LIVERPOOL INVESTMENT LETTER

June 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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CORONAVIRUS: WHAT COMES NEXT?

Forecasters protect themselves by being gloomy. This is because their clients want the future to be bright and will tend to act on bright forecasts. The forecasters who provide those will then be blamed if things go wrong, as the firm will have overspent assuming the best. A gloomy forecast, if things turn out better, will not be remembered in the firm's delight at events. This imparts a gloomy bias to forecasts.

The virus crisis is no exception. Yet it is an unusual crisis, in being mainly created by government deliberate suppression of the economy. In principle the lifting of the lockdown removes that suppression, so automatically regenerating activity. This is quite unlike a typical recession brought on by say a commodity shortage price shock, or a consumer- or firm-led collapse in demand and confidence; in these cases the government has no control. It can try to offset these things; but its success is hard to predict.

On this occasion the government can remove the cause because it is the cause. It is true that in addition people are fearful of the situation and may therefore spend less, while firms may also conserve cash. However, much of this fear is the result of government warnings about high chances of dying from the virus. As deaths come down and the easing of lockdown goes ahead, these warnings should be toned down and popular sentiment will become braver, as well as more impatient of restraint. Pre-Covid-19, people behaved robustly towards risk; but the crisis has changed that behaviour towards great timidity. This looks unlikely to last as lockdown is raised around the world and deaths continue to fall. Just as people go back to driving normally after accidents, so with attitudes to health risk as this episode winds down and the extreme alarmist forecasts of deaths prove to be false. Our forecast for Covid-19 deaths is shown opposite. By the end of June daily average deaths should be close to zero. In this respect it is following the standard logistic path of an epidemic, including the effects of government and personal reactions. Our causal model of the epidemic supports this dying-off behaviour.

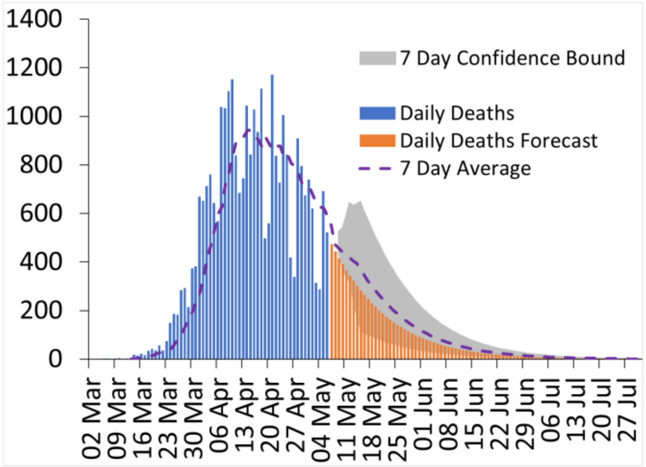
Some forecasters build in a second bad wave of infection, starting in the autumn. However, we think this is unlikely because the fatal strains of the virus have been essentially eliminated in the first wave by the deaths of those infected. The virus strains that survive will be those that caused less antibody creation and so created weaker symptoms. The death rate per infection of the common flu is around 0.1%; this flu virus coexists with us and we do not react to outbreaks by stopping our lives. So it will be with new waves of Covid-virus outbreak, evolutionary biology suggests.

Even if there is an outbreak worse than this, we assume it will be responded to not by lockdown but by track-trace-quarantine targeted on particular groups. This is all without assuming a vaccine or a cure —both of which are possible if unlikely things to appear soon.

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)



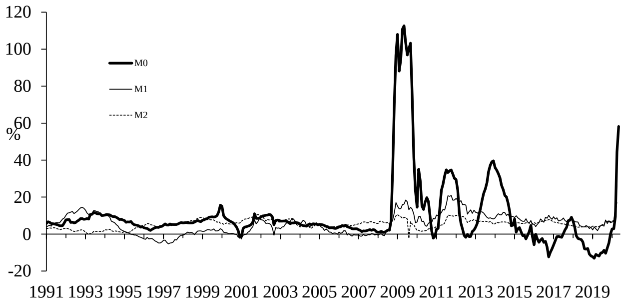
It is for these reasons that our forecast here is close to a V-shape. Q2, April–June, is where the lockdown is at its most severe. Q3 will see a rebound, and Q4 a further one. By the end of the year the recovery will be total.

The fiscal and monetary policy response

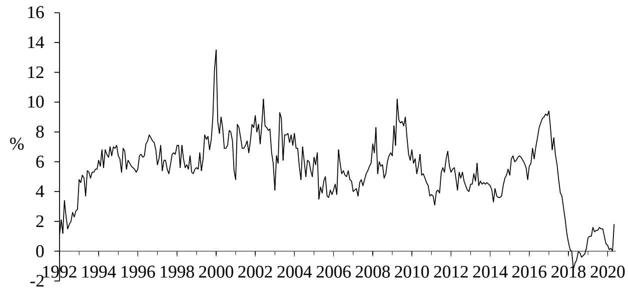
A key element in recovery will be policy. Fiscal policy is in bail-out mode currently, issuing huge amounts of debt. Monetary policy is in massive QE expansion mode. Effectively the Bank is buying all the debt the government is issuing, creating a false market in gilts; the government is borrowing from itself not the market. This QE needs to be wound down and gilts sold to the market at yields as close as possible to today's 0.4%, to keep long term interest costs to the taxpayer as low as possible. Maturities of issued debt need to be lengthened for the same reason. The time to do all this is in the rest of this year as recovery proceeds. The market in gilts should be able to absorb this debt; given the environment of insecurity that will prevail until the economy has fully recovered, private lenders will pay for safety.

By the end of the year this will change. Confidence will have returned and with it the huge quantity of money printed and lent out will start to fuel inflation. As we go into 2021, it will be necessary to tighten monetary conditions against this.

