

# LIVERPOOL INVESTMENT LETTER

April 2016



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 Julian Hodge Bank. 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. This research has been given especial relevance by the ongoing discussions on the extra powers regularly requested by the European Union and also by the recent crisis in the eurozone.

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 Jane 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 Bruce Webb and published on behalf of the group by Liverpool Macroeconomic Research Limited, which holds the copyright

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<p>We consider the outlook if there is Brexit. In our forecast we use our standard assumption of ‘rational expectations’, which is strongly supported by our tests against the data. This means that people understand the effects of new policies and act on them immediately. Brexit introduces important supply-side reforms which cause demand and interest rates to rise and a gradual increase in output as supply responds.</p>	
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# POST-BREXIT FORECAST BASED ON CARDIFF RESEARCH

The issue of the UK leaving the EU has started to affect the forecast outlook as the outcome of the referendum has moved towards being extremely close run. It is now important to make a forecast on the assumption that the UK leaves — Brexit — besides one where it does not, as has been assumed hitherto. The standard cliché forecast outlook emerging from such other forecasters as the CBI and Oxford Economics has been that there will be a ‘nasty shock’ to the UK outlook if it leaves. Yet the assumptions on which this is based are obscure, to say the least. Many of the arguments for leaving are based on supply-side changes such as reduced regulation, the trade effects of leaving the EU protectionist Customs Union, the return of budgetary contributions, and the guarantee of non-membership of the euro with associated bail-out concerns. If the supply-side should be improved in the longer term, then it is puzzling that the economy should shrink in the shorter term as these forecasts suggest.

In this post-Brexit forecast we take our previous forecast without Brexit and allow for Brexit. The assumptions we make are based on the figures in Minford et al (2015) for trade and regulation effects. We assume that the gain in consumer living standards from leaving the EU customs union is 3.2% due to the fall in tariff-equivalent (which we treat as a fall in the UK expenditure tax) and 0.8% due to an improvement in the terms of trade (whereby the prices of UK imports from the EU fall, partially offset by a fall in the prices of UK exports to the EU; but the exports are some 8% of GDP smaller than the imports). The net EU budget contribution, 0.8% of GDP, is also returned to UK consumers in the form of an income tax cut. The reduction of the regulative burden is modelled as a fall in the employer rate of national insurance by 2%. The PSBR is left unchanged since none of these changes therefore affect the net public revenues. The 0.8% terms of trade gain plus the 0.8% return of the net EU budget contribution are received as direct improvements of the current account.

All these changes are phased in gradually over five years.

The main effects of these changes are to boost the economy’s supply-side in the longer term. Growth improves as UK costs fall. Unemployment falls slightly. Real wages rise as firms demand more labour given higher profits. The higher output drives down the exchange rate as new markets are looked for by exporters.

In the shorter term there is a rise in inflation as the exchange rate falls and demand increases. Interest rates rise in reaction during 2017.

It is interesting to see that after Brexit the UK becomes a more ‘normal’ economy, with growth reviving, monetary policy ‘normalising’ and inflation back on track. The fall in

**Table 1.1: Summary of Forecast — pre-Brexit**

	2014	2015	2016	2017	2018	2019	2020
GDP Growth <sup>1</sup>	2.9	2.2	2.3	2.4	2.5	2.5	2.5
Inflation CPI	1.7	0.1	1.1	1.6	2.0	2.0	2.0
Wage Growth	1.2	2.7	3.2	2.9	3.0	2.5	2.9
Unemployment (Mill.) <sup>2</sup>	1.1	0.9	0.8	0.8	0.7	0.7	0.7
Exchange Rate <sup>3</sup>	87.1	91.6	90.4	90.5	90.1	91.8	91.3
3 Month Interest Rate	0.6	0.5	0.7	1.1	1.7	2.1	2.5
5 Year Interest Rate	1.8	1.4	2.0	2.2	2.5	2.5	2.5
Current Balance (£bn)	-99.9	-91.0	-70.4	-66.0	-66.2	-64.7	-64.5
PSBR (£bn)	83.3	78.1	65.5	56.6	36.1	31.4	23.8

<sup>1</sup>Expenditure estimate at factor cost

<sup>2</sup>U.K. Wholly unemployed excluding school leavers (new basis)

<sup>3</sup>Sterling effective exchange rate, Bank of England Index (2005 = 100)

**Table 1.2: Summary of Forecast — post-Brexit**

	2014	2015	2016	2017	2018	2019	2020
GDP Growth <sup>1</sup>	2.9	2.2	2.3	2.7	2.7	2.8	3.4
Inflation CPI	1.7	0.1	1.1	1.6	2.8	2.6	2.1
Wage Growth	1.2	2.7	3.2	3.5	4.5	3.1	3.4
Unemployment (Mill.) <sup>2</sup>	1.1	0.9	0.8	0.8	0.7	0.7	0.7
Exchange Rate <sup>3</sup>	87.1	91.6	90.4	89.9	86.6	86.2	84.9
3 Month Interest Rate	0.6	0.5	1.1	4.0	4.0	3.0	3.4
5 Year Interest Rate	1.8	1.4	2.4	3.7	3.4	2.9	2.8
Current Balance (£bn)	-99.9	-91.0	-69.7	-66.8	-57.8	-39.9	-27.1
PSBR (£bn)	83.3	78.1	64.1	62.9	26.7	19.8	17.6

<sup>1</sup>Expenditure estimate at factor cost

<sup>2</sup>U.K. Wholly unemployed excluding school leavers (new basis)

<sup>3</sup>Sterling effective exchange rate, Bank of England Index (2005 = 100)

the exchange rate and the direct improvement in the current account largely correct the recently persistent current account deficit. The PSBR as a share of GDP continues to fall towards balance at the end of the decade, with faster growth of nominal GDP.

What about the short term uncertainties? Essentially the Brexit effect in the short term divides into two parts:

1) there is a rise in long term performance which translates into higher profitability and more investment; the rising productivity and capital stock also raises output in a gradually increasing way

2) there is a gradual fall in the exchange rate which triggers a rise in interest rates (in order to maintain the incentive to keep portfolio investment in the UK and stop an accelerating fall). This has a negative effect on demand.

In the attached forecast these two forces are seen as balancing out. A more backward-looking model (in which expectations are based on past outcomes — ‘believe it when you see it’) makes 2) dominate; a completely forward-looking model makes 1) dominate.

This forecast is based on rational expectations. Therefore people understand the long-term changes in the environment. The fall in the exchange rate we see in the Liverpool Model after Brexit is coming from the expansion

of the economy and the need for larger markets to absorb the higher output. In recent work on the UK in which investment is forward-looking, as in Meenagh et al (2007), we find that in the short run output does not move much so that the rise of interest rates is needed to stop demand from surging upwards, because of better investment returns and higher longer term income prospects. This mechanism has been built into this forecast.

The essential point about rational expectations is that it assumes people understand the supply-side changes brought in by Brexit and build these into their plans at once. Rational expectations have been found in recent tests of models to fit the facts impressively (Liu and Minford, 2014), unlike rival assumptions such as ‘behavioural expectations’ which are mainly or entirely backward looking. Hence the long term changes start immediately to have beneficial effects on demand through the role of expectations.

Brexit is a ‘shock’ — basically a good shock.

For more detailed tables see forecast appendices.

