LIVERPOOL INVESTMENT LETTER

July 2017

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Julian Hodge Institute of Applied Macroeconomics

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LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

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The Julian Hodge Institute was launched in autumn 1999 in a new collaboration between the Cardiff Business School of Cardiff University and Hodge. The aim of the Institute is to carry out research into the behaviour of the UK economy, and to study in particular its relationship with the other economies of Europe. The research has been particularly germane in recent years and has proved to be of significant social and political relevance as Europe has navigated the difficulties of the global financial crash, the Eurozone crisis and most recently the UK referendum on EU membership. The Liverpool Investment Letter is written by Patrick Minford, with the assistance of other members of the Group; in particular the emerging markets section is written by Anupam Rastogi, and the focus on Japan is written by Francesco Perugini. The Investment Letter is published monthly.

The Liverpool Research Group in Economics is pursuing a research programme involving the estimation and use of macroeconomic models for forecasting and policy analysis. The Group is now mainly based in Cardiff Business School, Cardiff University, and is indebted to the School and to the Hodge Foundation for their support. The Group's activities contribute to the programmes being pursued by the Julian Hodge Institute of Applied Macroeconomics. This Liverpool Investment Letter is typeset by David Meenagh and published on behalf of the group by Liverpool Macroeconomic Research Limited, which holds the copyright

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WORLD MONETARY POLICY TIGHTENS AS BANK REGULATION IS ROLLED BACK

In the past week or so both Mario Draghi and Mark Carney have made statements that have been interpreted as the 'end of QE'. Meanwhile in the US the Fed has started tightening policy, raising interest rates twice and starting to cut back and even reverse QE.

This has created a repeat of the 'taper tantrum' that accompanied the first hints from the fed it would 'taper' the extent of new QE. Both Draghi and Carney have been 'reinterpreted' by their staff. However, nobody is much fooled. The mood of the monetary authorities has definitely changed and there is a desire to 'renormalise'.

Oddly, this has come at a time when growth is weakening, with the US and the UK slowing a little to around the 2% mark. The Eurozone is a bit stronger but only reaching growth rates of around 1.5%. One might think that in this situation the monetary spigots would be kept gushing.

However, it has begun to dawn on central bankers that consumers are being well stimulated by cheap money, even if small businesses still find getting credit difficult and expensive. They are quite reluctant in practice to use 'macro-prudential tools' (i.e. credit controls) to limit consumers, partly because it is bad politics and partly because past experience suggests it is either ineffective or far too effective.

Another factor is Donald Trump's determination to cut back regulation of banks and the financial sector generally. Dodd-Frank is being frowned upon by the president's new regulators and easing is in the wind. The BIS and the Basel Committee are unable to keep their draconian regulations in place if the US is loosening; so the writing is on the wall for the interventionism of Basel's latest version 4.

With regulation being cut back one of the main factors holding back credit will be gradually diminished. Hence monetary conditions should ease due to this cause; so central bankers can finally tighten without worrying so much about the weak upswing.

Table 1: Summary of Forecast

	2014	2015	2016	2017	2018	2019	2020
GDP Growth[1]	2.9	2.2	2.3	2.1	2.6	2.9	3.5
Inflation CPI	1.7	0.2	1.2	2.6	2.6	3.0	3.0
Wage Growth	1.2	2.4	2.9	2.6	3.6	4.7	4.5
Unemployment (Mill.)[2]	1.1	0.8	0.7	0.8	0.8	0.7	0.7
Exchange Rate[3]	87.1	91.6	80.4	76.4	75.1	74.6	74.4
3 Month Interest Rate	0.6	0.6	0.4	0.9	1.5	2.5	3.0
5 Year Interest Rate	1.8	1.3	0.9	1.1	2.0	2.9	3.0
Current Balance (£bn)	−99.9	−103.7	−89.0	−63.7	−44.9	−14.4	0.5
PSBR (£bn)	83.3	71.2	69.0	53.4	44.8	37.2	12.8

[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)

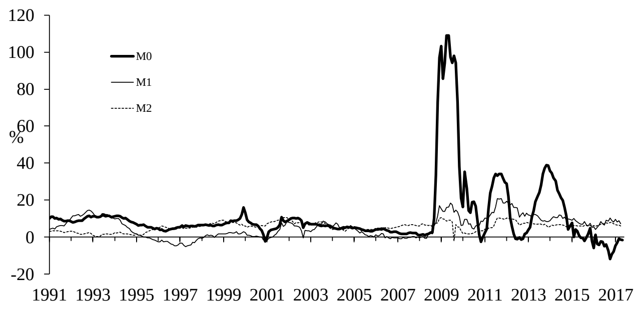
We have argued for a long time that monetary policy should be renormalised and bank regulation reduced; so these developments are very welcome.

The world recovery is not in danger because raw material capacity remains greatly underused still and materials prices consequently remain low. This augurs well for sustained continued recovery in the material-using majority of the world.

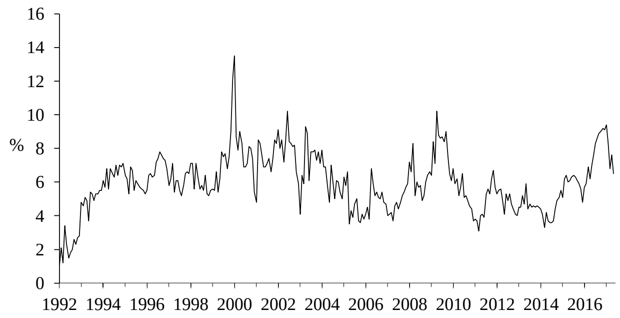
In the UK Mark Carney has repeatedly used Brexit as a reason for expecting low growth and so as a buttress for his loose money policies. However there is no evidence or rational expectation to maintain this position over Brexit. Indeed the major forecasters are now all firming up their forecasts for 2017 as the surveys point to strong manufacturing profits, rising investment and strengthening net exports. Furthermore, with cheap money the UK consumer is far from down and out even as real wages are being reduced somewhat by exchange rate pass-through.

As we look forward it does seem now that finally we are coming to the end of the period of endless monetary looseness and draconian bank regulation. The sooner they both end, the better.

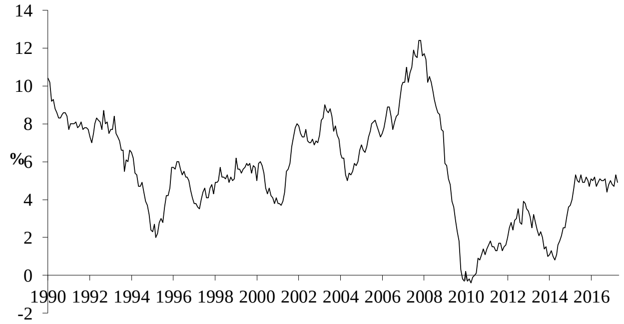
U.S.: Growth in Monetary Aggregates (Yr - on - Yr)



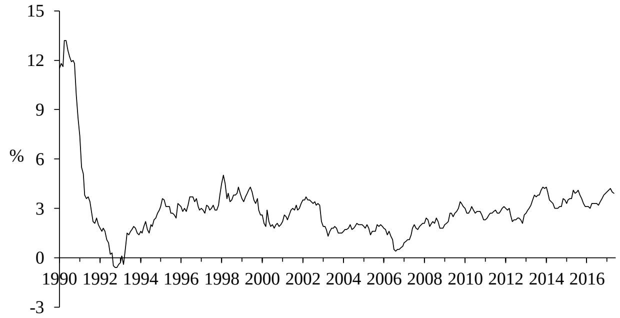
UK: Notes and Coins in Circulation Growth



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

Increased Interest in the Bank of Japan's Exit Strategy

The Bank of Japan (BOJ) kept monetary policy on hold at its June meeting, as the Policy Board voted 7–2 to keep its policy rate at minus 0.1% while the target yield for the benchmark 10-year Japanese government bond will stay at around zero percent. The central bank says it will continue to purchase those bonds at more or less the same pace — that's about ¥80 trillion yen, or US$700 billion, a year — in order to control the yield curve and keep long-term interest rates near 0%.