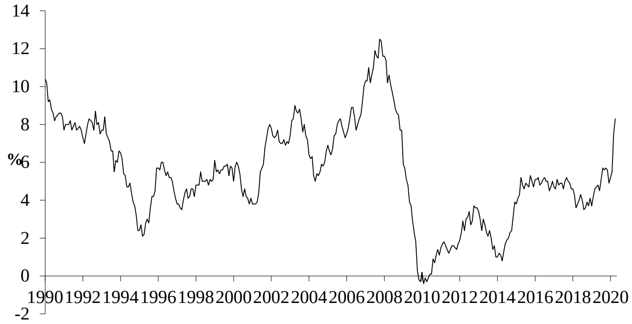
U.S.: Growth in Monetary Aggregates (Yr - on - Yr)



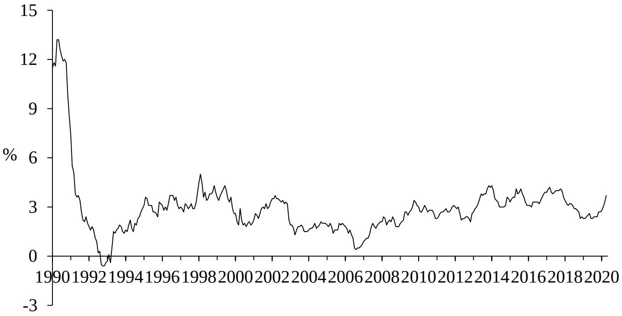
UK: Notes and Coins in Circulation Growth



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

Japan Lifted State of Emergency

Prime minister Shinzo Abe has declared victory for the "Japan model" of fighting coronavirus as on May 25th he lifted a nationwide state of emergency after seven weeks. Speaking at a press conference, Abe said that Japan had avoided an explosive increase in cases without the compulsory lockdowns used in Europe or the US. "The number of infections is decreasing day by day. That can be seen even in areas where the state of emergency is still in effect," the health minister Katsunobu Kato said. "The situation of the outbreak is improving, and the pressure on the medical system is being relieved."

Abe declared an emergency in the capital and some other areas from April 7, later expanding it nationwide. From mid-May he began lifting it in places where the rate of new infections subsided. The Tokyo metropolitan area — the worst-hit by the virus — was the final and largest site of infections. The Tokyo area, with its surrounding prefectures of Chiba, Kanagawa and Saitama, has a combined population of about 35 million people and an annual output of ¥182.2 trillion, which in global terms would make it the 11th largest economy on the planet. Overall, Japan has reported a cumulative total of approximately 17,200 infections and 853 deaths, out of a global death toll of more than 340,000. Those figures include more than 700 cases and 13 deaths linked to the Diamond Princess cruise liner, which was quarantined in Yokohama in February.

After lifting the restrictions in most areas earlier last month, Abe said that new infections had slowed enough to justify an easing of restrictions on businesses, bars and restaurants throughout the country, adding that hospitals were treating far fewer patients than at the height of the outbreak. But he urged people to remain vigilant and adopt a "new lifestyle" based around avoidance of the "three Cs" — confined and crowded spaces, and close human contact — to prevent a second wave of infections. "Even after the lifting of the state of emergency, we are going to have to live with the coronavirus around us," he said at a televised press conference. "If we lower our guard, the infection will spread rapidly. This is the scariest aspect of this virus. So, we need to remain vigilant while at the same time reviving the economy."

Despite Japan's relative success in fighting Covid-19, Abe's performance has been unpopular with the public. His approval ratings fell to a record low of 29% in a new poll by the Asahi newspaper. The public disapproved of the prime minister's handling of the virus by a majority of 57% to 30%, criticising the lack of testing and the government's strategy to support the economy.

Indeed, the current state of affairs in Japan is somewhat troubling, given the fact that the country has very recently fallen into a deep recession. This is the first time this has happened since 2015. Japan, which is the third-largest economy in the whole world, had its economy shrink at a yearly rate of 3.4% in the early months of 2020. Moreover, the state of emergency that only lasted one month severely impacted supply chains and companies of all different sizes, which given the country's dependence on trade have been badly affected. Analysts believe that GDP will fall by 22% during the months of April to June, which would be the biggest decline ever witnessed in Japan. As Japan is reliant on exports it is proving to be difficult for the country, given that the tourism industry has also seen monumental declines.

In a survey completed by more than 10,000 Japanese companies, it is apparent that 63% of the respondents said that the virus would have a substantial impact on the performance of domestic businesses. However, many companies are still digitizing and creating remote working measures, perhaps putting an end to the Japanese business culture of expecting long hours of their employees. Also focussing on life as opposed to just business, families will now be much closer together, which will perhaps challenge the country's traditional domestic roles.

To ease the widespread damage, Prime Minister Shinzo Abe has rolled out a multipronged economic stimulus worth ¥117.1 trillion — by far the largest in modern Japanese history, and a more recent ¥31.9 trillion yen budget economic stimulus package to help fight the economic impact of the novel coronavirus pandemic. It would be the world's largest stimulus package for a coronavirus-hit economy. The total package would amount to about 35% of the country's GDP. Government officials said the package will include steps such as an increased medical spending, aid to firms struggling to pay rent, support for students who lost part-time jobs, and more subsidies to companies hit by slumping sales. The government will also provide ¥200,000 to each front-line worker at hospitals treating coronavirus patients and ¥100,000 to each member of staff at medical institutions that have secured beds and are prepared to accept such patients. Mr. Abe also announced that government bonds would be issued to fund the second supplementary budget for the current fiscal year ending in March 2021. The government hopes to have the budget approved by Japanese lawmakers by June 12, allowing it to subsidize rent payments of small firms, as well as individual proprietors, facing financial difficulties. It will cover two-thirds of potential recipients for six months with a ¥6 million ceiling.

Meanwhile the Bank of Japan (BOJ) unveiled a raft of new measures last month. Governor Haruhiko Kuroda announced that the BOJ will buy government bonds in unlimited quantities, up from an annual cap of ¥80 trillion. The BOJ also increased its limits on purchases of longer-term corporate bonds and short-term commercial paper by ¥15 trillion, to a total of ¥20 trillion, and doubled its annual limit on purchases of exchange-traded funds and real-estate investment trusts.

MARKET DEVELOPMENTS

As recovery takes hold, equity prices will continue their recovery. Interest rates are forecast to rise in 2021 as inflationary pressures develop on the back of large increases in the money supply.

