LIVERPOOL INVESTMENT LETTER

May 2019

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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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HOW TO DIG THE WORLD ECONOMY OUT OF THE GREAT RECESSION CREATED BY CENTRAL BANK MISTAKES?

The state of the world economy can only be described as weak and lacking in confidence. Interest rates on safe assets like government bonds range from zero on short-dated paper to a maximum of around 2% on very long term bonds, but close to zero on most western countries' long term bonds, with the US around 2% as the only exception. In Japan and the euro-zone all rates are close to zero, while rates paid to banks on their central bank balances are actually negative. On risky assets rates are generally positive, reflecting the risk premium; however, large corporations enjoying dominant market positions are able to access capital at close to zero cost which is heavily distorting market competition. As for governments, they can raise capital at negative real interest rates, implying that they are being paid to borrow; they can even print money to finance themselves at negative real interest rates.

These facts signal desperate times are with us. Monetary policy is a busted flush, with its latest tool, QE, actually damaging the situation. Can nothing be done?

The clue to what can be done is to be found in that last sentence of the earlier paragraph: that people will pay governments to borrow and spend. This mirrors the desperate plight of the private sector, unwilling to borrow enough at such low interest rates that the economy would surge and raise the rate of return to normal.

Because of the bailouts of banks and related financial costs, western governments have historically high debt/GDP ratios. Yet because of QE, as much as a third of this debt is actually simply money — the debts have been bought by central banks in return for printed money. In normal times we would worry that all this printed money would cause inflation; and we would be urging the central banks to sell their bonds and retrieve the money. Yet plainly we are not in normal times.

It is as if people were going around too emaciated to eat large stores of accumulated food that in normal times we would worry might cause obesity. The economy is too emaciated to use the huge supplies of money that have been printed.

Abnormal times require abnormal solutions. Fortunately, all western countries have governments that can borrow, spend and cut taxes. As we have seen, they can do this at negative cost in debt interest; this means that future taxpayers will gain from the negative real interest cost on the debt, effectively only paying back less than the real value of the debt. From society's viewpoint, provided the government can get a social return on its spending or its tax cuts that is positive, then this borrowing pays. Future taxpayers will have more income with which to pay off less than 100% of the debt. This means that there is no argument to be had with future taxpayers. Meanwhile, current taxpayers will plainly be delighted if the government would take this action, bringing immediate direct benefits, but more importantly restoring the economy to functionality and confidence.

Table 1: Summary of Forecast

	2016	2017	2018	2019	2020	2021	2022
GDP Growth[1]	1.9	1.8	1.5	1.9	2.0	2.1	2.3
Inflation CPI	1.1	2.6	2.4	2.2	2.1	2.0	2.0
Wage Growth	2.4	2.9	2.7	2.8	2.9	2.8	2.8
Unemployment (Mill.)[2]	0.8	0.8	0.8	0.8	0.7	0.7	0.6
Exchange Rate[3]	82.1	77.4	78.5	76.6	76.1	76.3	75.6
3 Month Interest Rate	0.5	0.4	0.8	1.3	2.4	3.1	3.1
5 Year Interest Rate	0.7	0.6	1.2	2.5	3.3	3.8	3.8
Current Balance (£bn)	-90.9	-66.3	-62.9	-48.8	-41.2	-30.6	-18.4
PSBR (£bn)	45.1	39.4	30.9	22.3	6.9	-6.9	-18.5

[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 = 1

For those who feel concerned about adding to public debt ratios for fears of insolvency, this arithmetic provides consolation. The truth is that if such fiscal policies work and push up interest rates once more to the normal real interest rates of the past, then any current rise in debt ratios will actually be reversed. Here is a simple arithmetical example of what can happen. Suppose a country starts off with a debt ratio of 100%, of which say a third is very long term debt, say perpetuities, with long term interest rates at 1% p.a. Now assume it spends 10% of GDP borrowing on more very long term bonds to spend and cut taxes; and that this in time drives interest rates up to 3%. Its new stock of long term bonds will go up at first to 43% of GDP. But once interest rates rise to 3%, its value will fall by a third to 14% of GDP; this is because it is now being discounted by a rate three times higher than the current 1% (the value of a perpetuity is the coupon paid each year divided by the rate of interest). It therefore strongly pays governments with long term debts to get long term interest rates back up to normal, in the interests of solvency alone.

This example also shows that fiscal expansionism in these troubled times will bring its own termination and so can be thought of as self-limiting. Once interest rates get back up to normal, the normal solvency calculus will apply. New borrowing will once again be expensive in real terms; and potential movements in interest rates downwards will threaten yet higher future debt values and should induce the usual caution over fiscal deficits.

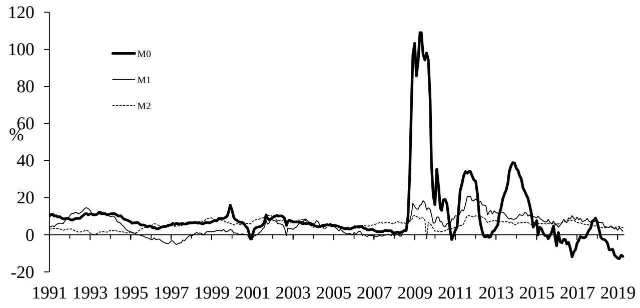
It is important to realise that the case I am making here for fiscal expansion is strictly exceptional, to be ended once normality returns. It echoes Hayek's response to Keynes' work, 'The general theory of employment, interest and money'; Hayek agreed that, in the very special circumstances of a stubborn depression, fiscal stimulus could be justified but he said there was not a 'general' case for fiscal 'activism', which Keynes was arguing for, on the grounds that the unaided economy might repeatedly fall into this state.

The same is true here. Usually, the economy works well without fiscal intervention. Any needs of stabilisation can be supplied by monetary policy. What has happened however is that monetary policy has laid waste the economy's usual robustness by dreadful mistakes, leaving only fiscal policy as the tool for the restoration of its robustness that we desperately need.

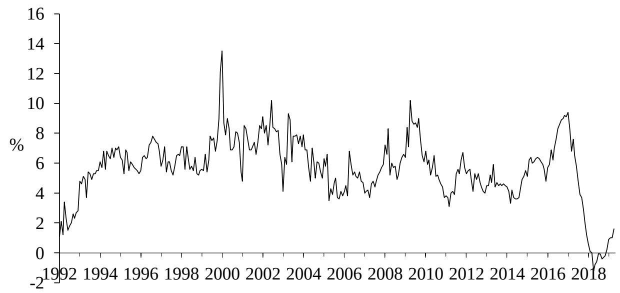
We leave on one side here the details of what spending, what tax cuts and how great in total borrowing should be. We would simply commend President Trump's tax cuts and urge Congress to agree with Trump a large infrastructure programme. In the euro-zone I would urge a general liberalisation of fiscal policy, backed up by an ECB pledge to buy the bonds of any government facing market pushback; in particular I would urge the German government to abandon its doctrinal opposition to fiscal deficits until the Great Recession is over. In the UK, the excuse of Brexit is there for a radical new direction in policy, to be backed up by fiscal liberalism.

What is clear is that capitalist governments have here a good opportunity to demonstrate their power to enhance living standards by well-targeted spending and tax cuts that raise spending power and strengthen corporate competitiveness.