The BOJ also retained its relatively upbeat stance, which emerged at its April meeting, and used its policy statement to repeat that Japan's economy "has been turning toward a moderate expansion" and that this trend was likely to continue. It was in April that the BOJ adopted a more upbeat tone in its Outlook for Economic Activity and Prices, forecasting real domestic product growth of 1.6% in the 2017 fiscal year, up from a 1.5% estimate provided in January. "The BOJ has grown confident on the economy, although it is fully aware inflation remains low despite a tightening labour market," said Izuru Kato, chief economist at Totan Research.

So far BOJ policy failed to spur inflation to anywhere near the central bank's 2% target rate. But with signs of economic improvement, talk is emerging about the central bank's exit strategy, that is how and when it will start to taper its massive bond-buying and raise interest rates. Last week, the head of Japan's life insurance lobby called on the BOJ to begin as soon as possible to openly debate how it will bring ultra-easy monetary policy to an end. The life insurance industry is the third-biggest holder of government bonds, after the BOJ itself and commercial banks. Hiroshi Yoshikawa, a former adviser to the finance minister, echoed that sentiment, urging the BOJ to talk about exit.

Talk about exiting monetary easing is gaining momentum around the world too. The Fed gave further details of its plan to normalize its balance sheet this year as it raised rates. The European Central Bank softened its easing bias at a meeting this month, reinforcing a view that it is moving toward an exit. "What's changed is that others have started calling for an explanation of an exit," said Masaki Kuwahara, senior economist at Nomura Securities in Tokyo. "There's a possibility that the BOJ may respond and answer to some extent, but they are not going to change their policy for a while."

Not everyone thinks it is so urgent for the bank to start that discussion. "It's not strange that BOJ Governor Kuroda isn't talking about an exit plan when inflation's around zero percent. It's just too early," said Daisuke Karakama, chief market economist at Mizuho Bank Ltd. in Tokyo. "The problem is that some started to wonder if the BOJ is really thinking about exit at all. That's something Kuroda would want to clarify." Indeed, Governor Kuroda said that talk of any exit from monetary stimulus is premature and would end up confusing markets. "There's some distance to achieving 2% inflation, so it's inappropriate to say now specifically how we will exit our ultra-loose monetary policy, and how that could affect the BOJ's financial health. We will debate an exit strategy only after 2% inflation is achieved and price growth stays there stably" Governor Kuroda told a news conference after the Policy Board meeting.

Some of the speculation about an early exit from stimulus may have been dampened by the most recent revision to first quarter GDP which showed growth had been adjusted down to an annualised 1% from the initial estimate of 2.2%. Nevertheless, this data confirmed that Japan's current economic expansion continued for a 53rd consecutive month in April, making it the third-longest in the post-war period. Besides, Japan's labour market is now at its tightest since 1990 and the peak of the bubble economy. The BOJ, though, is of the view that labour market shortages could be too modest to generate sufficient inflation, and this is why it plans no hasty exit from its monetary policy stimulus.

The central bank now expects to reach its inflation target by 2019 — four years later than originally planned — and economists are increasingly doubting if it has the tools to achieve its price promise. After the latest visit to Japan in June, IMF experts declared that Abenomics was a "success". "We're comfortable with the present stance of monetary and fiscal policy," said David Lipton, the IMF's number two official, after the fund's annual mission to Japan. "What we see as important is the maintenance of the approach that's been laid out." Despite the failure to ignite inflation during four years of Abenomics, Lipton rejected any suggestion the policy had failed. "I think we should be considering Abenomics as something that has been successful," he said. "It should be continued because it has brought success." David Lipton also rejected any suggestion that the BOJ should start plotting an exit from its monetary easing. He said Japan had not made as much progress as the US Federal Reserve, which began to raise rates in 2015. "Japan's inflation rate remains low. The prospects for inflation rising are good but we think inflation's likely to stay … in the 1 to 1.5% range for a while," he said. "It would be counterproductive if markets began to believe that normalization of some kind was near at hand. I think it's not."

However, we believe that much of the reason for the lack of sustained growth in Japan lies on the supply-side of the economy. The long-time needed structural reform policies aim to liberalize the labour market and agricultural sector, solidify trade partnerships, cut business regulations and corporate taxes, and help integrate women into the workforce in an effort to increase competitiveness. But these have not been forthcoming. Abenomics initially generated high expectations but it has more recently come to be seen as yet another failed economic experiment.

MARKET DEVELOPMENTS

We have long argued that the fundamentals for long continued expansion are in place because of large excess capacity in raw materials and their consequently low prices. This is stimulative for the final goods industries located in most of the world's economies. Monetary policy has been fairly tight because of the bank regulation backlash; this will not change much as central banks tighten because banks are being deregulated. So we are looking at a steady modest growth rate of around 3% for the world economy. This is good for equities and now we are seeing the bond markets dive as QE looks likely to be unwound. We remain committed to holding equities.

Table 1: Market Developments

	Market Levels		Prediction for Apr/May 2018	
	Jun 6	Jul 3	Previous Letter	Current View
Share Indices				
UK (FT 100)	7450	7377	11913	11811
US (S&P 500)	2434	2429	3074	2951
Germany (DAX 30)	12714	12475	20049	19873
Japan (Tokyo New)	1590	1614	2169	1987
Bond Yields (government				
UK	1.08	1.33	1.50	2.00
US	2.21	2.34	3.00	3.00
Germany	0.26	0.48	0.90	0.80
Japan	0.04	0.09	0.30	0.10
UK Index Linked	−1.69	−1.58	1.20	−1.00
Exchange Rates				
UK ($ per £)	1.29	1.29	1.26	1.26
UK (trade weighted)	77.84	77.48	77.10	96.5
US (trade weighted)	102.40	101.76	102.4	102.4
Euro per $	0.89	0.88	0.93	0.92
Euro per £	1.15	1.14	1.17	1.16
Japan (Yen per $)	110.1	113.3	112.0	115.2
Short Term Interest Rates (3-month deposits)				
UK	0.28	0.28	1.50	1.50
US	1.15	1.32	1.50	1.50
Euro	−0.40	−0.40	−0.20	−0.20
Japan	−0.15	−0.05	0.20	0.00

Table 2: Prospective Yields [1]

Equities: Contribution to £ yield of:

