# LIVERPOOL INVESTMENT LETTER

**March 2015**

**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 Julian Hodge Bank. The aim of the Institute is to carry out research into the behaviour of the UK economy, and to study in particular its relationship with the other economies of Europe. This research has been given especial relevance by the ongoing discussions on the extra powers regularly requested by the European Union and also by the recent crisis in the eurozone.

The Liverpool Investment Letter is written by Patrick Minford, with the assistance of other members of the Group; in particular the emerging markets section is written by Anupam Rastogi, and the focus on Japan is written by Francesco Perugini. The Investment Letter is published monthly.

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

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## March 2015

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# COMMON SENSE ON THE FINANCIAL CRISIS

We now have three 'monetary policy functions', all lodged at the Bank of England: 'normal' monetary policy, financial stability policy and 'macro-prudential' policy. The first concerns the setting of interest rates. The second concerns the avoidance of financial risk. The third concerns the use of regulatory levers to manage the business cycle in lending and finance.

The assumptions behind all this new paraphernalia is that the recent Great Recession was entirely the fault of the financial system and specifically the banks. Only on this basis would it make sense to interfere so actively in markets and consequent prices, since otherwise all one would need would be normal monetary policy and the usual eye on potential systemic dangers. Furthermore since one would not need macro-prudential intervention one would note that it is highly distortionary of market processes and for this reason should not be used as it is actively damaging to the economy.

Yet when one looks for evidence that the Great Recession was the result of the financial system, it is extremely hard to find. Several papers claim that financial shocks were what caused it; but on inspection it turns out these studies assumed the very mechanisms that generate this conclusion. In recent work at Cardiff we found that when the same models were estimated so as to fit the data and also to mirror the variety of shocks present, the share of the downturn accounted for by financial shocks is less than a fifth. This work matches work by Stock and Watson who look at the full sweep of relationships in this recession and finds that it was little different in the shocks causing it than previous ones; the Great Recession simply was caused by the same types of shocks as before but on average turning out bigger than usual on this occasion.

When we then turn to just why the financial shocks this time did occur, we are forced to ask whether it was the banks or the central banks themselves that precipitated them. During the second half of 2007 there was a breakdown in the inter-bank market which central banks did little to offset. On the contrary, central bankers spread the blame for the upset then on banks' 'moral hazard'; they ignored their own part in encouraging the prior credit boom and they also forgot their own responsibility to keep the banking system stable. However, from the end of 2007 through 2008 central banks were beginning to restore order in the inter-bank market. The financial crisis erupted with full force in September 2008 with the collapse of Lehman over the weekend of September 13–14th. For reasons that are still not clearly explained the Federal Reserve Board allowed the collapse (Lehman declared itself bankrupt in the small hours of Monday morning), even though there was a huge counterparty problem; and indeed AIG immediately collapsed which in turn forced the Fed into a massive bailout.

**Table 1: Summary of Forecast**

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|
| GDP Growth[1] | 0.7 | 1.7 | 2.6 | 2.8 | 2.5 | 2.5 | 2.5 |
| Inflation CPI | 2.1 | 1.9 | 1.7 | 1.4 | 1.7 | 1.7 | 2.0 |
| RPIX | 3.2 | 3.1 | 2.5 | 2.3 | 2.4 | 2.5 | 2.7 |
| Unemployment (Mill.) | | | | | | | |
| Ann. Avg.[2] | 1.6 | 1.4 | 1.1 | 0.9 | 0.8 | 0.8 | 0.7 |
| 4th Qtr. | 1.6 | 1.3 | 1.0 | 0.9 | 0.8 | 0.7 | 0.7 |
| Exchange Rate[3] | 83.0 | 81.5 | 87.7 | 90.3 | 90.4 | 90.4 | 90.1 |
| 3 Month Interest Rate | 0.9 | 0.6 | 0.6 | 1.0 | 1.6 | 2.0 | 2.1 |
| 5 Year Interest Rate | 0.9 | 1.3 | 1.9 | 2.2 | 2.5 | 2.5 | 2.5 |
| Current Balance (£bn) | −53.2 | −65.9 | −80.9 | −72.0 | −72.3 | −72.7 | −73.3 |
| PSBR (£bn) | 110.6 | 91.1 | 91.5 | 75.8 | 56.5 | 24.3 | 3.7 |

[1]Expenditure estimate at factor cost
[2]U.K. Wholly unemployed excluding school leavers (new basis)
[3]Sterling effective exchange rate, Bank of England Index (2005 = 100)

Again it seems that central banks were unwilling to save the banking system because some banks had shown moral hazard. The politicians too entered the game, declaring their disapproval of banks. Yet, approval or disapproval, central banks that terrible weekend should have thought about the banking system and how to save it. Cooperation between central banks was poor; in particular the Bank of England prevented Barclays from being involved in buying parts of Lehman and so contributing to a solution. Why did the Fed and other central banks not defer the Lehman action and search for a less damaging solution? Instead they suddenly threw in the towel over the weekend.