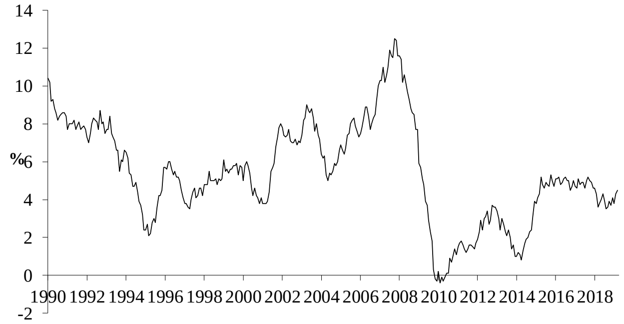
U.S.: Growth in Monetary Aggregates (Yr - on - Yr)



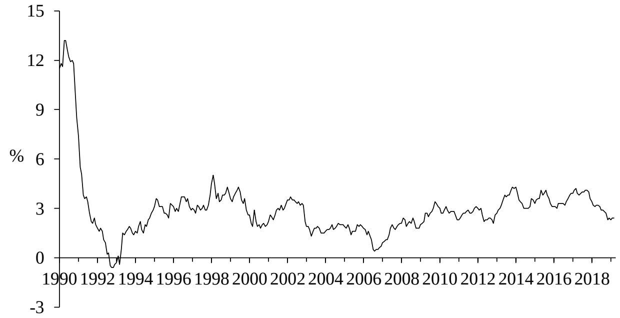
UK: Notes and Coins in Circulation Growth



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

Kuroda Said Band of Japan Will Not Scale Back Accommodative Policy

At the end of last month, Bank of Japan (BOJ) Governor Haruhiko Kuroda said that the central bank was ready to expand monetary stimulus if needed, brushing aside the view the BOJ had little ammunition left to fight the next economic downturn. Kuroda said it was true major central banks may have less room to cut interest rates because they are already very low after years of aggressive monetary easing. “But that doesn’t mean central banks have no ammunition left to ease further in response to financial developments,” Kuroda told a news conference after the Group of 20 finance leaders’ meeting. “The BOJ also has room to ease monetary policy further if doing so becomes necessary,” he said.

The move puts the BOJ in line with the Federal Reserve and the European Central Bank, which have been forced to pause in their efforts to scale back crisis-mode policies due to heightening uncertainty over the global economic outlook. But the BOJ has failed to fire up inflation to its elusive 2% target despite years of money printing. It is now faced with the growing demerits of prolonged easing, such as the pain ultra-low rates inflict on financial institutions’ profits. Kuroda also said he has no plans now to change the central bank’s forward guidance, or the message it sends to signal its policy intentions to financial markets. “Our forward guidance was introduced to clarify our stance of patiently maintaining powerful monetary easing,” Kuroda said.

Under a policy dubbed yield curve control, the BOJ guides short-term interest rates at minus 0.1% and the long-term yield around 0%. In July last year, it introduced a forward guidance pledge to keep interest rates very low for an “extended period”. Kuroda said the current forward guidance was appropriate because it struck the right balance between the need to make the commitment effective and to leave flexibility for future policy decisions. He also said there was no need to modify a loose pledge the BOJ makes to buy government bonds so that the balance of its holdings increase at an annual pace of roughly ¥80 trillion.

In fresh projections released at the end of last month, the BOJ slightly cut its economic growth and inflation forecasts. It now sees growth of 0.9% in the next fiscal year beginning in April 2020, down from 1.0% projected in January but still above the expectations seen in a recent Reuters poll of economists. It also forecast consumer inflation would hit 1.6% the following year, conceding that price growth will fall short of its target for at least three more years. Core inflation in March was 0.8%. In addition, in the quarterly outlook, the BOJ stuck to its view that the economy will continue to expand moderately as a trend. But it said it would be vigilant to various uncertainties such as the effect of a sales tax hike scheduled for October and overseas economic developments.

Years of heavy money printing have failed to fire up inflation to the BOJ’s target and left it with little ammunition to fight the next recession. Prolonged easing has also added to stresses on regional banks, already facing slumping profits due to a greying population and an exodus of borrowers to big cities. Norio Miyagawa, senior economist at Mizuho Securities, said the fact the BOJ did not ramp up asset purchases showed it was aware of the growing side effects of prolonged easing. “The BOJ is worried that consumer prices may not rise even after risks posed by overseas economies recede,” he said. “It’s saying it will continue to keep policy easy but there are limits to what more it can do, both in terms of duration and the kind of tools available.”

However, Japan’s problems are not just that monetary policy is ineffective, but rather that they are rooted in non-monetary phenomena. Japan needs to address the problems of economic slowdown and the consequent low inflation in other policy areas. Japan continues to face structural issues that monetary policy alone cannot fix. For instance, its exports engine has stalled since the 1990s, but domestic consumption, while strong, cannot make up for weaker exports. Also, its ageing population amplifies the high savings culture that has been fuelled by uncertainty about the future of the economy. Most importantly, while Japan’s economy has moderately expanded in the past six years under Abenomics, as Abe’s economic policies are known, the government has accelerated structural reforms to counter the greying population and embrace the entry of women, the elderly and foreign nationals into the country’s labour market. For instance, as suggested by the recent OECD country report, Japan should get rid of those practices, such as the mandatory retirement age, seniority-based wages and lifetime employment, that discourage women and seniors from working. “Japan needs to shift to more flexible employment, more flexible wage systems based on performance rather than age,” said OECD Secretary-General Angel Gurria. “And then, it will be possible to better utilize human capital.” As for its aging population, the report says it is important to shift long-term care out of hospitals and to use more generic drugs to curb Japan’s ballooning health care spending. The share of generic drugs in Japan’s pharmaceuticals market is around 40%, as opposed to more than 50% on average in the OECD and over 80% in the US.

In short, with monetary stimulus having failed and with no prospect of it ending the zero lower bound state of the economy, Japan needs to find other policies to ignite its stuttering economy.

MARKET DEVELOPMENTS

The world economy has a long way to go before recovery is threatened by lack of materials capacity. Its main problem is low interest rates. As these are dislodged by renewed growth, bond prices will fall but equities can accommodate the rising discount rate because of stronger growth.

Table 1: Market Developments

	Market Levels		Prediction for Apr/May 2020	
	Apr 10	May 3	Previous Letter	Current View
Share Indices				
UK (FT 100)	7422	7381	9812	9757
US (S&P 500)	2888	2940	3232	3290
Germany (DAX 30)	11906	12413	19561	20394
Japan (Tokyo New)	1608	1618	2053	2066
Bond Yields (government)				
UK	1.08	1.12	3.00	3.00
US	2.49	2.51	3.80	3.80
Germany	−0.10	−0.09	1.00	1.00
Japan	−0.05	−0.07	0.10	0.10
UK Index Linked	−1.88	−1.83	1.00	1.00
Exchange Rates				
UK ($ per £)	1.31	1.31	1.32	1.32
UK (trade weighted)	79.34	79.86	76.1	76.1
US (trade weighted)	100.32	101.06	102.5	102.5
Euro per $	0.89	0.89	0.88	0.88
Euro per £	1.16	1.17	1.16	1.16
Japan (Yen per $)	110.94	111.25	112.5	112.5
Short Term Interest Rates (3-month deposits)				
UK	0.83	0.83	2.10	2.10
US	2.61	2.62	3.00	3.00
Euro	−0.34	−0.35	0.00	0.00
Japan	0.05	0.05	0.10	0.10

Table 2: Prospective Yields [1]

Equities: Contribution to £ yield of:

	Dividend Yield	Real Growth	Inflation	Changing Dividend Yield	Currency	Total
UK	3.60	2.0	2.2	28.00		35.80
US	1.99	1.9	2.1	7.90	−0.62	13.27
Germany	3.30	1.6	1.7	61.00	1.18	68.78
Japan	1.90	0.5	1.2	26.00	−1.75	27.85
UK indexed[2]	−1.69		2.2	5.00		5.38
Hong Kong[3]	2.60	5.6	2.1	−15.00	−0.62	−5.32
Malaysia	3.30	4.8	2.1	43.00	−0.62	52.58
Singapore	3.50	2.7	2.1	10.00	−0.62	17.68
India	1.40	8.0	2.1	23.00	−0.62	33.88
Korea	1.10	2.9	2.1	−21.00	−0.62	−15.52
Indonesia	2.20	5.4	2.1	26.00	−0.62	34.08
Taiwan	2.80	2.1	2.1	9.00	−0.62	15.38
Thailand	3.20	3.8	2.1	27.00	−0.62	35.48

