LIVERPOOL INVESTMENT LETTER

July 2018

Cardiff Business School

Ysgol Busnes Caerdydd

Julian Hodge Institute of Applied Macroeconomics

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LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

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Editorial and Research Direction: Patrick Minford[†].

Senior Research Associates: Kent Matthews[†], Anupam Rastogi, Peter Stoney.

Research Associates: Vo Phuong Mai Le[†], David Meenagh[†], Francesco Perugini, Yongdeng Xu[†], Zheyi Zhu[†].

[†] Cardiff Business School

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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As the UK economy continues to grow moderately at very full employment it is obvious that Brexit could not have affected it since without it employment could not feasibly have been any higher; hours have now flatlined for around a year and are forcing higher productivity. What the Brexit devaluation has done is shift demand away from consumption to net exports, vitally improving the balance of payments. The precise Brexit policies we follow will be important for long term investment and the capital stock; the more we embrace free trade and UK-based regulation the higher the returns to capital. 'Brexit uncertainty' meanwhile just affects the timing of investment with no long term implications.

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THE ECONOMY REMAINS BUOYANT

To the immense frustration of persistent Remainers the economy has shown no trace of a negative reaction to Brexit. It has continued to create new jobs, in spite of unemployment having surely reached full employment rates. Nevertheless working hours have stopped growing, underlining that we have indeed probably reached full employment in terms of hours inputted into production. In the second half of 2017, this flattening off of working hours implied that productivity per hour rose at 3.7% per annum. This encourages the thought that we may be seeing a turning point in productivity as labour capacity tightens up. It is natural to link this to an increasing computerisation (robotisation) of the economy, which can come in with the least trouble when labour resources are tight and people are not worried about their jobs.

As we have said before, it is absurd to argue that Brexit has reduced GDP in these circumstances, since it could only have done so if output could have operated at higher than full employment without Brexit, which is plainly impossible. What has happened, as we have repeatedly said, is that the large and opportune Brexit devaluation has switched demand away from consumption towards net exports, and so improved the balance of payments. Since 2016 the current account has improved by some £40 billion at least, or around 2% of GDP. This improvement was badly needed and it is astonishing that so many Remainer commentators have ignored it.

Returning to the effect on GDP, we can engage with the frequent assertion that ‘investment has been hit by Brexit uncertainty’. Leave on one side for a moment whether this is true or not; just consider what it would do to GDP. First of all, as we have seen, it could not have affected demand for GDP as that is at a maximum, given existing capacity and available labour. Could it have reduced the supply of GDP? Suppose for argument’s sake investment had been cut by 5% by Brexit as some argue. What effect would this have on capital capacity? Capital is around 5 times GDP, and investment is around 15% of GDP; this implies that annual investment is about 3% of the capital stock. So a 5% fall in investment would reduce the capital stock by about 0.15%. Given that there is currently excess capital capacity, this would have virtually no effect on supply. All the numbers above can be argued about but no plausible adjustment would change this point.

It follows that Brexit cannot have had any non-trivial effect on GDP.

But of course investment is to be encouraged as it raises productivity. So we would not want it to be reduced by Brexit because of longer term consequences for productivity. Notice that the issue here is the long term effect of Brexit on investment and so productivity; as we have seen the short term effects on GDP are trivial.

Table 1: Summary of Forecast

	2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
GDP Growth[1]	1.9	1.8	1.9	1.9	1.9	2.1	2.3
Inflation CPI	1.1	2.6	2.3	2.0	1.9	2.0	2.7
Wage Growth	2.4	2.3	2.5	2.1	1.6	2.4	2.9
Unemployment (Mill.)[2]	0.8	0.8	0.8	0.7	0.7	0.6	0.5
Exchange Rate[3]	82.1	77.4	77.0	76.2	75.8	76.1	74.9
3 Month Interest Rate	0.5	0.4	0.4	0.9	2.2	2.8	2.8
5 Year Interest Rate	0.7	0.6	1.3	2.3	3.3	2.7	2.5
Current Balance (£bn)	-90.9	-66.3	60.1	-51.6	-41.2	-29.1	-15.8
PSBR (£bn)	45.1	45.1	35.3	24.9	9.1	-7.6	-10.9

[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)

Once one frames the issue in these terms it becomes clear that whether Brexit uncertainty reduces investment in the short term or not is a mere timing question. Once Brexit has occurred capital plans will be adjusted to meet the post-Brexit needs of the economy. Any delays due to previous uncertainty will be made up by acceleration later. The level of planned capital will be the same in the long run for any given Brexit outcome.

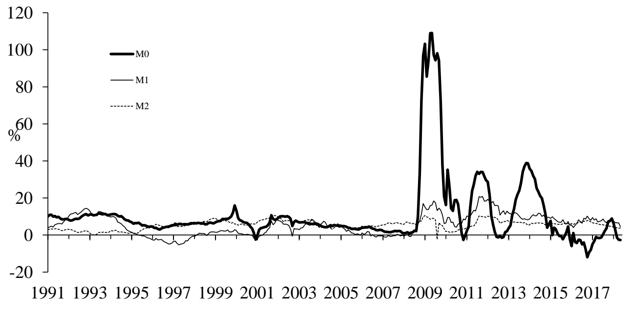
What matters therefore is the sort of Brexit we have. If it is one that goes to free trade and improves regulation, besides ending the subsidy of EU unskilled immigration, then the gains are considerable: they raise the marginal product of capital and so will raise capital and the investment path compared with no Brexit.

Of course if it is a ‘soft Brexit’, continuing the status quo, these gains will not materialise and investment will not rise compared with no Brexit.

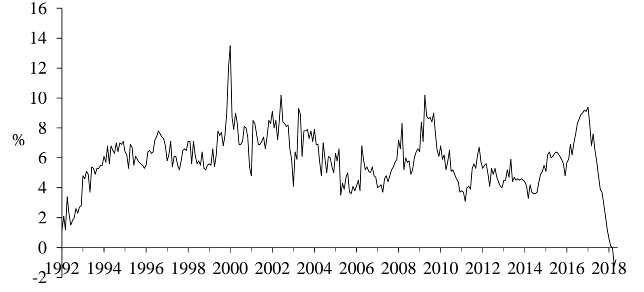
But either way Brexit ‘uncertainty’ is a merely temporary matter, with no effects in either the short or long term. As so often in the past three years the Remainer commentators have not used their models logically, so eager have they been to pour obloquy on Brexit. There seems to be no plausible way to measure how much investment today is being affected by Brexit uncertainty — which plainly exists. CBI and FSB surveys have been generally upbeat, suggesting any effect may well be very small. But in any case, as we have seen, it really does not matter.

