 7.1% to 1.45 trillion yuan ($230 billion) in 2022, up from the previous year's 6.8% increase and marking its most significant increase in three years.

China's factory-gate inflation eased, and consumer price growth slowed slightly. The producer-price index rose 9.1% in January from a year earlier, down from December's 10.3%. Softening coal and steel prices helped the index lower. China's PPI inflation is likely to be 8.2% in the first quarter before falling to 5.1%, 2.9%, and 0.5% in the remaining quarters for 2022.

**China: SSE Composite Index**




The People's Bank of China kept the One-year loan prime rate at 3.7%, while the five-year rate was 4.6%, both on par with the prior month. We expect Beijing to trim its benchmark loan rates again this year to provide more extensive economic support, which faces increased downward pressure from a property slump and sluggish domestic demand.

China's exports rose in January–February as global demand revived while imports also gained despite a downturn in the economy. Exports grew by 16.3% over a year earlier to $545 billion in the two months. Imports advanced 15.5% to $429 billion. Chinese authorities combine trade data for the first two months to screen out fluctuations due to the Lunar New Year holiday, which falls at different times each year in January or February. However, Chinese manufacturers fear that if the yuan further appreciates to 6.25 against the U.S. dollar, their exports will be less competitive.

The yuan is stable as global markets roll from Russia's attack on targets across Ukraine. While major stock markets took a hit, and currencies from the euro to the Korean won declined, the yuan is still hovering near a four-year high after Russian leader Vladimir Putin ordered an operation to demilitarize Ukraine. The yuan has been trading like a safe haven currency during the Ukraine crisis.

It seems that the central bank does not want to see the dollar-yuan falling below the 6.3 level. But, the yuan's appreciation could continue on the back of continued trade surplus, portfolio inflows, and safe haven perception of the yuan.

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

## South Korea

South Koreans elected Yoon Suk-yeol, a conservative, as new President on March 9th. He has pledged to get tougher on North Korea and develop closer ties with the U.S. We expect South Korea to remain away from the Sino-Russia nexus. Enhanced expenditure on the military is inevitable, but in the coming few years, South Korea will continue to grow until semi-conductor chip factories come on stream in the U.S., Europe, China, and India.

Inflation is likely to worsen as the crisis in Ukraine threatens to disrupt supply chains. The Bank of Korea's three interest-rate increases have failed to make a dent in price gains, and we expect it will hike again in the coming months. South Korea's inflation accelerated in February. The consumer prices index increased 3.7% from a year earlier compared to a 3.6% increase in the earlier month. We forecast inflation to be 3.2% in 2022 due to the rise in fuel prices leading to the rise in transportation and utility costs.

South Korea's central bank held its base rate steady in the last week of February after making three increases in the past six months. It signalled tighter policy and forecasted stronger inflation. The Bank of Korea left its benchmark seven-day repurchase rate unchanged at 1.25%.

South Korean exports in February expanded 20.6% from a year earlier and faster than the 15.2% gain in January. It also marked the 16th straight month of expansion. Imports jumped 35.5% and continued to outpace exports on higher energy prices, creating a trade deficit of ~$5 billion in January. However, the outlook for the trade balance and exports is clouded. Due to supply chains disruptions, the impact on South Korea is blurred due to the availability of Russian crude oil available at a heavy discount in the oil market. For the whole of 2021, the country's current account surplus reached $88.3 billion, which was higher than the previous year's $75.9 billion.

The South Korean won depreciated more than 3.5%. The currency will fluctuate due to the volatility in world trade.

| | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|
| GDP (%p.a.) | -0.9 | 4.0 | 3.0 | 2.5 | 2.3 |
| Inflation (%p.a.) | 0.5 | 2.5 | 3.2 | 2.5 | 2.0 |
| Current A/c(US$ bill.) | 70.0 | 91.0 | 80.0 | 40.0 | 35.0 |
| Won/$(nom.) | 1070 | 1150 | 1250 | 1300 | 1310 |

## Taiwan

This investment letter of February commented, "The U.S. and NATO response to the Ukraine-Russia crisis has given an indirect assurance to Taiwan. It has given a clear signal to China that any misadventure in the Taiwan strait will be met with the military might of near and far democratic nations." We stand by our commentary except that the onset of the cold war and subsequent setback to globalization will harm Taiwan in the long term because its prosperity depends on free trade. It benefited enormously in the last five decades as world trade expanded. However, markets outside Europe, such as Taiwan, will do well in the short term as it is

considered a safe haven. Moreover, the government has hinted that it will "extend a hand" if any "irrational" movements in the currency and stock markets.