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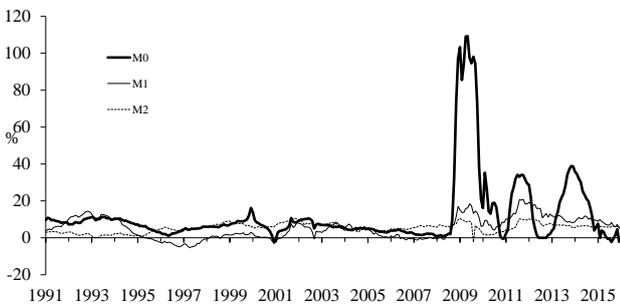
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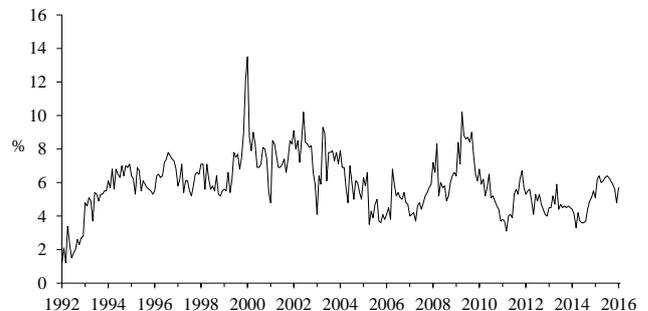
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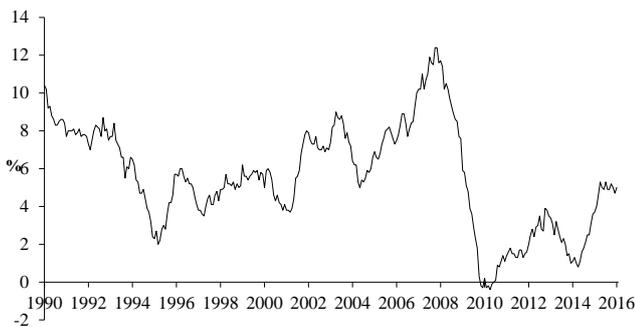
**U.S.: Growth in Monetary Aggregates (Yr - on - Yr)**



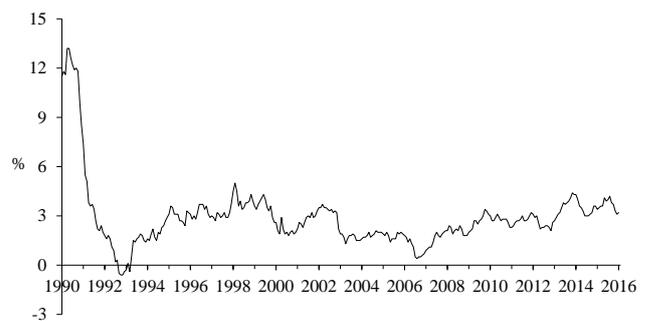
**UK: Notes and Coins in Circulation Growth**



**Eurozone M3 Growth**



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



## FOCUS ON JAPAN

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Francesco Perugini

### Is Abe going to delay planned sales tax hike once again?

At the first round of the International Finance and Economic Assessment Council held at the Prime Minister's Shinzo Abe office on March 16th, Abe, the Bank of Japan (BOJ) Governor Haruhiko Kuroda, key cabinet members and advisers, and Nobel-prize winner Joseph Stiglitz exchanged opinions on the plan to increase the tax rate from 8% to 10% in April 2017.

The government says the Council is not for discussing whether to raise the consumption tax, characterizing it instead as a “workshop” to prepare for the Group of Seven summit at Japan's Ise-Shima resort in May. But given that Abe has told the Diet that the tax increase could be postponed if a crisis like the Lehman Brothers collapse erupts or the global economy significantly shrinks, most observers say the sales tax issue was very much a focus of the talks. “Things are unfolding just as they did before the previous tax-hike delay,” said one market participant.

In November 2014, the government convened a meeting of experts to examine the plan for a consumption tax increase. On the final day of the meeting, Abe announced that the hike was being put off. It is believed that Paul Krugman, another Nobel-prize winner, whom Abe met at the time, heavily influenced the decision. There is speculation that the government invited Stiglitz and also Krugman to play a similar role this time. In fact Stiglitz told reporters that “a consumption tax increase now is going in the wrong direction,” while Krugman said that given the current global economic weakness, “Japan had not emerged from deflation and fiscal policy should be used to reinforce monetary easing after the Japanese economy has depended too much on accommodative monetary policy”. Even Abe's close aides are said to be urging him to defer the tax hike. Professor Emeritus Koichi Hamada of Yale University, who advises the prime minister on economic policy, said in a March 14 interview with *The Nikkei* that raising the consumption tax in April next year is “not wise.” Likening the Japanese economy to a boat in danger of sinking amid a raging sea, Hamada said that under such conditions “the tax increase plan should be dropped”.

Abe is not just letting others do all the talking for him. At an Upper House Budget Committee meeting on March 18, the prime minister said that “Uncertainties regarding the global economy are growing markedly. We will lose everything if the tax hike tanks the Japanese economy”. The Japanese economy is indeed on a weak footing. The recovery in exports is losing steam amid the slowdown in emerging markets, while domestic housing investment is lacklustre. Furthermore, the BOJ says expectations for inflation are fading among businesses and households. Market turmoil

since the start of the year has stirred concerns about Japan's economic outlook among executives, making big companies hesitant to carry out meaningful wage hikes in their annual spring labour negotiations. Stagnating wages could derail Abe's hopes for “a virtuous cycle driven by pay hikes and capital investment.” Flimsy wage increases could also throw cold water on the government's hopes for a jolt to consumer spending.

However, the view on the Japanese economic outlook and on the tax increase is mixed among observers and practitioners. For instance, Toshihiro Nagahama at the Dai-ichi Life Research Institute said that economic conditions are “grim” and that Japan should respond with “pro-growth policies.” Of the same view is Mitsumaru Kumagai, chief economist at the Daiwa Institute of Research, who supports the tax increase but said “detailed and thorough precautions” are essential to ensure it is successful.

Others argue that today's circumstances are not nearly as dire as in 2009, when the US and other advanced economies were contracting. Though worries over slowing growth persist, the global economy is forecast to expand this year. So these economists reject the notion that a disaster of Lehman-esque proportions is underway. “The global economy may be weak, but there is little risk of a recession a year from now, when the tax hike is supposed to take place,” said Hiromichi Shirakawa, chief Japan economist at Credit Suisse. Harvard University professor Dale Jorgenson offered an optimistic view of the economy too, and pointed to the need for Japan to raise the consumption tax without specifying any timing.

Since Abe earlier promised to go ahead with the next tax hike unless the global economic outlook is too weak, a pessimistic assessment of the global situation could provide a pretext for another postponement, while deflecting criticism of his own policies and Japan's domestic economic performance. “If the Japanese economy is not doing well, it's the failure of Abenomics,” said Adachi of JPMorgan. The consultations with top foreign experts allow Japanese leaders to say: “our policy is working and it's the fault of the severe global environment. However, if Abe delays the tax hike he likely will call a snap general election, just as he did in late 2014”, he said.

That's not an easy choice for the head of a ruling coalition that holds a two-thirds majority in the powerful Lower House of parliament. But sooner or later Abe has to make a decision on this, while balancing competing factors. If the benchmark Nikkei Stock Average, which temporarily slipped below 15,000 amid the global market turbulence, continues to recover steadily, it would smooth the way for him to dissolve the Lower House and hold votes for both houses of the Diet at the same time. At the same time, if the

Japanese economy remains tepid and the global economy grows conspicuously worse, putting off the consumption tax hike would become all the more likely. Holding off on an

increase would provide Abe with the grounds for dissolving the Lower House.

## MARKET DEVELOPMENTS

The outlook for investment in UK bonds and equities is affected by Brexit. In our forecast we find that bonds prices will fall because interest rates must rise to curb

demand and the exchange rate must fall to stimulate foreign demand for increased UK output. Equities should do well as the growth outlook improves.

**Table 1: Market Developments**

	Market Levels		Prediction for Mar/Apr 2017	
	Feb 29	Apr 1	Previous Letter View	Current View
<b>Share Indices</b>				
UK (FT 100)	6153	6175	8737	8700
US (S&P 500)	1978	2060	2473	2575
Germany (DAX 30)	9717	9966	13886	14241
Japan (Tokyo New)	1301	1347	1728	1789
<b>Bond Yields (government)</b>				
UK	1.52	1.54	2.00	2.10
US	1.82	1.80	2.10	2.10
Germany	0.15	0.16	0.70	0.70
Japan	-0.07	-0.05	0.40	0.40
UK Index Linked	-0.93	-0.98	0.10	0.10
<b>Exchange Rates</b>				
UK (\$ per £)	1.39	1.44	1.50	1.50
UK (trade weighted)	85.41	85.54	90.80	90.40
US (trade weighted)	104.1	102.2	100.0	100.0
Euro per \$	0.92	0.88	0.91	0.91
Euro per £	1.28	1.26	1.37	1.37
Japan (Yen per \$)	113.6	112.4	120.5	120.5
<b>Short Term Interest Rates (3-month deposits)</b>				
UK	0.50	0.50	1.00	1.00
US	0.60	0.60	1.20	1.20
Euro	-0.23	-0.28	0.00	0.00
Japan	-0.20	-0.20	0.20	0.20