Bonds: Contribution to £ yield of: −

	Redemption Yield	Changing Nominal Rates	Currency	Total
UK	1.12	−18.80		−17.68
US	2.51	−12.90	−0.62	−11.01
Germany	−0.09	−10.90	1.18	−9.81
Japan	−0.07	−1.70	−1.75	−3.52

Deposits: Contribution to £ yield of:

	Deposit Yield	Currency	Total
UK	0.83		0.83
US	2.62	−0.62	2.00
Euro	−0.35	1.18	0.83
Japan	0.05	−1.75	−1.70

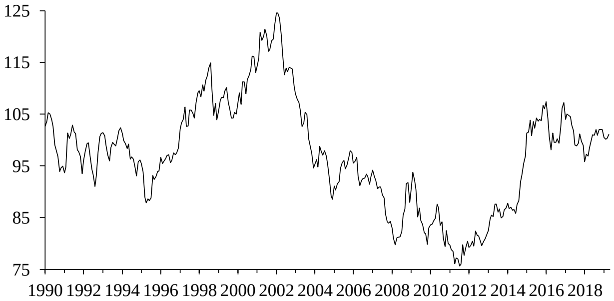
[1] Yields in terms of €s or $s can be computed by adjusting the £-based yields for the expected currency change.
[2] UK index linked bonds All Stocks
[3] Output based on China.

Table 3: Portfolio(%)

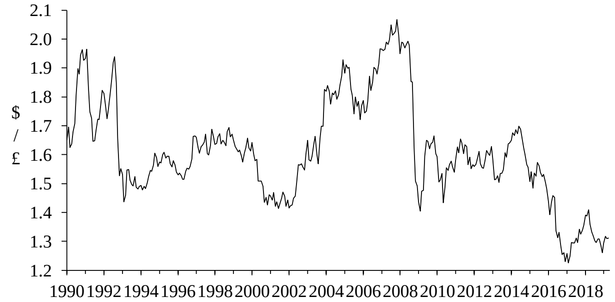
	Sterling Based Investor		Dollar Based Investor		Euro Based Investor	
	April Letter	Current View	April Letter	Current View	April Letter	Current View
UK Deposits (Cash)	5	5	5	5	1	1
US Deposits	-	-	-	-	-	-
Euro Deposits	-	-	-	-	-	-
Japanese Deposits	-	-	-	-	-	-
UK Bonds	-	-	-	-	-	-
US Bonds	-	-	-	-	-	-
German Bonds	-	-	-	-	-	-
Japanese Bonds	-	-	-	-	-	-
UK Shares	19	19	14	14	17	17
US Shares	14	14	19	19	16	16
German Shares	14	14	14	14	21	21
Japanese Shares	9	9	9	9	11	11
Hong Kong/Chinese Shares	4	4	4	4	4	4
Singaporean Shares	4	4	4	4	4	4
Indian Shares	4	4	4	4	4	4
Thai Shares	3	3	3	3	3	3
South Korean Shares	4	4	4	4	4	4
Taiwanese Shares	4	4	4	4	3	3
Brazilian Shares	4	4	4	4	3	3
Chilean Shares	4	4	4	4	3	3
Mexican Shares	4	4	4	4	3	3
Peruvian shares	4	4	4	4	3	3
Other:						
Index-linked bonds (UK)	-	-	-	-	-	-

INDICATORS AND MARKET ANALYSIS
FOREIGN EXCHANGE MARKETS

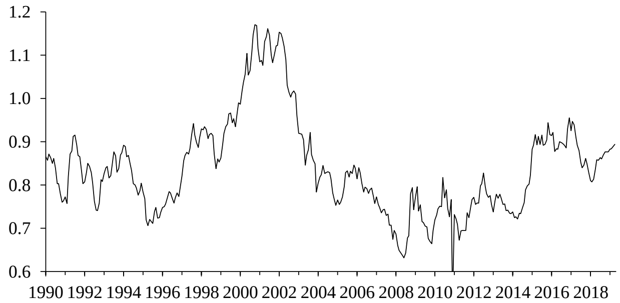
US : Trade Weighted Index
(Bank of England 1990 = 100)



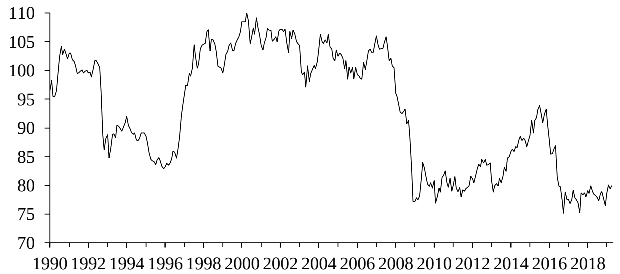
UK: Dollars Per Pound Sterling



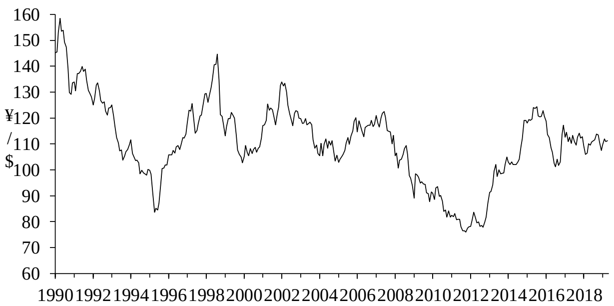
Euro per US dollar



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



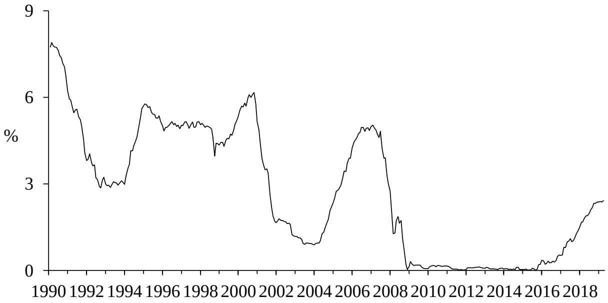
Japan : Yen Per U.S. Dollar



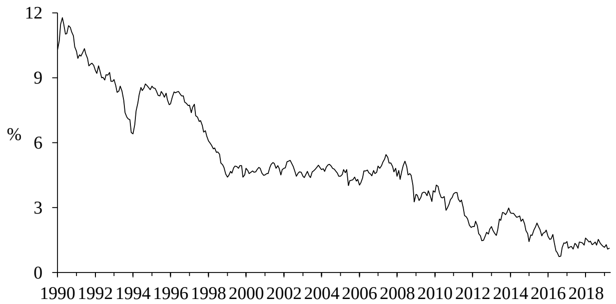
GOVERNMENT BOND MARKETS

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

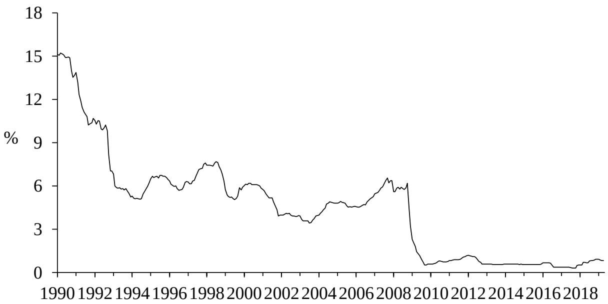
U.S. : 3-Month Treasury Bill



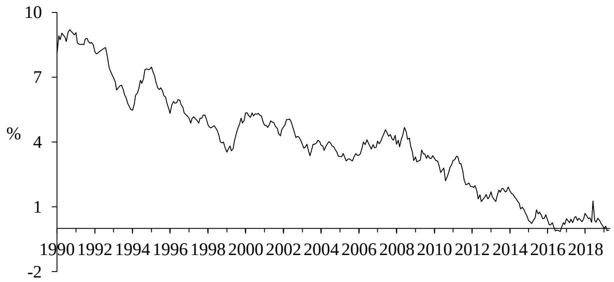
U.K.: Yield on Long-Term Government Bonds



