# LIVERPOOL INVESTMENT LETTER

September 2016







#### LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

**Editorial and Research Direction:** Patrick Minford<sup>†</sup>.

**Senior Research Associates:** Kent Matthews<sup>†</sup>, Anupam Rastogi, Peter Stoney, Bruce Webb<sup>†</sup>, John Wilmot.

**Research Associates:** Vo Phuong Mai Le<sup>†</sup>, David Meenagh<sup>†</sup>, Francesco Perugini, Yongdeng Xu<sup>†</sup>.

The Julian Hodge Institute was launched in autumn 1999 in a new collabouration 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

ISSN 0951-9262

#### Disclaimer

The Liverpool Investment Letter is a publication intended to provide information to investors and investment managers acting on their own initiative. No responsibility can be taken by Liverpool Macroeconomic Research Limited for decisions made by our readers. Whilst every attempt is made to ensure the accuracy of the contents, no guarantee of such accuracy is given.

<sup>†</sup> Cardiff Business School

# LIVERPOOL INVESTMENT LETTER

# September 2016

## **CONTENTS**

	Page
The Incredible Shrinking 'Brexit Recession' The Remain Doom and Gloom Consensus during the Brexit referendum has now translated into a Doom Scenario for 2017 for 0.6% growth, which may include a technical recession; for many forecasters there is a more than technical one. These forecasts were created on the assumption that Brexit would be inward-looking, protectionist and socialist which it is now clear is far from the truth. A further assumption was that Brexit uncertainty would destroy consumer and business willingness to spend. The latest available hard data contradict this and instead are fairly consistent with our own 'steady as she goes' forecast' which is similar to the one we made in early May before the referendum.	3
Focus on Japan	6
Market Developments Summary and Portfolio Recommendations	8
Indicators and Market Analysis Foreign Exchange Government Bond Markets Major Equity Markets Emerging Equity Markets Commodity Markets	10 11 12 13 18
UK Forecast Detail World Forecast Detail	19 21

## THE INCREDIBLE SHRINKING 'BREXIT RECESSION'

Astonishingly the July 2016 Consensus forecast growth rate for the UK in 2017 was 0.6%, close to a recession. Forecasters generally followed the UK Treasury's lead in projecting a 'doom and gloom' scenario after Brexit. Of course now that we have had the strong July figures for retail sales, the continuing strength in employment into August and the latest PMI for manufacturing (53.3), construction (49.2) and Services (52.9), with 50 being the cut-off for positive growth in these indices, we will no doubt see these forecasts being raised and we expect this raising to continue.

Our own post-Brexit forecast made on May 10th this year is shown below, as taken from our Brexit pamphlet of that time (The Economy after Brexit, downloadable from www.economistsforbrexit.co.uk). We projected growth at 2.7% for next year.

Table 1A: Summary of Forecast (post-Brexit, 10<sup>th</sup> May)

	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	89.8	88.2	86.8	87.4	86.1
3 Month Interest Rate	0.6	0.5	0.7	2.2	2.9	3.0	3.2
5 Year Interest Rate	1.8	1.4	2.2	3.1	3.2	2.9	2.7
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>&</sup>lt;sup>1</sup>Expenditure estimate at factor cost

How did our forecast come to be so different from that of the Treasury and the rest of the Consensus?

First, we made a different assumption about the Brexit policies that would be followed: we argued that the optimal policy would be for unilateral free trade as well as the UK taking over all regulatory functions from the EU and that this being optimal this would be chosen. This meant the abolition of the heavy EU protectionism of farming and manufacturing, as well as a programme of liberalisation of industrial regulation: the long term gains from the trade liberalisation came to 4% of GDP while those from deregulation were put at 2% of GDP. By contrast the consensus assumed that both the EU levels of protection and EU regulations would be left intact. Making these last assumptions gave varying long term negative effects to GDP. Yet we argued that no economic case could be made for these last assumptions: plainly they actually reduced the scope of UK free trade by eliminating free trade with the EU and putting nothing in its place! We were told by various consensus economists that 'it was not politically practical' to introduce unilateral free trade; yet plainly when there is a referendum normal political 'practice' (under which this possibly could be true) is suspended.

The second big difference between our forecast and the consensus lay in the treatment of 'Brexit uncertainty'.

**Table 1: Summary of Forecast** 

	2014	2015	2016	2017	2018	2019	2020
GDP Growth1	2.9	2.2	2.3	2.5	2.7	2.8	3.2
Inflation CPI	1.7	0.2	1.2	1.9	3.1	3.0	2.1
Wage Growth	1.2	2.4	2.9	3.9	6.2	6.2	4.6
Unemployment (Mill.) <sup>2</sup>	1.1	0.8	0.7	0.8	0.8	0.7	0.7
Exchange Rate <sup>3</sup>	87.1	91.6	80.4	76.4	75.1	74.6	74.4
3 Month Interest Rate	0.6	0.6	0.4	1.0	2.5	3.5	3.0
5 Year Interest Rate	1.8	1.3	0.9	1.2	1.5	2.5	3.0
Current Balance (£bn)	-99.9	-103.7	-89.0	-77.7	-65.1	-43.2	-32.6
PSBR (£bn)	83.3	71.2	69.0	54.7	38.7	28.3	13.0

<sup>&</sup>lt;sup>1</sup>Expenditure estimate at factor cost

Consensus economists put into their forecasts large negative assumed effects of this uncertainty, starting in Q2 and continuing for around two years. These effects generally caused risk premia on asset yields and directly reduced investment and consumer spending.

Our treatment of this uncertainty was based on rational expectations (nowadays a default modelling assumption) about post-Brexit policy: we evaluated the two main possible policy scenarios, an EEA-type deal and the free trade/deregulation assumption we made. Essentially the first leaves the status quo intact while the second gives gains as noted above. We also considered that before Brexit there was a more negative assumption possible, that of inward-looking protectionism and controls. Computing uncertainty as the difference between the extremes we found that this was at its height in Q2 and in Q3 fell as the third scenario disappeared under the new May government. We projected it as being steadily reduced as policies were finally chosen.