Taiwan's government has raised its GDP growth forecast to 4.42% in 2022, citing strong exports and increased investments. The 2021 growth forecast is revised to 6.5%, from a previous estimate of 6.3%. Foreign business groups are very optimistic about the growth of Taiwan and the government's COVID-19 response. Taiwan's economy is underpinned by stable export demand and increasing global demand for 5G, automotive electronics, high-end computing, and other internet products. Demand for Taiwanese products will remain strong in the next 3–4 years.

Consumer inflation, however, is projected to be 2.76% and 2.33% in 2022Q1 and Q2, respectively, which is higher than the government's 2% inflation target. Consumer inflation rose 2.8% in January, the sixth straight month of 2%-plus increases. Strong salary growth and large annual bonuses after a stellar year for corporate revenues are expected to keep consumption elevated.

High prices are likely to force Taiwan's policymakers to follow the lead of the U.S. Federal Reserve and other major central banks in raising rates this year. Borrowing costs have been at a record low of 1.125% since early 2020. The value of the Taiwan dollar vis-à-vis the U.S. dollar remains a primary concern for the central bank after it rose to its strongest level since 1997 January. The monetary authority may embrace the increase as a helpful tool in its battle against consumer prices. The central bank has said it would maintain ample forex reserves to ensure that domestic financial markets remain stable and guard against any

sudden withdrawal of funds out of the country by foreign institutional investors. The country's forex reserves as of the end of January stood at US$548.9 billion — the fifth-largest forex reserves holder in the world.

The Taiwan dollar is at NTS28 per U.S. dollar. The currency is relatively stable compared to major peers, and policymakers will maintain a flexible exchange rate policy.

| | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|
| GDP (%p.a.) | 3.1 | 6.5 | 4.4 | 3.2 | 2.8 |
| Inflation (%p.a.) | -1.0 | 2.6 | 2.2 | 1.8 | 1.6 |
| Current A/c(US$ bill.) | 71.0 | 90.0 | 100.0 | 65.0 | 60.0 |
| NT$/$(nom.) | 29.0 | 27.5 | 27.2 | 27.0 | 27.0 |

## Brazil

Brazil's economy expanded 4.6% in 2021, after a sharp contraction of 3.9% in 2020. The three main sectors, namely, primary, secondary, and tertiary, grew -0.2, 4.5, and 4.7%, respectively. In 2021, the severe drought led to the contraction of the agricultural sector. Household consumption rose by 3.6%, while government consumption grew by 2%. Investment recovered from 2020 to rise 17.2%, while imports expanded 12.4% and exports increased 5.8%. In 2021Q4, the economy got out of a technical recession, lifted by higher raw material prices and services that provided some relief to a country afflicted by soaring inflation and interest rates going into an election year.

Brazil will go to elections in October, and opinion polls widely show President Jair Bolsonaro trailing front-runner former President Luiz Inacio Lula da Silva. President Bolsonaro has once again expanded cash transfers to the poor. The war in Ukraine is likely to keep raw material prices high, and Brazil will benefit from the same. We forecast the economy to expand by 1% this year and 2% in 2023.

Brazil's inflation rate is slowing and may end up the year within the central bank's range as the incentives given during the pandemic are withdrawn. A year ago, Brazil embarked on an aggressive interest rate tightening cycle, increasing borrowing costs from a record-low 2% to 10.75% in an attempt to tame incipient inflationary pressures. Inflation appears to be levelling off.

