

# LIVERPOOL INVESTMENT LETTER

September 2018



Cardiff Business School  

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Ysgol Busnes Caerdydd

**Julian Hodge Institute of Applied Macroeconomics**

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**LIVERPOOL RESEARCH GROUP IN MACROECONOMICS**

## LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

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

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<p>The economy has been quite unruffled by all the excitement over the Brexit negotiations. The public rationally expect that either under WTO rules, or via a Canada+ deal, trade with the EU will continue with opening up to the rest of the world to follow. Monetary policy is now taking Brexit in its stride and resuming its focus on inflation. Only the Treasury remains stubbornly unreconciled to Brexit: but its position is unsustainable and it should move to grasp the opportunities for growth-enhancing policies as austerity comes to an end.</p>	
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# THE STRANGE IMPERTURBABILITY OF THE BRITISH ECONOMY

The political classes are in uproar, arguing over the various possible forms of Brexit, including one with no EU trade deal at all, exiting under WTO rules. Yet the economy sails on serenely, clocking up yet more record employment, with inflation coming down towards its target, interest rates finally rising, productivity recovering, the balance of payments improving and growth proceeding close to 2%. The pro-Remain media trumpet the ‘uncertainties’ and even the possible ‘terrors’ of no trade deal; and no one takes any notice apparently, outside the usual representatives of ‘industry’ such as the CBI.

What on earth is going on? We sometimes hear from pundits that ordinary people are ignorant of economic issues. Yet when we check the behaviour of their economies we typically find that their expectations are rational. This is not surprising since it is their interests that are at stake; and it is a stupid person indeed who ignores his or her very own interests.

The truth is that ordinary people have got this right: they realise that for all the posturing by politicians trade will continue largely undisturbed by Brexit but that Brexit will bring some longer term trend changes that they have by a substantial majority approved. The formal referendum majority was 4%. But it is well-known from previous polls that British people’s opinion has been by a much larger majority ‘eurosceptic’ for a very long time; when they joined the EEC they did not expect or want to be ruled by Brussels in the way things turned out and then threatened to go further in the journey towards political union. Probably a fair percentage of the electorate was sufficiently scared by the doomsday warnings of Project Fear into voting Remain. Now we know from the same polls that the vast majority of the electorate regard the issue of Brexit as settled and want the government just to ‘get on with it’.

Nor are they worried that the government will somehow renege on ‘full Brexit’. The British have enormous confidence in their democracy. They know full well that no government can survive by standing out against settled public opinion. The Conservatives are now reacting sharply to the unpopularity of this government’s Chequers proposals which have greatly alienated the referendum majority and caused a swing away from the Conservatives that could be sufficient to let in a Corbyn government.

With these proposals now clearly unacceptable, where will Brexit go? There are two possibilities: exit under WTO rules or a Canada+ trade deal. Both offer a full Brexit as demanded by the referendum result; both produce a long term economic gain for the UK economy, with free trade, own-regulation, control of borders, and no further budget contributions. Under WTO rules though the EU stands to lose a lot: no transition budget contribution, substantial tariff payments to

**Table 1: Summary of Forecast**

	2016	2017	2018	2019	2020	2021	2022
GDP Growth <sup>1</sup>	1.9	1.8	1.5	1.9	2.0	2.1	2.3
Inflation CPI	1.1	2.6	2.5	2.2	2.0	2.0	2.0
Wage Growth	2.4	2.9	2.7	2.4	1.7	2.4	2.3
Unemployment (Mill.) <sup>2</sup>	0.8	0.8	0.8	0.8	0.7	0.7	0.6
Exchange Rate <sup>3</sup>	82.1	77.4	77.4	76.2	75.4	75.5	75.2
3 Month Interest Rate	0.5	0.4	0.6	1.1	2.4	3.1	3.1
5 Year Interest Rate	0.7	0.6	1.5	2.5	3.4	2.9	2.6
Current Balance (£bn)	-90.9	-66.3	-60.3	-49.5	-39.7	-31.0	-17.9
PSBR (£bn)	45.1	39.4	30.7	21.8	5.6	-6.7	-15.1

<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 UK Treasury, and Brexit effects damaging their trade returns coming two years earlier. Their loss is largely the UK’s gain. It seems likely enough that as this possibility becomes a reality, the EU will be happy to switch to Canada+.

The British public know this. They are scornfully disregarding the daily scare stories about ‘No Deal’ put about by the Remain lobbies. WTO rules prevail for other countries outside the EU and they do not cause queues at the border, or stop aircraft flying, or interrupt energy supplies (look at the Russian gas piped into Germany). WTO rules are in fact highly prescriptive: such things as border hold-ups and discrimination on standards are simply illegal, and the EU knows this, which is why it does not try them on with third countries such as we will shortly become.

The irony of the present negotiations between the EU and the UK government within the Chequers framework is that the discussions can easily be ‘pivoted’ into a Canada+ framework where essentially the same ‘access’ will be achieved, but without the paraphernalia of the Chequers-proposed ‘EU rulebook’. This simply cannot ultimately be agreed by either side: ours because it requires foreign rule, the EU’s because it does not include the ‘fourth freedom’ of free migration.

## Policy and the Economy

The Bank of England has now reconciled itself broadly to Brexit. It is now eager to retake its role as regulator of the City in world markets. In its monetary policy judgements it is returning to normal analysis, arguing that whatever the trends in the economy due to non-monetary factors such as Brexit or productivity drivers it is simply their job to control inflation, not to try and use monetary policy to offset such trends — which it is incapable of affecting anyway in anything other than the very short term.

The last policy shoe to fall is the Treasury. This remains unreconciled to Brexit. In this attitude it reminds one of the Treasury in the very early years of Mrs. Thatcher,

unreconciled then to her monetarist policies. Then as now it staged a mandarin rebellion. After a decent interval those mandarins had to go, having totally misjudged the democratic mood.

The Treasury is playing the game of announcing doomladen forecasts still. Yet as Denis Healey memorably remarked ‘when in a hole, stop digging’. The Treasury’s predictions of doom were so badly wrong that they are entirely discredited as a forecasting organisation — even the new Brexit secretary has poked fun at them. Embarrassingly for the Treasury, in their home area of revenue, the money now keeps pouring in. The PSBR keeps on contracting, with the latest forecast for 2018–19 coming down to £30 billion, 1.5% of GDP, with the public debt/GDP ratio now having fallen steadily since 2015 (remembering to use the right debt definition, which must exclude all the Bank of England’s market operations).

It is high time the Treasury came around to accepting Brexit and making policy to optimise our economic prospects, building on the free trade and potential deregulation it will bring. For all the Remain efforts to defend our position within a protectionist EU, the truth has always been that free trade brings benefits in the form of lower prices and more competition. Furthermore, this freedom does not need to come at the expense of barriers with the EU: even under WTO rules these barriers will consist solely of tariffs which are in general fairly low but under Canada+ they will be effectively non-existent. In any case once our markets are open to the world, any barriers with the EU will have an insignificant effect on our economy.