How big is the effect of such uncertainty and how negative is it? Our view is that the effects are quite small. This seemed to be borne out by the Q2 growth rate, at 0.6% well up from Q1's 0.4%. By Q3 once the May government was in place we argued it was of little consequence at all. On the sign of the effect, one can argue that while more uncertainty will make people more cautious, this could make them spend more on certain items that enhance security (e.g. more investment in innovation to fend of greater competition). In sum we put in nothing for these effects from Q3.

In this we seem to have been right. The PMIs across all sectors dipped immediately after Brexit but have since rebounded. The immediate dip can be put down to the political chaos of the time with the Conservative leadership election in prospect and no viable government in office. It seems that once the May government was installed matters became 'business as usual'. As for the long term effects of policy these appear to have been treated as on balance positive, which would be consistent with our assumptions about the two scenarios: either the same as now or positive. Given that these effects will take a long time to come through because of lags in the policy implementation, this muted

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

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

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

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

response to the long term appears right: in our forecast we assume a five year lag in the full implementation which makes the effects positive but long drawn out.

In our early May Brexit forecast we underestimated the effect on the exchange rate. We projected a 5% fall over about two years; we got this effect from the model's projection that with higher output the exchange rate would need to fall to achieve the necessary higher overseas sales. In fact we have had an immediate 15% fall. How is this to be interpreted?

Here we come into the area of 'signal extraction' where we (and everyone else) try to understand what (the 'signal') may be driving short term events (the 'noise'). We know that in the very short term ideas about what is happening can drive asset prices sharply. Clearly the Brexit vote was a big surprise and reactions to it factored in 'doom and gloom' forecasts that were widely being made as we have seen. When a negative shock hits an economy the market reaction is to sell the currency and this is also an optimal economic stabiliser, boosting demand for exports and home production at the expense of foreign goods. It seems likely that the negative forecasts and the political chaos together drove the pound down. With the new government moving ahead steadily with its Brexit policies and the economy normalising, it is likely to recover. The one element in current surveys of business and consumer opinion that remains somewhat bearish is on 'the general economic outlook': this seems to reflect the weight of the forecast consensus and it too is likely to improve with the rising consensus forecast. It is noteworthy that business and consumer actions are most associated with their opinion of their 'own economic situation'; currently answers to this question where posed are generally positive and diverge from those for the general question.

Here is a short summary of recent hard data:

GDP growth: 0.6% Q2. Our projection for Q3: 0.6%.

Purchasing Managers Indices August(Markit/CIPS): Manufacturing 53.3; Construction, 49.2; Services, 52.9

Retail sales volume July: 5.9% up year-on-year (yoy); 1.4% up on June. 3 months to July, 5.2% up yoy; 1.8% up on previous 3 months (7.4% annualised).

Employment: current (April-June) employment rate 74.5%, up 1.1% yoy. Unemployment rate, 4.9% August (down 0.7% yoy). Unemployed claimants in July: 763.6 thousand (2.3%), down 8.6 th from June and 27th (0.1%) yoy.

Money and credit: Broad Money/Lending (M4ex) growth July 6.9% yoy (annualised 3-month rate 14.7%).

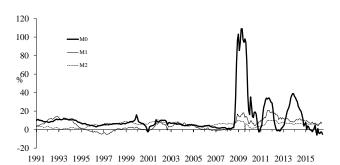
Divisia Money growth July, yoy: households 10%, PNFC 11.3%

Net credit card lending July, £291 million, 20% up yoy

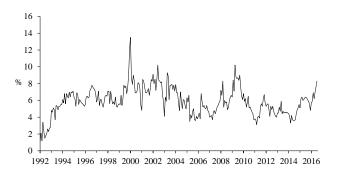
House prices, August: 0.6% up on July, 5.6% up yoy (v 5.2% in July).

Given these latest developments we expect growth to continue at current rates of 2-3% per annum, much as we forecast back in early May. We also expect consumer spending to remain strong and private investment to continue growing moderately as in Q2. Net exports will rise on the back of the fall in sterling and inflation will rise quite sharply, with it also wage rises because of the continuing rise in employment and the tight labour market, pushed ahead too by the rising minimum wage and the new controls on unskilled immigration. Public spending will move towards less restraint especially on infrastructure; but in spite of this the public finances will improve with rising tax revenues and the debt-GDP ratio will start to fall within the next year. Rising inflation will soon be seen as a threat to the inflation target by the Bank of England and interest rates will have to be raised.

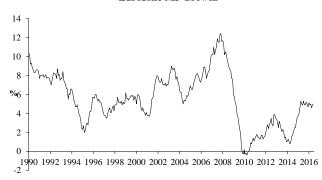
 $U.S.:\ Growth\ in\ Monetary\ Aggregates\ (Yr\ -\ on\ -\ Yr)$ 



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



#### **Eurozone M3 Growth**



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



## **FOCUS ON JAPAN**

Francesco Perugini

#### **Japan's Political Stability Increases**

Japan's economy grew 0.2% in the three months to June at an annualised rate, missing economists' forecasts for 0.7% growth and marking a sharp slowdown compared with a revised growth rate of 2.0% in the first quarter. On a quarter-on-quarter basis (qoq), the economy posted no growth during the three-month period -below expectations for a 0.2% rise. The weak data suggest that a combination of monetary and fiscal stimulus under the prime minister's Abenomics program since the end of 2012 have not been sufficient to boost domestic demand.

Business investment fell for the second straight quarter, -0.4% qoq. During the three-month period companies reported on average a 24% decline in net profits according to SMBC Nikko Securities, as the yen rose 9% against the US dollar and 12% cent against the euro.