The Real has become one of the most attractive assets in the region, and BRL can keep its gains in the short term even though Lula is likely to return to power after this year's election. The market believes that Lula is moving to the centre of the political spectrum, and he will pick a centrist to run as his vice-president to signal his move to the centre.

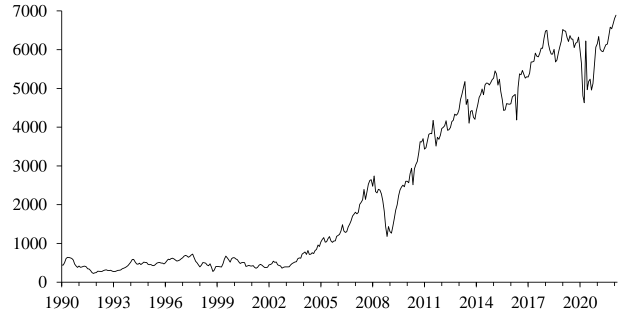
The Real is continuously strengthening, and its year-to-date gain is more than 11.4%. In the ongoing Ukraine conflict, Brazil is expected to do well, and it will be considered a safe haven for investors.

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

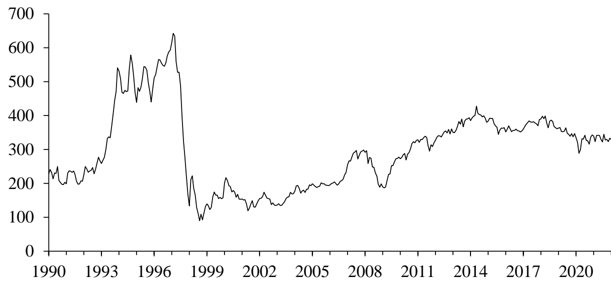
## Other Emerging Markets

**Hong Kong: FT-Actuaries**

**Indonesia: Jakarta Composite**

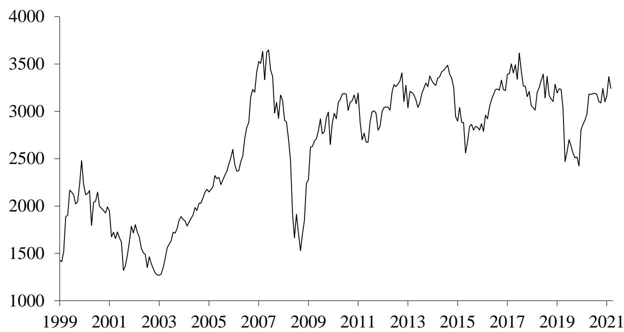



**Malaysia: FT-Actuaries (US$ Index)**




**Thailand: Composite Index**

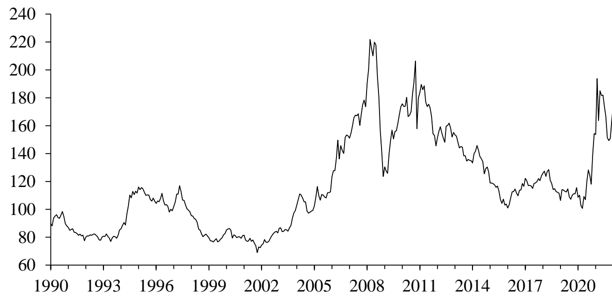
**Singapore: Straits Times Index**



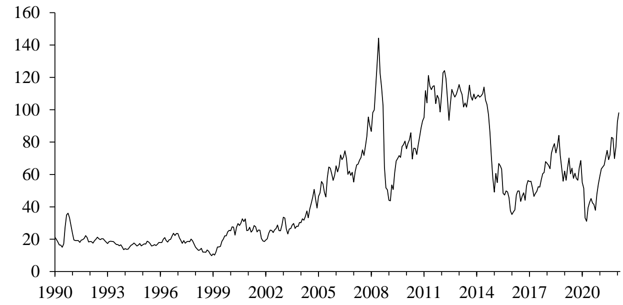

**Philippines: Manila Composite**

# COMMODITY MARKETS

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



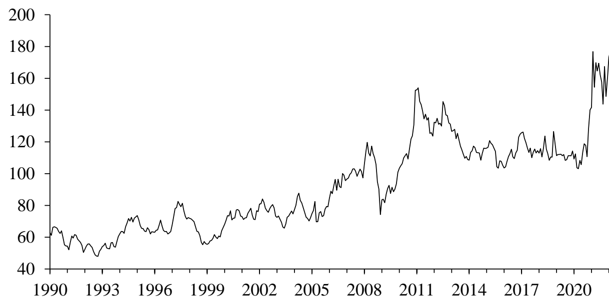

**Oil Price: North Sea Brent (in Dollars)**




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

**Gold Price (in Dollars)**

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



# UK FORECAST DETAIL

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

| | Inflation %[1] (CPI) | Short Dated (5 Year) Interest Rates | 3 Month Int. Rates | Nominal Exchange Rate (2005=100) [2] | Real Exchange Rate[3] | Real 3 Month Int. Rates %[4] | Inflation (RPIX) | Real Short Dated Rate of Interest[5] |