Table 1: Market Developments

	Market Levels		Prediction for May/Jun2021	
	May 5	Jun 3	Previous Letter	Current View
Share Indices				
UK (FT 100)	5849	6382	6581	7812
US (S&P 500)	2868	3123	2768	3220
Germany (DAX 30)	10729	12487	15579	18544
Japan (Tokyo New)	1431	1599	1742	1970
Bond Yields (government)				
UK	0.22	0.31	2.30	2.30
US	0.67	0.81	2.80	2.80
Germany	−0.55	−0.35	−0.20	−0.20
Japan	−0.03	0.03	−0.00	−0.00
UK Index Linked	−2.18	−2.31	1.00	1.00
Exchange Rates				
UK ($ per £)	1.25	1.26	1.32	1.32
UK (trade weighted)	78.03	77.53	79.4	79.4
US (trade weighted)	108.06	106.10	102.5	102.5
Euro per $	0.92	0.89	0.85	0.85
Euro per £	1.15	1.12	1.12	1.12
Japan (Yen per $)	106.61	108.83	112.5	112.5
Short Term Interest Rates				
UK	0.82	0.82	1.80	1.80
US	0.55	0.27	1.80	1.80
Euro	−0.33	−0.37	−0.50	−0.50
Japan	−0.05	0.00	−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	1.4	2.0	19.00		26.00
US	1.99	1.1	2.1	−0.10	−4.79	0.30
Germany	3.30	0.8	1.7	46.00	0.07	51.87
Japan	1.90	−0.3	0.5	23.00	−8.33	16.77
UK indexed[2]	−2.31		2.0	8.00		7.70
Hong Kong[3]	2.60	4.0	2.1	−31.00	−4.79	−27.09
Malaysia	3.30	2.0	2.1	15.00	−4.79	17.61
Singapore	3.50	1.0	2.1	−7.00	−4.79	−5.19
India	1.40	5.0	2.1	−7.00	−4.79	−3.29
Korea	1.10	0.8	2.1	−42.00	−4.79	−42.79
Indonesia	2.20	3.0	2.1	2.00	−4.79	4.51
Taiwan	2.80	1.0	2.1	−2.00	−4.79	−0.89
Thailand	3.20	1.5	2.1	4.00	−4.79	6.01

Bonds: Contribution to £ yield of: −

	Redemption Yield	Changing Nominal Rates	Currency	Total
UK	0.31	−19.89		−19.58
US	0.81	−19.93	−4.79	−23.91
Germany	−0.35	−1.55	0.07	−1.84
Japan	0.03	0.31	−8.33	−7.98

Deposits: Contribution to £ yield of:

	Deposit Yield	Currency	Total
UK	0.82		0.82
US	0.27	−4.79	−4.52
Euro	−0.37	0.07	−0.30
Japan	0.00	−8.33	−8.33

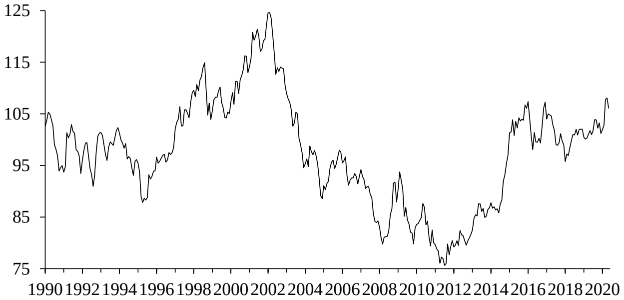
[1] Yields in terms of €s or $s can be computed by adjusting the £-based yields for the expected currency change.
[2] UK index linked bonds All Stocks
[3] Output based on China.

Table 3: Portfolio(%)

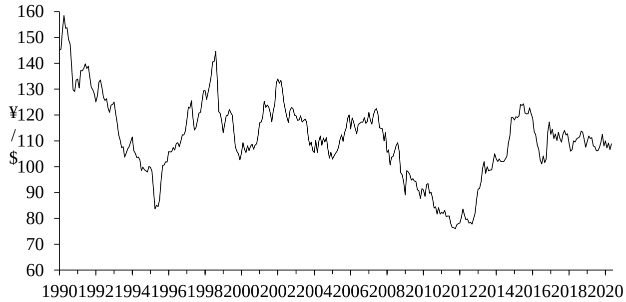
	Sterling Based Investor		Dollar Based Investor		Euro Based Investor	
	May Letter	Current View	May Letter	Current View	May Letter	Current View
UK Deposits (Cash)	5	5	5	5	1	1
US Deposits	-	-	-	-	-	-
Euro Deposits	-	-	-	-	-	-
Japanese Deposits	-	-	-	-	-	-
UK Bonds	-	-	-	-	-	-
US Bonds	-	-	-	-	-	-
German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

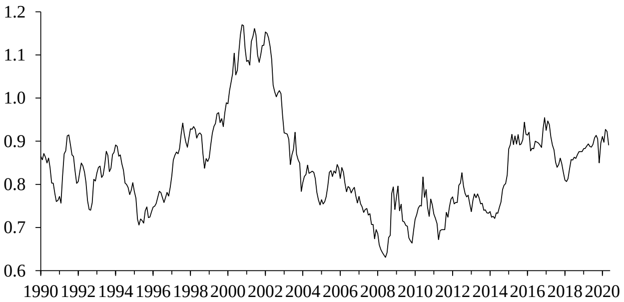
US : Trade Weighted Index
(Bank of England 1990 = 100)