Exports dropped 1.5 percentage points on the previous quarter. Exports of ships, steel product and oil-related goods fell. US and European demand for Japanese goods weakened, said a government official briefing reporters on the data. Economists said a strengthening of the yen against other major currencies since the beginning of the year has hit exports. "The strong yen's continued since the beginning of the year and I think a wait-and-see posture may have spread when it comes to business investment," said Masaki Kuwahara, an economist at Nomura Securities in Tokyo.

Household spending also was nearly flat. Consumer spending makes up roughly 60% of Japan's GDP. Economists say consumers have held back on spending because many have not received significant pay increases, despite record earnings at many large Japanese companies in recent years. Total compensation received by Japanese employees increased 0.3% from the previous quarter.

Residential investment rose 5% on the previous quarter, the biggest jump in a quarter since 2011. A government official said the fall in interest rates stemming from the Bank of Japan's (BOJ) monetary easing could have spurred demand. A one-time factor may also have been at work. Economists said anticipation of the 2017 sales-tax increases might have pushed up residential investment before Prime Minister Shinzo Abe announced the delay.

Japanese policymakers are struggling to find a strategy to produce consistent growth, with the economy oscillating between slight expansion and contraction. Businesses and consumers have been reluctant to spend, resulting in negative GDP numbers in five quarters over the past three years. The data keeps up the pressure on the BOJ to consider more monetary stimulus at its September meeting. In the

meantime, the government repeats that it is set to tackle structural obstacles to growth.

Abe recently proposed ¥28 trillion in spending initiatives — equal to more than 5% of Japan's GDP — meant to get consumers and businesses to spend more money and support the stalling recovery. Some of the main focuses of the stimulus package include strengthening child-rearing and nursing-care services and building infrastructure, aiming to facilitate mid- and long-term growth rather than boosting the economy over the short term. "We've put together a bold stimulus proposal that is an investment in the future," Abe recently said. "It will allocate money to social programs and infrastructure, including the construction of a high-speed train that will use magnetic levitation, or maglev, technology to float above its tracks".

However, economists doubt that this is the right option to revive the economy, arguing that the jolt it would give to growth would be much smaller than the headline number suggests. "Looking ahead, public works spending will be the only support for the economy as the fiscal stimulus package will be carried out later this year," said Atsushi Takeda, an economist at Itochu Corp. "But there's no change to the picture that the economy lacks a strong driver to boost growth, so we can't really expect a solid recovery. "Fundamentally, Japan's growth potentially has fallen. That means the government needs to continue with structural reforms, not just stimulus", echoed Hidenobu Tokuda, an economist at Mizuho Research Institute.

Economists also noted that the recently fiscal stimulus contains only \$7.5 trillion in new government spending, and that the money would be doled out on an uncertain timetable. The rest of the program takes the form of low-interest loans and financial guarantees, which can help stimulate economic activity but do not contribute nearly as directly to growth. The government estimated that the stimulus would increase GDP by 1.3%, though it did not say over what length of time.

Abe is not only betting that Japan can spend its way to growth, but that economic expansion will help the country claw its way out of a canyon of debt. Japan's government debt is bigger than that of any other country, relative to the size of its economy. Abe argues that things will only get worse if output keeps shrinking, so spending more now will make Japan financially stronger down the line. In June, he announced that he would delay a planned increase in the national sales tax by two and a half years -another decision that prioritized growth over an immediate fix for the deficit.

The approach has its critics. Some economists argue that the government would be better served by focusing on deregulation and other structural changes that would make the economy more competitive. Others fear a repeat of the

1990s, when the government spent heavily on public works without much of a return. "There were temporary pickups in the economy," wrote Makoto Hara, an economics

commentator at the Asahi Shimbun newspaper, "but in the end we were left with ballooning government debt and two lost decades."

## MARKET DEVELOPMENTS

The shock of the Brexit vote certainly knocked UK asset markets sideways for a period. Now they have pretty much fully recovered as the news from the economy has reassured on the upside. The pound needs to stay down to help the economy adjust to a new broader pattern and a much greater volume of exports. On past experience however it

will recover much of its initial fall over the next decade. This is therefore a good time to get into UK equities on a wide front, especially in the services sector which will be greatly boosted by the opening up of the economy to free trade and deregulation.

**Table 1: Market Developments** 

	Market Levels		Prediction for Aug/Sep 2017		
	Aug 4	Sep 2	Previous (		
			Letter Vie	w	
Share Indices					
UK (FT 100)	6740	6895	9632	11273	
US (S&P 500)	2164	2180	2662	2681	
Germany (DAX 30)	10228	10683	15843	16548	
Japan (Tokyo New)	1283	1341	1806	1888	
Bond Yields (governm	ent				
UK	0.92	0.73	2.10	1.20	
US	1.56	1.61	2.80	2.80	
Germany	-0.09	-0.11	0.70	0.70	
Japan	-0.05	-0.04	0.10	0.10	
UK Index Linked	-1.39	-1.76	0.10	0.10	
Exchange Rates					
UK (\$ per £)	1.31	1.33	1.40	1.40	
UK (trade weighted)	79.82	79.76	90.80	77.30	
US (trade weighted)	99.27	99.83	102.0	102.0	
Euro per \$	0.90	0.90	0.93	0.93	
Euro per £	1.18	1.19	1.30	1.30	
Japan (Yen per \$)	101.1	104.2	112.0	112.0	
Short Term Interest R	ates (3-month	deposits)			
UK	0.48	0.37	1.00	1.00	
US	0.80	0.85	1.30	1.30	
Euro	-0.33	-0.34	-0.20	-0.20	
Japan	-0.20	-0.25	0.00	0.00	