**Table 2: Prospective Yields<sup>1</sup>**

<b>Equities: Contribution to £ yield of:</b>						
	Dividend Yield	Real Growth	Inflation	Changing Dividend Yield	Currency	Total
UK	3.40	2.4	1.5	37.00		44.30
US	1.90	2.5	1.5	21.00	-4.36	22.54
Germany	2.60	1.8	1.1	40.00	-8.23	37.27
Japan	1.70	1.2	0.6	31.00	-11.89	22.61
UK indexed <sup>2</sup>	-0.89		1.5	1.00		1.53
Hong Kong <sup>3</sup>	2.60	6.0	1.5	-3.00	-4.36	2.74
Malaysia	3.30	6.1	1.5	64.00	-4.36	70.54
Singapore	3.50	3.0	1.5	21.00	-4.36	24.64
India	1.40	7.3	1.5	24.00	-4.36	29.84
Korea	1.10	3.0	1.5	-17.00	-4.36	-15.76
Indonesia	2.20	5.0	1.5	30.00	-4.36	34.34
Taiwan	2.80	3.4	1.5	12.00	-4.36	15.34
Thailand	3.20	4.0	1.5	37.00	-4.36	41.34
<b>Bonds: Contribution to £ yield of:</b>						
	Redemption Yield	Changing Nominal Rates	Currency	Total		
UK	1.54	-4.60				-3.06
US	1.80	-3.00	-4.36			-5.56
Germany	0.16	-5.40	-8.23			-13.47
Japan	-0.05	-4.50	-11.89			-16.44
<b>Deposits: Contribution to £ yield of:</b>						
	Deposit Yield	Currency	Total			
UK	0.50		0.50			
US	0.60	-4.36	-3.46			
Euro	-0.28	-8.23	-8.51			
Japan	-0.20	-11.89	-12.09			

<sup>1</sup> Yields in terms of €s or \$s can be computed by adjusting the £-based yields for the expected currency change.

<sup>2</sup> UK index linked bonds All Stocks

<sup>3</sup> Output based on China.

**Table 3: Portfolio(%)**

	Sterling Based Investor		Dollar Based Investor		Euro Based Investor	
	March Letter	Current View	March Letter	Current View	March 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

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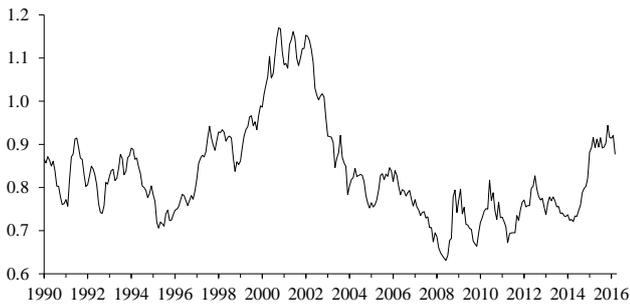
**US : Trade Weighted Index  
(Bank of England 1990 = 100)**



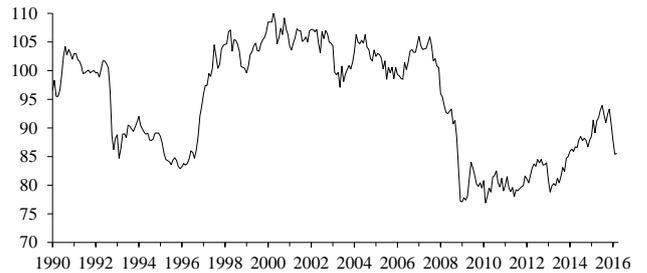
**UK: Dollars Per Pound Sterling**



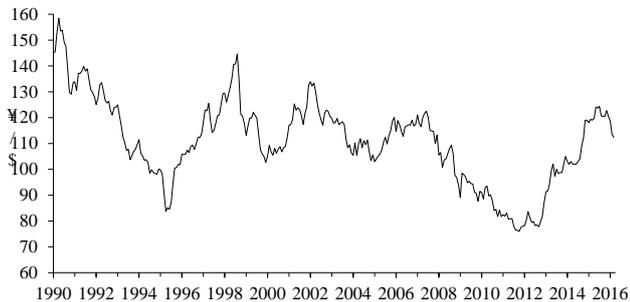
**Euro per US dollar**



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

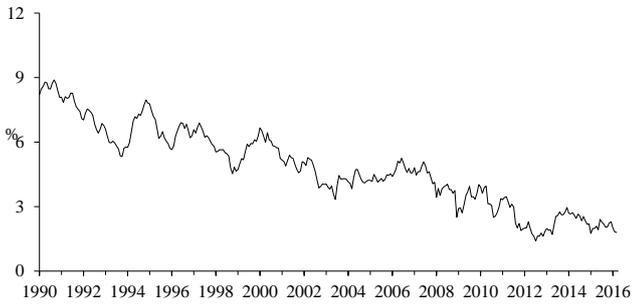


**Japan : Yen Per U.S. Dollar**

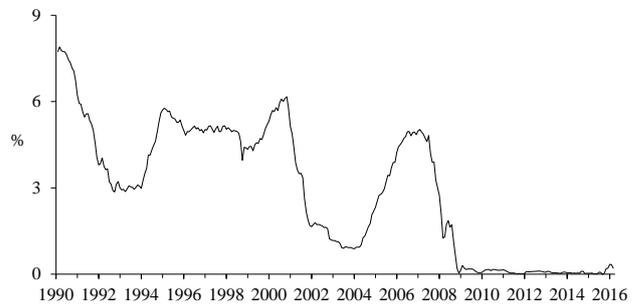


# GOVERNMENT BOND MARKETS

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



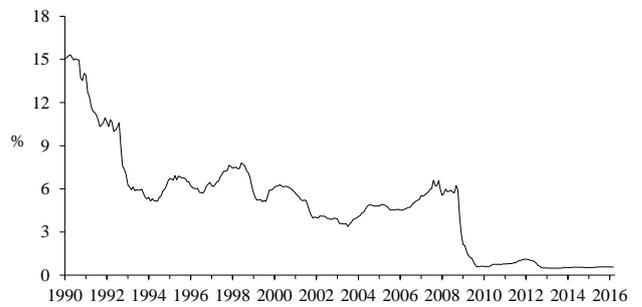
**U.S. : 3-Month Treasury Bill**



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



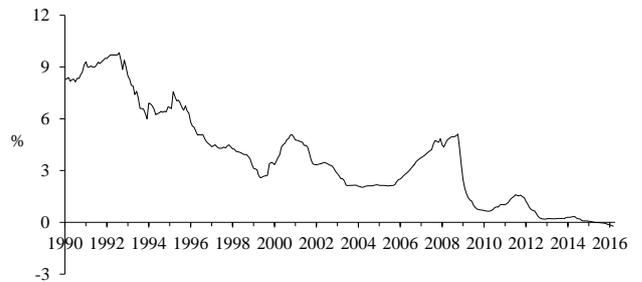
**U.K. : 3-Month Interbank Rate**



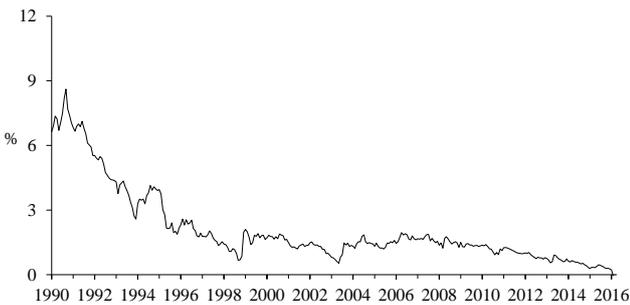
**Germany: Yield on Public Authority Bonds**



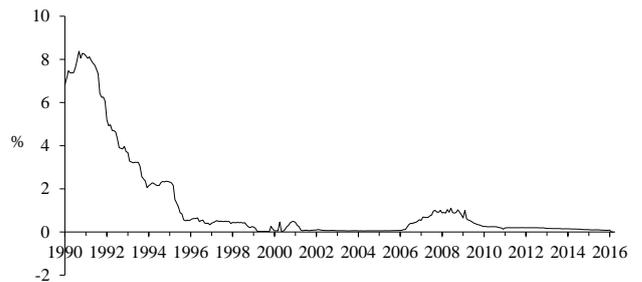
**Germany : 3-Month Interbank Deposit Rate**



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



**Japan : 3 Month Money Market Rate**



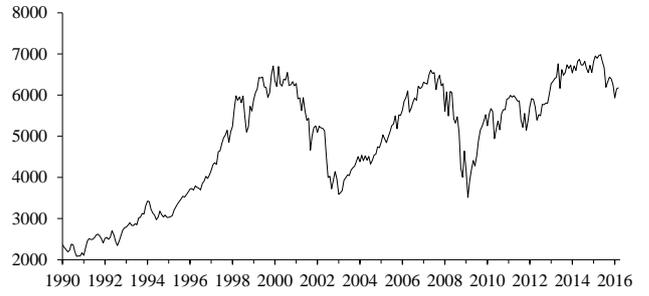
# MAJOR EQUITY MARKETS

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**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 Southwest monsoon, on which India's agricultural growth depends, is likely to be weak this year again — third time in a row — and this will lead India to grow below 7% in 2016. The ADB and the IMF expect India to remain one of the fastest-growing major economies in the region. They forecast India to grow more than 7% in 2016 and 2017. This compares with growth of 7.6% in 2015 due to strong public investment.