|---|---|---|---|---|---|---|---|---|
| 2019 | 1.7 | 0.6 | 0.8 | 78.3 | 73.8 | -0.7 | 2.6 | -0.5 |
| 2020 | 1.0 | 0.1 | 0.2 | 78.2 | 72.9 | -1.3 | 1.5 | -1.4 |
| 2021 | 2.5 | 0.4 | 0.1 | 81.5 | 78.2 | -5.6 | 4.0 | -5.3 |
| 2022 | 7.0 | 1.9 | 1.5 | 77.3 | 77.6 | -4.0 | 8.7 | -3.5 |
| 2023 | 4.3 | 3.5 | 2.4 | 76.7 | 78.9 | -1.1 | 5.7 | 0.0 |
| 2024 | 3.2 | 3.0 | 2.9 | 76.3 | 80.0 | 0.5 | 4.3 | 0.6 |
| 2021:1 | 0.9 | 0.2 | 0.1 | 80.6 | 76.2 | -3.9 | 1.4 | -3.8 |
| 2021:2 | 2.1 | 0.4 | 0.1 | 81.7 | 77.6 | -5.2 | 3.4 | -4.9 |
| 2021:3 | 2.7 | 0.3 | 0.1 | 81.7 | 78.7 | -6.3 | 4.5 | -6.1 |
| 2021:4 | 4.4 | 0.6 | 0.1 | 81.9 | 80.2 | -6.9 | 6.7 | -6.4 |
| 2022:1 | 6.9 | 0.7 | 0.3 | 77.8 | 77.4 | -6.2 | 9.0 | -5.8 |
| 2022:2 | 7.1 | 1.7 | 1.7 | 77.7 | 77.3 | -4.2 | 8.7 | -4.2 |
| 2022:3 | 7.0 | 2.2 | 1.8 | 76.9 | 77.3 | -3.3 | 8.5 | -2.9 |
| 2022:4 | 7.0 | 3.0 | 2.0 | 76.9 | 78.4 | -2.3 | 8.5 | -1.3 |
| 2023:1 | 5.0 | 3.0 | 2.0 | 77.0 | 78.7 | -1.9 | 6.4 | -0.9 |
| 2023:2 | 4.4 | 3.5 | 2.2 | 76.9 | 78.7 | -1.4 | 6.0 | -0.1 |
| 2023:3 | 4.0 | 3.5 | 2.5 | 76.5 | 78.7 | -0.9 | 5.5 | 0.1 |
| 2023:4 | 3.8 | 4.0 | 3.0 | 76.4 | 79.7 | -0.2 | 5.0 | 0.8 |

1 Consumer's Expenditure Deflator
2 Sterling Effective Exchange Rate Bank of England
3 Ratio of UK to other OECD consumer prices adjusted for nominal exchange rate
4 Treasury Bill Rate less one year forecast of inflation
5 Short Dated 5 Year Interest Rate less average of predicted 5 year ahead inflation rate