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

Equities: Contribution to £ vield of:					_
•	Dividend	Real	Inflation	Changing	<b>Currency</b> Total
	Yield	Growth		Dividend	
1.117	2.40	2.6	1.0	Yield	66.00
UK	3.40	2.6	1.9	59.00	66.90
US	1.90	2.5	1.5	19.00	-5.18 19.72
Germany	2.60	1.8	1.1	52.00	-9.19 48.31
Japan	1.70	1.2	0.6	39.00	-13.11 29.39
UK indexed <sup>2</sup>	-1.39		1.5	2.00	2.15
Hong Kong <sup>3</sup>	2.60	6.0	1.5	-5.00	-5.18 -0.08
Malaysia	3.30	5.4	1.5	55.00	-5.18 60.02
Singapore	3.50	3.4	1.5	23.00	-5.18 26.22
India	1.40	7.5	1.5	24.00	-5.18 29.22
Korea	1.10	3.0	1.5	-19.00	-5.18 - 18.58
Indonesia	2.20	5.3	1.5	31.00	-5.18  34.82
Taiwan	2.80	3.4	1.5	14.00	-5.18 16.52
Thailand	3.20	4.0	1.5	35.00	-5.18 38.52
Bonds: Cont	ribution to	£ yield	of:		
	Redemp		Changing	Currenc	ey Total
	Yield	d	Nominal Rates		
UK	0.7	3	<b>-4.70</b>		-3.97
US	1.6	1	-11.90	-5.18	-15.47
Germany	-0.1	1	-8.10	-9.19	-17.40
Japan	-0.0	4	-1.40	-13.11	-14.55
Deposits: Co	nt ribution	to f viel	d of		
2 0 position CO	Depos		Currency	Total	
	Yield			- 3-2-2	
UK	0.3	7		0.37	
US	0.8	5	-5.18	-4.33	
Euro	-0.3	4	-9.19	-9.53	
Japan	-0.2	5	-13.11	-13.36	

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

<sup>&</sup>lt;sup>2</sup> UK index linked bonds All Stocks

<sup>&</sup>lt;sup>3</sup> Output based on China.

Table 3: Portfolio(%)

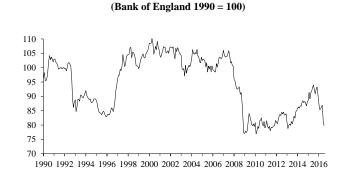
		g Based stor	Dollar Base	ed Investor	<b>Euro Based Investor</b>		
	August Letter	Current View	August Letter	Current View	August Letter	Current View	
UK Deposits (Cash)	5	5	5	5	1	1	
US Deposits	-	-	-	-	-	-	
Euro Deposits	-	-	-	-	_	-	
Japanese Deposits	-	-	-	-	_	-	
UK Bonds	-	-	-	-	-	-	
US Bonds	-	-	-	-	-	-	
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) 125 115 105 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016







**UK: Trade-Weighted Index** 



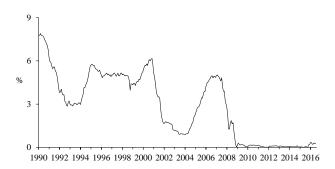
Japan: Yen Per U.S. Dollar

## **GOVERNMENT BOND MARKETS**

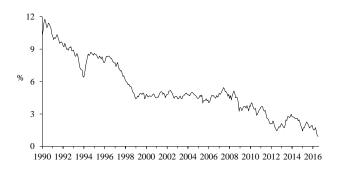
U.S.: Yield on Long-Term Government Bonds



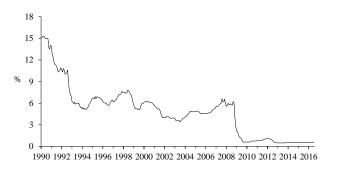
U.S.: 3-Month Treasury Bill



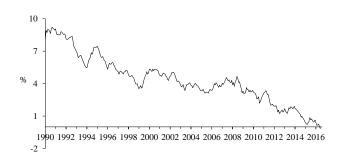
U.K.: Yield on Long-Term Government Bonds



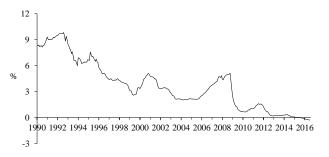
U.K.: 3-Month Interbank Rate



**Germany: Yield on Public Authority Bonds** 



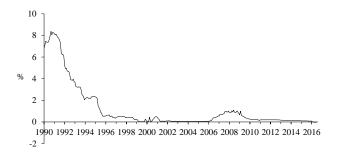
**Germany: 3-Month Interbank Deposit Rate** 



Japan: Yield on Long-Term Government Bonds

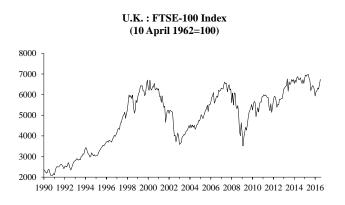


Japan: 3 Month Money Market Rate

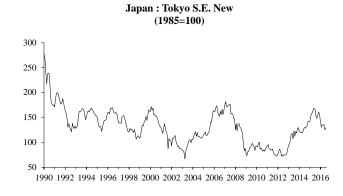


# MAJOR EQUITY MARKETS









## **EMERGING MARKETS**

#### Anupam Rastogi

#### India

India is in a sweet spot. Bountiful rains, higher salaries and pensions to government employees will boost consumption in the coming months. Government hopes that the GDP in the current fiscal year may grow as much as 8%. However, we remain cautious and maintain our forecast of GDP growth of 7.7% in 2016–17 and 8% in the next fiscal year.

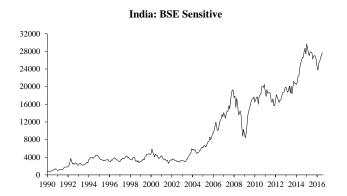
In the last six months, the government was in overdrive on economic reforms which are going to bear fruits in the coming two-three years. The emphasis on execution of existing government funded infrastructure projects has also given a fillip to the economy.