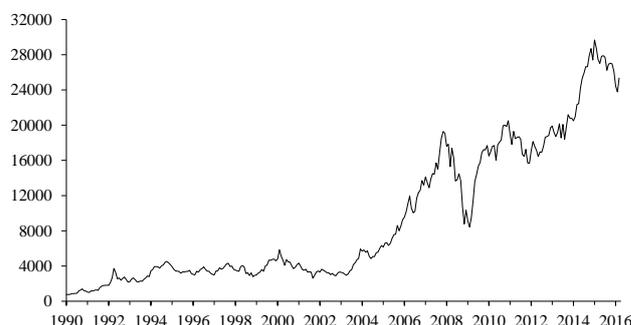
It seems that the government has prepared itself well for a bad monsoon in 2016. India's budget focused on the rural sector and the economically vulnerable sections and made large allocations for agriculture and social sector programmes, without compromising on fiscal discipline. This may help the Modi government to acquire a pro-farmer and poor-friendly image, by deploying politically powerful economic tools like rural employment guarantee and direct transfer of subsidies. The government was fairly active in procuring essential food items in the international markets in the last one month.

The Reserve Bank of India's first monetary policy statement for the financial year 2016–17 is scheduled to be released on April 5, 2016. We expect the Reserve Bank of India (RBI) to cut the repo rate by 50 basis points to 6.25%. With this cut, we hope that banks will cut their lending rates and push investment demand in the economy. Repo rate is the rate at which RBI lends to banks and acts as a sort of a benchmark for the short and medium term interest rates in the economy.

Most-recent government data show retail inflation eased to a four-month low of 5.2% in February, due to a sharp drop in food inflation, while wholesale prices fell for the 16th straight month in February, driven down by falling oil prices.

India's merchandise exports fell for the 15th month in a row in February, although the pace of decline slowed. Exports declined 5.7% from a year earlier to \$20.74 billion compared

India: BSE Sensitive



to 13.6% in January. Imports also declined 5% from a year earlier to \$27.28 billion in February, helping narrow the trade deficit to \$6.54 billion, from \$6.74 billion a year earlier and \$7.64 billion in January.

India's attempt to diversify and deepen its corporate debt market has fallen flat due to lack of demand and bad timing. India's plan to issue more than \$1.5 billion from so-called masala bonds has not been able to raise a rupee. A global pullback from emerging markets, volatility in the rupee currency, and a tax on the issuance of these bonds have made them unattractive to both, investors and issuers. Masala bonds, if popular, are an attractive source of funds for Indian companies, as investors bear the foreign-exchange risk. Many Indian companies are struggling as the amount of rupees they have to pay to service their dollar and euro debt has ballooned, as the South Asian currency has depreciated over the past year.

Indian stock market was up more than 10% in March as bargain-buying and expectations of a status quo in U.S. monetary policy supported sentiment. How long it would continue depends on the monsoons.

	13–14	14–15	15–16	16–17	17–18
GDP (%p.a.)	6.9	7.3	7.6	6.5	7.5
WPI (%p.a.)	7.0	6.0	5.2	4.5	4.0
Current A/c(US\$ bill.)	-50.0	-34.0	-24.0	-28.0	-32.0
Rs./\$(nom.)	60.0	62.0	66.5	68.5	70.0

## China

The ADB expects China to grow 6.5% this year and 6.3% in 2017. The Chinese government, at its annual parliament, in March, set a target of 6.5% to 7% growth this year and an average of 6.5% over the next five years, a level that can only be achieved by excessive monetary and fiscal stimulus. New loans issued by Chinese banks dropped sharply in February compared to January's gusher of 2.51 trillion yuan. The 726.6 billion yuan (about \$111.8 billion) in new loans extended in February was a fraction of January's binge. Taken together, new loans over the first two months totalled 3.23 trillion yuan, nearly 30% more than the same period a year earlier.

Chinese factory output registered a pickup in March. China's official manufacturing purchasing managers' index increased to 50.2 in March from 49.0 in February. This is the first time in eight months the figure has been at or above 50, the level dividing expansion from contraction. In the annual parliament meet the government has announced that it will reduce the tax burden on Chinese companies to spur dynamism and help the economy's shift toward consumption and services from manufacturing.

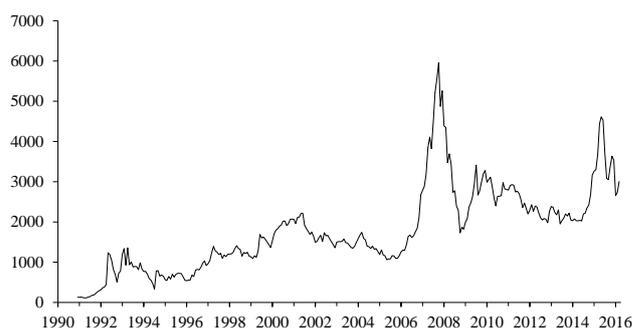
At the annual Boao Forum for Asia — China's answer to the Davos World Economic Forum — Mr. Li told about 2,000 foreign and Chinese officials and business leaders that the government will push ahead with tax cuts, with a particular focus on helping promising service industries, including those involved in research and development. This is the continued effort of the government to steer the economy from an investment led growth to a consumption led economy. However, with the ongoing structural reform, the government is not going to give up its growth objective.

Weighing down the economy is significant overcapacity in real estate and heavy industries such as coal mining and steel as well as rapidly rising corporate debt and four years of falling prices at the factory gate. There is no roadmap to deal with these issues.

Consumer inflation in February rose to 2.3%, the highest rate since June 2014, due to the Chinese New Year, in February. China's producer price index fell year-on-year for the 48th consecutive month, down 4.9%. The latest data mark four straight years of deflation in Chinese industry — a symptom of the country's chronic overcapacity.

China's exports declined for the first time since the financial crisis of 2008. The exports in February fell 25.4% in dollar terms year-over-year, compared with a drop of 11.2% in January. Imports also declined, falling 13.8% in February, compared with an 18.8% drop in January. This indicates a sharp cooling of demand in China that is affecting its Asian neighbours. China's trade surplus narrowed sharply in February to \$32.59 billion from \$63.29 billion in January.

China: SSE Composite Index



Wutongshu Investment Platform Co., a little-known unit of the State Administration of Foreign Exchange, has become a top shareholder of various banks and brokerages as those companies reported annual financial results and shareholding changes. China Securities Finance Corp., a lender owned by China's securities regulator, and Central Huijin Investment, the domestic investment arm of the nation's sovereign-wealth fund, are other two important shareholders of various banks and brokerages. The three main government bodies which run the economy, run the financial system and regulate the market, all have a direct stake in the market, literally. This may be viewed as supportive of the market, but allowing 'referees' to become "players" will damage the market in the long run. Thanks to its recent rally on March 13, the yuan is now largely flat against the dollar since the beginning of this year, after depreciating by as much as 1.5% earlier this year, when a weak economy and rapid capital outflows intensified pessimism about China's currency.