In the Economists for Free Trade ‘Budget for Brexit’ the possibilities for imaginative Treasury policies on tax and public spending were carefully set out. For this Conservative government they suggested that at last the Treasury could get away from its position of endless austerity and create opportunities for greater growth.

### **The Economic Outlook at Home and Abroad**

With plenty of excess capacity in world raw material markets the world outlook remains good for a long period ahead. The main challenge for the UK is to create growth from rising productivity now that the economy is hitting up against the limits of full employment. Some of this will occur naturally but after long years of austerity and a negative approach to growth-friendly policy the government now has a good chance to grasp the growth-creating opportunities from Brexit. Improved infrastructure, reformed funding of the NHS, and tax cuts can all usher in a

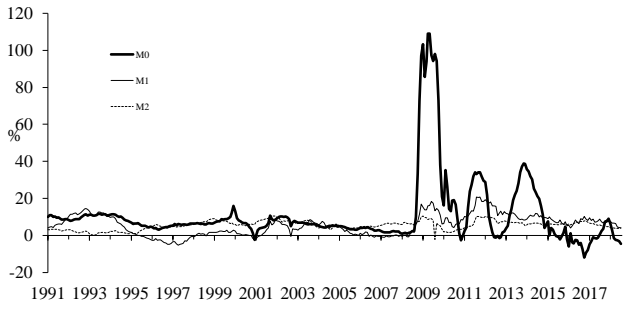
new environment that will build on the extra productivity coming directly from Brexit itself.

The usual round of ‘Brexit analyses’ from City and other firms continues — ‘showing’ that growth has been lower than it would have been because of Brexit. The favourite method, used by several before including the Bank of England and now recycled by UBS in a recent offering, is to create a ‘comparator group’ of countries and to compare their growth and other behaviour with that of the UK. These countries can be a variety, such as euro-zone or north American. The problem with this method for judging business cycle behaviour is simple and damning: cyclical experience is highly individual if one is judging percent changes over very short periods. Consider for example how specific the euro-zone’s experience is compared with the UK: it weathered the early financial crisis well, then the euro’s own crisis hit, then there was a late burst of QE from the ECB, finally it is coping with difficult banking problems across the zone but especially in Italy. Or the US with its ‘Trump effect’. The margin of error due to non-comparable features is simply too great to estimate differences in short term growth of a few percent. The method has reasonable validity when one looks at long periods of growth: for example, if you compare the much faster growth of mainland Europe from 1945 to 1979 with the UK’s you can reasonably treat this as evidence that we failed to achieve our potential during that period. In this case of a long period of history enough features of the two economies are similar to use the difference in long run growth to support good analysis based on economic modelling.

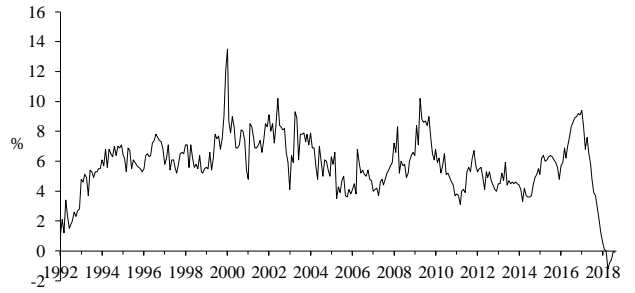
We have argued before that it is hard to ascribe any significant ‘demand effect’ to Brexit when the UK economy keeps on setting employment records in the region of full employment: could we have got ‘more than full’ employment without Brexit? On the supply side, any effect on investment would have only a miniscule effect on the capital stock (this being some 20 times the size of investment). As for productivity how could Brexit yet affect that, a longstanding ‘puzzle’ since the financial crisis hit? Brexit will have its long run effect on the supply side once it comes in. We will then be in a position to judge whether free trade has brought a productivity gain or whether a ‘gravity effect’ of distancing ourselves somewhat from the EU comes into play to diminish it.

Meanwhile the business of normalising monetary conditions needs to continue with due deliberate speed. As we have argued before, now that the economy is plainly not in the financial crisis situation any more, crisis monetary policy must be brought to an end. Interest rates need to go on rising and the Bank needs to sell its government bonds.

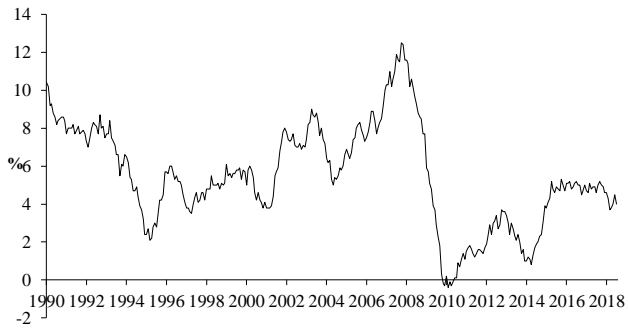
**U.S.: Growth in Monetary Aggregates (Yr - on - Yr)**



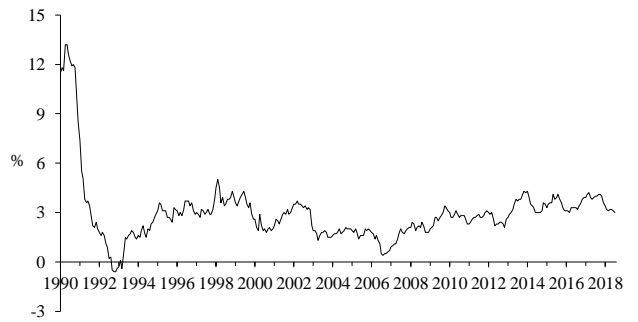
**UK: Notes and Coins in Circulation Growth**



**Eurozone M3 Growth**



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



## FOCUS ON JAPAN

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Francesco Perugini

### Japanese economy rebounds in the second quarter on brisk spending

Some good news has emerged from Japan: the economy expanded at the fastest pace for more than two years in the three months to June, a positive streak last experienced from early 2005 to mid-2006. According to a preliminary estimate from the Cabinet Office, in the second quarter Japan's GDP grew by 1% quarter-on-quarter, up from a revised 0.4% in the previous quarter and well ahead of economists' median forecast of 0.6%.

The data comes as a shot in the arm amid rising regional tensions sparked by the US president, Donald Trump, and North Korea's Kim Jong-un, a war of words that rattled global stock markets last week and could threaten Japan, its economy, and the rest of the world.