Consumer price inflation was 6.07% in July, higher than the target of 5%. As expected in the August Investment Letter, the Reserve Bank of India left its main lending rate unchanged at a five-year low, citing rising inflation in its last monetary policy meeting chaired by outgoing Governor Raghuram Rajan. However, the stance of monetary policy remains accommodative. Inflation averaged 5.6% in the three months to June 30, higher than the 5% target the RBI has set for March 31, 2017.

Raghuram Rajan's successor is Urjit Patel who is a Deputy Governor and in-charge of monetary policy. He was educated in the U.K. and the U.S., and has worked at the International Monetary Fund. Patel is unlikely to change monetary policy drastically. If anything, he is as much a monetarist as Raghuram Rajan is. Widely credited with devising the RBI's inflation-targeting mandate adopted last year, the new governor signals stability and continuity in central-bank policy.

Patel's immediate to-do list features three challenges. One, keep a lid on the inflation which in July soared to 6.07%, the highest since September 2014. Two, accelerate efforts to curb the ratio of bad loans at state-owned banks. That's vital to opening the transmission mechanisms needed to facilitate credit growth and basic financial stability. It's also vital to attracting the foreign investment needed to address the \$100 billion of stressed assets among Indian lenders. Third, make a success of the RBI's new monetary framework, which puts decisions in the hands of six policy makers.

The Indian Parliament has finally passed a bill that would allow a major tax overhaul. The tax will unravel a complex knot of overlapping state and federal levies into a uniform



one, boosting revenue and the country's GDP. The Indian government has significant hurdles to get over to reach its goal of implementing the tax by April. More than half of India's 29 states now need to pass the bill through their legislative assemblies — a process the finance ministry hopes will be completed within a month or so. The Indian President will then sign a notification to say that the constitution has changed. After that, the federal cabinet needs to approve the establishment of a GST Council — the key decision-making body on the new tax — which will be headed by the Finance Minister and made up of state and federal government ministers.

Last quarters' corporate earnings suggest that corporate profits are looking up. In the three months ended June, the net profit of companies in the benchmark index, the S&P BSE Sensex, rose 7% compared to a year earlier. While a few companies still haven't announced results yet, so far it looks like the highest growth for Sensex companies in two years.

Profits of the non-financial Sensex companies jumped 15% during the quarter. While the outlook on global demand is gloomy, hurting exporters and software companies, local demand is strong and getting stronger. Companies selling products to people in India can expect even more demand later this year as above-average monsoon rains bolster farmers' incomes and government employees receive a massive wage hike. Not surprisingly, the stock market is hovering at its peak. Given the monetary policy stability, INR is also stable.

	14-15	15-16	16-17	17–18	18-19
GDP (%p.a.)	7.3	7.6	7.7	8.0	8.0
WPI (%p.a.)	6.0	5.2	4.5	4.0	4.0
Current A/c(US\$ bill.)	-34.0	-24.0	-24.0	-26.0	-28.0
Rs./\$(nom.)	62.0	66.5	67.5	69.0	70.0

#### China

The Chinese economy is adjusting at a slow pace as China does not want to have economic adjustment at the cost of social cohesion. Retail sales growth of 10.2% year-on-year and industrial production growing at 6% is good. But, both are below government expectations. Credit, however, is still growing at 12%, or about twice the rate of the overall economy. Real estate investment and sales slowed for the third successive month in July, suggesting that economic growth would moderate in the third quarter after increasing 6.7% over the first six months of this year.

The IMF forecasts that China's economy will grow by 6.6% this year and then slow further to 5.9% by 2020. The fund has warned that China's corporate debt, at approximately 145% of GDP, is high but still manageable.

China's industrial producer price index fell by 1.7% in the year to July, compared with a 2.6% fall in the previous month and lows of 6% deflation in the second half of last year. China's consumer price index continued to rise, with inflation at 1.8% in the year to July.

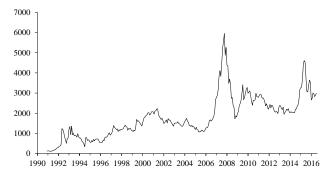
The continuing inflation faced by Chinese consumers, including in imported goods, was largely the result of high food prices. Substantial inflation in consumer prices combined with steep deflation in corporate earnings has created an unhappy mix for Chinese consumers, whose wages are affected by corporate profits.

The second-quarter survey by China's central bank shows Chinese business confidence below where it was, during the global financial crisis. Adding to the picture were 34 bond defaults totalling some \$3 billion in the first half, nearly double the level for all of 2015.

According to the IMF's annual "Article IV" review "Wealth management products" that allow banks to channel credit to local governments, property developers and industries struggling to access normal bank loans grew almost 50% to Rmb40tn (\$6trn) in 2015. The total value of risky wealth management products and other credit products generated by China's shadow banking sector was put at Rmb19tn, or about 30% of gross domestic product. Some of these products promise investors yields of up to 14%. This single element carries the greatest risk to China's financial sector stability. A sustained healthy growth of the Chinese economy depends on "the extent to which credit growth... is reined in," according to James Daniel, the IMF's China mission chief.

The central bank suggested in its latest monetary policy report that it may refrain from adopting aggressive easing measures out of concern that freeing up more funds for lending would put more pressure on the Chinese currency to depreciate.

#### China: SSE Composite Index



But, the 2016 growth target of at least 6.5% may force the central bank to go for two half-point reductions in required bank reserves and one quarter-point interest rate cut before the end of the year.

China needs to reduce its reliance on credit-fuelled investment, and deal with rising corporate debt and other imbalances while these problems are still manageable. Many of the IMF's reform prescriptions are largely on President Xi Jinping's agenda, though he has called for state companies to remain a core part of the economy and his government has been criticized for moving too slowly to tackle their problems.