	Dividend Yield	Real Growth	Inflation	Changing Dividend Yield	Currency	Total
UK	3.60	2.7	2.4	55.00		63.70
US	1.99	2.4	2.2	16.90	2.60	26.09
Germany	3.30	1.6	1.7	56.00	−1.86	60.74
Japan	1.90	1.1	1.0	21.00	0.98	25.98
UK indexed[2]	−1.58		2.4	7.00		7.83
Hong Kong[3]	2.60	6.3	2.2	−4.00	2.60	9.70
Malaysia	3.30	4.8	2.2	47.00	2.60	59.90
Singapore	3.50	2.0	2.2	7.00	2.60	17.30
India	1.40	7.6	2.2	23.00	2.60	36.80
Korea	1.10	3.0	2.2	−20.00	2.60	−11.10
Indonesia	2.20	5.4	2.2	30.00	2.60	42.40
Taiwan	2.80	3.4	2.2	4.00	2.60	15.00
Thailand	3.20	2.6	2.2	19.00	2.60	29.60

Bonds: Contribution to £ yield of:

	Redemption Yield	Changing Nominal Rates	Currency	Total
UK	1.33	−6.70		−5.37
US	2.34	−6.60	2.60	−1.66
Germany	0.48	−3.20	−1.86	−4.58
Japan	0.09	−0.10	0.98	−0.97

Deposits: Contribution to £ yield of:

	Deposit Yield	Currency	Total
UK	0.28		0.28
US	1.32	2.60	3.92
Euro	−0.40	−1.86	−2.26
Japan	−0.05	0.98	0.93

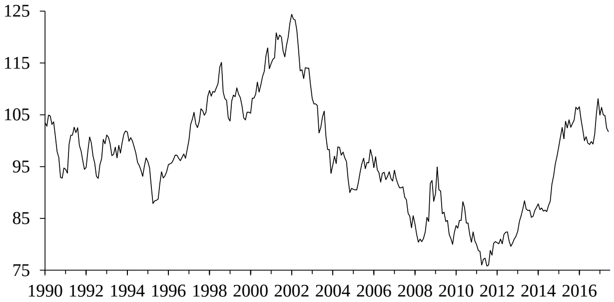
[1] Yields in terms of €s or $s can be computed by adjusting the £-based yields for the expected currency change.
[2] UK index linked bonds All Stocks
[3] Output based on China.

Table 3: Portfolio(%)

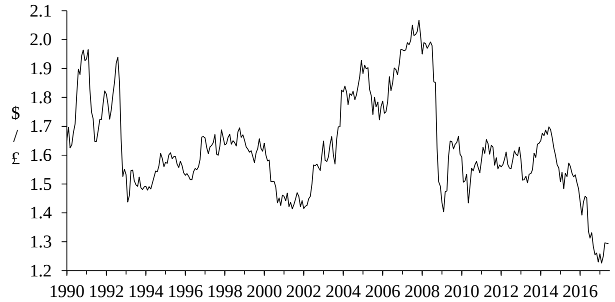
	Sterling Based Investor		Dollar Based Investor		Euro Based Investor	
	July Letter	Current View	July Letter	Current View	July Letter	Current View
UK Deposits (Cash)	5	5	5	5	1	1
US Deposits	-	-	-	-	-	-
Euro Deposits	-	-	-	-	-	-
Japanese Deposits	-	-	-	-	-	-
UK Bonds	-	-	-	-	-	-
US Bonds	-	-	-	-	-	-
German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

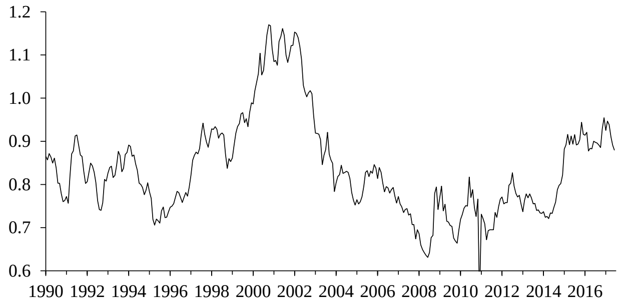
US : Trade Weighted Index
(Bank of England 1990 = 100)



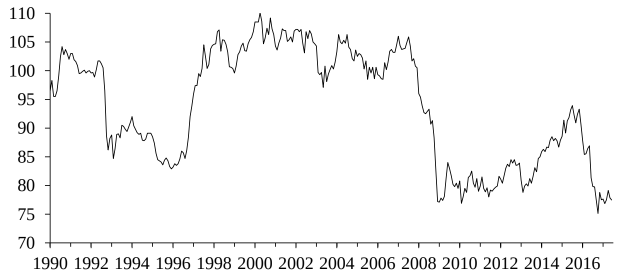
UK: Dollars Per Pound Sterling



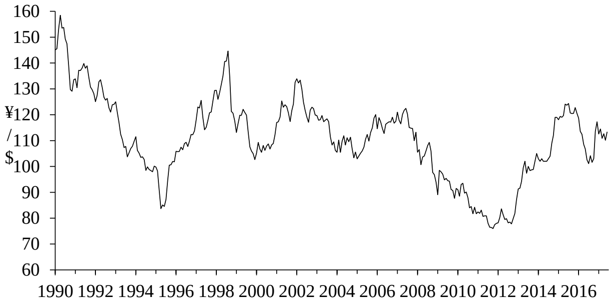
Euro per US dollar



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



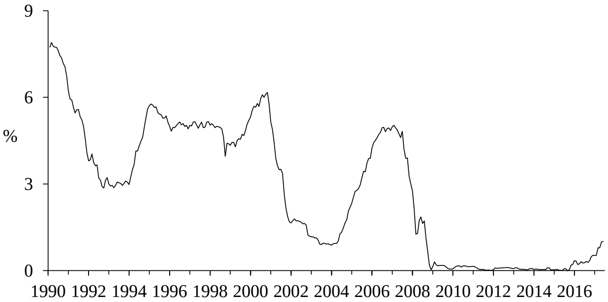
Japan : Yen Per U.S. Dollar



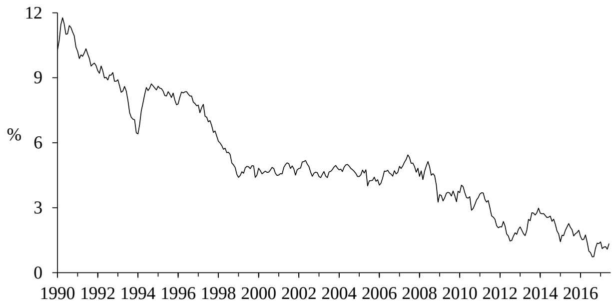
GOVERNMENT BOND MARKETS

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

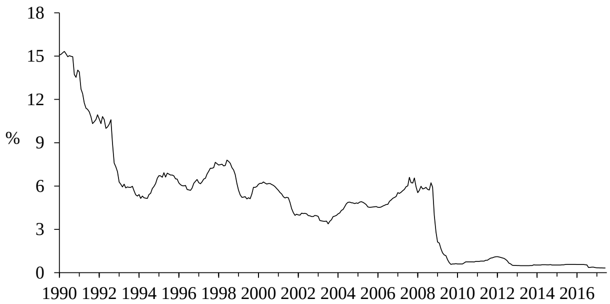
U.S. : 3-Month Treasury Bill



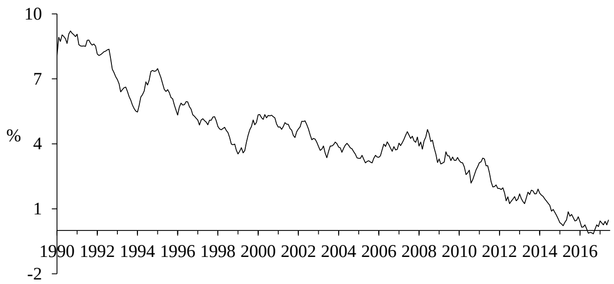
U.K.: Yield on Long-Term Government Bonds