Japan : Yen Per U.S. Dollar

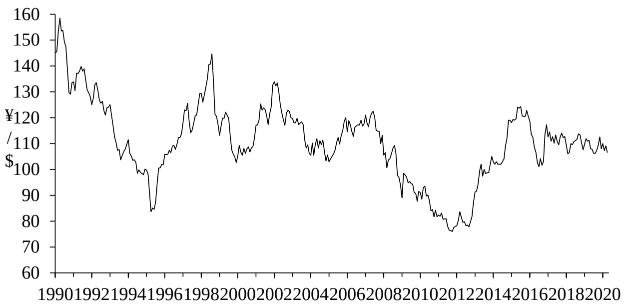


Euro per US dollar



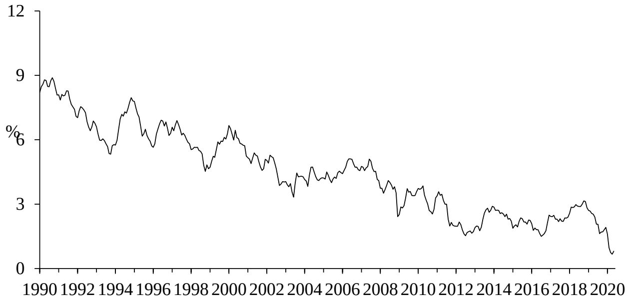
UK: Dollars Per Pound Sterling

Japan : Yen Per U.S. Dollar

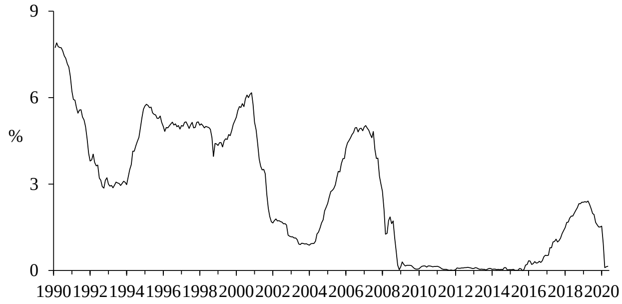


GOVERNMENT BOND MARKETS

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

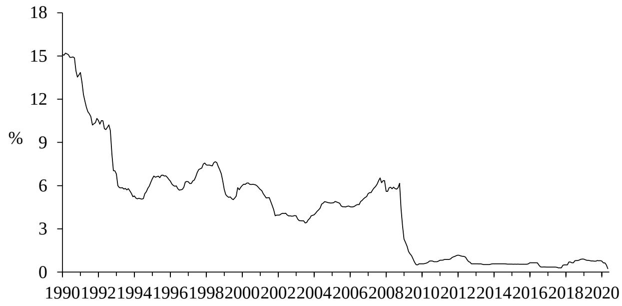


U.S. : 3-Month Treasury Bill

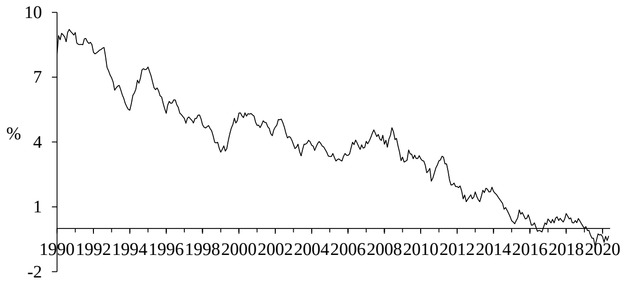


U.K.: Yield on Long-Term Government Bonds

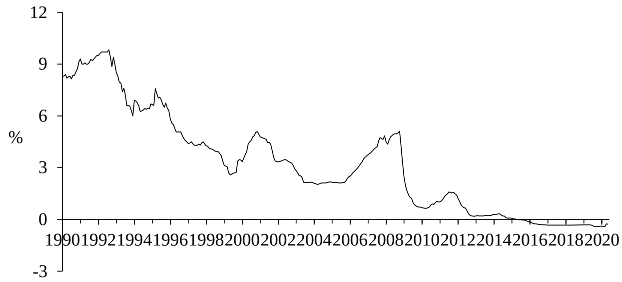
U.K. : 3-Month Certificate LIBOR Rate



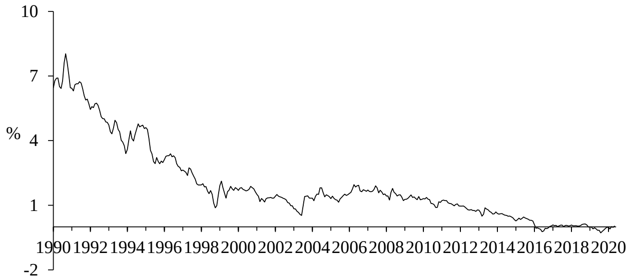
Germany: Yield on Public Authority Bonds



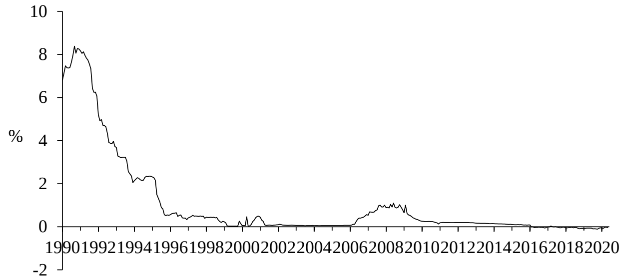
Germany : 3-Month Interbank Deposit Rate



Japan: Yield on Long-Term Government Bonds

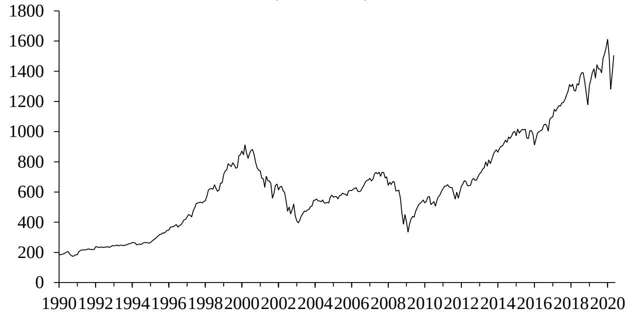


Japan : 3-Month Money Market Rate

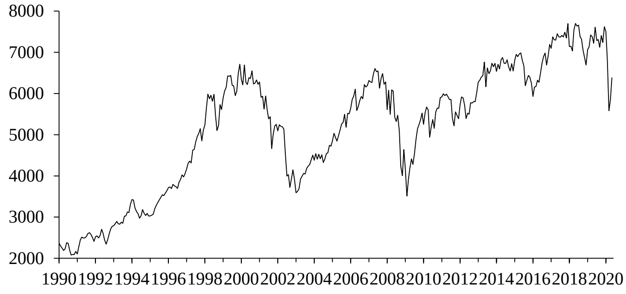


MAJOR EQUITY MARKETS

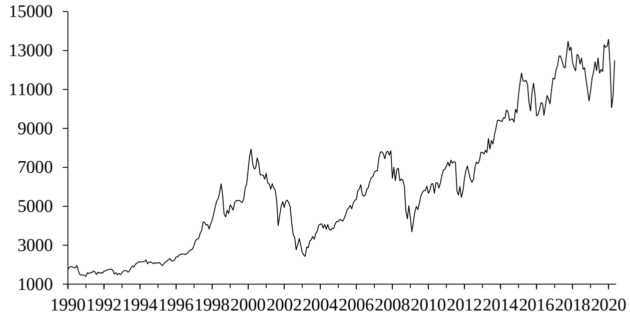
U.S. : S & P 400 Industrial
(1985=100)



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



Germany : DAX 30



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

EMERGING MARKETS

Anupam Rastogi

The Covid-19 crisis is a health crisis and it is different from credit or liquidity crisis we have seen before. We know enough about the financial and economic system to understand that conventional responses like stimulus or tax cuts are inappropriate. Just to put in historical perspective, the Spanish Flu, which also led to a lot of social distancing, didn't seem to leave a lasting economic scar on nations. But the modern economy is very different — more dependent on delicate supply chains, more reliant on webs of debt and credit, more weighted toward services rather than manufacturing and agriculture.

The response of governments can be placed in four buckets. First, fiscal stimulus like more government spending or tax cuts. Second providing credit enhancement to businesses so that they can borrow and get on with their businesses. Third, buying back assets whose value is lower than their book value to free up bank balance sheet. Fourth, reduce cost of capital by reducing bank rates.