Chinese reacted sharply to downgrading of its credit rating. The government has stressed that the nation's economic fundamentals remain sound. Standard & Poor's Ratings Services has cut its outlook on the Chinese government's credit rating following a similar move by Moody's Investors Service, citing concerns over the rising economic and financial risks. S&P kept its double-A minus rating on China's sovereign debt, but lowered the outlook to negative from stable. Moody's also lowered its outlook on China's credit rating to negative from stable, while affirming the still-respectable Aa3 grade on its sovereign debt. A negative outlook typically indicates a higher chance of a rating change. The agency could downgrade the debt within the next year if it sees a higher likelihood that China seeks to maintain growth at or above 6.5% by increasing credit, at a significantly faster rate than economic growth. Fitch Ratings rated China as A plus with a stable outlook, one notch lower than Moody's and S&P, as of its latest review in November.

MSCI revived talks on adding mainland Chinese shares to its benchmark despite concerns following last year's stock market swings. MSCI chose not to include Shanghai and Shenzhen listed companies — known as "A shares" — to its

Emerging Markets index last summer, after investors expressed worries about their ability to buy and sell mainland shares.

	13	14	15	16	17
GDP (%p.a.)	7.7	7.4	6.9	6.0	6.0
Inflation (%p.a.)	3.5	2.0	1.4	1.5	2.0
Trade Balance(US\$ bill.)	260	382	550	420	400
Rmb/\$ (nom.)	6.2	6.2	6.4	6.7	6.8

## South Korea

South Korea’s economy grew a seasonally adjusted 0.7% during the last quarter of 2015, marginally better than a 0.6% rise, estimated by the Bank of Korea. For the whole of 2015, South Korea grew by 2.6%. While the central bank and the government expect the economy to expand at least 3% this year, we expect the growth to remain roughly at the same level as 2015.

In the deflationary scenario, consumer prices fell 0.3% month-on-month in March from a 0.5% advance in February. The Bank of Korea expects inflation to rise by 1.4% in 2016, versus the prior estimate of 1.7%. The target for inflation is 2%, as the decline in international oil prices and the disappearance of the effect of a cigarette price hike works its way through.

The Bank of Korea announced on April 1 that South Korea is estimated to have recorded a current account surplus of US\$7.51 billion in February this year and the current account will remain in the black for 48 months in a row. In February, South Korea’s total goods exports fell 9.3% year on year to US\$36.55 billion while its goods imports showed a decrease of 13.9% to total US\$28.65 billion. The goods account surplus was maintained at US\$7.9 billion for the second consecutive month.

South Korea’s central bank is going to have four new candidates in its seven members’ policy committee. This change may give a greater say to the government in future monetary policy. The newcomers include Cho Dong-chul, a professor and chief economist of the state-run think tank Korea Development Institute; Lee Il-houng, president of the state-funded Korea Institute for International Economic Policy; Koh Seung-beom, a standing commissioner of the financial watchdog Financial Services Commission, and Shin In-seok, head of the Korea Capital Market Institute, which is frequently involved in state-funded research work. The nominees will replace four Bank of Korea policy makers who retire after their four-year terms on April 20, a day after the bank’s rate-setting meeting for the month.

	13	14	15	16	17
GDP (%p.a.)	3.0	3.3	2.6	2.5	2.5
Inflation (%p.a.)	1.3	2.0	0.7	1.4	1.4
Current A/c(US\$ bill.)	71.0	80.0	90.0	88.0	88.0
Won/\$ (nom.)	1100	1080	1180	1220	1240

**Korea: Composite Index**



**Taiwan: Weighted TAIEX Price Index**



## Taiwan

Taiwan’s gross domestic product (GDP) growth for 2016 is likely to be 1.4% due to a worse-than-expected export performance amid weakening global demand. The ADB expects Taiwan’s economy to grow 1.6% this year and 1.8% next year, thanks to the increased government expenditure and robust private consumption. Compared to this, the GDP grew only 0.7% in 2015.

The consumer price index rose 2.4% in February from a year earlier compared with January’s revised increase of 0.8%.

The Central Bank has cutting its key interest rates by 0.125 percentage points.

It was the third consecutive quarter in which the central bank has lowered interest rates, and the scale of the reduction was in line with market expectations. The discount rate stands at 1.5%. This move was widely anticipated since the central bank aims to use the lower interest rates to prevent foreign fund inflows.

Taiwan’s exports for 2016 will decline due to the weakening demand in China and competition from South Korea and other economies, which might offset the potential benefits of the slowly improving U.S. market.

	13	14	15	16	17
GDP (%p.a.)	2.1	3.7	0.8	1.4	2.0
Inflation (%p.a.)	1.2	1.5	0.7	1.0	1.0
Current A/c(US\$ bill.)	50.6	57.4	60.0	64.0	68.0
NT\$/\$(nom.)	30.0	31.0	32.8	33.0	32.0

## Brazil

The Brazilian economy is sinking. After a contraction of 3.8% in 2015, it is likely to shrink by more than 3%, and unemployment running at 9.5% is expected to rise further.

Brazilian industrial output dropped sharply in February, as Latin America’s largest economy faces a deep recession. Industrial production contracted 2.5% in February from January in seasonally adjusted terms, according to the Brazilian Institute of Geography and Statistics.

The shrinking economy has led to the reduction of government revenue as well. The Brazilian government posted a 12-month primary deficit equal to 2.11% of gross domestic product in February. The fiscal deficit for 2016 is expected to be above 10% of GDP and inflation is running at 10.4%. Inflation may decline by a couple of percentage points this year.

Joblessness in large Brazilian cities increased in February, while salaries have dropped.

Urban unemployment rose to 8.2% in February from 7.6% in January, according to the country’s statistical bureau, known as IBGE.

What is keeping the country engaged is the development at the political front. Brazilian President, Dilma Rousseff, has charged the effort in Congress by opposition parties to impeach her, is a “coup” attempt. She wants to reach a settlement with her political adversaries but opposition has smelt blood and they are keen to finish Ms. Rousseff’s Workers’ Party (PT). In a surprising move, she enlisted the support of former president Mr. Lula, who is embroiled in a



political scandal. Being in her cabinet, he gets legal protection.

The impeachment petition has been in Congress since 2015. But in March end, the Brazilian Democratic Movement Party (PMDB) quit the president’s governing coalition, raising the odds that the impeachment will go forward. The PMDB is reacting to a popular outcry against the president. She is alleged to have violated the country’s fiscal responsibility law with stimulus spending during her re-election campaign, then of using creative accounting to hide it. Last month, roughly three million Brazilians took to the streets to call for her removal. The country’s bar association has filed its own petition with Congress requesting impeachment.

Surprisingly, Brazil’s stock market and currency have risen since March 17 on optimism that Ms. Rousseff will be impeached. Brazil’s Bovespa stock index ranks in the top five markets — up in both local-currency and dollar terms.

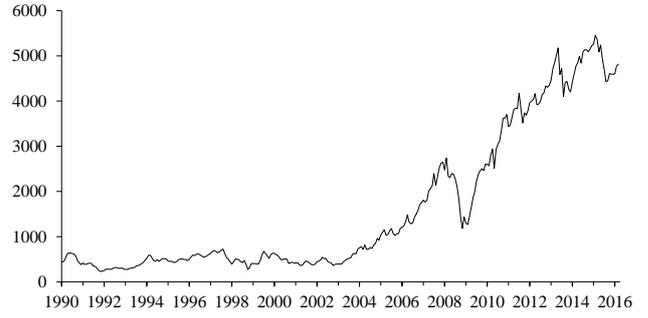
	13	14	15	16	17
GDP (%p.a.)	2.5	0.1	-3.8	-3.4	0.5
Inflation (%p.a.)	5.9	6.5	10.3	9.0	6.0
Current A/c(US\$ bill.)	-75.0	-104.0	-70.0	-60.0	-50.0
Real\$/\$(nom.)	2.3	2.4	3.9	4.2	4.4