To summarise, Brexit is having no significant effect on the level of GDP, either its demand or supply. What it has done, most fortunately, is reduce our balance of payments deficit by switching demand from consumption to net exports. Looking ahead, we need to make sure that Brexit really does lead to free trade and better regulation outside the EU customs union and Single Market, so that the gains to GDP and investment from this important policy regime change are maximised.

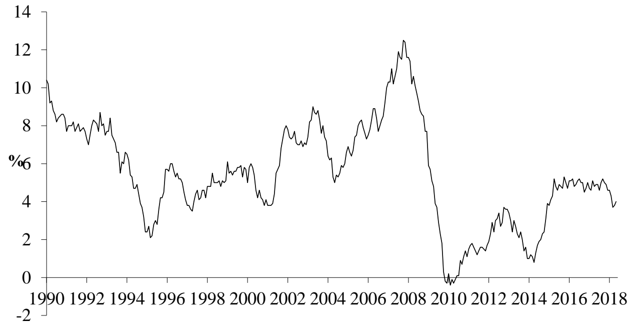
U.S.: Growth in Monetary Aggregates (Yr - on - Yr)



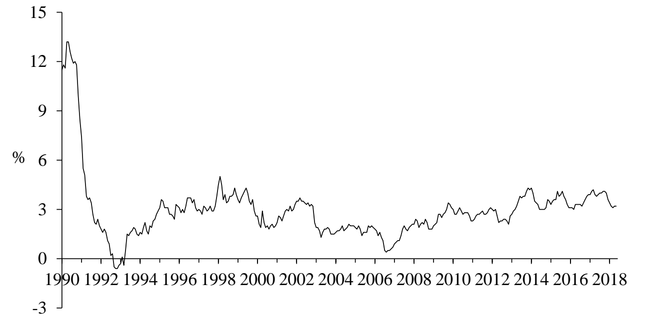
UK: Notes and Coins in Circulation Growth



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

Abe opens door for more foreign workers

Last month, Prime Minister Shinzo Abe announced plans to attract 500,000 foreign workers to Japan by 2025 to fill chronic labour shortages in farming, construction, accommodation, and elder care. According to government calculations, in order to maintain the population at 100 million, theoretically, Japan must accept a mammoth 200,000 immigrants each year, which would lift the fertility rate to 2.07 from 1.42 by 2030. As for the current goal, welcoming 500,000 workers means accepting on average 71,430 workers each year over seven years.

The government's decision to create a new visa status for foreign workers to fill the domestic manpower shortage represents a major change in Japan's strict immigration policy that has in principle prohibited foreigners from engaging in unskilled labour. Under the decision featured in the outline of the government's economic and fiscal policy, the maximum term of foreign workers residence will be five years. People who have taken part in the Technical Intern Training Program — a work training program providing employment opportunities for foreign nationals — for at least three years will be exempt from the skills and language test requirements.

The number of all types of foreign workers in Japan has risen steadily in recent years to 1.28 million — about 1% of the population — more than doubling from 486,000 in 2008. The biggest increases have come in two categories: foreign students, who are permitted to work 28 hours a week, and those on a technical intern program, which lasts up to five years before participants must return home. Many trainees see such internships as a way to earn more money than they would at home, while Japanese businesses often hire them to do undesirable jobs that are hard to fill.

The new permits are meant to bring more workers into that pool and have been applauded by the Japan Chamber of Commerce and Industry, a group of small and medium-sized businesses that have been hit hardest by labour shortages. Surveys show public attitudes are gradually becoming more accepting of foreigners. A 2017 survey by public broadcaster NHK showed that 51% of respondents said restrictions on foreign workers should be maintained at current levels, down slightly from 56% in 1992.

Also, many economists have long pushed for the introduction of mass immigration in Japan, but it is a sensitive political subject stemming from a deep-rooted fear of increased crime and migrant backlash similar to that seen in Europe. Indeed, among many Japanese, worries persist. "The image I have is that they might make the city dirtier, like spraying graffiti or throwing trash," said Yuki, a woman in her 40s who lives in Tokyo. "If they were doing more highly skilled work that would enhance Japan's economy, I'd be in favour of that. But I'm worried about bringing in blue-collar workers." A bestselling book published last year, "Chronology of the Future," captured many people's fears. Author Masashi Kawai, a journalist with the conservative Sankei newspaper, said Japan should transform into a compact and more efficient country rather than relax immigration rules. "The acceptance of a large number of immigrants in European countries has brought about such turmoil as terror attacks, riots and anti-immigration movements," he wrote. "An unprincipled acceptance of foreigners will create a social divide in Japan, too."

Immigration remains a politically charged issue in Japan, with some in Abe's party warning that allowing more immigrants into the country will cause economic and social problems. So Abe has been left trying to ensure that companies can get the workers they need while also signalling that he is not opening the door to immigrants. "My government has no intention of adopting a so-called immigration policy," Abe said in a recent speech. Yet the total number of foreign residents in Japan has grown 20% in the last three years, reaching 2.6 million in 2017, or 2% of the total population. In Tokyo, one in eight residents who came of age this year were foreigners. "Anyone wandering around Japan, from Hokkaido to Tokyo to Okinawa, knows that there is growing diversity in schools and the workplace," said Jeff Kingston, a professor at Temple University Japan. "Employers know just how essential [foreign workers] are and this recognition is spreading. Japan is a new immigration destination ... and more is necessary to boost its future economic prospects."

Japan is considered a "super-aged" nation, where more than 20% of the population is over 65 and the birth rate has reached record lows. By 2060, the country's population is expected to plummet by more than 40 million from 2010, to 86.74 million people, according to a projection by the Japanese Health Ministry, and this will continue to exert downward pressure on the country's economy. With fewer workers paying taxes to support a growing silver population in need of pensions and healthcare services, Japan's economy is facing an unprecedented challenge. This year, labour shortages were the highest they had been in 40 years, and analysts predict rising shortages in the years ahead.

Prime Minister Shinzo Abe has attempted to encourage more senior citizens and women to join the workforce. Outside observers argue that large-scale immigration would provide a more obvious fix to Japan's labour crisis and demographic issues. But there appears little appetite among the country's political class to increase levels of immigration, however important the need.

It is unmistakable that the nation cannot do without workers from overseas to fill the gap in manpower supply and demand, especially in certain industries such as the farm sector. For more skill-intensive sectors however, opening the door to immigration works if Japan can attract skilled workers. But this is highly uncertain. Rigid and often non-performing management structures, a lack of career advancement opportunities, short term contracts, and an emphasis on seniority over skill make Japanese companies unattractive to the qualified, skilled worker.