China's State Council, the country's cabinet, unveiled a plan to cut business costs over the next three years, in the latest effort by the government to bolster the slowing economy.

The irony is that China's debt and credit explosions look eerily similar to the U.S., circa 2008. Not that the central bank is not doing anything. They are working, but at a snail's speed.

PBOC has signalled its intention to gradually pierce a bond market bubble that has grown on heavy borrowing of short-term money. It has made a subtle change to the way it supplies the financial system with cash, a move that market watchers see as an attempt to cool investments in assets such as bonds, which have ballooned on an influx of cheap, short-term money.

China's exports fell 4.4% in July year-over-year in dollar terms after a 4.8% decline in June. July imports fell by a greater-than-expected 12.5% from a year earlier, raising concerns over weak domestic demand. China's trade surplus widened more than expected in July to \$52.31 billion from \$48.11 billion the previous month.

China's renminbi seems largely resilient one year after its sudden devaluation. The currency has weakened by only a couple of percent against the dollar this year as the Federal Reserve has refrained from raising interest rates. The People's Bank of China's foreign reserves have stopped falling and the spread between China's onshore and offshore exchange rates has almost vanished. Underlying the bearish sentiment on the renminbi is the fear that capital outflows will accelerate once the Federal Open Market Committee starts to tighten monetary policy again.

The renminbi's outsize falls over the past year — and the decline in the PBoC's reserves from a peak of \$4tn in 2014 to \$3.2tn now — have been spurred by just one US rate rise. The fear that a series of Fed rate hikes in future will lead to greater capital outflows underpins the ongoing contraction in offshore renminbi deposits.

	14	15	16	17	18
GDP (%p.a.)	7.4	6.9	6.6	6.0	5.8
Inflation (%p.a.)	2.0	1.4	2.0	2.0	2.0
Trade Balance(US\$ bill.)	382	550	420	400	380
Rmb/\$(nom.)	6.2	6.4	6.6	6.7	6.8

#### **South Korea**

South Korea's economy is showing mixed signals. With global trade sluggish, exports shrank for the 19th straight month in July, the pace of the decline quickening again after moderating in May and June. The central bank has trimmed its growth forecast for 2016 and forecast GDP growth of 2.7% only. Consumer sentiment is gradually improving, with retail sales experiencing sustained growth in July, following a pickup in the month of June.

Inflation remains well below the central bank's annual target of 2%, slowing in July to a 10-month low of 0.7% — though that does leave room for the bank to ease policy further without fear of stoking inflation.

The Bank of Korea kept its base rate unchanged for a second straight month — widely expected — as it waits to see the effects of its June rate cut and the government's fresh stimulus. The decision to hold the benchmark seven-day repurchase rate at a record-low 1.25% was unanimous.

Policy makers are increasingly wary of the effects of corporate restructuring in indebted industries, notably shipbuilding, where Seoul fears as many as 63,000 jobs could disappear by next year. The government has prepared a stimulus package with an 11 trillion won (\$10-billion) supplementary budget to buffer the economy against shocks from the overhaul.

South Korea plans to issue 50-year treasury bonds, the longest maturity debt the country would ever have, to secure more stable government financing, as its economy keeps relying on fiscal and monetary support to spur anaemic growth.

The planned issuance would be unprecedented in South Korea, as 30-year notes are currently the longest-maturity debt ever issued in the country. Discussions with market



Taiwan: Weighted TAIEX Price Index



participants will start within days to finalize issuance details. These bonds would help the nation better-handle the demographic challenges of greying population and increasing social welfare costs. It is hoped that the issuance would ease the refinancing burden of Korean treasury bonds and provide super long-term assets for pension and life insurance companies.

Standard & Poor's raised Korea's sovereign credit rating by one notch to AA, citing steady growth and greater space for policy stimulus. It expects growth in the next three to five years to be slower than before the global financial crisis, but still faster than that of other advanced economies.

	14	15	16	17	18
GDP (%p.a.)	3.3	2.6	2.7	2.5	2.3
Inflation (%p.a.)	2.0	0.7	1.0	1.2	1.2
Current A/c(US\$ bill.)	80.0	90.0	88.0	88.0	86.0
Won/\$(nom.)	1080	1180	1160	1140	1140

#### Taiwan

Taiwan's economy grew 0.69% in the June quarter, lifting the nation out of a nine-month recession. However, the government has cut its growth forecast for 2016 to one percent citing weak global demand for its electronics exports. The latest data on export orders suggests that growth would remain tepid for the current year.

Taiwan's industrial output fell into contraction again in July. Export orders fell 3.4% in July compared to the previous year, intensifying from contraction of 2.4% in June.

Inflation in Taiwan picked up slightly last month as the country clawed its way out of recession. The consumer price index rose 1.23% year-on-year in July, up from a 0.91% pace in June.

Taiwan's currency reached its strongest level against the dollar in a year following data on exports showing its exports expanding for the first time in 18 months.

The New Taiwan dollar strengthened just enough to trade at NT\$31.4 against the US dollar, marking its strongest level against the American currency since July 2015. The currency also was at its highest level against the renminbi since January 2013, at NT\$4.714.

The stock markets continued to show strength that began in January. The benchmark Taiex index hit its highest level in a year in August, rising to 9,168.

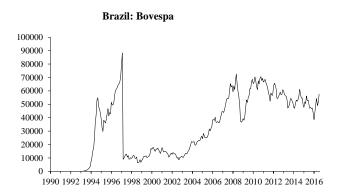
	14	15	16	17	18
GDP (%p.a.)	3.7	0.8	0.8	1.8	2.0
Inflation (%p.a.)	1.5	0.7	1.0	1.0	1.0
Current A/c(US\$ bill.)	57.4	60.0	64.0	68.0	68.0
NT\$/\$(nom.)	31.0	32.8	32.5	32.0	32.0

#### Brazil

There is an air of optimism flowing through Brazil. It is hoped that the senate would impeach suspended President Dilma Rousseff and install Mr Temer as President of Brazil to serve rest of Dilma Rousseff's term. The impeachment is expected to be passed by more than the necessary two-thirds margin of the 81-seat senate, installing Mr Temer as president. The business and markets expect rapid advances on the economy once he takes over.