## Other Emerging Markets

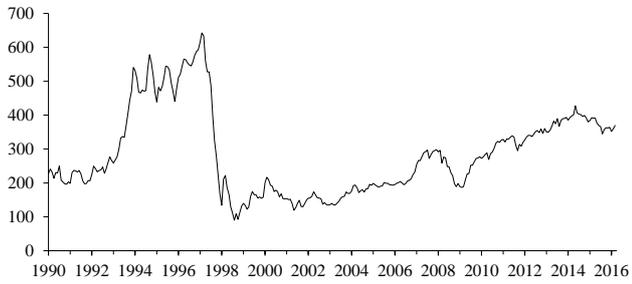
**Hong Kong: FT-Actuaries**



**Indonesia: Jakarta Composite**



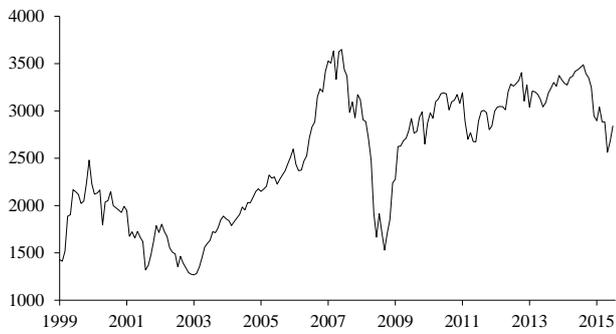
**Malaysia: FT-Actuaries  
(US\$ Index)**



**Thailand: Composite Index**



**Singapore: Straits Times Index**

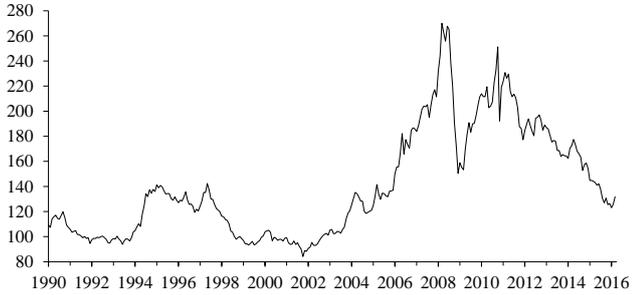


**Philippines: Manila Composite**

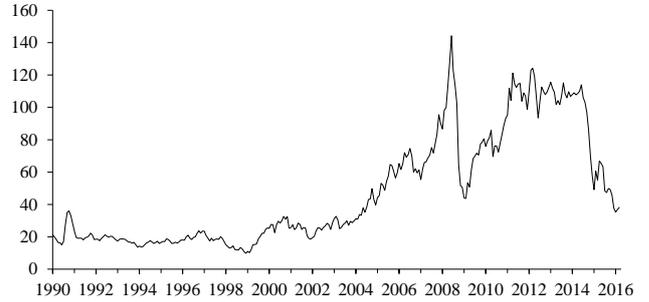


# COMMODITY MARKETS

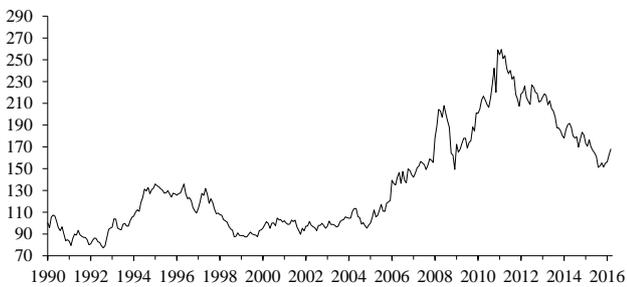
**Commodity Price Index (Dollar)**  
(Economist, 2000=100)



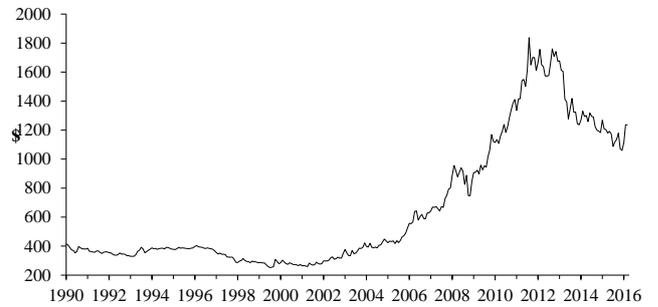
**Oil Price: North Sea Brent (in Dollars)**



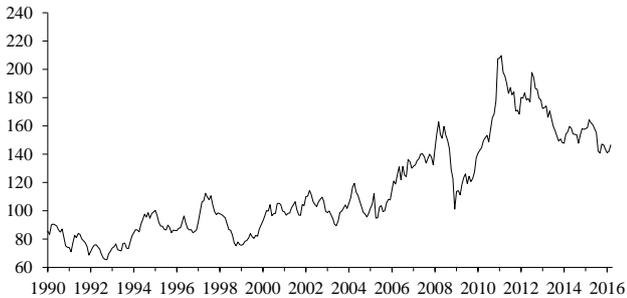
**Commodity Price Index (Sterling)**  
(Economist, 2000=100)



**Gold Price (in Dollars)**



**Commodity Price Index (Euro)**  
(Economist)



## UK FORECAST DETAIL PRE-BREXIT

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

	Inflation % <sup>1</sup> (CPI)	Short Dated (5 Year) Interest Rates	3 Month Int. Rates	Nominal Exchange Rate (2005=100) <sup>2</sup>	Real Exchange Rate <sup>3</sup>	Real 3 Month Int. Rates % <sup>4</sup>	Inflation (RPIX)	Real Short Dated Rate of Interest <sup>5</sup>
2015	0.1	1.4	0.5	91.6	97.6	-0.2	1.0	-0.3
2016	1.1	2.0	0.7	90.4	95.8	-0.9	2.0	0.1
2017	1.6	2.2	1.1	90.5	95.8	-0.9	2.4	0.2
2018	2.0	2.5	1.7	90.1	95.8	-0.2	2.7	0.5
2019	2.0	2.5	2.1	91.8	95.8	0.1	2.7	0.5
2020	2.0	2.5	2.5	91.3	95.7	0.0	2.7	0.5
2015:1	0.7	1.1	0.5	89.6	96.1	0.3	1.0	-0.6
2015:2	0.2	1.3	0.5	91.5	97.2	0.8	1.0	-0.4
2015:3	-0.2	1.4	0.5	93.1	99.0	-0.7	1.0	-0.3
2015:4	-0.2	1.8	0.5	92.4	98.2	-1.0	1.0	0.1
2016:1	0.5	2.0	0.5	90.6	95.8	-1.0	1.5	0.1
2016:2	1.0	2.0	0.5	90.2	95.5	-1.0	1.9	0.1
2016:3	1.2	2.1	1.0	90.5	95.8	-0.6	2.1	0.2
2016:4	1.5	2.1	1.0	90.4	95.9	-0.8	2.3	0.2
2017:1	1.5	2.1	1.0	90.8	95.9	-1.0	2.3	0.1
2017:2	1.5	2.1	1.0	90.4	95.7	-1.0	2.3	0.1
2017:3	1.6	2.2	1.0	90.4	95.7	-1.0	2.4	0.2
2017:4	1.8	2.5	1.5	90.4	96.0	-0.5	2.5	0.5

<sup>1</sup> Consumer's Expenditure Deflator

<sup>2</sup> Sterling Effective Exchange Rate Bank of England

<sup>3</sup> Ratio of UK to other OECD consumer prices adjusted for nominal exchange rate

<sup>4</sup> Treasury Bill Rate less one year forecast of inflation

<sup>5</sup> 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) <sup>1</sup>	Wage Growth <sup>2</sup>	Unemployment (New Basis) Percent <sup>3</sup>	Millions	Real Wage Rate <sup>4</sup> (1990=100)
2015	247.6	2.7	2.4	0.9	133.3
2016	255.4	3.2	2.1	0.8	136.1
2017	262.7	2.9	2.0	0.8	137.8
2018	270.6	3.0	1.9	0.7	139.2
2019	277.3	2.5	1.8	0.7	139.8
2020	285.4	2.9	1.8	0.7	141.1
2015:1	246.4	2.3	2.5	0.9	132.9
2015:2	246.1	2.6	2.5	0.9	132.7
2015:3	248.3	3.0	2.4	0.9	133.6
2015:4	249.7	2.7	2.1	0.9	134.0
2016:1	254.6	3.3	2.1	0.8	136.6
2016:2	253.2	2.9	2.1	0.8	135.1
2016:3	254.7	2.6	2.1	0.8	135.5
2016:4	259.2	3.8	2.1	0.8	137.0
2017:1	260.6	2.4	2.1	0.8	137.8
2017:2	261.1	3.1	2.0	0.8	137.3
2017:3	262.2	2.9	2.0	0.8	137.3
2017:4	266.8	2.9	1.9	0.8	138.6

<sup>1</sup> Whole Economy

<sup>2</sup> Average Earnings

<sup>3</sup> Wholly unemployed excluding school leavers as percentage of employed and unemployed, self employed and HM Forces