The factors that propelled the most recent growth in GDP were led by rising domestic activity, as consumer spending accelerated significantly (department stores in Tokyo reported 6.9% y-o-y sales growth in June, the biggest yearly gain in about three years), while low unemployment helped wages to grow faster than in the previous quarter (employees' income rose by 0.7% in the second quarter compared with the first three months of the year, marking the biggest increase since the July–September period of last year). “There was a replacement cycle at play for sales of electronics and autos, and spending rose despite the fact that Japan's historically tight labour market was still delivering only sluggish rises in wages”, commented Kiichi Murashima, Citigroup economist. “Most important is the stabilisation of prices in daily products during the quarter, that supported real private consumption by pushing up the purchasing power of consumers, especially pensioners,” he added.

Other economists highlighted the impressive rise in the Japanese stock market between April and the end of June — a bull run that saw the benchmark Topix index rise 6.6% over the period, breaking through the 1,600 point mark for the first time in two years and giving rise to a wealth effect on consumer sentiment. Also, preparations for the 2020 Olympic Games in Tokyo may have helped to contribute to growth in public investments, while high levels of employment have also pushed businesses to invest in capital projects.

The external environment, however, was less favourable, even without any direct impact to exports from increasing trade hostilities between the US and its major trading partners over the quarter. “If the trade conflict heightens uncertainty over the outlook, companies could rein in spending, even if Washington does not impose higher tariffs on Japanese goods,” Yusuke Ichikawa, senior economist at Mizuho Research Institute, said. External demand, or exports minus imports, subtracted 0.1 percentage points from growth, missing expectations for a 0.1 percentage point contribution. US President Donald Trump is pushing Tokyo to sign a bilateral free trade agreement and threatened to impose higher tariffs on auto imports, including those from Japan. The two countries failed to reach an agreement in talks recently between US Trade Representative Robert Lighthizer and Toshimitsu Motegi, economic revitalization minister. Motegi stuck to Tokyo's position that it prefers multilateral free trade agreements over bilateral ones, a stance that has put the two countries at loggerheads.

Overall, the latest good figures could be a help to Prime Minister Shinzo Abe, whose popularity sank recently over a series of scandals including claims he exploited his political power to help a friend. Over the last few years he has pledged to reignite growth and spending through the Abenomics reforms, a mix of monetary easing, government spending and structural reforms. However, Japan's economy still remains a long way off a fully-fledged recovery. The Bank of Japan continues to tackle weak inflation with negative interest rates, bucking the trend of its US and European counterparts' tightening of monetary policy. “Whether wages will continue to rise above inflation even when weak external demand weighs on the economy” is a key factor for continued economic expansion, said Takuji Aida from Societe Generale Securities in Tokyo.

However, attention should be given to the implementation of structural reforms, long-awaited but still to arrive and vital to promote higher and more sustainable growth. “We'll make sure that the domestic demand-led recovery continues. What is needed is supply-side reform, and we'll focus our efforts on human resource investment, improvement in productivity and new growth strategies”, said Japanese Economy Minister Toshimitsu Motegu when commenting on the GDP data release.

## MARKET DEVELOPMENTS

The outlook for the world economy remains good with raw material markets still in substantial excess capacity. Trump's unpredictable antics are slowly forcing both China and the EU into more open trade policies after long years in

which they have behaved in a destructively mercantilist way; the EU may also start to spend more on defence which in turn could help it to reduce its chronic payments surpluses.

**Table 1: Market Developments**

	Market Levels		Prediction for Jul/Aug 2019	
	Aug 3	Sep 5	Previous Letter View	Current Letter View
<b>Share Indices</b>				
UK (FT 100)	7659	7383	10654	10049
US (S&P 500)	2840	2889	3306	3362
Germany (DAX 30)	12616	12040	20261	19337
Japan (Tokyo New)	1743	1705	2408	2356
<b>Bond Yields (government)</b>				
UK	1.39	1.26	2.30	2.50
US	2.99	2.85	3.00	3.00
Germany	0.37	0.27	0.80	0.80
Japan	0.09	0.09	0.10	0.10
UK Index Linked	-1.61	-1.54	-1.00	-1.00
<b>Exchange Rates</b>				
UK (\$ per £)	1.30	1.30	1.30	1.30
UK (trade weighted)	77.80	77.31	76.0	76.0
US (trade weighted)	100.91	101.99	102.5	102.5
Euro per \$	0.86	0.86	0.86	0.86
Euro per £	1.12	1.11	1.12	1.12
Japan (Yen per \$)	111.17	111.58	112.0	112.0
<b>Short Term Interest Rates (3-month deposits)</b>				
UK	0.80	0.80	0.60	1.00
US	2.34	2.34	2.50	2.50
Euro	-0.34	-0.35	-0.10	-0.10
Japan	0.10	0.00	0.10	0.10

**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	3.60	1.9	2.2	32.00		39.70
US	1.99	2.4	2.1	11.90	-0.33	18.06
Germany	3.30	1.8	1.8	57.00	-0.31	63.59
Japan	1.90	1.1	1.1	36.00	-0.71	39.39
UK indexed <sup>2</sup>	-1.54		2.2	1.00		1.67
Hong Kong <sup>3</sup>	2.60	6.0	2.1	-12.00	-0.33	-1.13
Malaysia	3.30	5.4	2.1	48.00	-0.33	58.47
Singapore	3.50	2.9	2.1	11.00	-0.33	19.17
India	1.40	8.1	2.1	23.00	-0.33	34.27
Korea	1.10	2.0	2.1	-31.00	-0.33	-26.13
Indonesia	2.20	5.5	2.1	26.00	-0.33	35.47
Taiwan	2.80	2.5	2.1	12.00	-0.33	19.07
Thailand	3.20	3.4	2.1	22.00	-0.33	30.37
<b>Bonds: Contribution to £ yield of: –</b>						
	Redemption Yield	Changing Nominal Rates	Currency	Total		
UK	1.26	-12.40				-11.14
US	2.85	-1.50		-0.33		1.02
Germany	0.27	-5.30		-0.31		-5.34
Japan	0.09	-0.10		-0.71		-0.72
<b>Deposits: Contribution to £ yield of:</b>						
	Deposit Yield	Currency	Total			
UK	0.80		0.80			
US	2.34	-0.33	2.01			
Euro	-0.35	-0.31	-0.66			
Japan	0.00	-0.71	-0.71			

<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	
	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

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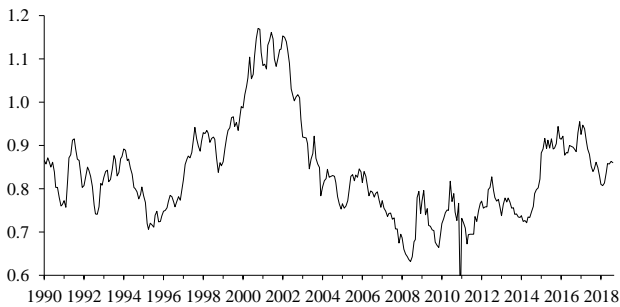
**US : Trade Weighted Index  
(Bank of England 1990 = 100)**