## Labour Market and Supply Factors (Seasonally Adjusted)

| | Average Earnings (1990=100)[1] | Wage Growth[2] | Unemployment (New Basis) Percent[3] | Millions | Real Wage Rate[4] (1990=100) |
|---|---|---|---|---|---|
| 2019 | 275.7 | 3.5 | 3.8 | 1.0 | 148.8 |
| 2020 | 279.1 | 1.6 | 4.5 | 1.3 | 149.7 |
| 2021 | 296.1 | 5.8 | 4.5 | 1.3 | 154.5 |
| 2022 | 314.8 | 6.7 | 4.9 | 1.5 | 154.0 |
| 2023 | 328.4 | 4.3 | 3.6 | 1.0 | 154.0 |
| 2024 | 341.1 | 4.1 | 2.8 | 0.7 | 155.4 |
| 2021:1 | 292.1 | 4.5 | 4.9 | 1.4 | 155.3 |
| 2021:2 | 289.7 | 7.3 | 4.7 | 1.3 | 153.4 |
| 2021:3 | 298.4 | 7.1 | 4.3 | 1.3 | 155.5 |
| 2021:4 | 301.1 | 4.5 | 4.1 | 1.4 | 153.6 |
| 2022:1 | 311.7 | 6.7 | 5.0 | 1.5 | 155.0 |
| 2022:2 | 309.3 | 6.8 | 5.0 | 1.5 | 152.9 |
| 2022:3 | 318.3 | 6.7 | 5.0 | 1.5 | 155.0 |
| 2022:4 | 319.9 | 6.7 | 4.7 | 1.4 | 153.1 |
| 2023:1 | 326.2 | 4.5 | 4.2 | 1.2 | 154.5 |
| 2023:2 | 322.9 | 4.4 | 3.6 | 1.0 | 152.9 |
| 2023:3 | 331.9 | 4.3 | 3.4 | 0.9 | 155.4 |
| 2023:4 | 332.6 | 4.6 | 3.2 | 0.9 | 153.3 |

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

## Estimates and Projections of the Gross Domestic Product[1] (£ Million 1990 Prices)

| | Expenditure Index | £ Million '90 prices | Non-Durable Consumption[2] | Private Sector Gross Investment Expenditure[3] | Public Authority Expenditure[4] | Net Exports[5] | AFC |
|---|---|---|---|---|---|---|---|
| 2019 | 167.8 | 803514.3 | 475369.3 | 308458.5 | 209136.4 | -70959.7 | 118490.2 |
| 2020 | 152.0 | 728097.3 | 427575.8 | 258732.0 | 199232.3 | -33095.4 | 124347.4 |
| 2021 | 163.3 | 782161.7 | 452309.6 | 292118.7 | 208538.0 | -36908.1 | 133896.5 |
| 2022 | 172.3 | 825357.2 | 479861.8 | 289024.0 | 218557.2 | -23886.6 | 138199.2 |
| 2023 | 176.1 | 843295.7 | 494513.6 | 282408.2 | 225319.4 | -18612.0 | 140333.5 |
| 2024 | 181.0 | 866882.8 | 509517.7 | 285194.7 | 232155.8 | -15890.3 | 144095.1 |
| 2019/18 | 1.4 | | 0.3 | 3.1 | 3.0 | | -0.1 |
| 2020/19 | -9.4 | | -10.1 | -16.2 | -4.8 | | 4.9 |
| 2021/20 | 7.5 | | 6.8 | 15.8 | 5.2 | | 7.7 |
| 2022/21 | 5.6 | | 6.2 | -0.3 | 4.8 | | 3.2 |
| 2023/22 | 2.2 | | 3.1 | 1.2 | 3.1 | | 1.5 |
| 2024/23 | 2.8 | | 3.0 | 1.7 | 3.0 | | 2.7 |
| 2021:1 | 155.5 | 186205.9 | 106678.2 | 68183.6 | 51087.4 | -7838.9 | 31904.4 |
| 2021:2 | 163.9 | 196217.8 | 112089.9 | 66707.0 | 51382.2 | -672.0 | 33289.3 |
| 2021:3 | 166.4 | 199176.5 | 116084.7 | 78828.1 | 52892.3 | -14394.2 | 34234.4 |
| 2021:4 | 167.5 | 200561.5 | 117456.8 | 78400.1 | 53176.1 | -14003.1 | 34468.4 |
| 2022:1 | 169.2 | 202535.5 | 118569.8 | 73860.3 | 53932.3 | -9285.7 | 34541.2 |
| 2022:2 | 172.2 | 206121.1 | 119522.6 | 69230.1 | 54465.4 | -2829.4 | 34267.6 |
| 2022:3 | 173.5 | 207696.3 | 120433.1 | 73370.9 | 54873.9 | -6098.3 | 34883.3 |
| 2022:4 | 174.6 | 209004.2 | 121336.4 | 72562.6 | 55285.5 | -5673.1 | 34507.2 |
| 2023:1 | 174.9 | 209452.2 | 122246.4 | 77513.4 | 55700.2 | -11225.1 | 34782.7 |
| 2023:2 | 175.8 | 210455.1 | 123162.6 | 68889.8 | 56117.6 | -2732.1 | 34982.8 |
| 2023:3 | 176.5 | 211349.8 | 124087.0 | 68248.6 | 56538.8 | -2249.0 | 35275.6 |
| 2023:4 | 177.1 | 212038.5 | 125017.6 | 67756.4 | 56962.8 | -2405.7 | 35292.6 |