<sup>4</sup> Wage rate deflated by CPI

**Estimates and Projections of the Gross Domestic Product<sup>1</sup> (£ Million 1990 Prices)**

	Expenditure Index	£ Million '90 prices	Non-Durable Consumption <sup>2</sup>	Private Sector Gross Investment Expenditure <sup>3</sup>	Public Authority Expenditure <sup>4</sup>	Net Exports <sup>5</sup>	AFC
2015	157.4	753730.5	436512.0	298617.2	197430.6	-54076.9	124749.3
2016	161.0	771083.7	445700.6	297926.9	197878.0	-42875.6	127540.2
2017	164.9	789900.1	455410.4	303956.2	201835.6	-40412.1	130882.3
2018	169.1	809642.0	466208.9	312287.4	205872.3	-40317.6	134398.2
2019	173.3	829875.0	477782.5	319506.5	209989.8	-39376.3	138026.9
2020	177.6	850628.3	490729.8	326536.5	214189.6	-39055.7	141760.5
2015/14	2.2		1.9	1.9	1.5		-2.3
2016/15	2.3		2.1	0.0	0.2		2.6
2017/16	2.4		2.2	2.1	2.0		2.6
2018/17	2.5		2.4	2.8	2.0		2.7
2019/18	2.5		2.5	2.3	2.0		2.7
2020/19	2.5		2.7	2.2	2.0		2.7
2015:1	156.2	186964.7	107966.1	77826.4	50385.0	-15573.3	33639.5
2015:2	157.0	187977.5	108889.7	70313.2	48635.4	-11413.2	28447.6
2015:3	157.7	188823.0	109697.1	74552.3	49279.4	-14082.0	30623.8
2015:4	158.7	189965.3	109959.1	75925.2	49130.9	-13008.5	32038.4
2016:1	157.6	188690.6	110498.7	69165.2	51059.5	-10512.9	31517.3
2016:2	160.8	192550.4	111077.7	75256.6	48262.0	-10476.7	31566.8
2016:3	161.9	193832.6	111720.2	75772.2	49051.9	-10775.8	31934.9
2016:4	163.7	196010.0	112403.9	77733.0	49504.7	-11110.3	32521.2
2017:1	161.8	193656.9	112869.0	71040.2	52080.7	-10216.7	32114.9
2017:2	164.9	197438.1	113483.4	77708.6	49227.3	-10305.9	32674.6
2017:3	166.0	198764.8	114165.1	77247.9	50032.9	-9761.5	32918.1
2017:4	167.1	200040.3	114892.8	77959.4	50494.7	-10128.0	33174.6

<sup>1</sup> GDP at factor cost. Expenditure measure; seasonally adjusted

<sup>2</sup> Consumers expenditure less expenditure on durables and housing

<sup>3</sup> Private gross domestic capital formation plus household expenditure on durables and clothing plus private sector stock building

<sup>4</sup> General government current and capital expenditure including stock building

<sup>5</sup> Exports of goods and services less imports of goods and services

**Financial Forecast**

	PSBR/GDP % <sup>1</sup>	GDP <sup>1</sup> (£bn)	PSBR (£bn)	Debt Interest (£bn)	Current Account (£ bn)
			Financial Year		
2015	4.8	1637.5	78.1	55.8	-91.0
2016	3.8	1715.1	65.5	58.7	-70.4
2017	3.2	1789.8	56.6	61.6	-66.0
2018	1.9	1870.4	36.1	65.9	-66.2
2019	1.6	1952.2	31.4	68.6	-64.7
2020	1.2	1529.0	23.8	52.7	-64.5
2015:1	0.6	409.1	2.3	13.3	-25.1
2015:2	6.5	401.7	26.2	13.6	-18.9
2015:3	4.1	407.8	16.9	13.8	-18.9
2015:4	6.6	415.4	27.3	14.3	-28.2
2016:1	1.9	412.6	7.7	14.1	-15.2
2016:2	5.7	422.5	23.9	14.2	-17.2
2016:3	3.7	427.0	16.0	14.7	-12.9
2016:4	4.4	435.2	19.2	15.0	-25.1
2017:1	1.5	430.5	6.4	14.9	-14.7
2017:2	4.0	441.2	17.7	15.0	-16.9
2017:3	1.8	445.9	8.1	15.1	-11.0
2017:4	5.7	452.0	25.9	15.8	-23.5

<sup>1</sup> 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	2.4	2.5
U.K.	2.2	2.9	2.2	2.3	2.4	2.5
Japan	1.4	-0.1	0.5	1.0	0.8	0.8
Germany	0.3	1.6	1.7	1.8	1.5	1.6
France	0.7	0.2	1.1	1.4	1.5	1.6
Italy	-1.7	-0.3	0.8	1.1	1.3	1.5

### Growth Of Consumer Prices

	2013	2014	2015	2016	2017	2018
U.S.A.	1.5	1.6	0.1	1.3	2.2	2.0
U.K.	2.3	1.7	0.1	1.1	1.6	2.0
Japan	0.4	2.7	0.8	0.2	1.8	2.0
Germany	1.5	0.9	0.3	0.5	1.6	2.0
France	0.9	0.5	0.0	0.4	1.2	1.8
Italy	1.2	0.2	0.1	0.2	1.1	1.7

### Real Short-Term Interest Rates

	2013	2014	2015	2016	2017	2018
U.S.A.	-1.5	-0.1	-1.1	-1.2	-0.7	-0.5
U.K.	-1.5	-0.9	-0.2	-0.9	-0.9	-0.2
Japan	-2.5	-0.6	0.0	-1.8	-2.0	-1.8
Germany	-0.6	-0.2	-0.6	-1.8	-2.2	-2.2
France	-0.2	0.1	-0.5	-1.4	-2.0	-2.0
Italy	0.1	0.0	-0.3	-1.3	-1.9	-1.9

### Nominal Short-Term Interest Rates

	2013	2014	2015	2016	2017	2018
U.S.A.	0.1	0.0	0.2	1.0	1.3	1.5
U.K.	0.6	0.6	0.5	0.7	1.1	1.7
Japan	0.2	0.2	0.2	0.0	0.0	0.2
Germany	0.3	0.1	-0.1	-0.2	-0.2	-0.2
France	0.3	0.1	-0.1	-0.2	-0.2	-0.2
Italy	0.3	0.1	-0.1	-0.2	-0.2	-0.2

### Real Long-Term Interest Rates

	2013	2014	2015	2016	2017	2018
U.S.A.	1.6	0.7	0.3	0.4	0.8	1.0
U.K.	0.0	0.4	-0.3	0.1	0.2	0.5
Japan	-0.8	-1.1	-1.3	-2.0	-1.9	-1.7
Germany	0.8	-0.8	-1.0	-1.5	-1.3	-1.1
France	1.1	-0.5	-0.8	-1.3	-1.1	-0.9
Italy	1.2	-0.5	-0.7	-1.2	-1.0	-0.8

### Nominal Long-Term Interest Rates

	2013	2014	2015	2016	2017	2018
U.S.A.	3.0	2.2	2.2	2.4	2.8	3.0
U.K.	1.3	1.8	1.4	2.0	2.2	2.5
Japan	0.7	0.3	0.3	0.0	0.1	0.3
Germany	1.9	0.5	0.6	0.4	0.7	0.9
France	1.9	0.5	0.6	0.4	0.7	0.9
Italy	1.9	0.5	0.6	0.4	0.7	0.9

### Index Of Real Exchange Rate(2000=100)<sup>1</sup>

	2013	2014	2015	2016	2017	2018
U.S.A.	82.1	83.9	93.0	94.0	94.5	94.8
U.K.	81.6	87.1	91.6	90.4	90.5	90.1
Japan	63.5	59.8	56.0	58.4	58.5	58.6
Germany	99.0	99.9	94.7	95.0	95.2	95.1
France	100.7	100.8	96.2	96.0	95.9	95.7
Italy	106.9	107.5	102.1	102.0	101.8	101.7

<sup>1</sup> 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)						
	2013	2014	2015	2016	2017	2018
U.S.A. <sup>1</sup>	86.00	89.40	99.94	102.10	102.00	102.20
U.K.	1.55	1.65	1.53	1.50	1.50	1.50
Japan	98.20	106.70	120.00	118.40	121.20	121.00
Eurozone	0.75	0.76	0.90	1.05	1.08	1.09