MARKET DEVELOPMENTS

The world environment is good for growth, with large-scale excess capacity still for raw materials and oil. World growth is a shade below 4% so it has scope to be lower for a time as the arm-wrestling on trade and tariffs continues. This should in time lead to more pro-trade policies from the EU and China, both of them persistent offenders against free trade and orderly practices (e.g. in intellectual property). Equities remain the best vehicle to profit from these good long term growth prospects.

Table 1: Market Developments

	Market Levels		Prediction for Jun/Jul 2019	
	Jun 1	**Jun 30**	**Previous Letter**	**Current View**
Share Indices				
UK (FT 100)	7702	7637	10713	10623
US (S&P 500)	2735	2718	3183	3164
Germany (DAX 30)	12724	12306	20435	19763
Japan (Tokyo New)	1749	1731	2417	2392
Bond Yields (government				
UK	1.27	1.31	2.30	2.30
US	2.84	2.83	3.00	3.00
Germany	0.27	0.26	0.80	0.80
Japan	0.02	0.02	0.10	0.10
UK Index Linked	−1.58	−1.59	−1.00	−1.00
Exchange Rates				
UK ($ per £)	1.33	1.32	1.30	1.30
UK (trade weighted)	78.45	78.04	76.0	76.0
US (trade weighted)	99.92	101.44	102.5	102.5
Euro per $	0.86	0.86	0.86	0.86
Euro per £	1.14	1.13	1.12	1.12
Japan (Yen per $)	109.6	110.8	112.0	112.0
Short Term Interest Rates (3-month deposits)				
UK	0.60	0.65	0.60	0.60
US	2.25	2.38	2.50	2.50
Euro	−0.41	−0.41	−0.10	−0.10
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	1.9	2.0	35.20		42.70
US	1.99	2.4	2.1	11.90	1.54	19.93
Germany	3.30	1.8	1.8	57.00	1.14	6.04
Japan	1.90	1.1	1.1	36.00	0.44	40.54
UK indexed[2]	−1.58		2.1	1.00		1.42
Hong Kong[3]	2.60	6.0	2.1	−12.00	1.54	0.24
Malaysia	3.30	5.4	2.1	48.00	1.54	60.34
Singapore	3.50	2.9	2.1	11.00	1.54	21.04
India	1.40	8.1	2.1	23.00	1.54	36.14
Korea	1.10	2.0	2.1	−31.00	1.54	−24.26
Indonesia	2.20	5.5	2.1	26.00	1.54	37.34
Taiwan	2.80	2.5	2.1	12.00	1.54	20.94
Thailand	3.20	3.4	2.1	22.00	1.54	32.24

Bonds: Contribution to £ yield of:

	Redemption Yield	Changing Nominal Rates	Currency	Total
UK	1.31	−9.90		−8.59
US	2.83	−1.70	1.54	2.67
Germany	0.26	−5.40	1.14	−4.00
Japan	0.02	−0.80	0.44	−0.34

Deposits: Contribution to £ yield of:

	Deposit Yield	Currency	Total
UK	0.65		0.65
US	2.38	1.54	2.92
Euro	−0.41	1.14	0.73
Japan	0.05	0.44	0.49

[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.

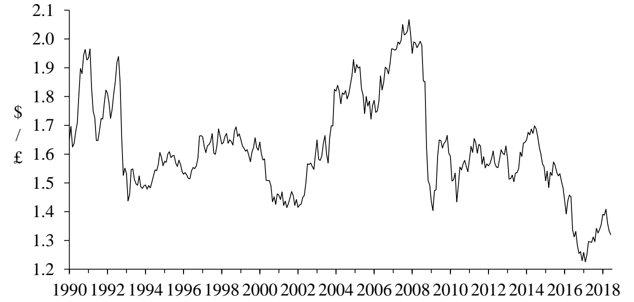
Table 3: Portfolio(%)

	Sterling Based Investor		Dollar Based Investor		Euro Based Investor	
	June Letter	Current View	June Letter	Current View	June 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)	-	-	-	-	-	-

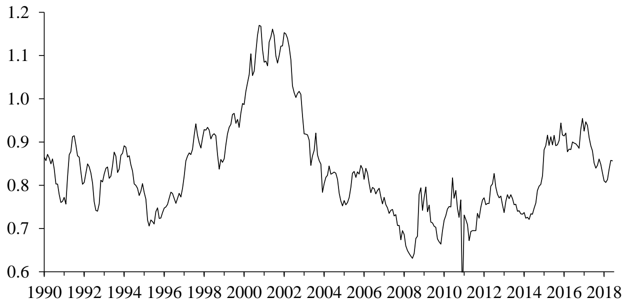
INDICATORS AND MARKET ANALYSIS
FOREIGN EXCHANGE MARKETS

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

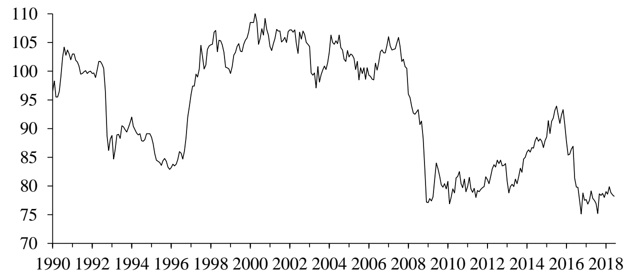
UK: Dollars Per Pound Sterling



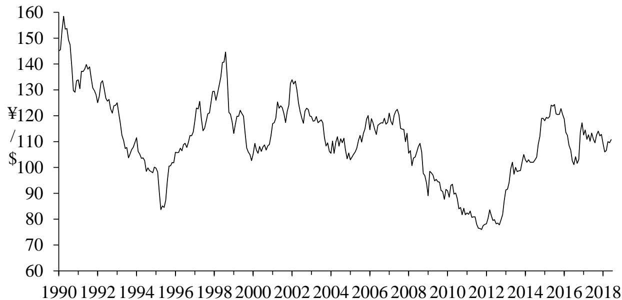
Euro per US dollar



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



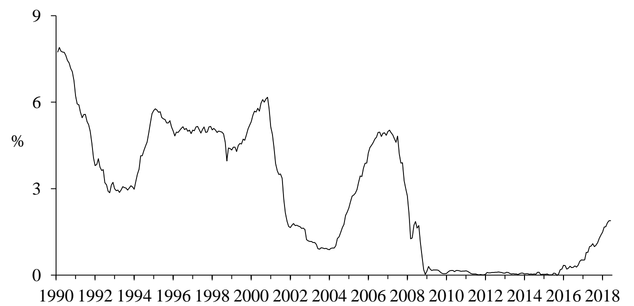
Japan : Yen Per U.S. Dollar



GOVERNMENT BOND MARKETS

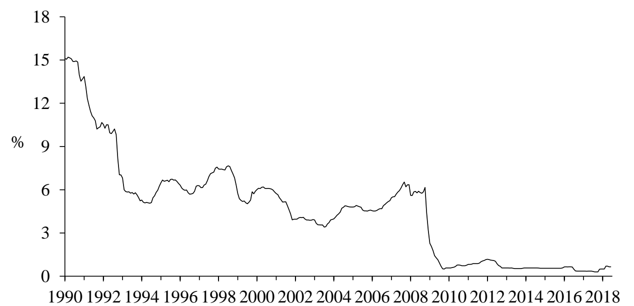
U.S.: Yield on Long-Term Government Bonds