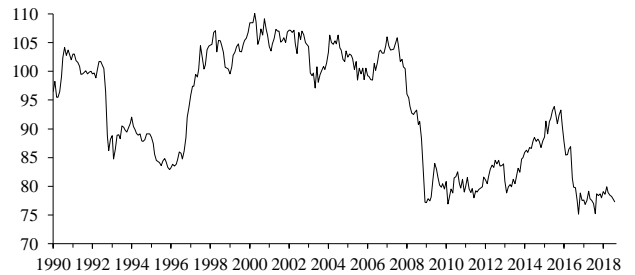
**UK: Dollars Per Pound Sterling**



**Euro per US dollar**



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



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

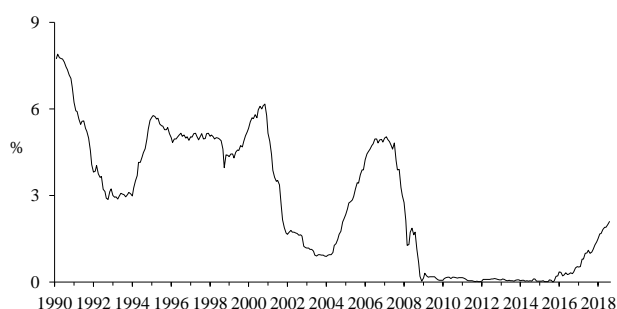


# GOVERNMENT BOND MARKETS

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



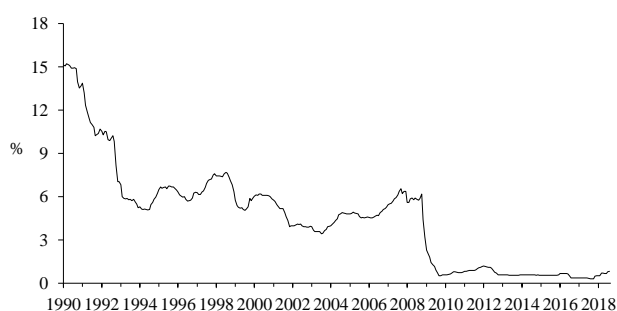
**U.S. : 3-Month Treasury Bill**



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



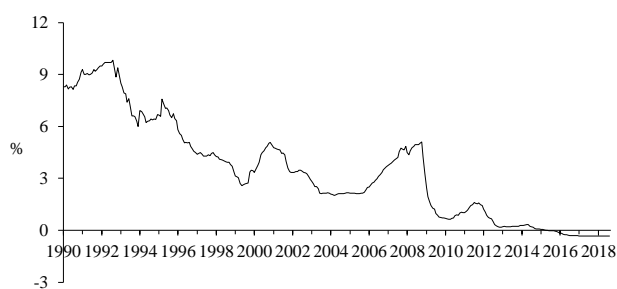
**U.K. : 3-Month Certificate of Deposit Rate**



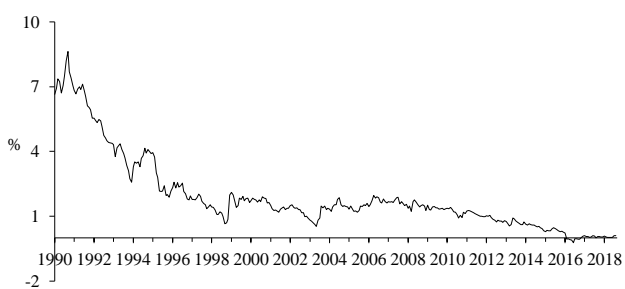
**Germany: Yield on Public Authority Bonds**



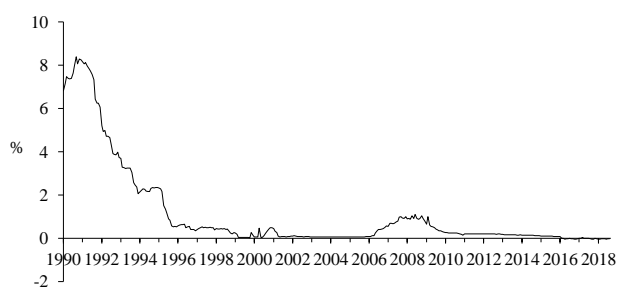
**Germany : 3-Month Interbank Deposit Rate**



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



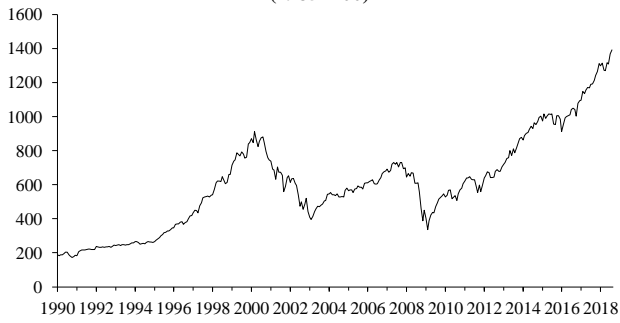
**Japan : 3-Month Money Market Rate**



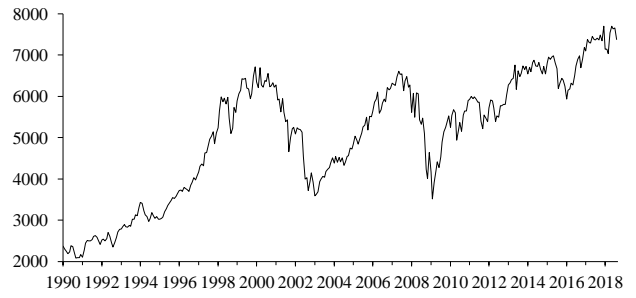
## MAJOR EQUITY MARKETS

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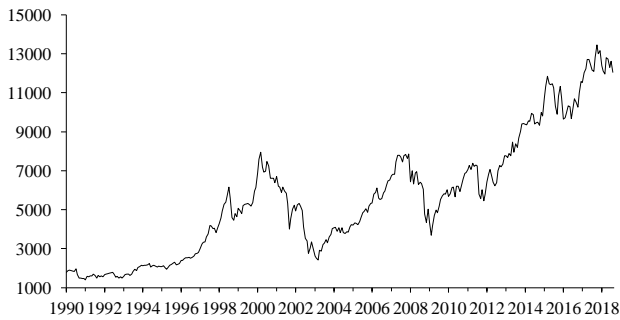
**U.S. : S & P 400 Industrial  
(1985=100)**



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



**Germany : DAX 30**



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



## EMERGING MARKETS

Anupam Rastogi

### India

India's economic growth rose to a nine-quarter high of 8.2% in the first quarter of 2018–19, compared to 7.7% growth in Q4FY18. The spurt in growth is the result of the favourable base effect which will wear off later in the year. However, the growth recovery will remain robust and we expect GDP growth to be 7.6% in this financial year as against 6.7% in 2017–18. If there is continuity in the regime, post-2019 general elections, we expect growth to be 8% plus in FY20 and FY21.