Now it is true that over the next few months central banks and governments put together bailout schemes to clear up the mess. But in retrospect it is puzzling why the mess was allowed to occur in the first place, especially after the great efforts that had been made to stabilise the system after the sub-prime crisis of August 2007 (itself the first conspicuous failure of central bank management).

To summarise all this, we find that over the whole period the financial crisis was just one component of the Great Recession and that this component itself can be put down mainly to central bank incompetence. Yet the new Regulatory framework is put forward as the way to prevent future crises, even though it will only remove a small component of crisis-causing shocks and is also highly damaging to the flow of credit and finance through the economy.

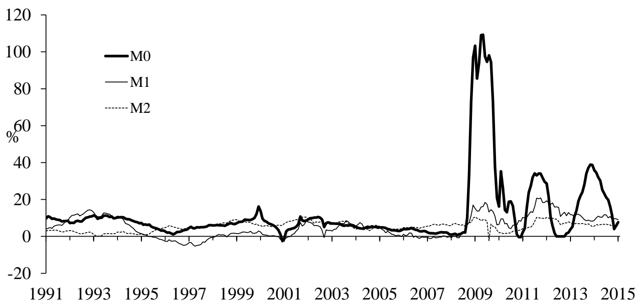
One must hope that in time sense will prevail and the monstrous new system put in place will be somewhat unwound and reduced in scale. The Bank of England has published its ambitious plans for research on these areas; so maybe it will learn the error of these ways from this new programme.

Meanwhile monetary policy is being kept remarkably easy, to try to offset the effects on credit growth of the New Regulation. This is a case of two wrongs not adding up to a

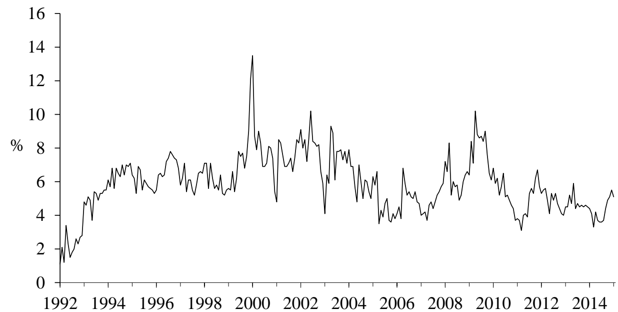
right. The difficulty, as we have argued before, is that new forms of credit (so far not reliably measurable) are being created via the internet peer-to-peer network. Plainly the economy is now growing strongly and wages are starting to rise, reflecting the strength of employment growth.

In the US the Fed is now starting to talk about tightening. We think the Bank will have to do the same here. Once the Fed starts markets will start to view Bank reluctance with concern. So interest rates should start to rise here as in the US before the end of this year. If the Bank refuses to tighten, then it is running risks of losing control of the inflationary process; this does not look a threat today but the fall in commodity prices will soon drop out of the inflation numbers and then the threat will become more apparent.

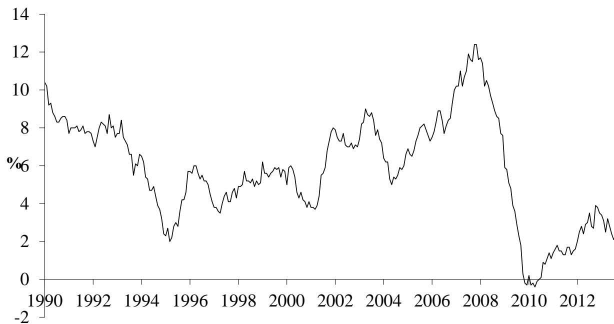
**U.S.: Growth in Monetary Aggregates (Yr - on - Yr)**