U.S. : 3-Month Treasury Bill

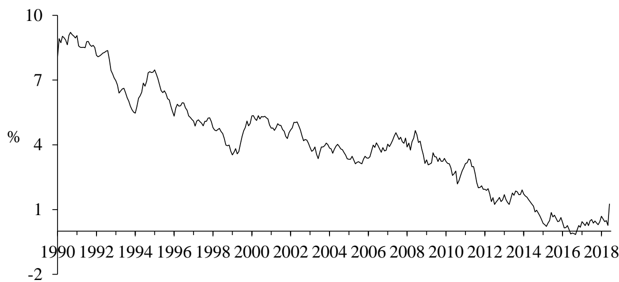


U.K.: Yield on Long-Term Government Bonds

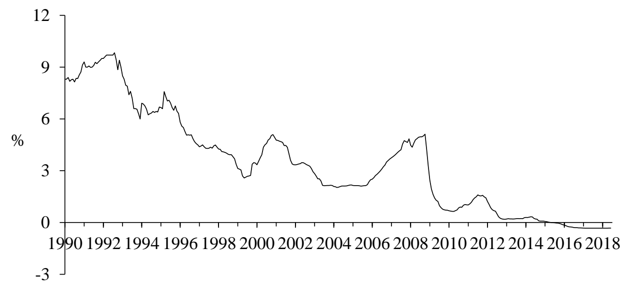
U.K. : 3-Month Certificate of Deposit Rate



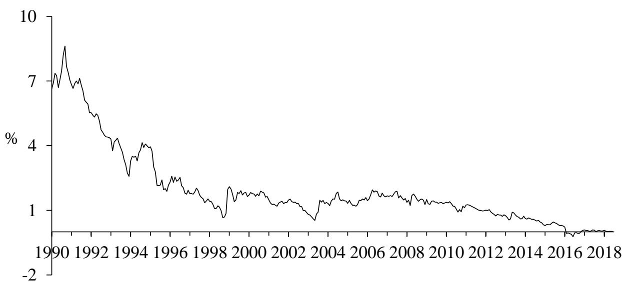
Germany: Yield on Public Authority Bonds



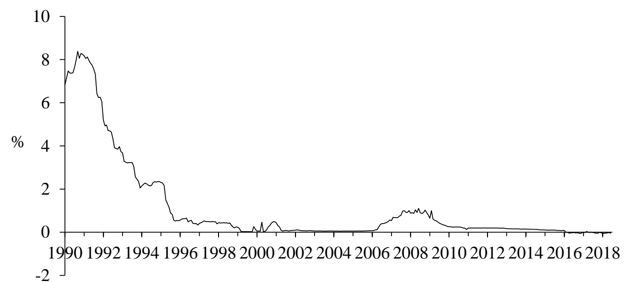
Germany : 3-Month Interbank Deposit Rate



Japan: Yield on Long-Term Government Bonds

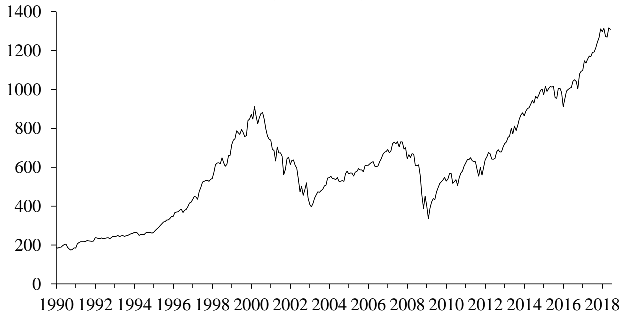


Japan : 3-Month Money Market Rate

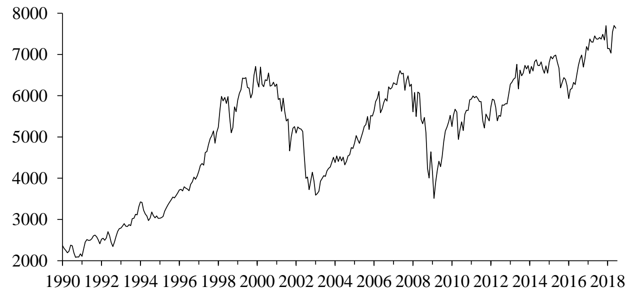


MAJOR EQUITY MARKETS

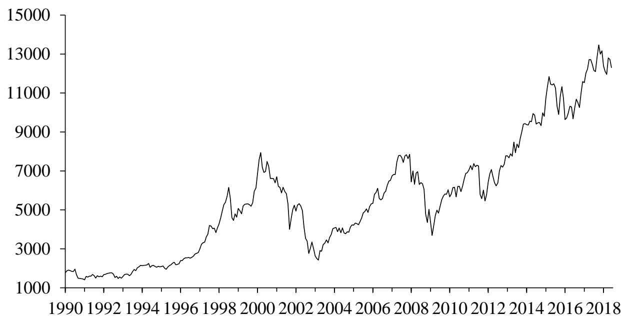
U.S. : S & P 400 Industrial
(1985=100)



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 government has lauded the fourth quarter GDP growth of 7.7% saying the future looks much brighter than the past. The first anniversary of the implementation of the Goods and Services Tax (GST) shows rising direct and indirect tax revenue for the government. It seems that, after a few hiccups, the economy has got its mojo.

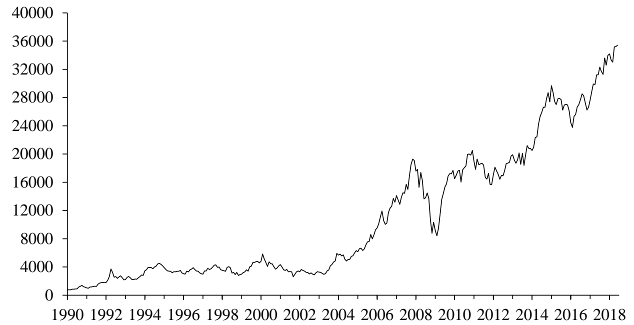
India's retail inflation in May rose to a four-month high of 4.87% due to costly petrol and diesel. The central bank is trying to nip the inflationary expectations. It raised the repo rate for the first time since 2014, by 25 basis points to 6.25%. But the central bank kept its "neutral" policy stance unchanged. India's 10-year bond yield rose above 8% for the first time since May 2015 as concern deepened that higher oil prices will fuel inflation and widen the government's budget deficit — which may not happen due to tight monitoring by the government.