Markets especially want to see Mr Temer's finance minister, Henrique Meirelles, succeed in reining in Brazil's ballooning budget deficit and place public finances on a sustainable track. The keystone reform is a new law that would rule out real increases in public spending for the foreseeable future. The progress on reforms would see economic recovery in Brazil next year.

However, we maintain our estimates of Brazil's gross domestic product contracting 3.3% this year, and for 2017, a modest GDP expansion of 1.1%. The government's budget proposal for next year, assumes gross domestic product to increase 1.6% in 2017.



For inflation, as measured by the consumer-price index, we maintain our forecast of 7.3% this year, and 5.3% in 2017.

The central bank's benchmark interest rate has been at 14.25% for more than a year now as it tries to bring inflation down. With rapid fall in consumer inflation, the Selic benchmark interest rate may come down to 13.75% by the end of 2016 and 11% by the end of 2017. Consumer confidence in Brazil increased in August to 79.3, for the fourth-consecutive month, according to a poll by a prominent think tank.

Brazil's main consumer-confidence index was at 79.3 points, up from 76.7 points in July. The index remains well below the neutral level. The confidence index has a one-to-200-point range, with 100 considered an indicator of neutral sentiment.

In sharp contrast to the pre-Olympics angst, global investors have been optimistic on Brazil this year. They have quietly poured billions of dollars into local assets in one of the biggest votes of confidence in the country's future in years.

The Brazilian real has also been the world's best performing currency this year, rallying 23% against the US dollar to trade at a one-year high of 3.12 against the US dollar earlier in the month of August.

The benchmark Bovespa index has gained nearly 70% in dollar terms since the opening of impeachment proceedings in April against Ms Rousseff, whose interventionist policies were seen as partly to blame for Brazil sinking into its deepest recession on record over the past two years.

	14	15	16	17	18
GDP (%p.a.)	0.1	-3.8	-3.3	1.0	1.5
Inflation (%p.a.)	6.5	10.3	7.0	5.3	6.0
Current A/c(US\$ bill.)	-104.0	-70.0	-50.0	-40.0	-44.0
Real/\$(nom.)	2.4	3.9	3.8	3.5	3.6

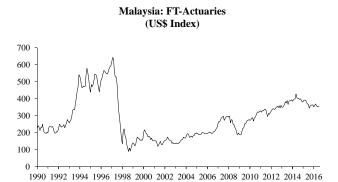
### **Other Emerging Markets**

6000



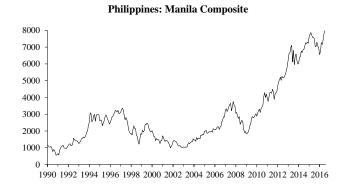
 $1990\ 1992\ 1994\ 1996\ 1998\ 2000\ 2002\ 2004\ 2006\ 2008\ 2010\ 2012\ 2014\ 2016$ 





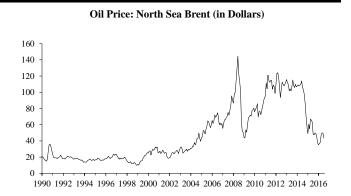


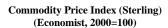




## **COMMODITY MARKETS**

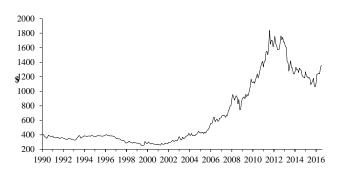




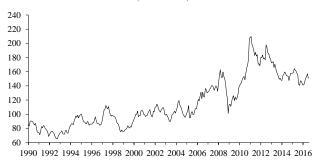




#### Gold Price (in Dollars)



# Commodity Price Index (Euro) (Economist)



# **UK FORECAST DETAIL**

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	0.2	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	-1.5	2.1	-1.6
2017	1.9	1.2	1.0	77.9	76.4	-2.1	2.6	-1.5
2018	3.1	1.5	2.5	75.7	75.1	-0.5	3.6	-1.1
2019	3.0	2.5	3.5	74.3	74.6	1.5	3.5	0.3
2020	2.1	3.0	3.0	73.8	74.4	0.5	2.7	0.9
2015:1	0.9	1.1	0.5	89.6	90.3	0.2	1.0	0.8
2015:2	0.4	1.3	0.5	91.4	91.1	1.0	1.0	0.7
2015:3	-0.4	1.4	0.5	93.0	92.5	0.5	1.0	0.4
2015:4	0.1	1.3	0.6	92.3	92.4	0.3	1.1	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	1.8	1.0	0.5	78.9	77.4	-2.5	2.5	-1.4
2017:2	1.8	1.2	1.0	78.5	77.4	-2.2	2.5	-1.5
2017:3	1.9	1.2	1.0	77.3	75.4	-2.2	2.6	-1.7
2017:4	2.1	1.2	1.5	76.7	75.4	-1.7	2.8	-1.9

Consumer's Expenditure Deflator

Labour Market and Supply Factors (Seasonally Adjusted)