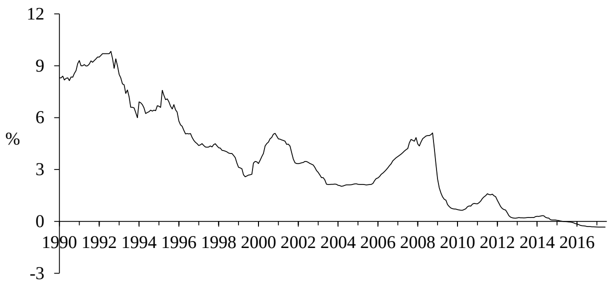
U.K. : 3-Month Interbank Rate



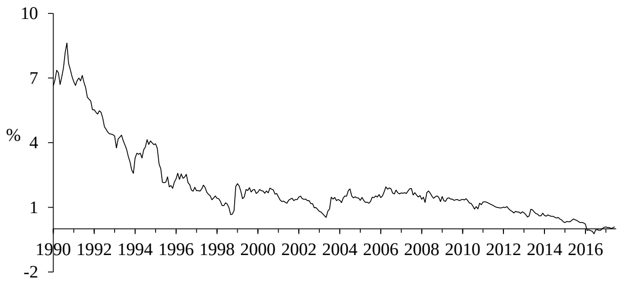
Germany: Yield on Public Authority Bonds



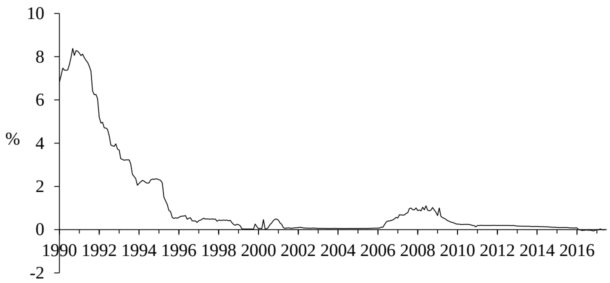
Germany : 3-Month Interbank Deposit Rate



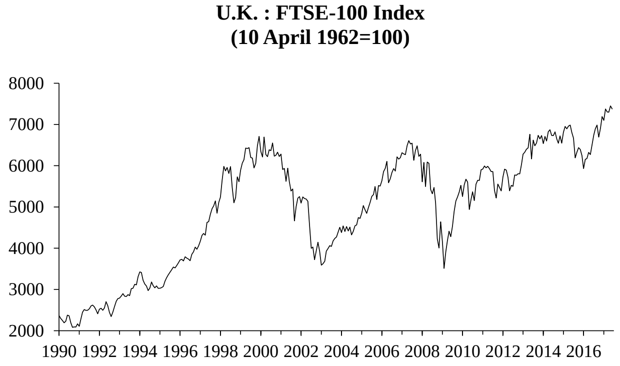
Japan: Yield on Long-Term Government Bonds

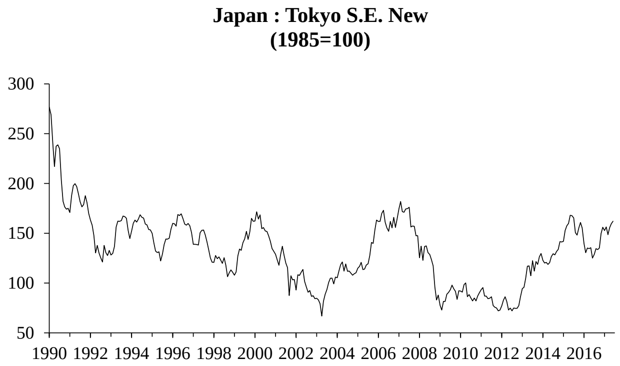


Japan : 3 Month Money Market Rate



MAJOR EQUITY MARKETS





EMERGING MARKETS

Anupam Rastogi

India

India is having a good fortune of political stability which allowed it to introduce far reaching economic reforms. The goods and services tax came into force on July 1. It has replaced 17 state and federal levies on everything from bread to motor cars. It has transformed India into a common market larger than Europe, the US, Brazil, Mexico and Japan put together. According to the International Monetary Fund, the GST will mean India's medium-term growth in gross domestic product rises above 8%. Stock markets have given thumbs up to the reforms as there was no hiccup post-July 1.

A good monsoon and falling oil prices are good for India's economy. The economy is expected to grow 8% in the current fiscal year. The inflation data has been consistently below the RBI's forecasts of 4% over the past few months, expectations are high that in the next Monetary Policy Committee meeting of the RBI, to be held on August 1–2, there would be 25–50 bps cut in interest rate. The bond market has already priced a rate cut.

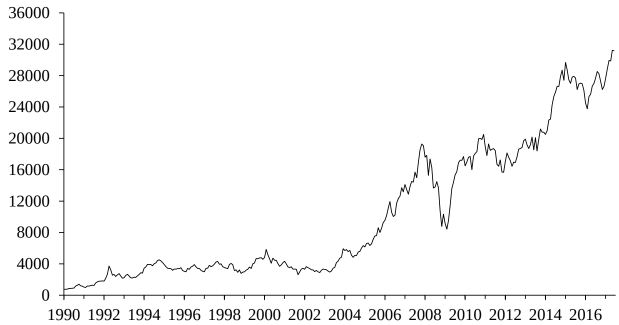
The firming up of the rupee has resulted in lowering the cost of external borrowing for companies. The Indian rupee has appreciated 5% since the beginning of the year. The recent improvement in the external account situation has led the rupee to remain stable in the FY 2017–18.

Bolstered by tax reform, the Indian government is getting ready to privatise Air India and part-privatise Indian Railways. There seems to be a few airlines which would like to buy Air India. The part-privatisation plan of the Indian Railways is gaining momentum.

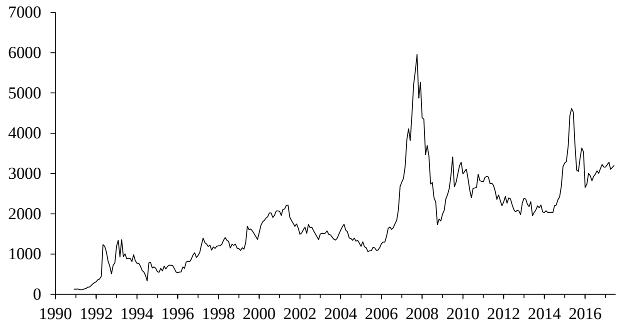
The Indian Prime Minister's trip to the US and Israel is being seen as the government's big push towards making India as a manufacturing hub. It appears that both, Israel and US corporates do not want to miss the opportunity to be a part of steadily growing economy.