In a major boost to the government, India's exports grew 20.18% to $28.86 billion in May, recording the highest number in the last six months. Even though exports outpaced imports, a higher oil import bill wiped away the benefits of a contraction in gold imports. India's trade deficit widened to a four-month high of $14.62 billion in May, as imports surged nearly 15%. Oil imports were up 49% to $11.5 billion on the back of a surge in international crude prices.

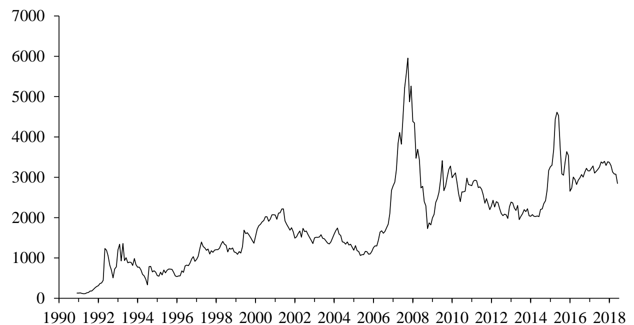
President Donald Trump's moves to protect U.S. trade interests are creating unusual bedfellows in Asia. India and China, long standing economic and strategic rivals, are seeing a thaw in relations. Since May, China has made it easier for India to export non-Basmati rice, removed import duties on anti-cancer drugs and agreed to share data that predicts river flows between the two countries during the flood season. Chinese President Xi Jinping and Indian Prime Minister Narendra Modi have met twice since April, pledging to strengthen bilateral ties. On the other hand, Indian companies are bracing for a possible flood of steel imports, should the U.S. and China follow through on their threats about a trade war.

Even though the rupee has depreciated more than 7% this year, the government is confident about dealing with rupee volatility. The government believes that it has adequate "firepower" of foreign exchange reserves to deal with the current volatility, as it is being driven by global factors, including proposed US sanctions on Iran and the mismatch in demand and supply of oil. The rupee touched its record low of 69.10 to the dollar in the last week of June. The rupee would have depreciated even more, but for the intervention from the Reserve Bank of India (RBI), which managed to strengthen the currency.

India: BSE Sensitive



China: SSE Composite Index



Indian equity and debt markets have witnessed fund outflows of Rs 5.37bn and Rs 324.16bn so far in 2018. But, as emerging-market stocks reel under the pressure of a rising dollar and trade rhetoric, Indian equities are charting a different course. The nation's benchmark S&P BSE Sensex Index has risen 7.5% in the second quarter in local-currency terms, the best performance among developing nations. The MSCI Emerging Markets Index has tumbled almost 9% in the same period. This is due to the fact that the Indian economy is insulated from trade risks due to its massive domestic market and burgeoning middle class. And while India hasn't been immune to outflows, buying by local funds has more than made up for this and helped the Sensex to so far shrug off headwinds such as rising oil prices and a weak rupee.

	16–17	**17–18**	**18–19**	**19–20**	**20-21**
GDP (%p.a.)	7.1	6.5	7.6	8.1	8.2
WPI (%p.a.)	4.5	3.5	4.5	4.6	4.2
Current A/c(US$ bill.)	-24.0	-26.0	-36.0	-44.0	-46.0
Rs./$(nom.)	68.2	65.0	67.5	67.5	67.5

China

China's economy is on track for stable growth with leading indicators pointing to steady factory and service sector activities. The country's manufacturing purchasing managers' index (PMI) came in at 51.5 in June, above the boom-bust line of 50. This is marginally lower than 51.9 in May. We expect China to manage 6.5% and 6% growth in

GDP, in 2018 and 2019 respectively, in line with its official declaration.

China's central bank is engaged in forward-looking policy fine-tuning. The Peoples' Bank of China may lower the reserve ratios for some banks — the third cut this year — as it strives to keep a balance between debt containment and stable growth. Meanwhile, China is likely to step in and defend the renminbi, should it fall to the key psychological level of 6.7 per dollar. In the offshore market renminbi has been falling continuously.

China's central bank's cut in reserves will unlock about 700 billion renminbi ($108 billion) of liquidity, as it seeks to control leverage and support smaller companies. The required reserve ratio for some banks will drop by 0.5 percentage points, effective July 5, the People's Bank of China said on its website. The aim is to support small and micro enterprises. The cut will apply to major state-run commercial banks, joint-stock commercial lenders, postal banks, city commercial lenders, rural banks and foreign banks.

China's producer price index (PPI) inflation continued to rise in May while consumer price index (CPI) inflation remained unchanged from April. The subdued CPI inflation was mainly due to falling food prices, but with the hog-to-corn price ratio falling below the breakeven threshold of six since March (which implies a potential shortage of pork supply in the future as hog raising becomes unprofitable), food prices may rise in coming quarters. China's trade surplus narrowed in May on strong imports and the gap with the U.S. widened — in part, because of concerns that trade tensions could worsen in the months ahead. Overall, China's exports in May were up 12.6% from a year earlier, about matching April's 12.9% pace.

After more than two years on the back-burner, there are signs that China is once again focusing on its efforts to increase the renminbi's status in global finance. Since May, initiatives from the central bank and government have included full operation of a new phase of an international payment system, making it easier for overseas lenders to borrow the renminbi to help facilitate foreign investments in onshore bonds and stocks, and signalling the resumption of a program for mainland investors to buy offshore assets with the renminbi.

The US approved tariffs of 25% on about $50 billion of Chinese goods prompted Chinese officials to hit back by announcing the country would levy penalties of the same rate on U.S. goods of the same value. Rising frictions in international trade in recent months have already instilled uncertainty in global markets, which are experiencing one of their most volatile stretches in years.

The U.S. has a strong hand in the trade dispute because it imports far more than it sells to China, but the Chinese have ways to hurt U.S. businesses beyond tariffs including the ones that hit as quickly as tariffs. China has used this tactic before on Japan and Korea. In 2012, amid a long-running feud between Japan and China over a group of disputed islands in the East China Sea, Japan's auto exports to China fell 80% over three months. Korean car makers were similarly hit when the country decided to install an antimissile defence system.

Trump had vowed additional duties if China retaliated — which Beijing immediately did. We expect the confrontation to be a war of attrition.

The open trade war rhetoric has led to panic selling in the Shanghai stock market. Shanghai Composite Index fell below the key 3,000 level. This level was previously breached during the market crashes in 2015 and 2016. With Washington and Beijing threatening tit-for-tat moves over import tariffs, investors are worried a trade war will act as a brake on China's economy and hollow out an already deflating equity market. The Shanghai Composite is among the world's worst performing benchmarks this year.