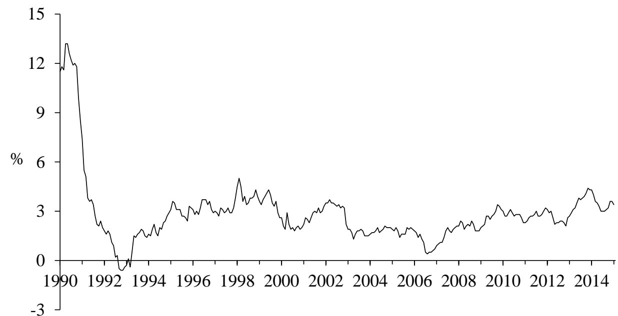

**UK: Notes and Coins in Circulation Growth**




**Eurozone M3 Growth**




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



# FOCUS ON JAPAN

Francesco Perugini

## Japan's Economy Growing Again

Japan's economy emerged from recession in the fourth quarter of 2014, but even after two years of Abenomics it is still struggling for momentum. According to the latest release GDP expanded by 0.6% in Q4 over the previous quarter after two consecutive quarters of negative growth following the hike in the consumption tax which weighed on activity. While this is good news, markets had been looking for a stronger gain so there was a degree of disappointment and some head scratching, given that monthly data released during the quarter had pointed to a stronger outcome. Overall growth for the year is zero.

Looking at demand components, the biggest gain came from exports which gained 2.7% on the quarter, the biggest increase in four quarters, indicating that Prime Minister Shinzo Abe's weak-yen policy — the currency has fallen by around a third against the US dollar since late 2012 — is having the desired effect of significantly increasing exports. Exports to China, Japan's second-largest export destination, in December totalled ¥1.27 trillion, the highest for a single month since December 2010. Exports to the US, its biggest market, totalled ¥1.4 trillion, the most since 2007.

Meanwhile, consumer spending grew for the second consecutive quarter, but by only 0.3% on the quarter. Japanese consumers are recovering more slowly than expected from a sales-tax increase implemented in April, which sent spending into a tailspin, causing the economy to contract for two consecutive quarters. Rises in base wages have lagged behind inflation, including the effects of the tax increase, for 18 months in a row.

Capital spending also remained weak last quarter, rising 0.1%. It was the first expansion after two quarters of contraction, even though many Japanese companies, led by auto makers, reported record profits and are sitting on unprecedented piles of cash. According to data compiled by Nikkei, the leading economic newspaper in Japan, pre-tax profit at the companies that have released results will likely total ¥22.2 trillion yen in fiscal 2014 — which ends in March 2015 — up 3.8% on the year.

Among other components of aggregate demand, residential investment — down 1.2% — posted a third consecutive quarterly drop, while non-residential business investment edged up just 0.1%, not enough to fully reverse the two previous quarter's dips. Finally, public-sector demand accounted for just 0.1 percentage points of GDP growth last quarter.

The GDP figure might suggest Japan's economy is back on track, but the recovery has yet to reach the public. According to a recent opinion poll by Nikkei, 81% of respondents said they have not sensed any tangible improvement and merely 13% said that the economic recovery has been felt in their daily lives.

Moreover, the economy is still not generating the kind of domestic demand growth needed for a permanent end to deflation or for the government to be able to tackle its budget deficit. "The preliminary GDP release confirms the economy is past the worst," said Yasunari Ueno, chief market economist at Mizuho Securities in Tokyo. "But it's not easy to be optimistic about the path of growth from here".

Indeed, economists believe that the Japanese economy faces several risks going forward, especially come April 2017, when the sales tax is due to go up another 2 percentage points to 10%. The only reason for optimism is a 50% decline in oil prices since mid-2014, which is putting more money into consumers' pockets and reducing costs for companies. "With the improvement in buying power brought on by lower oil prices, Japan should be able to grow more than its 0.3% potential growth rate," said a recent BNP Paribas report on the economy. However, sharply lower oil prices have frustrated the Bank of Japan's (BOJ) efforts to achieve 2% inflation, the key policy goal. Inflation on the core consumer-price index (stripping out food prices) fell to 0.5% in December, excluding the sales-tax increase, the lowest level in 16 months.