As India heads toward the elections, there is concern that India will breach its fiscal target and inflation. The economy is in for a rough ride, with rising oil prices and its already-weakened currency. Given the robust collection in direct and indirect taxes, we reckon, that government will be able to maintain its promises on both, fiscal and inflationary, fronts.

Consumer Price Index inflation remained slightly above the inflation target of 4% and the current account deficit below 2.5% of GDP. Almost normal monsoon and the implementation of the minimum support price hikes will balance each other out and would not weigh on inflation. The GST rate cuts on over 100 items will further help ease inflation. India's annual consumer inflation will be around 5%, staying above the RBI's medium-term 4% target for an eighth consecutive month. A significant fall in food inflation from 2.97% in June to 1.37% in July led to the cooling down of the overall inflation. Raw food items are exempted from the GST. Food and beverages have over 54% weight in Consumer Price Index (CPI).

The RBI is likely to gradually tighten policy further, in response to inflationary pressures emanating from the rise in crude prices and falling rupee. The Reserve Bank of India lifted its repurchase rate to 6.50% from 6.25%, its second rate increase of the year, on concern that rising oil and food prices are pushing inflation beyond its comfort zone. RBI is trying to ensure India's economic health remains as robust as possible as global trade tensions threaten to spiral. At a time when currencies of the countries with large external deficits are being punished by the markets, the monetary policy committee at its next review, scheduled for October 3–5 is expected to stay in pause mode for the rest of the FY19.

India is less exposed to trade frictions that hurt other countries. India's exports made up 18.9% of its gross

India: BSE Sensitive



domestic product in 2017 compared with 20.4% in Indonesia and 26% of Russia. India is trying to fill the void left by the US exporter. There are about a hundred items that India could supply to China. Indian exporters see the trade war between the US and China as a golden opportunity and is unlikely to give it up. India can gain competitiveness in some segments of the economy and compete with other countries who are looking at this unique opportunity to fill the gap and establish their presence in bilateral trade with both China and the USA.

India's currency is under heavy pressure — the rupee is trading near record-lows against the dollar. It fell past 71 per dollar mark for the first time in early trade and recorded the biggest monthly drop in three years in the month of August. On a year-to-date basis the Indian rupee remains the worst performer — down 10.1% this year so far. As the “yield differential” with the US narrowed, one would expect capital outflows from India, but the reverse has happened. In the month of August there has been net inflow of dollars and reserves have crossed the US\$ 400 billion mark once again. Contagion on the Indian currency will remain for some time as long as the global crude oil prices remain elevated.

The country's main stock index, the Sensex, is trading around all-time highs, having risen nearly 11% this year. Much of the buying has come from domestic fund managers. There is some interest from foreign investors as well. They turned buyers in July after three straight months of selloff in debt market, and inflows improved in August.

	16–17	17–18	18–19	19–20	20-21
GDP (%p.a.)	7.1	6.7	7.6	8.1	8.2
WPI (%p.a.)	4.5	3.5	5.0	4.7	4.2
Current A/c(US\$ bill.)	-24.0	-26.0	-49.0	-44.0	-44.0
Rs./\$(nom.)	68.2	65.0	69.5	71.5	73.5

## China

China's relationship with the US is worsening and the US is all set to put tariffs on US\$250 billion worth of imports from China by mid-September and China, in turn, is likely to put tariffs on imports on the US products worth US\$120 billion. In the short run, this will shave off 1.3% of GDP of China and 1% of the US and the world will be poorer by 0.6% of world GDP. It is to be seen that how these two economic giants play their hands.

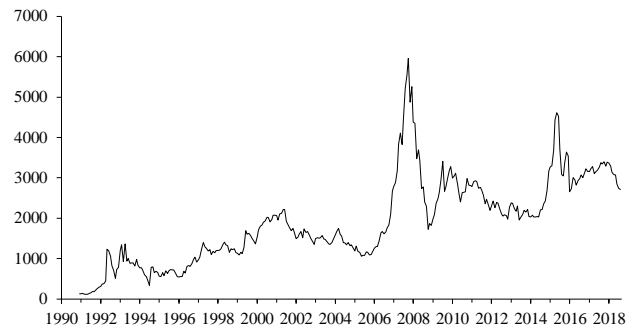
For the time being, China's economy maintained steady growth in the first half of this year with a robust growth of 6.8%. The GDP growth has stayed within the range of 6.7 to 6.9% for 12 straight quarters. We expect the impact of the tariff war to be felt in the second half of the year but China will manage to achieve a GDP growth rate of 6.5% in 2018.

The bad economic numbers have started trickling in. The manufacturing purchasing managers' index, a leading indicator, hit a five-month low in the last week of August and the yuan fell to a 13-month low against the U.S. dollar. Chinese stocks have lost one-fifth of their value since January and are near a two-year low. China's economy is cooling. Spending on factory machinery, public-works projects and other fixed-asset investments in China's nonrural areas grew at the slowest pace in nearly two decades. Retail sales also slowed, and unemployment increased. The slowdown in fixed-asset investment reflects Beijing's campaign to curb risky borrowing by local governments and companies. Pro-actively the government is trying to lean against the wind, once again. There are signs of policy support in increased lending. The central bank has already promised liquidity to banks to expand credit, and in the last week of August it offered \$74 billion in medium-term financing. The authorities also encouraged companies to issue bonds and eased restrictions on borrowing by local governments for public works. Tax cuts are in the pipeline for corporations and individuals. Looser monetary policy has contributed to the yuan's weakness.

The consumer price index increased 2.1% in July from a year earlier, compared with a 1.9% gain in June, as consumers paid more for food and fuel.

Gasoline and diesel prices surged by more than 20% on year, adding about 0.42 percentage points to the headline index. The government aims to keep inflation under about 3% this year. The July inflation data is the first official reading on the impact on prices from China's retaliatory tariffs on \$34 billion of U.S. goods that went into effect on July 6 and apply to a range of products from soybeans, to mixed nuts and whiskey.

China: SSE Composite Index



Boosted by a strong appetite for commodities, China's imports were up 27.3% in July from a year earlier, accelerating from a 14.1% increase the previous month. Exports rose 12.2% from a year earlier following June's 11.3% increase. China reported a trade surplus of \$28.05 billion in July, compared with a surplus of \$41.61 billion a month earlier. China's service trade posted a deficit of \$147.3 billion, up from \$73.6 billion three months earlier. The spending on trips, transport, and intellectual property rights contributed to the bulk of the deficit. Amid the trade war with the US, China has reported a current account deficit of \$28.3 billion in the first half of 2018 — a first in 20 years for China. It also recorded its first quarterly current account deficit in nearly 17 years this year, ending its dream run of accumulating trade surplus as top exporter for years.