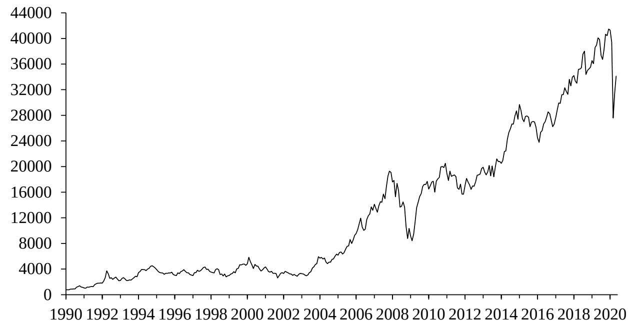
The financial impact of lockdown has turned out to be expensive on government treasuries and the solution to the health crisis remains clouded, not to speak of patience of people wearing thin, countries have started opening up their economies at a different pace.

Poorer countries are starting to reopen while new infections and deaths are growing, rather than slowing. This is against health experts and nations are ready to see and cope with a rise in cases and deaths. The number of people who could eventually die in crowded slums across the developing world may rise substantially but that would be lower than people dying of hunger and pushing millions into poverty. Policy makers understand, but do not pronounce, that many of their people, especially the estimated 1.6 billion across the world, who toil in the informal sector, are suffering more from containment measures than from the virus itself. Hundreds of millions of people have lost their jobs and poverty rates across the world are soaring.

While leaders in wealthier countries face similar trade-offs, the dilemma for leaders in developing countries is especially stark. Each week that the reopening is postponed creates more poverty, increases chances of social unrest and violence. Reopening — too soon — may cause new outbreaks but they are ready to take this risk now.

Crawling out of the malaise caused by this health crisis will require new norms at the work place but we have to live with it for the next eighteen months or so. How rapidly we shall be able to restart and go back to our December 2019 lifestyle is anyone's guess. Lower return on capital is almost certain and compensation on labour may not rise due to heightened unemployment and technology driven increase in productivity.

India: BSE Sensitive



India

India's GDP in the first quarter of 2020 was an 11-year low of 3.1%, illustrating the nature of the national lockdown, even though the country was under lock down for less than a fortnight during that period. Growth was dragged down by lower consumption as well as investment demand. GDP growth in FY20 is lowered to 4.2%, which is the lowest in the last 11 years. More than two months of lockdown and a gradual easing of restrictions from June 1 will impact the Indian economy more severely than envisaged earlier. We expect the economy to shrink 3% in FY 2022 and rebound to 7.5% in the next fiscal year. Moody's has downgraded India's rating to Baa3 from Baa2 with negative outlook in line with Fitch and S&P ratings.

The India Manufacturing Purchasing Managers' Index stood at 30.8 in May compared with 27.4 in April on a seasonally-adjusted basis. This suggests a sharp deterioration in business conditions continuing in May. But, for the one-year business outlook, manufacturers remained optimistic. Confidence was supported by expectations for a return to growth once all coronavirus-related restrictions are lifted.

Weather forecasts for normal monsoon rains are in farmers' favour at least, giving hope that the rural sector can help support the millions of people and migrant workers who returned to their villages from the cities.

Headline inflation remained at 5.9% in April and reflects a pickup in food-price growth, which accelerated to 8.6% in April.

Merchandise exports contracted by 60% and imports plunged 58% in April amid shutdown. Exports have made a turnaround after mid-April. Till then, there were supply and logistical challenges, with disruption in port operations and restriction on exports of several formulations.

India's strict lockdown has given way to a sudden easing from June 1 and is like a diluted version of the Swedish strategy. India has used the Covid-19 crisis to reform its economy. Many difficult decisions related to land and labour which could not be taken earlier are taken in one swoop. Prime Minister Modi has focused on converting the situation into an opportunity. By announcing a wholesome economic package to support all categories of businesses, he has emphasized on reviving local production.

Hence, it is clear that instead of a single comprehensive strategy to tackle survival, reduce damage and reinvigorate growth, the government has made announcements that cover a number of sectors, attempting both short-term as well as medium-term strategies. The government has tried to implement a number of ideas that have been languishing for a long time.

Between March 27 and May 22, the RBI reduced the policy repo rate by 115 basis points. The repo rate stands at 4%, and the reverse repo rate at 3.35%.

India's rescue package also includes the promise, for example, of roughly $40 billion in collateral-free loans to small businesses that would be completely guaranteed by the government.

People who believe their business will recover can take on a loan for payments that they have to make; banks will be happy to cover them, since they're being underwritten by the government. Instead of the government figuring out who to pay to reopen the economy, banks and businesses will make the decision. While we'll have to see how it works in practice — any delays in the rollout and the whole thing will fall apart — the idea is sound.

The focus on liquidity support and risk underwriting instead of across-the-board spending, India's debt might remain under control instead of exploding. The prime minister himself is a fiscal hawk and, hence, purse strings have been loosened only a little.

If the package is looked at from the point of view of providing livelihood and employment to the large number of informal workers, it is the agricultural reform component that appears to be well-thought through.

Credit guarantees from government, deficit financing by the RBI and a Hold-To-Maturity of government bonds hike for banks are the only solutions that can get the wheel of credit and investment rolling.

Labour laws barring the Minimum Wages Act, Industrial Safety Rules and Employees Compensation Act have been suspended. Land can now be bought by industries directly from farmers.

Finally, Prime Minister Narendra Modi has incentivized shifts from China to India in supply chains caused by the

Sino-American Trade War, setting aside land and lobbying over 1,000 multinational corporations to 'Make in India'.

The stock market has recovered sharply from its low of March 2020. Many of the reform measures have been priced in and risk of another increase in Covid-19 cases is being ignored by the market.

	18–19	**19–20**	**20–21**	**21–22**	**22–23**
GDP (%p.a.)	6.8	4.2	-3.0	7.5	6.0
WPI (%p.a.)	3.9	3.6	3.8	4.5	5.0
Current A/c(US$ bill.)	-70.0	-22.0	0.0	-35.0	-35.0
Rs./$(nom.)	79.5	73.0	78.0	79.0	80.0

China

China is flexing its muscles and would like to be acknowledged as growth driver to the world economy displacing the US. Not surprisingly, the US is in no mood to relinquish this position. However, the US response has been opening too many fronts at the same time rather than tackling China and keeping strong alliances with other nations. There is a possibility that China may become insular, and other emerging markets will the find life harder. Unfortunately, if the U.S.-China dispute intensifies, they can expect collateral damage in the short-term. For the time being, the US blinked after taking a very strong stand on Hong Kong. Access to the US capital market by Chinese companies has been watered down considerably and China, in turn, has mellowed down. The Premier, Li Keqiang, used his post-NPC press conference to set a conciliatory tone toward the U.S., calling for mutual respect and saying 'decoupling' would harm the world.