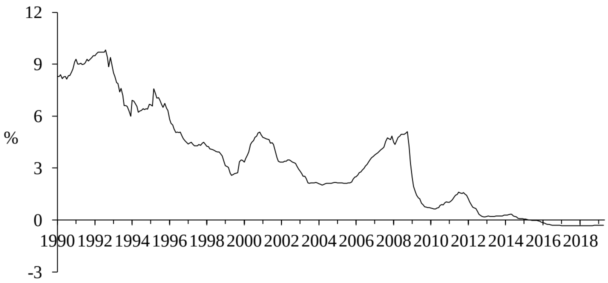
U.K. : 3-Month Certificate of Deposit Rate



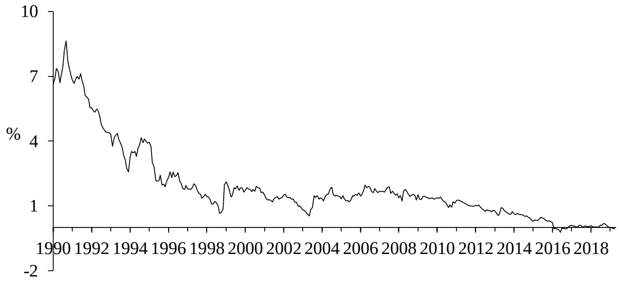
Germany: Yield on Public Authority Bonds



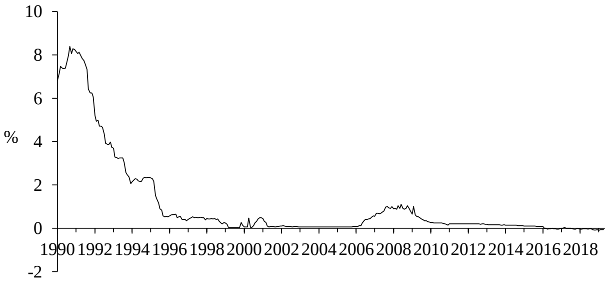
Germany : 3-Month Interbank Deposit Rate



Japan: Yield on Long-Term Government Bonds

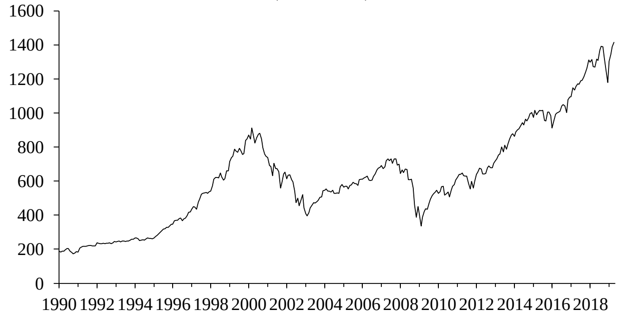


Japan : 3-Month Money Market Rate

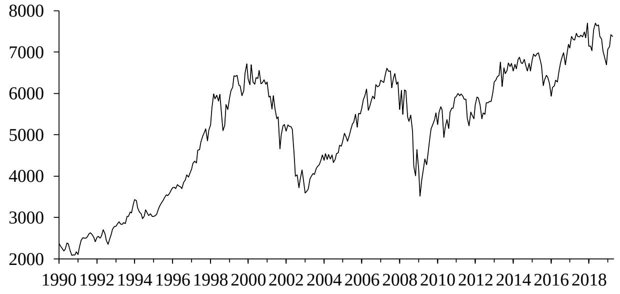


MAJOR EQUITY MARKETS

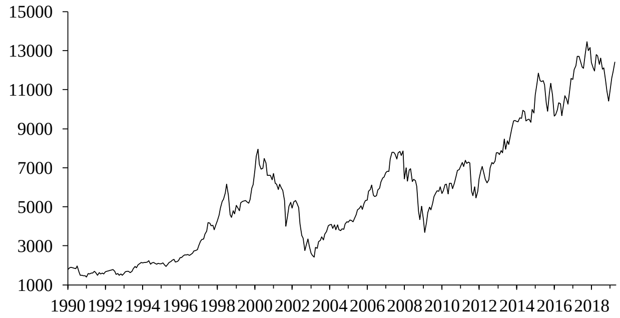
U.S. : S & P 400 Industrial
(1985=100)



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



Germany : DAX 30



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

EMERGING MARKETS

Anupam Rastogi

India

The Indian economy seems to have clocked 7% in 2018–19. We maintain our growth forecast of 7.3% in the fiscal year 2019–20, driven by continued investment, particularly private sector investment and improved export performance supported by resilient consumption. After 2019–20, we have trimmed our forecast as the GDP growth would depend on crucial land and labour reforms. Multilateral agencies like the IMF, World Bank and ADB expect growth to be above 7.5% in the medium term as India is able to implement structural reforms and eases infrastructure bottlenecks.

A sustained decline in food prices and the softening of oil prices resulted in sub 4% inflation in the last fiscal year and may remain contained around 4% in the current fiscal year. The RBI reduced the policy rate by 25 basis points in February 2019 and may go for another 25 basis points cut if the monsoon turns out to be normal and crude oil prices do not cross USD 80 to a barrel to bolster domestic investment.

Food price inflation at the wholesale level appears to be picking up steam in India, with the WPI food index rising from 3.3% to 3.9% in April.

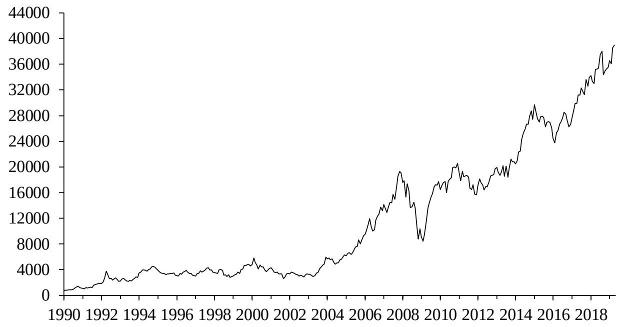
Despite exports and imports growing at the same rate of 9%, India's trade deficit reached a record high of $176 billion in 2018–19. Exports in 2018–19 were $331 billion compared to $303 billion in 2017–18. Imports soared to $507 billion in 2018–19. The trade deficit figures may not rise even when India abides by the U.S. rules on trade with Iran. With a slowdown in India's domestic demand slowing its core imports, the current account deficit is set to narrow in 2019.

The rupee gained strength against the US dollar and recorded a higher-than-average appreciation rate in March as foreign investors bought Indian equity.

India is in the midst of general election and the six week long exercise would throw its result on May 23rd. All will know whether India has given Mr. Modi, the incumbent Prime Minister, another chance to govern the country for another five years or not. Like all political parties, the nationalist leaning BJP party is supremely confident that it would get the mandate. It is time to look back and see critically what they have achieved and what they have missed.

The jury is still out on their most controversial economic decision of demonetization. Result shows, as named by THE IMF, it was only an exercise in remonetisation. We think that more than anything else, it was an exercise to tell businesses to keep account books and pay taxes. Without this, the biggest fiscal reform i.e. introduction of Goods and Services

India: BSE Sensitive



Tax (GST) would have failed. The time was most appropriate as the economy was at its peak and general elections were 2½ years away in November 2016, soon after the Deepavali, when most traders gross 50% of their revenue. The implementation of GST saw tweaking of rates many times and gross GST collections remained below Rs 100,000 crore (USD 1.4 billion) per month. It seems that it has settled now, as March 2019 collection was ~Rs 106,000 crore and April 2019 collection was ~Rs113,000 crore. The rising tax revenue provides the government money to spend on infrastructure now.