China guided the yuan 0.7% stronger against the dollar in the last week of August. The dollar is hovering around 6.82 yuan in the onshore market. This time, the yuan has slid more slowly. The move has been fuelled by market forces, not the central bank, based on the outlook for interest rates and trade. The slide of the yuan suggests that the yuan may weaken beyond 7 to the dollar by mid-2019, which it hasn't breached in a decade.

Chinese stocks suffered their biggest daily loss in more than eight years on August 24, 2015. The Shanghai Composite has fallen by roughly 25% from its January high and the yuan has tumbled 5.5% against the dollar this year. There is still a lack of confidence among investors, and pessimism about the economy's outlook. As a result, China's stock market may be stuck in bear country for a long, long time.

	16	17	18	19	20
GDP (%p.a.)	6.5	6.9	6.5	6.0	5.6
Inflation (%p.a.)	2.0	1.6	2.2	2.3	2.3
Trade Balance(US\$ bill.)	510	400	300	300	300
Rmb/\$(nom.)	6.7	6.6	6.8	7.0	7.1

## South Korea

South Korea's GDP growth in 2018 will be around 2.6%. This is due to weaker export growth as a result of base effects and escalating global trade tensions, as well as the weak employment outlook in the country, which will weigh on private consumption. This is also lower than the 2.8% y-o-y figure in Q1 2018, which points to a further slowing over the coming quarters. Our view is based on a decline in export growth due to high base effects in 2017 and ongoing trade tensions between US and China, as well as a weakening consumption outlook. South Korea's consumer confidence weakened for the third straight month in August.

We expect growth to be slightly better in 2019. In addition to a weak external picture, the consumption outlook for South Korea for the coming quarters is poor, with private consumption growth likely to be hampered by weak employment, a depreciation of the won and high levels of household debt, which stood at approximately 95% of GDP in 2017.

The South Korean economy is heavily reliant on trade as exports account for 42% of GDP, and a slowdown in the sector will weigh on growth over the coming quarters. To bolster the economy, President Moon Jae-in's government proposes to spend a record 471 trillion won (\$420 billion) next year, aimed at speeding up the economy by creating jobs, raising the minimum wage and prodding innovative growth. The 2019 budget proposal calls for a spending increase of about 9.7% from last year's initial budget, the biggest jump since the aftermath of the global financial crisis in 2009. Spending to create jobs will rise to a record amount, while infrastructure spending will fall.

The BOK has held the benchmark interest rate at 1.5% since raising it from a record low in November. The slowing job growth and global trade battles raised concerns about the outlook for the export-dependent economy. The BOK Governor Lee Ju-yeol has cited financial imbalances and the need to create room for policy responses to an economic downturn as reasons for maintaining status quo. South Korea's producer price inflation accelerated for the fourth straight month in July. It climbed to 2.9% year-on-year in July, faster than June's 2.6% rise.

Export growth slowed to 4.0% y-o-y in Q2 2018, trending lower from 10.8% y-o-y in Q1 2018. This can be in large part explained by high base effects from 2017, and the growing uncertainty induced by the US-China trade conflict, with Chinese exports accounting for 25% of South Korea's total exports by value and intermediate goods accounting for 79% of South Korea's total exports to China.

Political developments are impacting near term economic prospects of the country. A deadlock in US-North Korea denuclearization talks is prompting South Korea's leader to re-evaluate the pace of his engagement with the North. Mr. Moon is still expected to continue with a planned inter-

Korea: Composite Index



Taiwan: Weighted TAIEX Price Index



Korean summit to be hosted by North Korean leader Kim Jong Un in Pyongyang in September — though the agenda will likely change depending on the developments in the North's talks with Washington and Seoul. Mr. Moon and his advisers have described the use of economic incentives as a way of nudging Pyongyang toward giving up its nuclear weapons.

	16	17	18	19	20
GDP (%p.a.)	2.8	3.1	2.6	2.8	2.9
Inflation (%p.a.)	1.0	1.9	1.7	2.0	1.9
Current A/c(US\$ bill.)	88.0	88.0	86.0	80.0	78.0
Won/\$ (nom.)	1160	1100	1100	1120	1050

## Taiwan

In the first quarter the economy posted 3.04% growth but with external headwinds increasing, we expect the economy to slow down over the second half of the year and in 2019. We maintain growth rate of 2.6% in 2018 and 2019. The government forecast the economy to expand 2.69 percent in 2018 and 2.55 percent in 2019.

Taiwan's consumer price inflation accelerated at a faster-than-expected pace in July. The CPI climbed to 1.75% year-over-year in July, slower than the 1.4% rise in June. Costs for transportation and communication grew 4.36% annually in July and housing costs went up by 0.93%.

Exports are expected to have increased 5.35% from a year earlier, compared with 9.4% in June. Taiwan's export trends are a key gauge of global demand for hi-tech gadgets worldwide. In the second quarter, exports were buoyant,

which might reflect stepped-up shipments ahead of the July 6 effective date of new United States tariffs on \$34bn worth of imports from China, and Chinese countermeasures. The US-China trade war was already casting a shadow over the island's second half growth outlook. Orders for trade-dependent Taiwan fell 0.1% from June 2017 to \$40.31bn. In May, orders rose a robust 11.7% from a year earlier.

Taiwan is worried that it could become “a bargaining chip” in negotiations with Beijing, with US support for the island swapped for Chinese cooperation on North Korea or trade. The United States would seemingly have little to lose on trade by jettisoning Taipei.

Tsai's government has decided that it makes sense to stick close to Trump in the hope of greater diplomatic recognition and economic help. She unofficially visited the US. With her visits to the United States, Tsai is hoping to reinforce the long-term viability of her country. But Trump tends to think in the short term — and he seems to favour deals over democracy.

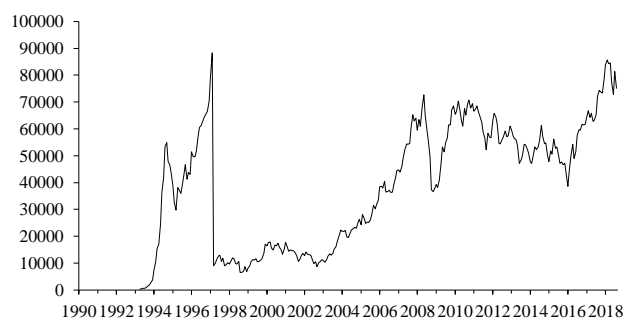
	16	17	18	19	20
GDP (% p.a.)	1.4	2.6	2.6	2.6	2.3
Inflation (% p.a.)	1.0	0.6	1.5	1.3	1.2
Current A/c(US\$ bill.)	64.0	68.0	68.0	70.0	71.0
NT\$/\$(nom.)	32.5	31.0	29.8	31.0	31.0

## Brazil

The Brazilian economy barely grew in the second quarter as a countrywide truckers' strike all but paralyzed key business sectors. GDP of Brazil expanded just 0.1% compared with the first three months of the year. This would mark the slowest growth rate since Brazil emerged, at the start of 2017, from the deepest recession in decades. There is a possibility that the economy may contract in the second half of 2018. For 2019 and 2020, the estimate for GDP growth remains at 2% and 2.5% respectively.