	15–16	16–17	17–18	18–19	19–20
GDP (%p.a.)	8.0	7.1	7.5	8.0	8.1
WPI (%p.a.)	5.2	4.5	4.0	4.0	4.1
Current A/c(US$ bill.)	-24.0	-24.0	-26.0	-28.0	-30.0
Rs./$(nom.)	66.5	68.2	67.0	68.0	69.0

India: BSE Sensitive



China: SSE Composite Index



China

The Chinese economy is showing weakness but for the Chinese leadership, growth and stability is more important than longer-term reform. As the dates of the 19th Party Congress come nearer, China would not like to see volatility in its GDP growth numbers or in the foreign exchange market. In the Article IV report of the IMF the Fund has suggested that China needs to accelerate reforms to secure medium-term stability. The IMF forecast China's gross domestic product to grow 6.7% this year, marginally higher than the previous estimate of 6.6% and falling to 6.4% between 2018–20. The IMF is more optimistic than our forecast of the Chinese economy. Premier Mr. Li has vowed not to resort to stimulus measures to jump-start China's economy. Instead, he said, China will continue to focus on structural changes such as cutting debt levels and reducing overcapacity to put the economy on a stronger footing in the longer term.

China is still struggling with states for faking their economic data. The Corruption watchdog has named provinces Jilin and Inner Mongolia for faking economic data.

Real Estate remains in a flux. The Real Estate Index fell to a five-month low of 46 in June as the housing market is coming under a big squeeze because mortgage rates continued to rise.

Markets have taken note of the inverted yield curve which precedes economic recession in developed economies. The yield on the 10-year Chinese government bond (CGB) has been higher than that on the one-year CGB by an average 100 basis points since 2005, the gap reversed in the month of June when the 10-year CGB yield sank below the one-year CGB yield amid a severe liquidity crunch in the interbank market. For Chinese policymakers, maintaining macro stability, particularly financial stability, in the $10 trillion bond market is of paramount importance. China has opened the government bond market to foreign investors now.

In recent months, authorities have been keeping the currency, the yuan, relatively stable, while cracking down on leverage in the financial sector. A trillion dollar of reserves have been spent defending the currency in the past three years. The renminbi depreciated a record 6.5% last year. It was believed that the renminbi will depreciate in 2017 as well but it has gained 2.1% this year. China's forex reserves have risen for four straight months to the end of June, after falling for 20 of the previous 25 months. That suggests that the People's Bank of China is no longer selling dollars to support the currency.

MSCI has, at last, put a seal of approval on the Chinese stocks. It would admit 222 Chinese stocks to benchmarks such as its Emerging Markets Index, which is tracked by funds with some $1.6 trillion of assets under management worldwide. The inclusion, expected to take effect in two stages roughly a year from now, means the funds that track MSCI indexes will automatically allocate money into China. Beijing's perennial fear of market forces means MSCI inclusion of Chinese stocks is likely to disappoint investors in the same way as the IMF's move in 2015 to elevate the status of the Chinese renminbi as a reserve currency.

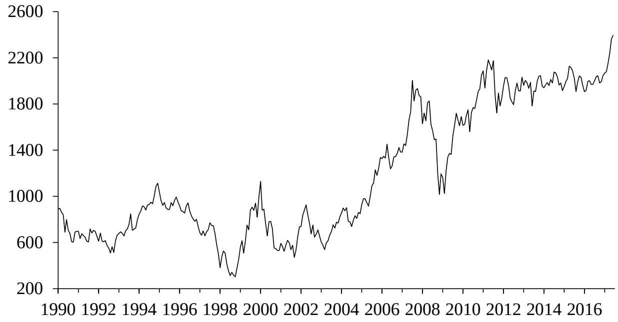
	15	**16**	**17**	**18**	**19**
GDP (%p.a.)	6.9	6.5	6.3	5.8	5.5
Inflation (%p.a.)	1.4	2.0	2.2	2.0	2.1
Trade Balance(US$ bill.)	550	510	400	380	350
Rmb/$(nom.)	6.4	6.7	6.9	6.9	7.0

South Korea

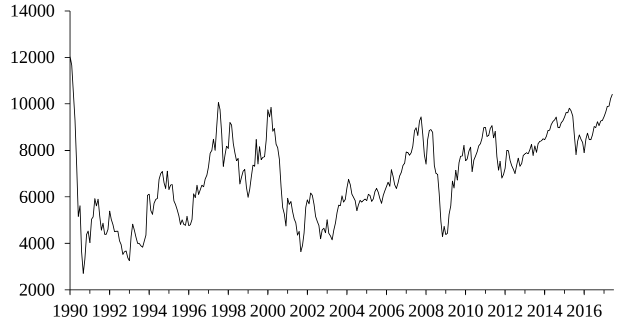
The economy is in a stable recovery cycle, thanks to robust exports and improving sentiment of households and businesses. The economy is facing headwinds from the sliding global oil prices and commodities as it would slow export growth in the second half. The OECD Economic Outlook has predicted Korea's gross domestic product will grow from 2.6% to 2.8% in 2018 assuming that domestic and international political uncertainty dispels. But, political uncertainties are growing rather than withering away. China's continued decisions to cut Korean imports and ban Chinese tour groups may lower GDP growth by 0.2 percentage points. Consumer prices in South Korea were up 2.0% on year in May.

President Moon Jae-in has proposed the 11.2 trillion won (US$9.91 billion) supplementary budget plan. The government expects the supplementary budget to add 0.2 percentage points to GDP growth this year. The extra budget will not lead to a rise in the Korean government's debt because it is financed by higher-than-expected tax revenues and last year's budget surplus. According to Moody's, the Korean government's debt ratio will stay stable at slightly below 40% of GDP over the next three years.

Korea: Composite Index



Taiwan: Weighted TAIEX Price Index



Exports are expected to grow 17.1% from a year earlier, versus 13.3% growth in May. Imports will grow 19.5% after jumping 19.1% a month earlier.

The South Korean president Moon Jae-in had a successful meeting with President Trump. The leaders focussed on the threat from North Korea. The Trump administration is wary of Mr Moon, who succeeded the conservative Park Geun-hye, because he once served as chief of staff to former leftist president Roh Moo-hyun.

Western businesses in South Korea are ramping up pressure on the country's new president to abandon what many see as lingering protectionism that undermines its commitments to open up its economy. The lobbying came as Moon Jae-in prepared for a meeting last month with US counterpart Donald Trump, who has threatened to renegotiate or even terminate a landmark trade deal between their two nations. The western business leaders and diplomats are increasingly unhappy with longstanding non-tariff barriers, which they say, go against the spirit of trade deals struck with the EU in 2011 and the US in 2012.

	15	**16**	**17**	**18**	**19**
GDP (%p.a.)	2.6	2.8	2.5	2.5	2.5
Inflation (%p.a.)	0.7	1.0	1.6	1.2	1.3
Current A/c(US$ bill.)	90.0	88.0	88.0	86.0	80.0
Won/$(nom.)	1180	1160	1140	1140	1130

Taiwan

As global demand for electronic items and computer chips is rising, GDP growth in 2017 is going to perk up to more than

2%. Momentum has picked up in industrial production in the second half of last year on the back of growing exports. For 2017, the private consumption is expected to grow 1.77% from a year earlier after inflationary adjustments, while the real growth in private investments could hit 1.85%. Real growth in the import and export of merchandise and services in 2017 is expected to reach 3.73% and 3.63%, respectively, from a year earlier.