	16	**17**	**18**	**19**	**20**
GDP (%p.a.)	6.5	6.9	6.5	6.0	5.6
Inflation (%p.a.)	2.0	2.2	1.5	2.0	2.2
Trade Balance(US$ bill.)	510	400	380	350	300
Rmb/$(nom.)	6.7	6.6	6.6	6.7	6.4

South Korea

South Korea's gross domestic product (GDP) rebounded in the first quarter on brisk export and facility investment. It may have a very short life as South Korea's export growth came to a halt in June, as shipments of cars and consumer electronics fell sharply, casting a shadow over prospects for this year, amid escalating trade tension between China and the United States.

The first-quarter growth was in line with the BOK's growth forecast of 3% for this year but it may not hold in coming quarters. The steady rise in global crude prices will invariably fuel inflationary pressure on the economy, which in the worst case scenario could trigger stagflation. Inflation in South Korea stood still at 1.50% for the past months which comes short to the 2% target. Because of this, the central

bank will maintain its accommodative monetary policy stance in the second half of 2018.

Exports totalled $51.2 billion, down 0.1% from a year earlier after a 13.2% jump in May. Imports were up 10.7% from a year ago.

However, the Global rating agency, Moody's Investors Service, has maintained its rating on South Korea at 'Aa2,' citing the country's resilience to global shocks, eased geo-political risks and sound public finances. The agency has kept its outlook stable. The main reason being the geopolitical risk owing to historical tensions with North Korea have ebbed.

The won has depreciated against the US dollar, in line with other emerging market currencies.

	16	17	18	19	20
GDP (%p.a.)	2.8	3.2	2.8	2.8	2.6
Inflation (%p.a.)	1.0	1.9	1.7	2.0	1.9
Current A/c(US$ bill.)	88.0	88.0	86.0	80.0	78.0
Won/$(nom.)	1160	1100	1100	1120	1050

Taiwan

In the wake of a strong showing in the first half of the year, GDP is expected to grow marginally higher at 2.6% in 2018. The government expects GDP to grow 3.08%, 2.33% and 2.03% in the second, third and fourth quarters of this year, respectively. Exports are expected to get a boost from solid demand for semiconductors in a wide range of applications, such as high performance computing, automotive electronics and Internet of Things. In addition, the private investment has picked up in 2018.

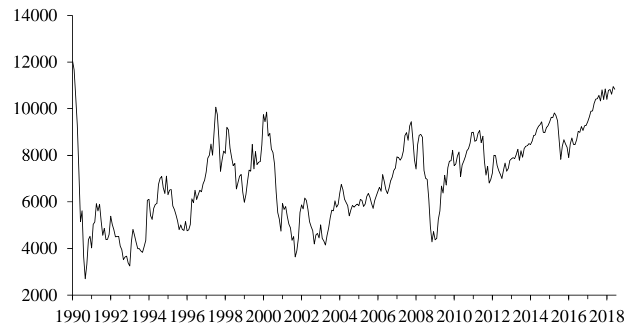
In the wake of higher international crude prices and a hike in tobacco taxes, consumer price inflation is expected to be 1.5%.

Surprisingly, exports are expected to grow by 5–7% in June 2018 compared to June 2017. However, the slowing of export growth is expected in some part due to the upcoming Dragon Boat festival and consequent public holidays.

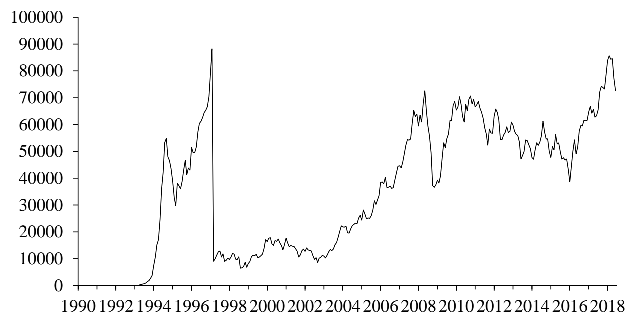
The exchange rate of the New Taiwan Dollar against the US dollar was approximately NT$30, a depreciation of more than 2 points.

American companies were quick to apologize for offending China's geopolitical sensibilities, from listing Taiwan and Tibet as countries on their websites to inaccurately reflecting the status of Chinese-controlled Hong Kong and Macau. The US government has urged businesses to ignore China's demand and asked United Airlines and other US carriers to ignore Chinese demands over how they refer to Taiwan. This is the latest example of mounting friction between the US and China.

Taiwan: Weighted TAIEX Price Index



Brazil: Bovespa



	16	17	18	19	20
GDP (%p.a.)	1.4	2.6	2.6	2.6	2.3
Inflation (%p.a.)	1.0	0.6	1.5	1.3	1.2
Current A/c(US$ bill.)	64.0	68.0	68.0	70.0	71.0
NT$/$(nom.)	32.5	32.0	29.8	30.0	30.5

Brazil

Besides many uncertainties related to world trade, the trucker strike is proving to be very expensive for the Brazilian economy. The central bank has joined independent economists in slashing 2018 GDP growth forecast to 1.6% from 2.6% after the nationwide truckers strike paralyzed key sectors of Latin America's largest economy.

For 2019 also, GDP growth projections have decreased to 2.8%. However, the debt-to-GDP ratio is still stable at 55% for 2018. Projections for the Brazilian industrial output growth in 2018 and 2019 are trimmed to 3.51% and 3.20%, from 3.80% and 3.50%, respectively.

Brazil's central bank also expects inflation to shoot up as the economy deteriorated in the second quarter. The bank forecasts inflation ending 2018 at 4.2%, up from the 3.8% forecast in March but still below the 4.5% target. The truckers strike drove product shortages across the board, lifting consumer prices by the most in more than two years.

Political uncertainty has driven the Brazilian real to 2-year lows as the market doubts that winners of elections in October will implement tough fiscal measures. Brazil's central bank president Ilan Goldfajn is facing the test of his career as the country's currency has once more come under

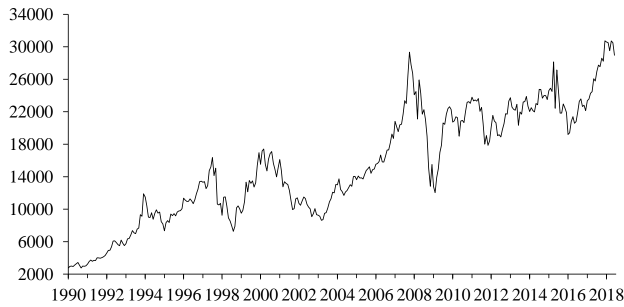
assault from investors. Investors are rubbing Brazilian policymakers' noses in the dirt. The central bank failed to stop the sell-off in the real. The currency has declined sharply. The real is down to 3.9 per dollar

The real is down 14% this year, near its lowest levels since March 2016. Driving the currency's decline are apprehensions over recent labour unrest, shaky economic growth and a presidential election slated for October. Those issues have been magnified by a stronger dollar and higher U.S. bond yields, which have created a punishing environment for emerging-market investors and slammed the stocks and bonds of vulnerable countries this year. In order to protect the currency, the policy makers are selling additional foreign-exchange swap contracts to reduce pressure on the local currency compared to its usual offer of 15,000 contracts daily.