Inflation is expected to be higher than expected, but still within the government's target of 3% to 6%. Inflation cooled in mid-August to the slowest monthly pace since a nationwide truckers' strike in May drove widespread product shortages. Underlying pressures remain largely subdued due to insipid economic recovery, which took a further hit from the protests and has kept the unemployment rate stubbornly in double digits. Hence, the central bank has enough elbow room to hold interest rates at an all-time low even as the Brazilian real fell to its weakest in 2-1/2 years, leading to a sharp increase in import costs. We expect the country's benchmark interest rate (SELIC) should remain at 6.5 percentage points until the end of the year. Brazil's central bank will probably refrain from raising interest rates even though there are jitters ahead of the October 7 presidential election, as well as broad selling of emerging market currencies.

Brazil: Bovespa



Brazil posted a wide deficit in its transactions with foreign nations in July, after four consecutive monthly surpluses, due mainly to interest payments. The central bank forecast the current-account deficit widening to \$17.55 billion by the end of 2018. The challenges for Brazil remain sizable. The government struggles to tame a gaping budget shortfall equal to 7% of gross domestic product.

It is estimated that a 10% decline in the Brazilian currency would add around 50 basis points to inflation. The real is down nearly 17% so far this year. Brazil FX plunged 4.7% to 4.10/USD, the weakest nominal level since January 2016. Brazil's currency is sliding as investors are concerned about election.

The country is facing a high degree of uncertainty ahead of its presidential election, which is set to take place in October. A poll suggests that the jailed former President Luiz Inacio Lula da Silva is holding a double-digit lead against far-right Congressman Jair Bolsonaro. Lula is facing corruption charges and is expected to be barred from the race. Establishment politician Geraldo Alckmin, a former São Paulo governor who has the support of a wide coalition of parties, has established himself as the market's favourite but has consistently polled in the single digits. The race for the presidency remains all but clear.

Wealthy Brazilians are fleeing the country, terrified by spiralling gun violence and pessimistic about the nation's political and economic future. About 52% of the richest Brazilians — those with a monthly household income of more than \$2,500 — want to emigrate, while 56% of college-educated Brazilians want to leave, according to a study published in June by Brazilian polling agency Datafolha. Overall, 43% of Brazilians would emigrate if they could.

	16	17	18	19	20
GDP (% p.a.)	-3.5	1.0	0.5	2.0	2.5
Inflation (% p.a.)	6.3	3.0	4.4	4.5	4.2
Current A/c(US\$ bill.)	-28.0	-4.0	-20.0	-18.0	-18.5
Real/\$(nom.)	3.5	3.2	3.8	4.0	4.0



## Other Emerging Markets

**Hong Kong: FT-Actuaries**



**Indonesia: Jakarta Composite**



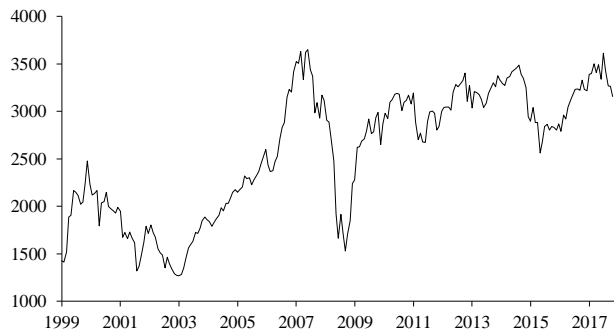
**Malaysia: FT-Actuaries  
(US\$ Index)**



**Thailand: Composite Index**



**Singapore: Straits Times Index**



**Philippines: Manila Composite**



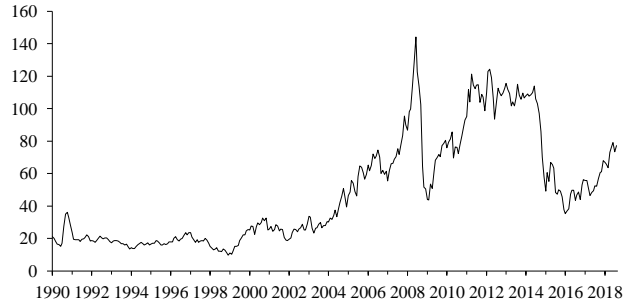
# COMMODITY MARKETS

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



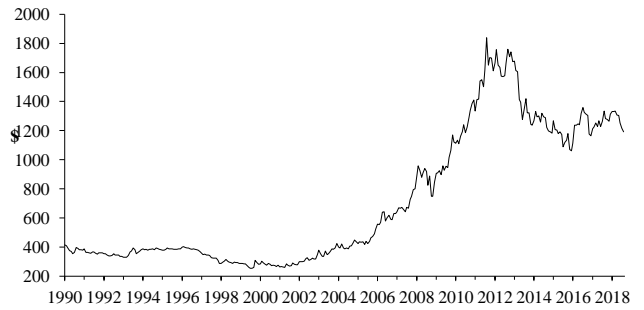
**Oil Price: North Sea Brent (in Dollars)**



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



**Gold Price (in Dollars)**



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



## UK FORECAST DETAIL

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

	Inflation % <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>
2017	2.6	0.6	0.4	77.4	75.5	-1.6	3.8	-1.5
2018	2.5	1.5	0.6	77.4	75.8	-1.5	3.5	-0.5
2019	2.2	2.5	1.1	76.2	74.9	-1.0	2.9	0.5
2020	2.0	3.4	2.4	75.4	74.3	0.4	2.6	1.4
2021	2.0	2.9	3.1	75.5	74.9	1.0	2.5	0.9
2022	2.0	2.6	3.1	75.2	74.8	1.1	2.6	0.7
2017:1	2.2	0.6	0.3	76.8	75.0	-1.7	3.3	-1.5
2017:2	2.6	0.4	0.4	78.2	76.4	-1.5	3.8	-1.7
2017:3	2.7	0.6	0.3	76.7	74.5	-1.5	4.0	-1.5
2017:4	2.8	0.8	0.4	77.9	76.0	-1.7	4.1	-1.3
2018:1	2.5	1.0	0.5	79.2	78.0	-1.6	3.6	-1.0
2018:2	2.6	1.5	0.5	77.0	75.4	-1.7	3.6	-0.5
2018:3	2.5	1.8	0.8	77.1	75.4	-1.4	3.5	-0.2
2018:4	2.5	1.8	0.8	76.2	74.4	-1.4	3.4	-0.2
2019:1	2.2	2.5	0.8	76.6	75.4	-1.3	2.9	0.5
2019:2	2.2	2.5	1.0	76.5	75.4	-1.1	2.9	0.5
2019:3	2.2	2.5	1.0	75.9	74.4	-1.0	2.8	0.5
2019:4	2.2	2.5	1.5	75.7	74.3	-0.5	2.9	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)
2017	259.1	2.9	2.2	0.8	141.7
2018	265.8	2.7	2.2	0.8	142.2
2019	272.3	2.4	2.1	0.8	142.5
2020	276.9	1.7	1.9	0.7	142.7
2021	283.4	2.4	1.9	0.7	142.3
2022	289.8	2.3	1.5	0.6	142.9
2017:1	258.1	2.1	0.8	142.2	190.2
2017:2	257.3	2.3	0.8	141.6	192.2
2017:3	260.2	2.2	0.8	142.7	194.0
2017:4	260.9	2.3	0.8	142.2	196.0
2018:1	264.6	2.3	0.8	142.8	196.1
2018:2	264.3	2.1	0.8	141.8	199.6
2018:3	267.0	2.1	0.8	142.9	201.3
2018:4	267.3	2.1	0.8	142.2	203.1
2019:1	269.7	2.0	0.7	142.3	203.0
2019:2	271.9	2.0	0.7	142.7	204.9
2019:3	272.8	2.0	0.7	142.9	206.7
2019:4	274.8	1.9	0.7	143.0	208.5