The Central Bank of China, Taiwan (CBC) kept its discount rate on hold at 1.375%. The decision was in line with expectations among economists. The CBC is unlikely to adjust monetary policy and in view of a strong export-led recovery, interest rate cuts are not needed to support the economy. Inflation remains tepid which does not warrant tighter monetary policy either.

China lashed out at the US over its announcement of an arms sale to Taiwan, amid what appears to be a sea change in the Trump administration's policy towards Beijing. The foreign ministry in Beijing said that the $1.4bn deal had "severely damaged China's security and sovereignty", and that Taiwan was "an indispensable part of China's territory".

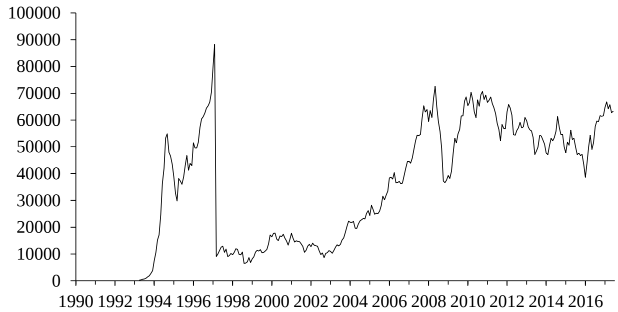
	15	16	17	18	19
GDP (%p.a.)	0.8	1.4	2.5	2.6	2.3
Inflation (%p.a.)	0.7	1.0	1.0	1.0	1.2
Current A/c(US$ bill.)	60.0	64.0	68.0	68.0	70.0
NT$/$(nom.)	32.8	32.5	32.0	32.0	32.0

Brazil

The ethical crisis seems to be growing after the sweeping corruption investigation into state-controlled oil company Petrobras and related plea bargains by the country's largest construction company Odebrecht and meatpacker JBS. All of the country's five recent presidents have been implicated as well as one-third of Mr Temer's cabinet, one quarter of the senate and a large swath of the congress. JBS told investigators that it paid bribes to 1,839 politicians across most parties and regions of Brazil. The scandal known as Lava Jato, or Car Wash, has led to the conviction of politicians, businessmen and former executives of the state-controlled oil company Petrobras and its contractors, Odebrecht.

However, even if President Temer gets impeached and an interim president steps in the run up to next year's presidential elections, investors in domestic markets seem to expect that congress will approve the social security reform with many changes. But, Brazil is heading into recession later this year. Brazil had returned to growth in the first three months of 2017, with quarter-on-quarter expansion of 1% ending a two-year recession. The country is set to slide back into recession, possibly in the third quarter of the year, according to forward looking indicator. In 2017, full-year growth of GDP is likely to be 0.5% only.

Brazil: Bovespa



President Michel Temer will become the first sitting president in the country's history to face criminal charges. This will set the stage for a showdown between Brazil's crusading law-enforcement apparatus and an entrenched political class at a time of growing tension between the two sides.

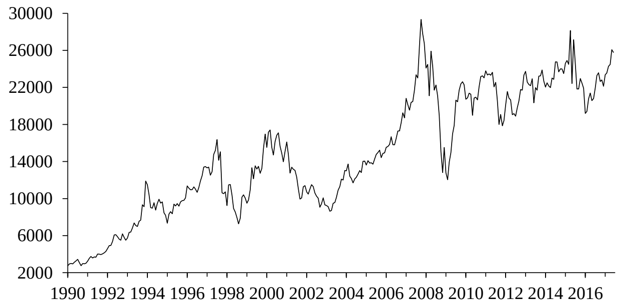
With the Brazilian real below 3.4 per U.S. dollar, the markets seem to be pricing-in expectations that congress will vote on a significantly modified version of social-security reform in the lower house and that the senate will vote on labour reform in the third quarter, despite the political crisis surrounding President Michel Temer. More than two third of congress embroiled in the scandal, they have an incentive to support Temer.

São Paulo's benchmark Ibovespa equity index is down nearly 8% since the JBS scandal broke on May 17, 2017.

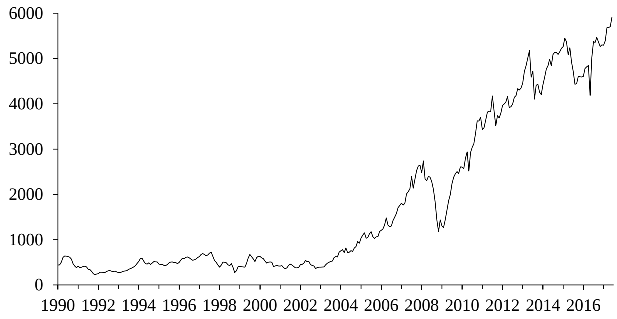
	15	16	17	18	19
GDP (%p.a.)	-3.8	-3.6	0.5	1.5	3.0
Inflation (%p.a.)	10.7	6.3	4.4	4.5	4.0
Current A/c(US$ bill.)	-70.0	-28.0	-25.0	-25.0	-32.0
Real/$(nom.)	3.9	3.5	3.4	3.2	3.2

Other Emerging Markets

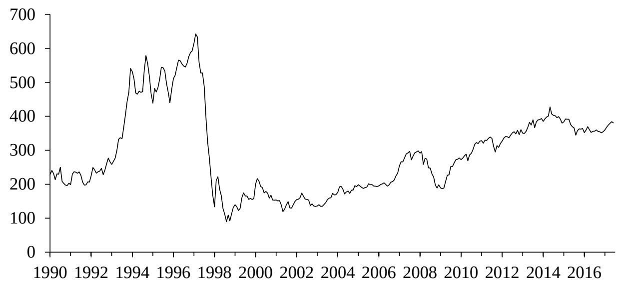
Hong Kong: FT-Actuaries



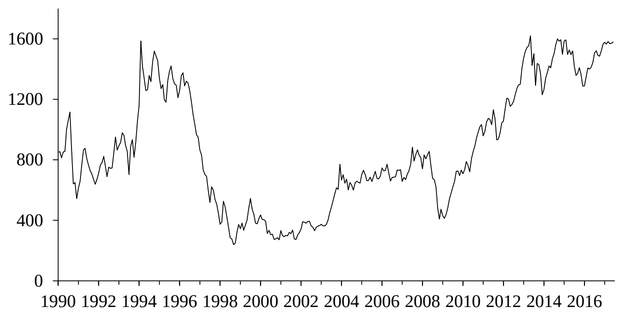
Indonesia: Jakarta Composite



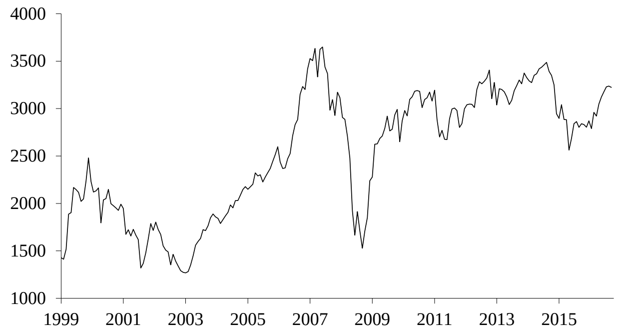
Malaysia: FT-Actuaries (US$ Index)