Credit markets have also strengthened with expedited insolvency procedures with a new bankruptcy code.

With inflation well under control, the shortage of jobs and rural distress are the election issues. Rural distress is mostly to do with almost zero inflation of agriculture produce leading to no rise in income for rural folks in the last two years. Mr. Modi says with another term he can address two impediments to luring more manufacturers: employment laws that make it nearly impossible to fire full-time workers, and real-estate laws that impede the accrual of land to build large-scale factories. Neither of these initiatives were allowed by opposition in Mr. Modi's first term.

In terms of key indicators, in the last five years, there are many successes and a few failures. Economic growth accelerated during Mr. Modi's premiership and India's gross domestic product is on track to be the fifth-largest in the world in the next couple of years. Manufacturing Companies did not invest much in new capacities as the introduction of Insolvency and Bankruptcy Code made them consolidate their balance sheet first before taking any more debt. As far as corruption is concerned, we saw fewer scandals under his watch and an improved ranking for India in Transparency International's corruption index.

Finally, lives have improved in the last five years if one measures it in terms of some consumption indicators that suggest that the growing middle class has more freedom and money to spend on family trips, motorcycles, smartphone and data consumption.

In terms of jobs creation, data is imprecise and both, government and private entities, count only jobs created in formal sector whereas 75% to 80% of jobs in India are in informal sector. He has given handouts to the poor and middle class also provided there is no apparent leakage. But, critiques say that doles have not reached the most deserving lot. Election results would tell whether enough jobs have been created in the economy or not and doles reached to the poor or not, because both may not find a place in the economic statistics but they are voters and vote enthusiastically.

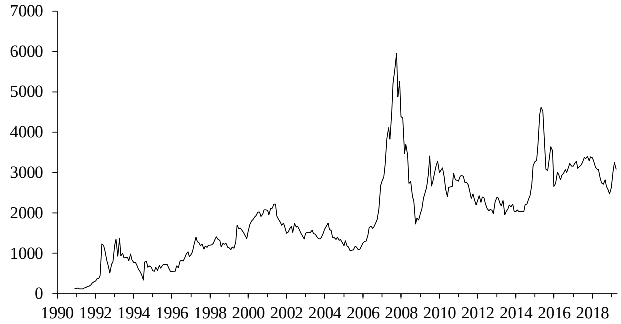
	18–19	19–20	20–21	21–22	22–23
GDP (%p.a.)	7.0	7.3	7.6	7.6	7.6
WPI (%p.a.)	3.9	3.9	4.0	4.0	4.0
Current A/c(US$ bill.)	-70.0	-64.0	-64.0	-65.0	-65.0
Rs./$(nom.)	79.5	69.5	71.0	72.0	72.5

China

The Chinese government is able to manage growth figures well and, hence, some inconsistencies in economic data may be apparent. A 6.4% expansion in China's economy during the first quarter is in line with the last year's growth rate and belied the market expectations that the Sino-US spat on trade would decelerate the economy. The clampdowns on riskier lending and pollution that deterred fresh investment, and the U.S. and Chinese tariffs on each other's goods would eventually see the economy growing 6% in 2019, which is at the lower end of Beijing's 6–6.5% target range. The government flooded the market with debt, but it isn't flowing to areas such as infrastructure spending that underpin real economic gains. China's consumers remain stretched, and they are wary of buying cars and smartphones or ordering takeout meals. Beijing's recent stimulus is filtering into real estate, damaging the country's long-term prospects. We believe that 2019 being a politically sensitive year in China, policy makers are promoting economic expansion and putting aside restructuring needed to keep debt under control.

Chinese authorities began 2019 by cutting taxes, pledging lending to small companies and ordering municipal governments to fund infrastructure construction, actions taken in response to a rapid economic slowdown late last year that frightened many business owners. We think that managing growth rate has three reasons. First, economic buoyancy could limit the barbs from President Trump, who has said China's economy is so weak that Beijing has great incentive to secure a trade deal. Second, China's sustained economic growth optically allowed President Xi Jinping to convince the visiting heads of state that Beijing has the wherewithal to push forward its global infrastructure program, the Belt and Road Initiative. Third, China will celebrate in October the 70th year of rule by the Communist Party.

China: SSE Composite Index



The central bank has cut banks' reserve requirement ratios (RRR) five times since early last year to free up more funds for lending. It has also pressed banks to keep lending to struggling firms despite the risk of more bad loans, and has guided interbank interest rates lower to reduce financing costs. In its fight to maintain the GDP growth, we may see three more RRR cuts of 50 basis points each in the three quarters of 2019.

Consumer and producer prices both accelerated last month, lifted by hefty increases in pork prices and higher oil prices. March's consumer price index rose 2.3% from a year earlier, compared with a 1.5% gain in February. The producer price index rose 0.4% in March from a year ago, compared with a 0.1% on-year increase in February. The increase in the consumer price index was mainly driven by surging vegetable prices, after cold rainy weather, and rebounding pork prices due to supply disruptions caused by African swine fever that forced farmers to cull hundreds of thousands of pigs. Pork prices in March rose 5.1% from a year ago, while fresh vegetable prices surged 16.2%.

American and Chinese officials met in the last week of April to give a final push to settle a year-long dispute over bilateral trade. As part of a prospective deal on trade, the U.S. and China have agreed to measures that will deter Beijing from currency manipulation by requiring greater disclosure of economic actions. The deal could also include penalties for China if it manipulates its currency to increase exports. In the first quarter, China's exports increased 1.4% on year while its growth in the same period last year was 14%. Dollar-denominated imports were down 7.6% in March from a year ago. Imports fell 4.8% on year, compared with an 18.9% increase in the first quarter of 2018. The dollar-yuan rate remains around 6.8 with a bias of moving down a few basis points.

The U.S.-China trade dispute is entering a critical stage, President Xi Jinping has pledged fresh backing for the liberalization of his country's economy in ways the Trump administration has demanded. While addressing the gathering of the Belt and Road Initiative, Mr. Xi said China would increase imports, cut production overcapacity, protect intellectual property, expand imports, hold its currency stable and allow foreign companies to operate in more sectors. He said China's government would eliminate "unjustified" market-distorting policies, including industrial subsidies.

He promised that a more open China will fully integrate itself into the world.

To the gathering, Mr. Xi outlined a more expansive definition of Belt and Road, stretching it beyond infrastructure-building into areas including international cooperation in education and media. Mr. Xi also called for more multilateral and commercial funding for infrastructure projects, a contrast to his pledges of Chinese financing in a similar speech two years ago. The Belt and Road Initiative has pushed China's massive construction, telecommunications and shipping companies to go global as a cooling domestic economy reduces business at home. But the recipient countries have found that the projects are capital intensive, involves huge corruption and enmeshing the countries into a debt trap.

Therefore, Mr. Xi was forced to concede this year that China would introduce well-recognised rules and standards in its Belt and Road projects to ensure they are of high-standard, beneficial to people and sustainable. He made it clear that "we will make sure that corporates follow international rules and standards during construction, operation, merchandise and tender and respect laws and regulations in different countries."