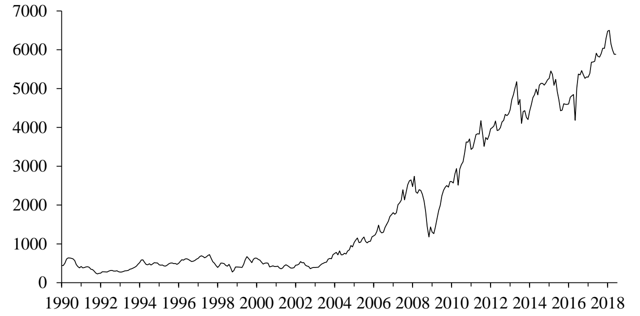
	16	**17**	**18**	**19**	**20**
GDP (%p.a.)	-3.5	1.0	1.5	2.5	3.0
Inflation (%p.a.)	6.3	3.0	4.4	4.5	4.2
Current A/c(US$ bill.)	-28.0	-4.0	-5.2	-8.0	-8.5
Real/$(nom.)	3.5	3.2	3.7	3.6	3.4

Other Emerging Markets

Hong Kong: FT-Actuaries



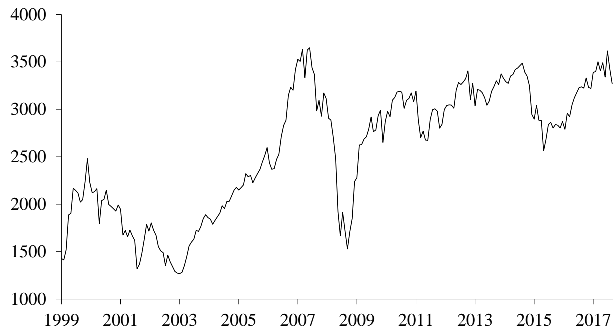
Indonesia: Jakarta Composite



Malaysia: FT-Actuaries (US$ Index)

Thailand: Composite Index

Singapore: Straits Times Index

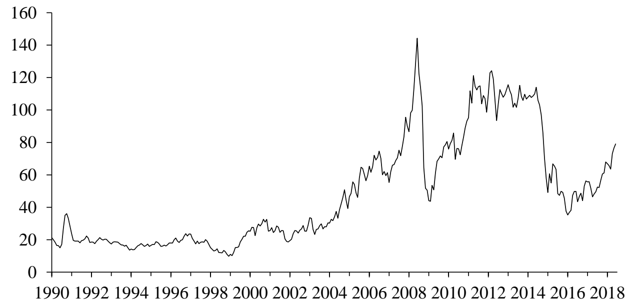


Philippines: Manila Composite

COMMODITY MARKETS

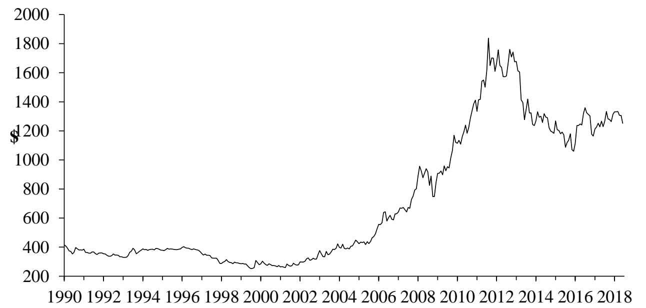
Commodity Price Index (Dollar)
(Economist, 2000=100)

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]
2016	1.1	0.7	0.5	82.1	81.4	-1.2	1.9	0.7
2017	2.6	0.6	0.4	77.4	75.5	-1.7	3.8	0.6
2018	2.3	1.3	0.4	77.0	75.4	-1.6	3.0	1.3
2019	2.0	2.3	0.9	76.2	74.9	-1.0	2.5	2.3
2020	1.9	3.3	2.2	75.8	74.6	0.2	2.3	3.3
2021	2.0	2.7	2.8	76.1	75.4	0.2	2.5	2.7
2017:1	2.2	0.6	0.3	76.8	75.0	-1.7	3.3	0.6
2017:2	2.6	0.4	0.4	78.2	76.4	-1.5	3.8	0.4
2017:3	2.7	0.6	0.3	76.7	74.5	-1.5	4.0	0.6
2017:4	2.8	0.8	0.4	77.9	76.0	-2.1	4.1	0.8
2018:1	2.3	1.1	0.3	77.0	75.6	-1.7	3.0	1.1
2018:2	2.4	1.3	0.4	77.1	75.6	-1.7	3.2	1.3
2018:3	2.2	1.3	0.5	76.6	74.7	-1.5	2.9	1.3
2018:4	2.2	1.3	0.5	77.2	75.7	-1.6	2.8	1.3
2019:1	2.0	2.3	0.6	76.7	75.6	-1.4	2.5	2.3
2019:2	2.0	2.3	0.6	76.0	74.6	-1.4	2.4	2.3
2019:3	1.9	2.3	0.8	76.2	74.7	-1.0	2.4	2.3
2019:4	1.9	2.3	1.6	76.1	74.7	-0.3	2.4	2.3

[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)
2016	253.2	2.4	2.2	0.8	141.7
2017	259.1	2.3	2.2	0.8	142.2
2018	265.5	2.5	2.1	0.8	142.5
2019	271.1	2.1	1.9	0.7	142.7
2020	275.4	1.6	1.9	0.7	142.3
2021	282.1	2.4	1.5	0.6	142.9
2017:1	258.1	2.3	2.1	0.8	142.2
2017:2	257.3	2.6	2.3	0.8	141.6
2017:3	260.2	2.1	2.2	0.8	142.7
2017:4	260.9	2.1	2.3	0.8	142.2
2018:1	264.9	2.6	2.1	0.8	142.8
2018:2	264.0	2.6	2.1	0.8	141.9
2018:3	266.4	2.4	2.1	0.7	143.0
2018:4	266.7	2.2	2.0	0.7	142.3
2019:1	269.5	1.7	2.0	0.7	142.4
2019:2	271.0	2.6	1.9	0.7	142.9
2019:3	271.7	2.0	1.9	0.7	143.0
2019:4	272.2	2.1	1.9	0.7	142.5