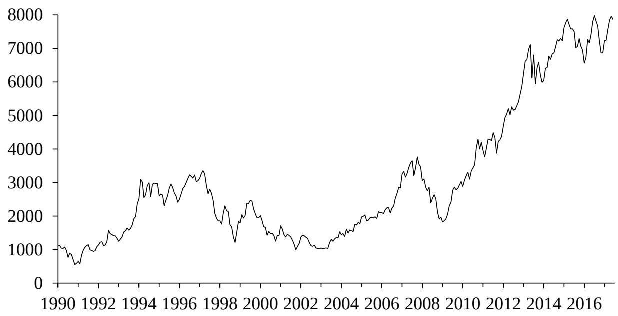
Thailand: Composite Index



Singapore: Straits Times Index

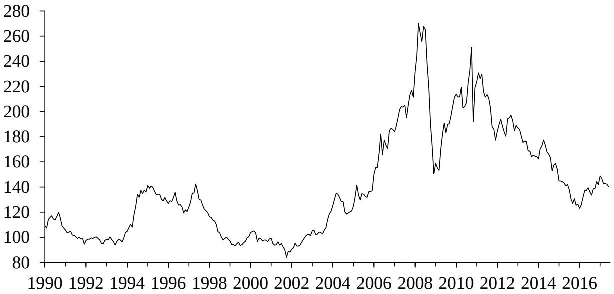


Philippines: Manila Composite

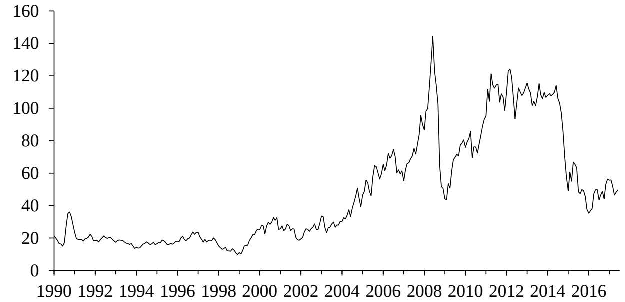


COMMODITY MARKETS

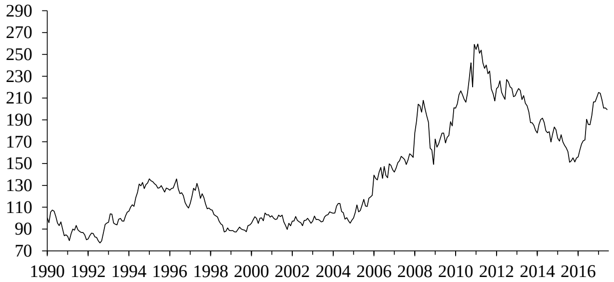
Commodity Price Index (Dollar)
(Economist, 2000=100)



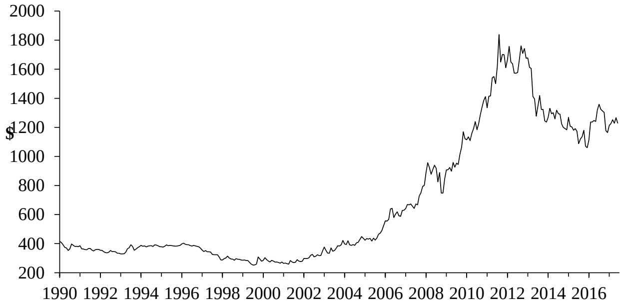
Oil Price: North Sea Brent (in Dollars)



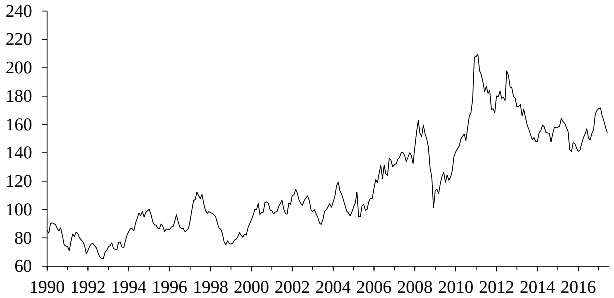
Commodity Price Index (Sterling)
(Economist, 2000=100)



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]
2015	0.2	1.3	0.6	91.6	91.6	0.5	1.0	-1.0
2016	1.2	0.9	0.4	81.5	80.4	-1.6	2.1	-1.5
2017	2.6	1.1	0.9	77.8	76.4	-1.7	3.2	-1.7
2018	2.6	2.0	1.5	76.1	75.1	-1.3	3.1	-1.0
2019	3.0	2.9	2.5	74.7	74.6	-0.1	3.4	0.0
2020	3.0	3.0	3.0	73.4	74.4	0.5	3.5	0.0
2016:1	0.3	0.9	0.7	87.2	86.8	-1.1	1.4	-0.7
2016:2	1.3	0.9	0.5	81.8	81.2	-1.3	2.2	-0.9
2016:3	1.5	0.9	0.2	79.4	77.8	-1.7	2.3	-1.0
2016:4	1.8	0.9	0.2	77.6	75.9	-1.8	2.5	-1.2
2017:1	2.1	1.0	0.5	79.0	77.4	-1.6	2.8	-1.9
2017:2	2.6	1.2	0.5	78.7	77.4	-1.5	3.2	-1.9
2017:3	2.8	1.2	1.0	76.9	75.4	-1.5	3.3	-1.8
2017:4	3.0	1.2	1.5	76.6	75.4	-1.5	3.5	-1.3
2018:1	2.4	1.5	1.3	76.8	75.4	-1.5	3.0	-1.5
2018:2	2.4	2.0	1.5	76.5	75.4	-1.4	3.0	-1.0
2018:3	2.8	2.0	1.5	75.3	74.4	-1.5	3.3	-1.0
2018:4	2.8	2.5	1.5	75.7	75.4	-1.5	3.3	-0.5

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)
2015	247.1	2.4	2.3	0.8	141.1
2016	254.3	2.9	2.1	0.7	143.5
2017	260.8	2.6	2.2	0.8	146.3
2018	270.1	3.6	2.1	0.8	150.8
2019	282.7	4.7	2.0	0.7	155.6
2020	295.3	4.5	1.9	0.7	159.5
2016:1	252.0	2.1	2.1	0.7	143.2
2016:2	252.1	2.5	2.2	0.8	142.7
2016:3	254.4	2.4	2.2	0.8	143.5
2016:4	254.3	2.5	2.3	0.8	142.5
2017:1	257.7	2.3	2.2	0.8	143.8
2017:2	259.8	3.1	2.2	0.8	144.6
2017:3	261.9	3.0	2.2	0.8	145.0
2017:4	263.4	3.6	2.2	0.8	144.6
2018:1	266.0	3.2	2.1	0.8	145.0
2018:2	267.9	3.1	2.1	0.8	145.6
2018:3	271.4	3.6	2.1	0.8	146.2
2018:4	275.0	4.4	2.0	0.7	147.0