	18	19	20	21	22
GDP (%p.a.)	6.6	6.0	5.6	5.4	5.2
Inflation (%p.a.)	2.2	2.3	2.3	2.0	1.8
Trade Balance(US$ bill.)	300	280	260	240	200
Rmb/$(nom.)	6.8	6.8	6.8	6.9	6.9

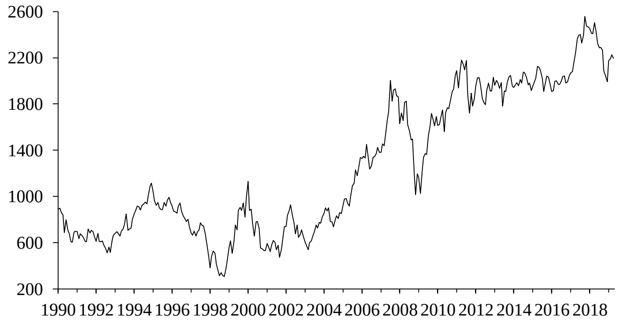
South Korea

South Korea's first-quarter gross domestic product declined a seasonally adjusted 0.3% from October–December. The business sentiment is clearly bad. The shrinking of GDP was largely due to reduced government spending and sluggish capital investment and exports. The government submitted the supplementary budget bill worth 6.7 trillion won (5.8 billion U.S. dollars) in April to the National Assembly to push economy. But, the passage of the extra budget plan was forecast to be delayed on the ongoing wrangling in the parliament over the amendment of an election law that can be enforced in the parliamentary election in April 2020.

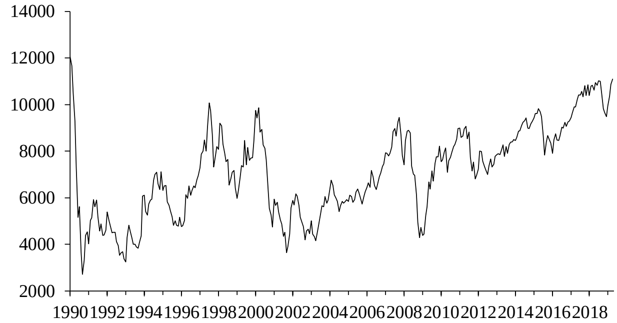
The inflation rate is likely to remain far below the central bank's 2% target and clock 1.1% for 2019. The headline inflation slowed to its weakest pace since July 2016 in March on declines in food prices and weaker service costs growth, adding pressure for policymakers to shift to an easing stance and ramp up stimulus. In April, however, consumer prices rose 0.6% year on year. The Bank of Korea may cut interest rates for the first time in three years. However, the central bank maintains that the bank is not in a hurry to ease the monetary policy.

South Korea's exports contracted less in April than in the previous month, but the fifth straight of month of shrinkage,

Korea: Composite Index



Taiwan: Weighted TAIEX Price Index



with memory chip shipments down 13.5%, could hurt chances of the trade-reliant economy to grow more than 2% in 2019. April exports fell 2.0% from a year earlier compared to March's 8.2% drop. South Korea is suffering collateral impact from the China-US tariff war, and falling semiconductor prices, which are now in a cyclical downturn.

Import increased 2.4% over the year to 44.74 billion dollars in April, sending the trade surplus to 4.12 billion dollars. The trade balance stayed in black for 87 months in a row. Imports fell 3.3% on a decline in imports of energy goods, including crude oil and natural gas, and machinery and equipment.

South Korea's won fell to its weakest in more than two years. The won has weakened by 4.2%, the most so far this year among Asian currencies.

	18	19	20	21	22
GDP (%p.a.)	2.7	2.0	2.5	2.7	2.7
Inflation (%p.a.)	1.5	1.1	1.5	1.5	1.5
Current A/c(US$ bill.)	86.0	80.0	78.0	70.0	70.0
Won/$(nom.)	1130	1090	1160	1160	1160

Taiwan

Notwithstanding the risk the island economy is facing, we maintain the GDP growth to be 2.1% for 2019 and growing 2.4% in 2020 and 2021. We expect an increase in domestic demand to offset the impact of slowing global demand in 2019. The International Monetary Fund forecast that Taiwan's gross domestic product will grow 2.5% in 2019 and 2020, in its latest World Economic Outlook report.

We maintain the consumer prices in Taiwan to grow 1.0% in 2019 and 2020.

Taiwan's imports of capital equipment rose 15.4% in the first quarter from a year earlier, while imports of semiconductor production equipment increased 41.2%. As a result, domestic demand is expected to pick up, which will help drive Taiwan's 2019 GDP growth.

Taiwan's exports have shrunk for five straight months amid weak demand for smart devices. But there is a silver lining from imports, which returned to positive growth due to stronger demand for semiconductor equipment. The 5G is helping and will be the growth engine of Taiwan's economy in the coming years. The production of equipment is just the beginning of the 5G supply chain. In the coming year, this latest generation of cellular mobile communications will create demand for end products, namely, smart devices, from which Taiwan's manufacturing sector will benefit the most.

Taiwan's foreign exchange reserves climbed to a new high for the fifth consecutive month at the end of March, largely on the back of an increase in returns on the central bank's portfolios, according to the bank. The country's forex reserves were at US$464 billion at the end of March. Taiwan's forex reserves were the fifth highest in the world, after China's US$3.09 trillion, Japan's US$1.22 trillion, Switzerland's US$741.6 billion and Saudi Arabia's US$474 billion.

	18	19	20	21	22
GDP (%p.a.)	2.6	2.1	2.4	2.4	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	31.0	31.0	31.0

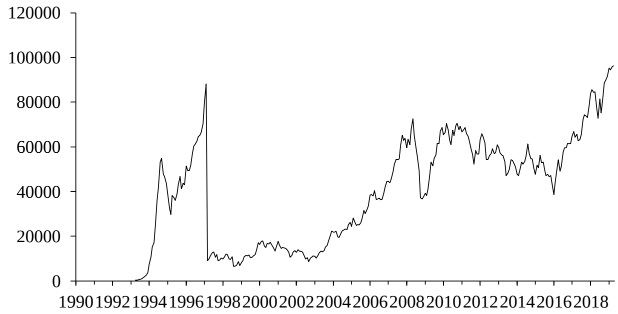
Brazil

The slow pace of economic reforms is keeping the economy underperforming. Brazil is running a fiscal deficit of around 7% of gross domestic product and a debt-to-GDP ratio of more than 75%. The overly generous public pension system, which bleeds the treasury, is unsustainable.

GDP growth is expected to be 1.70% this year.

Brazilian consumer price inflation rose to 4.7% in the last 12 months, its highest in two years, in mid-April, led by price increases in the transport and food and drink sectors. The central bank expects inflation to drift towards the target of 4% later in the year. We expect the central bank to maintain the SELIC rates at its historical minimum of 6.5% until the

Brazil: Bovespa



end of 2019. The rates may rise gradually to 7.50% by the end of 2020.

Brazil posted a current account deficit of $494 million in March, narrowing from a deficit of $994 million in February. Foreign direct investment fell to $6.8 billion in March, down from $8.4 billion in February and below the $8 billion average estimate.

The forecast for the dollar remains at BRL 3.7 at the end of this year and gradually moving to BRL 3.8 at the end of 2020 assuming that inflation would not flare up in the coming months.

Brazilian President Jair Bolsonaro's proposal to overhaul the country's pension system had its first win after two months of contentious debate, but the path ahead for final approval is long and likely to get thornier. A committee of the lower house of Congress has finally approved that the bill is in accordance with Brazil's constitution. Support for the Bolsonaro administration is fading as delivery of reforms is slow. After 30 years of mis-management of the economy and corruption, there is a public uproar against corruption, violence and lack of jobs. The government's first two reform packages sent to the Congress are aimed at fighting corruption and reform of the public pension system, which addresses the fiscal time bomb.