[1] GDP at factor cost. Expenditure measure; seasonally adjusted
[2] Consumers expenditure less expenditure on durables and housing
[3] Private gross domestic capital formation plus household expenditure on durables and clothing plus private sector stock building
[4] General government current and capital expenditure including stock building
[5] Exports of goods and services less imports of goods and services

## Financial Forecast

| | PSBR/GDP %[1] | GDP[1] (£bn) | PSBR (£bn) Financial Year | Current Account (£ bn) |
|---|---|---|---|---|
| 2019 | 2.2 | 2196.3 | 49.1 | -89.1 |
| 2020 | 15.8 | 2006.2 | 317.2 | -57.6 |
| 2021 | 7.4 | 2311.2 | 169.9 | -63.8 |
| 2022 | 2.1 | 2579.1 | 55.0 | -37.9 |
| 2023 | 1.2 | 2732.3 | 31.9 | -25.5 |
| 2024 | 0.8 | 2903.4 | 23.5 | -18.1 |
| 2020:1 | -2.7 | 537.8 | -14.4 | -38.6 |
| 2020:2 | 4.4 | 534.5 | 23.3 | -24.9 |
| 2020:3 | 1.7 | 544.9 | 9.2 | -16.4 |
| 2020:4 | 3.8 | 567.5 | 21.6 | -9.2 |
| 2021:1 | -0.9 | 549.4 | -5.0 | -18.7 |
| 2021:2 | 30.6 | 437.6 | 133.8 | -11.9 |
| 2021:3 | 14.6 | 519.2 | 76.0 | -12.3 |
| 2021:4 | 12.2 | 525.7 | 64.3 | -14.8 |
| 2022:1 | 5.7 | 605.7 | 34.2 | -15.0 |
| 2022:2 | 2.1 | 625.2 | 13.2 | -19.3 |
| 2022:3 | 2.3 | 638.1 | 14.5 | -6.9 |
| 2022:4 | 2.1 | 654.1 | 13.7 | 3.3 |

[1] GDP at market prices (Financial Year)

# WORLD FORECAST DETAIL

**Growth Of Real GNP**

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

**Growth Of Consumer Prices**

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

**Real Short-Term Interest Rates**

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

**Nominal Short-Term Interest Rates**

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

**Real Long-Term Interest Rates**

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

**Nominal Long-Term Interest Rates**

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

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

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

[1] The real exchange rate is the domestic price level relative to the foreign price level converted into domestic currency. A rise in the index implies an appreciation in the real exchange rate.

**Nominal Exchange Rate (Number of Units of Local Currency To $1)**

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

[1] The series for the USA is a nominal broad U.S dollar index (2006=100); the series for the UK is $ per £

* Forecasts based on the Liverpool World Model