It seems that for the time being a new Cold War is averted between the U.S. and China. China sees President Trump as a lame duck and would like to wait for five months before a new administration takes over. China, slowly but surely, will impose strict security rules on Hong Kong, which will end the city's independence and would usher into a Greater Bay Area development, which encompasses Guangdong-Hong Kong-Macau, to develop its own silicon valley. In our opinion, China may delay development of its plan for a few months but it would not stall it as it wants to take on Silicon Valley of the US.

China's economic recovery shows signs of stalling. The country's factories have reopened for work in the past three months as the coronavirus-related restrictions have eased. But now they are not having enough orders from overseas customers. Not surprisingly, the new-export-orders sub index, a gauge of external demand, continued to remain deep in contractionary territory. It was 35.3 in May compared to 33.5 in April. Exports still account for a substantial part of the Chinese growth equation. In turn, policy makers have promised stimulus measures to boost the economy. The announcements have fallen short of efforts compared to previous less severe downturns as China is worried about bad debts accumulating in its banks caused by previous massive stimulus.

The government's official non-manufacturing PMI climbed to a four-month high of 53.6 in May, boosted by a strong recovery in the country's construction activity. China's PMIs showed a recovery, but the gauge declined to 50.6 from 50.8. In the midst of confusing signals, China did not set a GDP growth target for 2020. However, Chinese President Xi Jinping said China's annual economic growth target could have been set around 6% which according to us, is an aspiration and defy slowing down of GDP growth rates of the past. We maintain our growth forecast of the last month. The government announced a range of fiscal measures to bolster the economy, equal to about 4.1% of China's GDP.

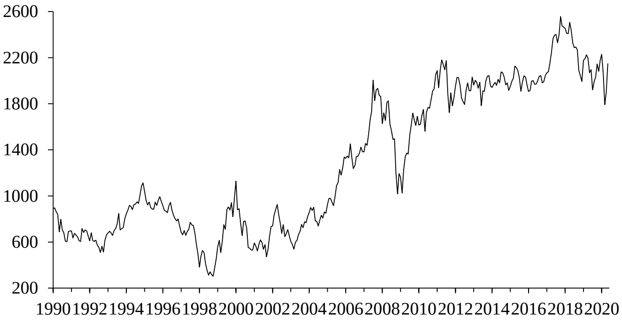
China's consumer price index, the main gauge of inflation, grew 3.3% year on year in April, moderating from the 4.3% gain in March. In the first four months of this year, CPI went up 4.5% year on year on average. Falling food prices are going to reduce yearly inflation further as pork price inflation declines.

China's exports unexpectedly rose in April aided by stronger shipments to South East Asia. In the coming months, however, the Covid-19 pandemic's damage to global demand would assert itself. Imports fell in the month of April. Exports rose 3.5% in dollar terms in April from a year earlier, while imports dropped 14.2%. The trade surplus was $45.3 billion in April.

An important battle between China and the US is fought in the currency market. Rather than a dollar-centric world, we could see a bipolar world, with China establishing some form of financial hegemony over Asia. This is a hidden agenda of China's Belt and Road Initiative.

For the time being, China is allowing the yuan to become weaker against the USD to make China more competitive, and make life harder for U.S. exporters. China plays the currency game from Hong Kong and the USD is supreme there. While the U.S. doesn't directly control Hong Kong's status as a financial centre, Washington has demonstrated its extensive reach over the dollar system, with penalties against Korean, French and Lebanese financiers for dealing with sanctioned parties. Putting the ability of Chinese banks to conduct dollar-denominated activities at risk would be deleterious to China's ability to operate financially overseas, posing a challenge for the largely dollar-denominated Belt and Road global infrastructure initiative. Chinese determination that Hong Kong is no longer autonomous could mark the beginning of a squeeze on China's international financial operations, for which Beijing has no equivalent ability to retaliate.

Korea: Composite Index



The Federal Reserve has signed liquidity swap with 14 central banks. The list has natural U.S. allies such as Mexico, Brazil, Australia, New Zealand, Singapore and South Korea. China and Russia are not included in this list. The attempt is to isolate China.

The offshore yuan steadied near a record low of 7.15, after China signalled with a stronger-than-expected fixing that it wants to avoid rapid depreciation.

	18	**19**	**20**	**21**	**22**
GDP (%p.a.)	6.6	6.1	0.0	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

South Korea eased social restrictions and shifted to "everyday life quarantine" in the month of May after the number of daily new cases of COVID-19 fell to single digits, with the number of domestic infections sometimes nearing zero.

The government is struggling to boost domestic demand by aggressively pouring taxpayer money into the retail services and household consumption sectors, the nation's GDP growth depends heavily on export performance. We are maintaining our forecast for South Korea's GDP to contract one percent as the Covid-19 impact plays out in full on international trade. South Korea is preparing for a third supplementary budget as April exports suffered the worst slump in 11 years while jobs vanished at the fastest pace since 1999.

The Bank of Korea (BOK) expects the country's economy to contract 0.2% in 2020, which would be the first contraction since 1998 in the wake of the Asian financial crisis. The Bank expects the Korean economy to rebound 3.1% in 2021. The South Korean economy grew 1.3% year-on-year in the first quarter of 2020 compared to a 2.3% expansion in the previous period. But, GDP growth in the first quarter fell 1.4% from the previous three months, the lowest in more than 11 years.

The Bank has cut the key rates by 25 basis points to a record 0.5%, working in tandem with the government to extend liquidity to businesses hit by the coronavirus pandemic. Success in containing Covid-19 hasn't ended a growth slowdown. Exports are plunging and consumers remain wary of travel or shopping. The BOK had previously pledged unlimited liquidity through June via repurchase agreements and began lending to securities firms for the first time in its 70-year history. The BOK will accelerate outright purchases of government bonds to soak up the public debt issuance needed to cover the cost of the third supplementary budget. This would be a 'stealth' quantitative easing, that is sustained BOK purchases of government bonds without a formal announcement. South Korea joins the United States, Australia, UK and New Zealand in bond-buying operations to nurse the economy through the pandemic.

Exports in April plunged 24.3% on year and the statistic of May will match April's slide. Double-digit drops will last for at least a couple more months. The auto sector was among the worst hit.

Optimism over South Korea's relatively successful containment of Covid-19 has sent its stock benchmark to its 100-day moving average for the first time since the health crisis hit global financial markets. The Kospi index has recovered 37% from a low in March and is hovering around the key resistance of 100-day moving average.