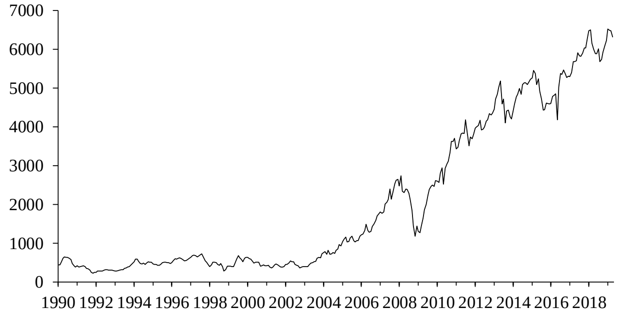
According to the Economy Minister Paulo Guedes, the proposed pension bill will save the government about 1 trillion Brazilian reais ($251 billion) over a decade. This will improve public finances unless the bill is watered down.

	18	19	20	21	22
GDP (%p.a.)	1.1	2.0	2.2	2.5	2.5
Inflation (%p.a.)	3.8	4.0	4.2	4.2	4.0
Current A/c(US$ bill.)	-14.6	-16.0	-16.0	-16.0	-16.0
Real/$(nom.)	3.8	3.7	3.7	3.8	3.8

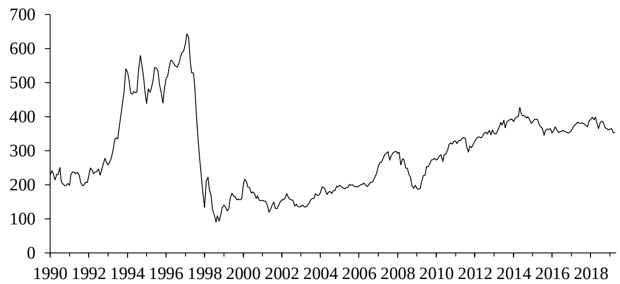
Other Emerging Markets

Hong Kong: FT-Actuaries

Indonesia: Jakarta Composite

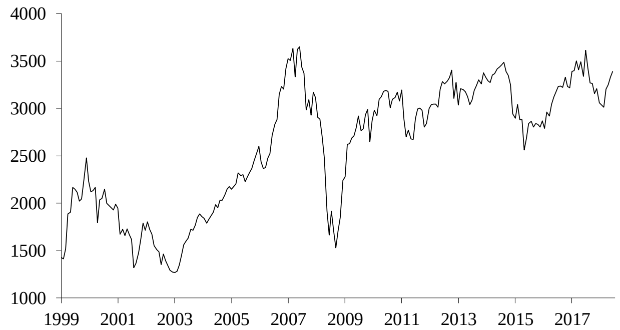


Malaysia: FT-Actuaries (US$ Index)



Thailand: Composite Index

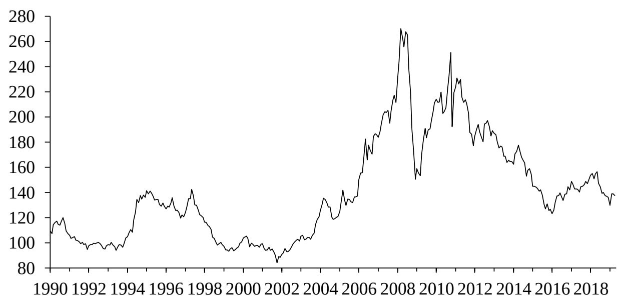
Singapore: Straits Times Index



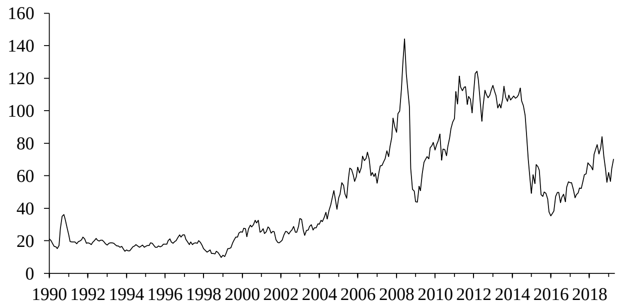
Philippines: Manila Composite

COMMODITY MARKETS

Commodity Price Index (Dollar) (Economist, 2000=100)

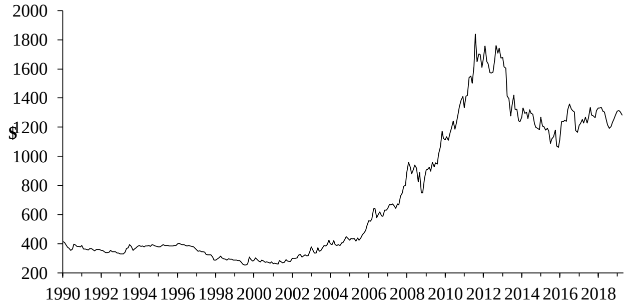


Oil Price: North Sea Brent (in Dollars)

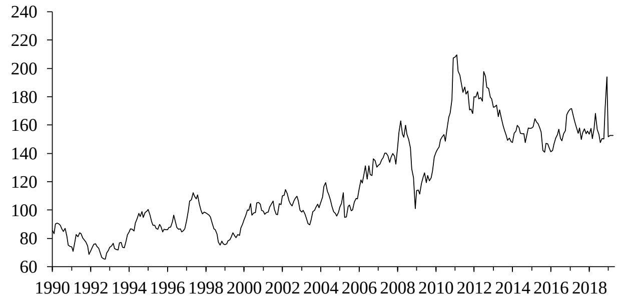


Commodity Price Index (Sterling) (Economist, 2000=100)

Gold Price (in Dollars)



Commodity Price Index (Euro) (Economist)



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]
2017	2.6	0.6	0.4	77.4	75.5	-1.6	3.8	-1.5
2018	2.4	1.2	0.8	78.5	76.7	-1.5	3.4	-0.5
2019	2.2	2.5	1.3	76.6	74.6	-0.7	2.9	0.5
2020	2.1	3.3	2.4	76.1	74.3	0.4	2.7	1.4
2021	2.0	3.8	3.1	76.3	75.1	1.1	2.6	0.9
2022	2.0	3.8	3.1	75.6	74.6	1.1	2.5	0.6
2018:1	2.5	1.0	0.5	79.2	77.9	-1.7	3.7	-1.1
2018:2	2.4	1.0	0.7	79.3	77.7	-1.7	3.4	-1.1
2018:3	2.5	1.0	0.9	78.0	75.9	-1.3	3.3	-1.1
2018:4	2.3	1.8	1.0	77.6	75.4	-1.2	3.1	-0.3
2019:1	2.2	2.5	1.1	77.2	75.4	-1.0	2.9	0.5
2019:2	2.2	2.5	1.3	76.6	74.4	-0.8	2.9	0.5
2019:3	2.2	2.5	1.4	76.4	74.4	-0.6	2.9	0.5
2019:4	2.2	2.5	1.5	76.3	74.3	-0.5	3.0	0.5
2020:1	2.1	3.0	2.1	76.1	74.3	0.1	2.8	1.0
2020:2	2.1	3.0	2.1	76.2	74.3	0.1	2.8	1.0
2020:3	2.0	3.5	2.1	76.1	74.3	0.1	2.6	1.5
2020:4	2.0	3.8	3.3	76.0	74.3	1.3	2.5	1.8

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)
2017	259.1	2.9	2.2	0.8	142.2
2018	265.9	2.7	2.2	0.8	142.6
2019	273.2	2.8	2.1	0.8	143.4
2020	281.0	2.9	1.9	0.7	144.6
2021	288.9	2.8	1.6	0.7	145.7
2022	297.0	2.8	1.3	0.6	146.9
2018:1	264.6	3.0	2.3	0.8	142.9
2018:2	263.4	2.6	2.2	0.8	141.8
2018:3	268.4	3.1	2.1	0.8	143.5
2018:4	267.0	2.3	2.1	0.7	142.3
2019:1	272.0	2.8	2.0	0.7	143.7
2019:2	270.7	2.8	2.0	0.7	142.6
2019:3	275.8	2.8	2.0	0.7	144.3
2019:4	274.5	2.8	2.0	0.7	143.0
2020:1	279.9	2.9	2.0	0.7	144.8
2020:2	278.6	2.9	2.0	0.7	143.8
2020:3	283.5	2.8	2.0	0.7	145.5
2020:4	282.1	2.8	1.9	0.7	144.2