<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
2017	162.3	777336.9	443745.6	302292.1	198857.7	-65371.5	102187.0
2018	164.7	788702.9	452535.4	300001.6	200246.3	-62820.3	101237.1
2019	167.8	803486.7	458033.7	303844.4	200602.7	-55631.9	103388.8
2020	171.1	819157.6	466811.5	305454.3	201938.2	-49424.8	105622.7
2021	174.6	836277.7	476328.1	309328.2	203070.4	-44408.2	108042.3
2022	178.6	855233.2	486139.0	312409.7	204308.6	-36921.2	110703.2
2017/16	1.8		0.6	0.8	0.4	-0.7	0.6
2018/17	1.5		2.0	-0.7	0.7	-0.8	2.0
2019/18	1.9		1.2	1.3	0.2	2.1	1.2
2020/19	2.0		1.9	0.5	0.7	2.2	1.9
2021/20	2.1		2.0	1.3	0.6	2.3	2.0
2022/21	2.3		2.1	1.0	0.6	2.5	2.1
2017:1	161.5	193340.7	110460.5	76110.0	50838.0	-16948.9	27118.9
2017:2	161.9	193817.5	111360.7	74039.4	48893.4	-16008.3	24467.6
2017:3	162.6	194710.8	110910.0	75858.8	49324.8	-15656.7	25726.1
2017:4	163.3	195468.0	111014.4	76284.0	49801.5	-16757.6	24874.3
2018:1	163.6	195906.9	110726.8	75395.5	51361.5	-16549.5	25007.4
2018:2	164.3	196658.4	113112.9	76462.4	49463.3	-17119.9	25257.6
2018:3	165.0	197581.8	114100.5	74023.6	49577.5	-14658.4	25458.2
2018:4	165.8	198555.8	114595.2	74120.1	49844.0	-14492.5	25513.8
2019:1	166.7	199543.9	113052.0	76413.1	50526.0	-14820.6	25636.7
2019:2	167.3	200322.9	114121.4	76582.8	50009.7	-14624.9	25773.7
2019:3	168.2	201324.8	115127.6	74790.6	50056.5	-12733.9	25925.3
2019:4	169.0	202295.1	115732.7	76058.0	50010.4	-13452.6	26053.1

<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		
2017	2.0	2047.3	39.4	79.9	-66.3
2018	1.4	2131.8	30.7	82.7	-60.3
2019	1.0	2219.8	21.8	87.5	-49.5
2020	0.2	2309.9	5.6	94.6	-39.7
2021	-0.3	2406.9	-6.7	98.0	-31.0
2022	-0.6	2513.2	-15.1	99.5	-17.9
2017:1	-2.9	507.9	-14.6	20.0	-15.7
2017:2	5.0	503.8	25.3	20.0	-20.5
2017:3	2.3	510.3	11.8	19.7	-15.3
2017:4	3.2	513.3	16.5	19.9	-14.8
2018:1	-2.7	520.0	-14.3	20.2	-13.4
2018:2	1.3	525.5	6.8	20.3	-22.2
2018:3	1.5	529.4	7.7	20.7	-13.5
2018:4	1.5	535.0	7.8	20.8	-11.3
2019:1	1.6	541.9	8.5	21.0	-10.8
2019:2	1.1	547.3	5.9	21.3	-18.4
2019:3	0.9	551.2	5.1	21.3	-10.6
2019:4	0.8	557.4	4.6	22.0	-9.6

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

## WORLD FORECAST DETAIL

### Growth Of Real GNP

	2015	2016	2017	2018	2019	2020
U.S.A.	2.9	1.5	2.3	2.7	2.4	2.5
U.K.	2.3	1.9	1.8	1.5	1.9	2.0
Japan	1.4	1.0	1.7	1.4	1.1	1.2
Germany	1.7	1.9	2.2	2.3	1.8	2.0
France	1.0	1.1	2.0	1.9	1.7	1.9
Italy	1.0	0.9	1.5	1.4	1.1	1.2

### Growth Of Consumer Prices

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

### Real Short-Term Interest Rates

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

### Nominal Short-Term Interest Rates

	2015	2016	2017	2018	2019	2020
U.S.A.	0.2	0.5	1.4	1.8	2.5	2.8
U.K.	0.6	0.5	0.4	0.6	1.1	2.4
Japan	0.2	0.1	0.1	0.1	0.1	0.1
Germany	-0.1	-0.3	-0.3	-0.2	-0.2	0.0
France	-0.1	-0.3	-0.3	-0.2	-0.1	0.0
Italy	-0.1	-0.3	-0.3	-0.2	-0.1	0.0

### Real Long-Term Interest Rates

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

### Nominal Long-Term Interest Rates

	2015	2016	2017	2018	2019	2020
U.S.A.	2.2	2.5	2.8	3.0	3.5	3.8
U.K.	1.3	0.7	0.6	1.5	2.5	3.4
Japan	0.3	0.0	0.1	0.1	0.1	0.1
Germany	0.6	0.1	0.4	0.6	0.9	1.0
France	1.0	0.7	0.8	1.1	1.4	1.5
Italy	1.6	1.7	1.9	2.3	2.6	2.7

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

	2015	2016	2017	2018	2019	2020
U.S.A.	93.0	94.0	94.5	94.8	95.0	95.2
U.K.	92.2	81.4	75.5	75.8	74.9	74.3
Japan	56.0	58.4	58.3	58.1	58.4	58.3
Germany	94.7	95.0	94.3	94.9	95.1	95.0
France	96.2	96.0	95.3	95.1	95.5	95.4
Italy	102.1	102.0	101.2	101.1	101.1	101.0

<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)

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

<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