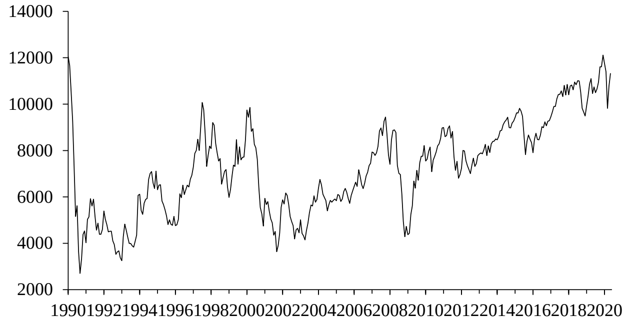
	18	**19**	**20**	**21**	**22**
GDP (%p.a.)	2.7	1.8	-1.0	2.0	2.2
Inflation (%p.a.)	1.5	0.4	-0.5	0.2	1.2
Current A/c(US$ bill.)	86.0	80.0	68.0	70.0	70.0
Won/$(nom.)	1130	1200	1230	1260	1260

Taiwan

Taiwan implemented epidemic prevention measures early, which ensured manufacturing activities have not been disrupted. Therefore, Taiwan may be able to escape contraction even though the coronavirus pandemic has hurt domestic consumption and the job market. Strong global demand for electronics may be able to compensate the blow for the trade-reliant island.

Gross domestic product (GDP) rose by 1.59% in the first quarter of 2020 from a year earlier. The impact of the pandemic will be known from the second quarter figures. The government has said the pandemic has hit the island's consumption, especially the services sector and tourism, but global demand for electronics helped offset some of the impact due to the growing need for telecommuting as more people work from home to reduce the risk of infections. The government has also revised its inflation estimate for 2020 to -0.32% from 0.62%.

Taiwan: Weighted TAIEX Price Index



Taiwan's merchandise and services exports are expected to decline by 3% in 2020. Taiwan's exports for April stood at US$25.2 billion, down 1.3% from a year earlier and imports fell 9.9% from a year earlier to US$23 billion, with a trade surplus of US$2.2 billion.

In the first four months of this year, Taiwan's exports rose 2.4% year-on-year to US$103.9 billion, while imports grew 2.7% to US$92.1 billion, with a trade surplus of US$11.8 billion. There is marginal increase in trade surplus from a year earlier.

Taiwan's success in containing the virus outbreak and keeping the economy on an even keel has kept the currency strong. The Taiwan dollar has climbed about 0.5% in 2020, the best performing currency in Asia compared to 5% drop in the South Korean won.

Taiwan Semiconductor is planning to build a multibillion-dollar chip plant in Arizona to ensure supply chain security. TSMC has negotiated with the US government to manufacture semiconductors and produce sensitive components domestically for national security reasons. However, America's trade war with Beijing could undermine local firms if they must choose sides. China hasn't eased up pressure during the pandemic.

The approval rating for Taiwan's President Tsai Ing-wen reached its highest level since she took office in May 2016, as she was sworn-in for a second term and called upon China, who has taken an aggressive posture in international disputes to assert its dominance, to "find a way to coexist."

	18	**19**	**20**	**21**	**22**
GDP (%p.a.)	2.6	2.0	-1.0	2.0	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	30.0	30.5	31.0

Brazil

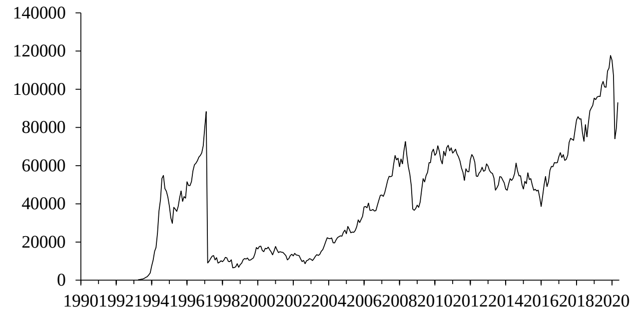
Brazil's response to Covid-19 at best can be described as chaotic and, hence, the country is suffering more than its competitors in the short-term. Scars of this pandemic will be felt over a long time as well. Other than the U.S., Brazil is the only country where more than 1,000 people are regularly dying each day from the pandemic.

The government lowered its 2020 economic outlook and expects GDP to contract 4.7% in 2020. According to economic policy secretary Adolfo Sachsida, -4.7% decline in GDP would be the biggest annual fall since records began in 1900. The disruption to production and consumption are profound and we continue to maintain our forecast of contraction of 5.5% and no growth in 2020 and 2021 respectively. A substantial part of GDP, lost during isolation, will not be recovered and the country will take long time to return to its pre-crisis levels of December 2019. At present economic activity of Brazil is at the same level as 2012. The contraction in economic activity has been far worse in the second quarter, as the outbreak of pandemic and public quarantine measures taken by provincial governments only gained steam in the second half of March.

Brazil's 12-month inflation slowed in the month through mid-May as social distancing implemented to control the spread of the coronavirus and lower prices for fuel and airfare.

Consumer prices fell 0.59% in the period from April 16 through May 15, the biggest monthly deflation since Brazil introduced the real as its currency in 1994 according to the country's Institute of Geography and Statistics (IBGE). On an annual basis, consumer prices rose 1.96% in the 12 months through mid-May, compared to 2.92% in the 12 months through mid-April. We forecast one percent inflation in 2020 and 2021 as well. The central bank has cut its benchmark lending rate to a record low of 3% in May, and another cut is expected in its meeting in June.

Brazil: Bovespa



As the supply chains are shifting and new sources are being developed, Brazil is making waves in the commodities world with reduced iron ore shipments and increase in agribusiness exports. A sharp increase in iron-ore prices by Brazil, prevented a worsening of the trade dispute between China and Australia, because of Australia's importance as a supplier of iron ore to China's steel mills, which have returned to full production. Most of Brazilian beef found home in China.

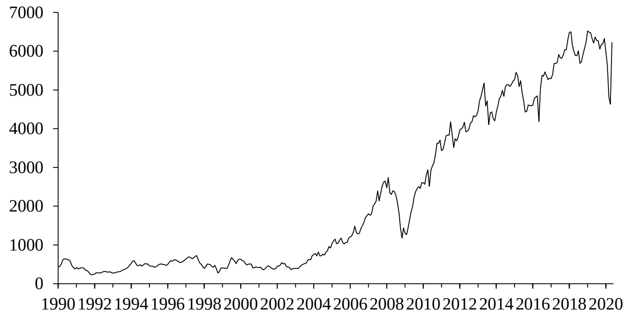
The dollar did not pierce 6.00 reais as reopening of economies going to improve trade volumes and domestic political tensions have ebbed. This was followed by central bank president Roberto Campos Neto's reaffirmation that the bank stands ready to dip into its large pool of foreign exchange reserves and would continue intervening in the market if needed. A flattening of yield curve between short- and long-term rates is a sign of improving investor sentiment and easier financial conditions.