<sup>1</sup> 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

## Appendix: UK FORECAST DETAIL POST-BREXIT

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

	Inflation % <sup>1</sup> (CPI)	Short Dated (5 Year) Interest Rates	3 Month Int. Rates	Nominal Exchange Rate (2005=100) <sup>2</sup>	Real Exchange Rate <sup>3</sup>	Real 3 Month Int. Rates % <sup>4</sup>	Inflation (RPIX)	Real Short Dated Rate of Interest <sup>5</sup>
2015	0.1	1.4	0.5	91.6	97.6	-0.2	1.0	-0.3
2016	1.1	2.4	1.1	90.4	95.8	-0.5	2.0	0.1
2017	1.6	3.7	4.0	89.9	95.2	1.7	2.4	0.2
2018	2.8	3.4	4.0	86.6	92.6	1.4	3.3	0.5
2019	2.6	2.9	3.0	86.2	90.9	1.0	3.2	0.5
2020	2.1	2.8	3.4	84.9	89.8	1.0	2.7	0.5
2015:1	0.7	1.1	0.5	89.6	96.1	0.3	1.0	-0.6
2015:2	0.2	1.3	0.5	91.5	97.2	0.8	1.0	-0.4
2015:3	-0.2	1.4	0.5	93.1	99.0	-0.7	1.0	-0.3
2015:4	-0.2	1.8	0.5	92.4	98.2	-1.0	1.0	0.1
2016:1	0.5	2.0	0.5	90.6	95.8	-1.0	1.5	0.1
2016:2	1.0	2.0	0.5	90.2	95.5	-1.0	1.9	0.1
2016:3	1.2	2.1	1.0	90.5	95.8	-0.6	2.1	0.2
2016:4	1.5	3.8	2.4	90.3	95.8	0.7	2.3	0.2
2017:1	1.5	3.8	3.8	90.9	95.9	1.3	2.3	0.1
2017:2	1.5	3.8	4.1	90.2	95.3	1.5	2.3	0.1
2017:3	1.6	3.7	4.5	89.7	94.8	1.6	2.4	0.2
2017:4	1.8	3.9	5.4	89.2	94.5	2.2	2.5	0.5

<sup>1</sup> Consumer's Expenditure Deflator

<sup>2</sup> Sterling Effective Exchange Rate Bank of England

<sup>3</sup> Ratio of UK to other OECD consumer prices adjusted for nominal exchange rate

<sup>4</sup> Treasury Bill Rate less one year forecast of inflation

<sup>5</sup> 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) <sup>1</sup>	Wage Growth <sup>2</sup>	Unemployment (New Basis) Percent <sup>3</sup>	Millions	Real Wage Rate <sup>4</sup> (1990=100)
2015	247.6	2.7	2.4	0.9	133.3
2016	255.4	3.2	2.1	0.8	136.1
2017	262.9	3.5	2.0	0.8	137.9
2018	273.2	4.5	1.8	0.7	139.4
2019	282.0	3.1	1.7	0.7	140.1
2020	291.3	3.4	1.6	0.7	141.9
2015:1	246.4	2.3	2.5	0.9	132.9
2015:2	246.1	2.6	2.5	0.9	132.7
2015:3	248.3	3.0	2.4	0.9	133.6
2015:4	249.7	2.7	2.1	0.9	134.0
2016:1	254.6	3.3	2.1	0.8	136.6
2016:2	253.2	2.9	2.1	0.8	135.1
2016:3	254.7	2.6	2.1	0.8	135.5
2016:4	259.2	3.8	2.1	0.8	137.0
2017:1	260.7	2.5	2.1	0.8	137.9
2017:2	261.5	3.5	1.9	0.8	137.4
2017:3	262.5	3.7	2.0	0.8	137.5
2017:4	267.0	4.3	1.9	0.8	138.7

<sup>1</sup> Whole Economy

<sup>2</sup> Average Earnings

<sup>3</sup> Wholly unemployed excluding school leavers as percentage of employed and unemployed, self employed and HM Forces

<sup>4</sup> Wage rate deflated by CPI

**Estimates and Projections of the Gross Domestic Product<sup>1</sup> (£ Million 1990 Prices)**

	Expenditure Index	£ Million '90 prices	Non-Durable Consumption <sup>2</sup>	Private Sector Gross Investment Expenditure <sup>3</sup>	Public Authority Expenditure <sup>4</sup>	Net Exports <sup>5</sup>	AFC
2015	157.4	753770.6	436595.2	298648.7	197430.6	-54148.4	124757.4
2016	160.8	770055.7	445695.9	297068.1	197125.4	-42461.3	127367.1
2017	165.1	790816.9	455364.6	308041.5	199245.4	-40776.5	131044.4
2018	169.7	812428.2	466130.4	320355.6	198882.9	-38062.1	134876.0
2019	174.1	833565.5	477699.4	326332.4	202570.1	-34364.1	138667.4
2020	180.1	862130.2	490658.3	338625.4	213457.6	-36882.7	143710.4
2015/14	2.2		1.9	1.9	1.5		-2.3
2016/15	2.3		2.1	0.0	0.2		2.6
2017/16	2.7		2.2	3.7	1.1		2.9
2018/17	2.7		2.4	4.0	-0.2		3.0
2019/18	2.8		2.5	1.9	1.9		2.9
2020/19	3.4		2.7	3.8	5.5		3.6
2015:1	156.2	186964.7	107966.1	77826.4	50385.0	-15573.3	33639.5
2015:2	157.0	187977.5	108889.7	70313.2	48635.4	-11413.2	28447.6
2015:3	157.7	188823.0	109697.1	74552.3	49279.4	-14082.0	30623.8
2015:4	158.7	190005.4	110042.3	75956.7	49130.9	-13080.0	32046.5
2016:1	160.6	192288.6	110866.2	74555.9	51059.5	-12075.9	32120.6
2016:2	162.6	194619.7	111552.7	78788.9	48262.0	-12079.2	31908.8
2016:3	162.9	195077.1	112243.5	78004.2	49051.9	-12079.8	32142.0
2016:4	162.9	194982.0	112399.2	76874.2	48752.1	-10695.9	32348.1
2017:1	165.3	197774.0	112863.5	78105.7	51270.0	-11661.6	32803.2
2017:2	165.2	197838.0	113468.8	79596.3	48527.4	-11020.5	32742.5
2017:3	164.9	197442.5	114154.3	75797.5	49559.6	-9359.0	32701.2
2017:4	165.2	197762.3	114878.0	74542.0	49888.4	-8735.4	32797.4

<sup>1</sup> GDP at factor cost. Expenditure measure; seasonally adjusted

<sup>2</sup> Consumers expenditure less expenditure on durables and housing

<sup>3</sup> Private gross domestic capital formation plus household expenditure on durables and clothing plus private sector stock building

<sup>4</sup> General government current and capital expenditure including stock building

<sup>5</sup> Exports of goods and services less imports of goods and services

**Financial Forecast**

	PSBR/GDP % <sup>1</sup>	GDP <sup>1</sup> (£bn)	PSBR (£bn)	Debt Interest (£bn)	Current Account (£ bn)
			Financial Year		
2015	4.6	1641.6	74.6	55.2	-91.0
2016	3.4	1727.5	58.1	62.1	-79.1
2017	3.2	1798.6	57.5	74.6	-77.0
2018	1.1	1896.7	21.9	73.5	-67.3
2019	0.7	1996.5	15.5	73.4	-48.3
2020	0.7	1590.2	15.8	57.1	-34.4
2015:1	0.6	409.1	2.3	13.3	-25.1
2015:2	6.5	401.7	26.2	13.6	-18.9
2015:3	4.1	407.8	16.9	13.8	-18.9
2015:4	6.5	414.0	26.8	13.9	-28.1
2016:1	1.1	418.2	4.8	13.9	-17.9
2016:2	5.3	424.6	22.4	14.0	-20.0
2016:3	3.5	427.3	15.0	14.6	-15.2
2016:4	4.4	432.1	19.1	16.2	-26.0
2017:1	0.3	443.5	1.5	17.4	-20.7
2017:2	4.0	443.2	17.6	17.9	-21.2
2017:3	2.4	442.6	10.4	18.3	-12.6
2017:4	6.7	445.9	29.5	19.5	-22.5

<sup>1</sup> GDP at market prices (Financial Year)