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
2015	156.5	749593.1	430478.9	302953.3	196562.0	-50539.3	129861.8
2016	159.4	763130.9	440238.4	297248.0	198473.7	-55145.2	117683.9
2017	163.1	781039.6	458510.3	276002.6	201835.6	-31228.2	124080.0
2018	167.4	801728.0	469801.9	276816.4	205872.3	-23275.3	127485.1
2019	172.2	824788.8	481547.0	275786.6	209989.8	-11175.3	131356.0
2020	178.2	853457.0	493585.6	287525.6	214189.6	-5675.3	136174.4
2015/14	2.2		1.6	3.8	1.1		-2.3
2016/15	2.3		3.3	-6.3	1.0		-3.7
2017/16	2.1		1.3	0.5	0.9		3.5
2018/17	2.6		1.9	0.8	1.0		2.7
2019/18	2.9		2.2	-0.6	1.2		3.0
2020/19	3.5		2.3	3.9	1.9		3.7
2016:1	158.1	189138.4	108678.4	72398.4	50736.1	-13542.0	29132.6
2016:2	158.9	190275.7	109825.3	73785.0	48907.3	-12813.4	29428.6
2016:3	159.7	191226.4	110456.6	75298.0	49388.4	-16711.1	27205.5
2016:4	160.8	192490.5	111278.1	75766.5	49441.8	-12078.7	31917.3
2017:1	161.3	193068.3	110289.9	73007.2	51174.2	-10116.5	31287.1
2017:2	162.2	194226.4	111206.1	74520.6	49141.5	-10103.9	30538.0
2017:3	163.3	195469.2	111967.0	75369.8	49891.8	-11094.1	30664.8
2017:4	164.2	196638.6	112632.2	75930	50099.3	-10691.5	31330.6
2018:1	165.6	198242.7	112567.2	73572.7	51892.3	-8179.1	31610.3
2018:2	166.6	199460.3	113264.8	76217.0	49423.6	-7778.1	31666.7
2018:3	167.2	200136.3	113966.8	74803.9	50232.4	-7096.8	31769.2
2018:4	168.5	201737.9	114673.1	76633.7	50696.1	-8167.1	32097.0

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)
2015	4.6	1533.1	71.2	52.0	-103.7
2016	4.3	1592.4	69.0	52.3	-89.0
2017	3.2	1662.4	53.4	55.7	-63.7
2018	2.5	1756.4	44.8	61.6	-44.9
2019	2.0	1861.6	37.2	66.6	-14.4
2020	0.7	1477.6	12.8	51.5	0.5
2016:1	-0.1	384.6	-0.5	13.1	-33.7
2016:2	5.8	392.0	22.9	13.1	-14.0
2016:3	2.4	394.5	9.5	12.9	-13.1
2016:4	5.8	402.2	23.2	13.0	-28.2
2017:1	4.1	403.3	16.6	13.1	-18.4
2017:2	3.0	407.5	12.2	13.2	-17.6
2017:3	3.2	412.4	13.1	13.7	-17.2
2017:4	3.1	419.3	13.1	14.3	-10.4
2018:1	3.6	423.3	15.1	14.4	-15.3
2018:2	2.4	429.2	10.2	14.9	-13.8
2018:3	2.6	434.9	11.3	15.1	-10.1
2018:4	2.6	442.2	11.4	15.7	-5.7

1 GDP at market prices (Financial Year)

WORLD FORECAST DETAIL

Growth Of Real GNP

	2013	2014	2015	2016	2017	2018
U.S.A.	1.5	2.4	2.4	2.1	2.1	2.4
U.K.	2.2	2.9	2.2	2.3	2.1	2.6
Japan	1.4	–0.1	0.5	1.0	1.4	1.1
Germany	0.3	1.6	1.7	1.8	1.6	1.6
France	0.7	0.2	1.1	1.4	1.4	1.5
Italy	–1.7	–0.3	0.8	1.1	0.9	0.9

Real Short-Term Interest Rates

	2013	2014	2015	2016	2017	2018
U.S.A.	–1.5	–0.1	–1.1	–1.4	–1.1	–0.4
U.K.	–0.8	–2.2	-1.0	–1.6	–1.7	–1.3
Japan	–2.5	–0.6	0.0	–0.7	–1.0	–1.5
Germany	–0.6	–0.2	–0.6	–2.0	–2.0	–2.2
France	–0.2	0.1	–0.5	–1.5	–1.6	–1.8
Italy	0.1	0.0	–0.3	–1.6	–1.6	–1.9

Real Long-Term Interest Rates

	2013	2014	2015	2016	2017	2018
U.S.A.	1.6	0.7	0.3	0.3	0.5	1.0
U.K.	–0.8	–0.7	–1.0	–1.5	–1.7	–1.0
Japan	–0.8	–1.1	–1.3	–1.2	–1.3	–1.5
Germany	0.8	–0.8	–1.0	–1.6	–1.4	–1.2
France	1.1	–0.5	–0.8	–1.4	–1.0	–0.8
Italy	1.2	–0.5	–0.7	–1.3	0.4	0.6

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

	2013	2014	2015	2016	2017	2018
U.S.A.	82.1	83.9	93.0	94.0	94.5	94.8
U.K.	86.5	93.1	91.6	80.4	76.4	75.1
Japan	63.5	59.8	56.0	58.4	58.3	58.1
Germany	99.0	99.9	94.7	95.0	94.3	94.9
France	100.7	100.8	96.2	96.0	95.4	95.2
Italy	106.9	107.5	102.1	102.0	101.2	101.1

[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.

Growth Of Consumer Prices

	2013	2014	2015	2016	2017	2018
U.S.A.	1.5	1.6	0.1	1.3	2.4	2.2
U.K.	2.3	1.7	0.2	1.2	2.6	2.6
Japan	0.4	2.7	0.8	0.2	0.7	1.0
Germany	1.5	0.9	0.3	0.5	1.8	1.7
France	0.9	0.5	0.0	0.4	1.3	1.3
Italy	1.2	0.2	0.1	0.2	1.4	1.3

Nominal Short-Term Interest Rates

	2013	2014	2015	2016	2017	2018
U.S.A.	0.1	0.0	0.2	1.0	1.1	1.6
U.K.	0.6	0.6	0.6	0.4	0.9	1.5
Japan	0.2	0.2	0.2	0.0	0.0	0.0
Germany	0.3	0.1	–0.1	–0.2	–0.3	–0.2
France	0.3	0.1	–0.1	–0.2	–0.3	–0.2
Italy	0.3	0.1	–0.1	–0.2	–0.3	–0.2

Nominal Long-Term Interest Rates

	2013	2014	2015	2016	2017	2018
U.S.A.	3.0	2.2	2.2	2.4	2.6	3.0
U.K.	1.3	1.8	1.3	0.7	1.1	2.0
Japan	0.7	0.3	0.3	0.0	0.1	0.1
Germany	1.9	0.5	0.6	0.4	0.5	0.8
France	1.9	0.5	0.6	0.4	0.9	1.2
Italy	1.9	0.5	0.6	0.4	2.3	2.6

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

	2013	2014	2015	2016	2017	2018
U.S.A.[1]	85.61	89.04	103.08	101.91	102.20	102.40
U.K.	1.55	1.65	1.53	1.35	1.28	1.26
Japan	98.20	106.70	120.00	118.40	113.50	115.20
Eurozone	0.75	0.76	0.90	0.95	0.93	0.92

[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