[1] Whole Economy
[2] Average Earnings
[3] Wholly unemployed excluding school leavers as 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
2016	159.5	763688.6	441080.4	294912.8	197985.9	-70902.2	99388.2
2017	162.3	777336.9	448255.6	297689.1	198857.7	-65371.5	97584.0
2018	165.4	792196.2	454105.9	302003.3	199247.8	-62093.1	101071.5
2019	168.6	807506.6	458503.7	308033.2	200602.7	-56385.7	103255.3
2020	171.8	822560.9	467283.4	308558.9	201938.2	-49863.9	105369.9
2021	175.3	839535.7	476699.4	310406.6	203070.4	-42896.0	107742.6
2017/16	1.9		2.5	1.0	0.9		-8.0
2018/17	1.8		1.6	0.9	0.4		-1.7
2019/18	1.9		1.3	1.5	0.2		3.9
2020/19	1.9		1.0	2.0	0.7		2.2
2021/20	1.9		1.9	0.2	0.7		2.0
2022/21	2.1		2.0	0.6	0.6		2.3
2017:1	161.5	193340.7	110460.5	74512.0	50838.0	-16948.9	25520.9
2017:2	161.9	193817.5	111980.7	71917.4	48893.4	-16008.3	22345.6
2017:3	162.6	194710.8	112800.0	73915.8	49324.8	-15656.7	23783.1
2017:4	163.3	195468.0	113014.4	77344.0	49801.5	-16757.6	25934.3
2018:1	164.0	196342.1	112066.3	76454.1	50362.9	-17160.6	25382.9
2018:2	165.0	197573.2	113169.1	74697.6	49463.3	-14870.8	24885.4
2018:3	165.9	198621.8	114178.4	74885.7	49577.5	-14829.7	25192.2
2018:4	166.8	199659.0	114692.1	75965.9	49844.0	-15232.1	25611.1
2019:1	167.5	200499.9	113164.2	77563.6	50526.0	-15076.8	25679.2
2019:2	168.2	201405.6	114237.9	76033.5	50009.7	-13171.8	25706.7
2019:3	169.0	202322.6	115244.5	76742.9	50056.5	-13874.5	25848.2
2019:4	169.8	203278.5	115857.2	77693.3	50010.4	-14262.6	26021.1

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

Financial Forecast

	PSBR/GDP %[1]	GDP[1] (£bn)	PSBR (£bn) Financial Year	Debt Interest (£bn)	Current Account (£ bn)
2016	2.3	1977.2	45.1	78.9	-90.9
2017	2.2	2042.9	45.1	79.7	-66.3
2018	1.6	2135.3	35.2	81.6	-60.1
2019	1.1	2219.2	24.9	86.4	-51.6
2020	0.4	2303.3	9.1	93.1	-41.2
2021	-0.3	2403.6	-7.6	96.3	-29.1
2017:1	-2.9	504.2	-14.6	20.0	-15.7
2017:2	5.1	498.9	25.3	20.0	-20.5
2017:3	1.7	505.8	8.6	19.7	-15.3
2017:4	3.2	515.7	16.5	19.9	-14.8
2018:1	-1.0	522.5	-5.4	20.0	-15.0
2018:2	1.2	525.7	6.3	20.1	-18.7
2018:3	1.1	529.7	5.7	20.3	-14.0
2018:4	2.9	536.2	15.4	20.4	-12.4
2019:1	1.5	543.6	7.9	20.7	-11.8
2019:2	1.2	547.3	6.8	20.8	-16.3
2019:3	1.1	550.6	6.3	21.1	-12.5
2019:4	0.9	556.5	5.2	22.0	-11.0

[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	1.5	2.3	2.7	2.4	2.5
U.K.	2.3	1.9	1.8	2.9	1.9	1.9
Japan	1.4	1.0	1.7	1.4	1.1	1.2
Germany	1.7	1.9	2.2	2.3	1.8	2.0
France	1.0	1.1	2.0	1.9	1.7	1.9
Italy	1.0	0.9	1.5	1.4	1.1	1.2

Growth Of Consumer Prices

	2015	2016	2017	2018	2019	2020
U.S.A.	0.1	1.3	2.1	2.5	2.2	2.0
U.K.	0.2	1.1	2.6	2.3	2.0	1.9
Japan	0.8	–0.1	0.5	0.9	1.1	1.2
Germany	0.3	0.5	1.8	1.7	1.8	1.9
France	0.0	0.2	1.0	1.3	1.5	1.6
Italy	0.1	–0.1	1.2	1.1	1.4	1.5

Real Short-Term Interest Rates

	2015	2016	2017	2018	2019	2020
U.S.A.	–1.1	–1.6	–0.9	–0.4	0.5	0.8
U.K.	0.0	–1.2	–1.7	–1.6	–1.0	0.2
Japan	0.1	–0.4	–0.8	–1.0	–1.1	–1.1
Germany	–0.6	–2.0	–2.0	–2.0	–2.1	–2.0
France	–0.2	–1.3	–1.6	–1.7	–2.1	–1.8
Italy	0.0	–1.5	–1.4	–1.6	–2.1	–1.5

Nominal Short-Term Interest Rates

	2015	2016	2017	2018	2019	2020
U.S.A.	0.2	0.5	1.4	1.8	2.5	2.8
U.K.	0.6	0.5	0.4	0.4	0.9	2.2
Japan	0.2	0.1	0.1	0.1	0.1	0.1
Germany	–0.1	–0.3	–0.3	–0.2	–0.2	0.0
France	–0.1	–0.3	–0.3	–0.2	–0.1	0.0
Italy	–0.1	–0.3	–0.3	–0.2	–0.1	0.0

Real Long-Term Interest Rates

	2015	2016	2017	2018	2019	2020
U.S.A.	0.3	0.5	0.8	1.0	1.5	1.8
U.K.	–0.7	–1.5	–1.6	–0.8	0.2	1.2
Japan	–0.5	–1.0	–1.1	–1.3	–1.5	–1.5
Germany	–0.9	–1.7	–1.5	–1.4	–1.1	–1.0
France	–0.7	–0.9	–0.9	–0.8	–0.6	–0.5
Italy	0.4	0.1	0.3	0.4	0.6	1.3

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	1.3	2.3	3.3
Japan	0.3	0.0	0.1	0.1	0.1	0.1
Germany	0.6	0.1	0.4	0.6	0.9	1.0
France	1.0	0.7	0.8	1.1	1.4	1.5
Italy	1.6	1.7	1.9	2.3	2.6	2.7

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	75.4	74.9	74.6
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