	18	**19**	**20**	**21**	**22**
GDP (%p.a.)	1.1	0.8	-5.5	0.0	2.5
Inflation (%p.a.)	3.8	4.3	1.0	1.0	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

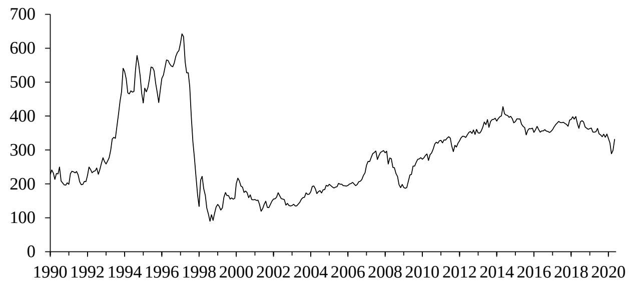
Other Emerging Markets

Hong Kong: FT-Actuaries

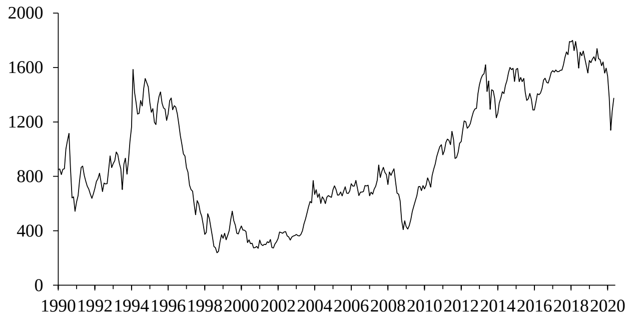
Indonesia: Jakarta Composite



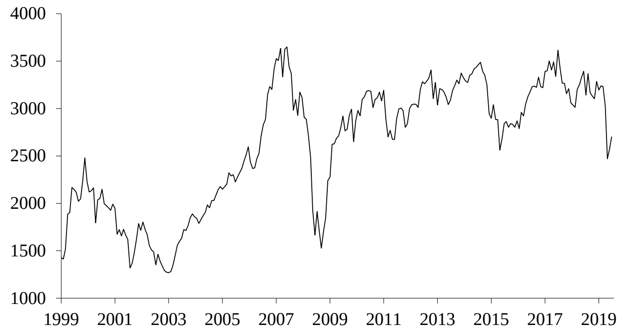
Malaysia: FT-Actuaries (US$ Index)



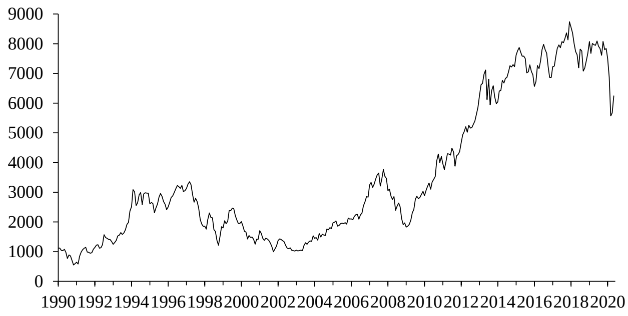
Thailand: Composite Index



Singapore: Straits Times Index

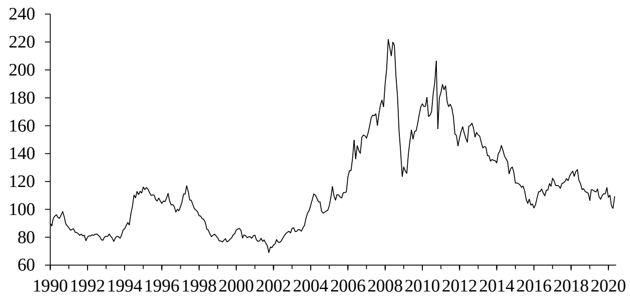


Philippines: Manila Composite

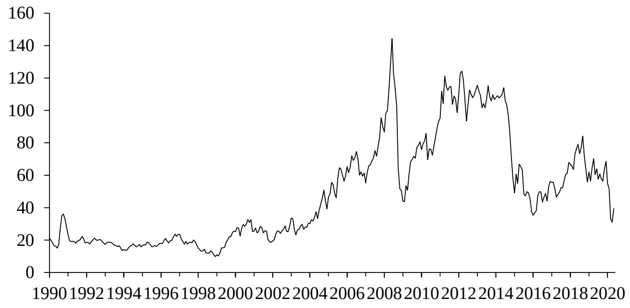


COMMODITY MARKETS

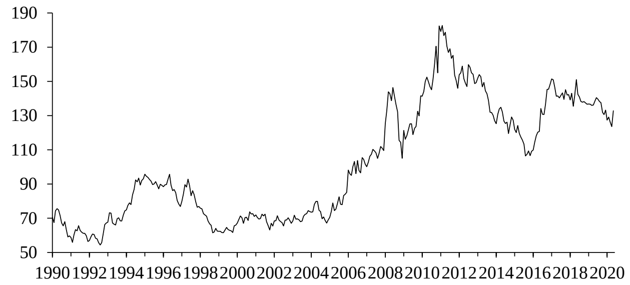
Commodity Price Index (Dollar)
(Economist, 2015 = 100)



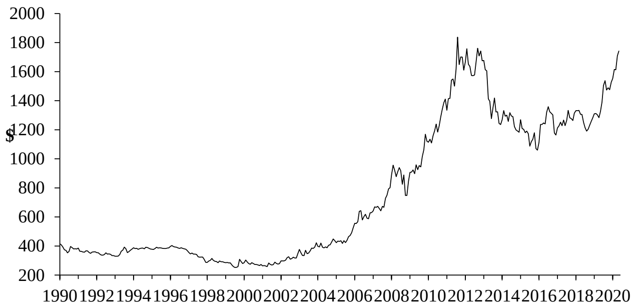
Oil Price: North Sea Brent (in Dollars)



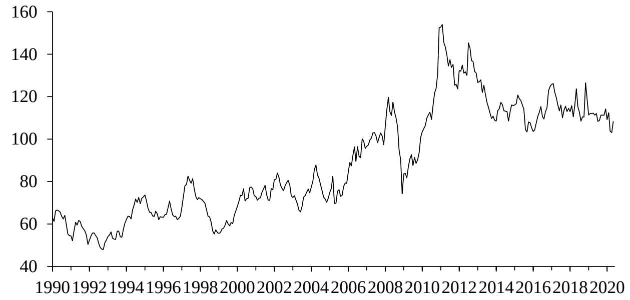
Commodity Price Index (Sterling)
(Economist, 2015 = 100)



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