	$\begin{array}{ccc} Average & Wage & Une \\ Earnings & Growth^2 \\ (1990=100)^1 & & & \end{array}$		Une mployment (New	Millions	Real Wage Rate <sup>4</sup>
			Growth <sup>2</sup> Basis) Millions Percent <sup>3</sup>		
2015	247.1	2.4	2.3	0.8	141.1
2016	254.3	2.9	2.2	0.8	143.5
2017	264.1	3.9	2.1	0.7	146.3
2018	280.5	6.2	2.1	0.7	150.8
2019	297.8	6.2	2.0	0.7	155.6
2020	311.4	4.6	1.9	0.7	159.5
2015:1	246.5	2.4	2.4	0.8	140.7
2015:2	245.7	2.4	2.3	0.8	140.4
2015:3	248.3	3.0	2.3	0.8	142.2
2015:4	247.7	1.9	2.2	0.8	141.1
2016:1	251.5	2.0	2.2	0.8	143.1
2016:2	252.5	2.8	2.2	0.8	142.5
2016:3	254.9	2.7	2.2	0.8	143.9
2016:4	258.1	4.2	2.1	0.7	144.5
2017:1	260.5	3.6	2.1	0.7	145.7
2017:2	261.3	3.5	2.1	0.7	144.9
2017:3	264.4	3.7	2.1	0.7	146.5
2017:4	270.0	4.6	2.1	0.7	148.1

Whole Economy

Sterling Effective Exchange Rate Bank of England

Ratio of UK to other OECD consumer prices adjusted for nominal exchange rate

Treasury Bill Rate less one year forecast of inflation

Short Dated 5 Year Interest Rate less average of predicted 5 year ahead inflation rate

Average Earnings
Wholly unemployed excluding school leavers as percentage of employed and unemployed, self employed and HM Forces

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	Public Authority	Net Exports <sup>5</sup>	AFC
		<b>F</b>		Expenditure <sup>3</sup>	Expenditure <sup>4</sup>		
2015	156.6	749967.5	431566.6	302272.7	202850.7	-55478.9	125108.2
2016	160.2	767235.6	445899.9	312701.0	209007.0	-44482.0	145527.8
2017	164.3	786798.8	458510.3	323871.4	217609.3	-32648.1	169393.1
2018	168.8	808163.4	469801.9	338700.7	221961.4	-28471.5	184156.4
2019	173.5	831134.9	481547.0	358611.6	226400.7	-24594.0	203029.4
2020	179.1	857745.2	493585.6	380617.3	230928.7	-20309.5	220638.7
2015/14	2.2		1.6	3.8	1.1		-2.3
2016/15	2.3		3.3	3.4	3.0		16.3
2017/16	2.5		2.8	3.6	4.1		16.4
2018/17	2.7		2.5	4.6	2.0		8.7
2019/18	2.8		2.5	5.9	2.0		10.2
2020/19	3.2		2.5	6.1	2.0		8.7
2015:1	155.5	186173.7	106852.9	76506.7	50170.8	-14587	32769.7
2015:2	156.2	186957.5	107512.3	77424.8	50522.0	-11925.0	36576.6
2015:3	156.8	187777.3	108377.3	77811.9	50926.2	-14036.0	35302.1
2015:4	157.9	189059	108824.1	77033.8	51231.7	-13444.0	34586.6
2016:1	158.6	189907.1	109165.2	76956.8	51590.4	-14141.0	33664.2
2016:2	159.8	191266.2	111552.7	78034.1	52054.7	-15661.0	34714.3
2016:3	160.4	191986.6	112243.5	78658.4	52471.1	-13089.0	38297.4
2016:4	162.1	194075.7	112938.5	79051.7	52890.9	-11953.5	38851.9
2017:1	162.8	194913.8	113610.1	79526.0	53472.7	-11395.3	40299.7
2017:2	163.8	196083.3	114285.7	80639.4	54060.9	-11303.5	41599.1
2017:3	164.8	197259.8	114965.4	81445.8	54709.6	-10680.5	43180.4
2017:4	165.8	198542	115649	82260.2	55366.1	-10419.5	44313.9

#### **Financial Forecast**

	PSBR/GDP % <sup>1</sup>	$GDP^1$	PSBR	Debt Interest	Curre nt
		(£bn)	(£bn)	( <b>£bn</b> )	Account
		, ,	Financial Year	` ,	(£ bn)
2015	4.6	1533.1	71.2	52.0	-103.7
2016	4.3	1592.4	69.0	52.3	-89.0
2017	3.3	1669.4	54.7	58.2	-77.7
2018	2.2	1770.8	38.7	65.4	-65.1
2019	1.5	1874.6	28.3	70.3	-43.2
2020	0.7	1473.0	13.0	52.7	-32.6
2015:1	0.8	383.9	3.1	12.6	-25.8
2015:2	7.1	379.3	26.9	12.8	-20.2
2015:3	4.7	382.0	17.8	13.0	-22.6
2015:4	7.0	387.2	26.9	13.1	-35.1
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	3.3	403.7	13.4	13.3	-23.3
2017:2	5.6	408.9	22.7	13.9	-14.1
2017:3	2.2	412.1	8.9	13.9	-13.4
2017:4	3.9	421.3	16.4	14.6	-26.8

GDP at market prices (Financial Year)

GDP at factor cost. Expenditure measure; seasonally adjusted Consumers expenditure less expenditure on durables and housing

Private gross domestic capital formation plus household expenditure on durables and clothing plus private sector stock building

General government current and capital expenditure including stock building Exports of goods and services less imports of goods and services

# 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	2.7	2.8			
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	0.2	1.2	3.1	3.0		
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	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.	-0.8	-2.2	0.5	-1.5	-2.1	-0.5					
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 S	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	0.6	0.4	2.5	3.5				
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	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.	-0.8	-0.7	-1.0	-1.6	-1.5	-1.1					
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	1.3	0.9	1.2	1.5			
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			
Ital y	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.	86.5	93.1	91.6	80.4	76.4	75.1			
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>&</sup>lt;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	1.36	1.30	1.27		
Japan	98.20	106.70	120.00	118.40	112.00	113.00		
Eurozone	0.75	0.76	0.90	0.95	0.93	0.92		

 $<sup>^1</sup>$  The series for the USA is a trade weighted index (1990=100); the series for the UK is \$ per £

<sup>\*</sup> Forecasts based on the Liverpool World Model