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
2017	162.3	777336.9	443745.6	302292.1	198857.7	-65371.5	102187.0
2018	164.6	788057.2	447703.5	309777.2	199983.9	-71893.1	97213.6
2019	167.6	802696.2	454303.6	310600.3	200602.7	-62943.8	99862.6
2020	171.0	818972.8	460685.5	316674.7	201938.2	-58117.3	102210.3
2021	174.6	836108.1	467804.4	321816.8	203070.4	-52020.5	104566.0
2022	178.6	855103.2	475356.9	327523.1	204308.6	-44936.8	107148.0
2017/16	1.8		0.6	0.8	0.4		0.6
2018/17	1.4		0.9	3.2	0.6		-2.8
2019/18	1.9		1.5	0.3	0.3		2.8
2020/19	2.0		1.4	2.0	0.7		2.4
2021/20	2.1		1.5	1.6	0.6		2.3
2022/21	2.3		1.6	1.8	0.6		2.5
2018:1	163.4	195600.5	111071.3	74328.3	51436.3	-17532.1	23703.2
2018:2	164.1	196413.8	111520.6	78149.0	49061.0	-18806.3	23510.5
2018:3	165.1	197609.1	112343.6	79434.8	49642.5	-18437.4	25074.5
2018:4	165.7	198433.9	112768.1	77865.2	49844.0	-17117.3	24925.4
2019:1	166.4	199235.8	112806.5	76347.5	50526.0	-15756.7	24688.2
2019:2	167.1	200032.9	113132.9	77285.3	50009.7	-15591.0	24802.8
2019:3	168.1	201273.4	113952.7	78293.8	50056.5	-15900.9	25126.9
2019:4	168.9	202154.1	114411.5	78673.8	50010.4	-15695.2	25244.6
2020:1	169.9	203369.8	114363.4	78191.7	50860.0	-14689.5	25354.4
2020:2	170.5	204186.2	114717.5	79020.4	50335.5	-14421.8	25465.2
2020:3	171.4	205199.1	115569.5	79774.3	50315.1	-14836.7	25624.4
2020:4	172.2	206217.7	116035.1	79688.3	50427.6	-14169.3	25766.2

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)
2017	2.0	2047.3	39.4	79.9	-66.3
2018	1.5	2117.0	30.9	80.0	-62.9
2019	1.0	2206.6	22.3	84.7	-48.8
2020	0.3	2297.2	6.9	91.0	-41.2
2021	-0.3	2394.8	-6.9	94.2	-30.6
2022	-0.7	2500.2	-18.5	95.4	-18.4
2018:1	-2.8	515.6	-14.3	20.2	-16.7
2018:2	3.3	518.6	16.9	19.7	-18.7
2018:3	0.7	527.9	3.8	19.8	-13.5
2018:4	1.9	532.3	10.2	20.1	-14.0
2019:1	0.0	538.2	0.1	20.4	-13.7
2019:2	2.2	541.9	11.9	20.7	-13.8
2019:3	1.7	548.8	9.2	20.9	-9.4
2019:4	1.5	554.3	8.3	21.2	-11.9
2020:1	-1.3	561.6	-7.1	21.9	-12.2
2020:2	1.3	565.4	7.5	22.0	-12.0
2020:3	0.9	570.9	5.1	22.1	-7.6
2020:4	1.0	576.9	5.5	23.5	-9.4

1 GDP at market prices (Financial Year)

WORLD FORECAST DETAIL

Growth Of Real GNP	2015	2016	2017	2018	2019	2020
U.S.A.	2.9	1.6	2.2	2.9	2.6	1.9
U.K.	2.3	1.9	1.8	1.4	1.9	2.0
Japan	1.3	0.6	1.9	0.8	1.1	0.5
Germany	1.7	2.2	2.2	1.5	1.4	1.6
France	1.1	1.1	2.3	1.5	1.5	1.4
Italy	0.9	1.1	1.6	0.9	0.5	0.7

Growth Of Consumer Prices	2015	2016	2017	2018	2019	2020
U.S.A.	0.1	1.3	2.1	2.4	2.1	2.2
U.K.	0.2	1.1	2.6	2.4	2.0	2.1
Japan	0.8	–0.1	0.5	1.0	1.1	1.2
Germany	0.3	0.5	1.8	1.8	1.8	1.7
France	0.0	0.2	1.0	1.3	1.3	1.5
Italy	0.1	–0.1	1.2	1.2	1.2	1.4

Real Short-Term Interest Rates	2015	2016	2017	2018	2019	2020
U.S.A.	–1.1	–1.6	–1.0	0.3	0.4	0.8
U.K.	–0.5	–2.1	–2.0	–1.2	–0.8	0.3
Japan	0.3	–0.4	–0.9	–1.0	–1.1	–1.1
Germany	–0.6	–2.1	–2.2	–2.1	–2.0	–1.7
France	–0.3	–1.3	–2.2	–1.6	–1.8	–1.5
Italy	0.0	–1.5	–1.5	–1.5	–1.7	–1.4

Nominal Short-Term Interest Rates	2015	2016	2017	2018	2019	2020
U.S.A.	0.2	0.5	1.4	2.4	2.6	3.0
U.K.	0.6	0.5	0.4	0.8	1.3	2.4
Japan	0.2	0.1	0.1	0.1	0.1	0.1
Germany	–0.1	–0.3	–0.3	–0.3	–0.3	0.0
France	–0.1	–0.3	–0.3	–0.3	–0.3	0.0
Italy	–0.1	–0.3	–0.3	–0.3	–0.3	0.0

Real Long-Term Interest Rates	2015	2016	2017	2018	2019	2020
U.S.A.	0.2	0.3	0.6	0.8	1.2	1.4
U.K.	–0.7	–1.5	–1.5	–0.8	0.5	1.3
Japan	–0.4	–1.0	–1.1	–1.4	–1.4	–1.6
Germany	–0.9	–1.7	–1.5	–1.7	–1.3	–1.0
France	–0.2	–0.8	–0.8	–0.9	–0.8	–0.7
Italy	0.6	0.4	0.5	1.2	1.5	1.6

Nominal Long-Term Interest Rates	2015	2016	2017	2018	2019	2020
U.S.A.	2.2	2.5	2.8	3.0	3.5	3.8
U.K.	1.3	0.7	0.6	1.2	2.5	3.3
Japan	0.3	0.0	0.1	0.0	0.1	0.1
Germany	0.6	0.1	0.4	0.2	0.6	1.0
France	1.0	0.7	0.8	0.7	1.0	1.2
Italy	1.6	1.7	1.9	2.8	3.3	3.5

Index Of Real Exchange Rate(2000=100)[1]	2015	2016	2017	2018	2019	2020
U.S.A.	93.0	94.0	94.5	94.8	95.0	95.2
U.K.	92.2	81.4	75.5	75.8	74.9	74.3
Japan	56.0	58.4	58.3	58.1	58.4	58.3
Germany	94.7	95.0	94.3	94.9	95.1	95.0
France	96.2	96.0	95.3	95.1	95.5	95.4
Italy	102.1	102.0	101.2	101.1	101.1	101.0

[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)	2015	2016	2017	2018	2019	2020
U.S.A.[1]	103.08	101.91	102.20	102.40	102.50	102.50
U.K.	1.53	1.35	1.30	1.29	1.30	1.32
Japan	121.11	108.61	112.18	114.10	112.00	112.50
Eurozone	0.90	0.90	0.88	0.85	0.86	0.85

[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