After the GDP data release, the BOJ left policy settings unchanged at the last meeting pointing to signs of improvement in the economy. Economists believe that BOJ policymakers will announce more stimulus in late April as they do not seem to be fully convinced over the strength of the economic recovery. However, the latest appointment of Yutaka Harada, a professor from Waseda University as a BOJ policy board member suggests that additional monetary policy measures might be harder to implement. Last October the BOJ's policy board was divided over the decision for extra measures, with five members for the move and four against. Harada is replacing Ryuzo Miyao, who was in favour of the measure. But Harada is an advocate of mild inflation and he believes that as long as employment is rising steadily, it does not matter if inflation cannot reach the 2% target by March 2015. Recent data shows that the labour market is indeed very tight: the unemployment rate in December declined to 3.4%, the lowest level since 1997 while the job-to-applicant ratio, probably a better measure of labour market conditions, hit a two-decade high. So if Harada prioritizes economic conditions over inflation, then attempts to ease monetary policy even further anytime soon could face higher hurdles. "This could be a turning point for the BOJ's policy management, from putting 2% inflation first to placing the

highest priority on the economy", says Koya Miyamae, senior economist at SMBC Nikko Securities Inc.

What these latest figures for growth seem to tell us is that Japan has lost the dynamism it might have been acquiring before the 'bursting of the asset bubble' at the end of the 1980s. Then it seemed as if it had the confidence to reform itself, deregulate the service sector, so vital for growth in a mature economy (as illustrated by the UK's renaissance post-1979), and introduce competition, unleashing productivity growth. The collapse of asset prices however heralded a policy era in which all reform ideas were forgotten and politics awarded a veto to all parts of society, crushed as they were by the general collapse. If even Mr. Abe cannot revive the opening up of the Japanese economy, then we probably should assume Japan will continue to stagnate, with minimal productivity growth, sine die. The policies of monetary and fiscal stimulus, so endlessly resorted to, will just make no difference, except possibly to the rate of inflation.

# MARKET DEVELOPMENTS

With the Fed stopping QE and starting to raise interest rates, we are moving into a turbulent time for the markets. The strength of growth however is still underpinning equity price rises so it would be unwise to get out of the equity market.

**Table 1: Market Developments**

| | Market Levels | | Prediction for Feb/Mar 2016 | |
|---|---|---|---|---|
| | **Jan 30** | **Feb 27** | **Previous Letter** | **Current View** |
| **Share Indices** | | | | |
| UK (FT 100) | 6811 | 6950 | 9841 | 10042 |
| US (S&P 500) | 2021 | 2111 | 2640 | 2757 |
| Germany (DAX 30) | 10738 | 11327 | 14915 | 15733 |
| Japan (Tokyo New) | 1414 | 1522 | 1928 | 2076 |
| **Bond Yields (government** | | | | |
| UK | 1.43 | 1.73 | 2.00 | 2.00 |
| US | 1.75 | 1.98 | 2.10 | 2.10 |
| Germany | 0.36 | 0.30 | 1.50 | 1.50 |
| Japan | 0.29 | 0.34 | 0.70 | 0.70 |
| UK Index Linked | –0.93 | –0.79 | 0.10 | 0.10 |
| **Exchange Rates** | | | | |
| UK ($ per £) | 1.51 | 1.54 | 1.56 | 1.56 |
| UK (trade weighted) | 88.6 | 91.4 | 82.3 | 88.6 |
| US (trade weighted) | 98.9 | 100.8 | 85.5 | 85.5 |
| Euro per $ | 0.88 | 0.89 | 0.79 | 0.79 |
| Euro per £ | 1.33 | 1.37 | 1.23 | 1.23 |
| Japan (Yen per $) | 118.1 | 119.4 | 98.0 | 98.0 |
| **Short Term Interest Rates (3-month deposits)** | | | | |
| UK | 0.56 | 0.56 | 1.10 | 1.10 |
| US | 0.25 | 0.26 | 0.70 | 0.70 |
| Euro | 0.03 | 0.02 | 0.50 | 0.50 |
| Japan | 0.10 | 0.10 | 0.70 | 0.70 |

**Table 2: Prospective Yields** [1]

**Equities: Contribution to £ yield of:**

| | Dividend Yield | Real Growth | Inflation | Changing Dividend Yield | Currency | Total |
|---|---|---|---|---|---|---|
| UK | 3.40 | 2.5 | 2.0 | 40.00 | | 47.90 |
| US | 1.90 | 3.0 | 1.6 | 26.00 | −1.25 | 31.25 |
| Germany | 2.60 | 1.4 | 1.5 | 36.00 | 10.31 | 51.81 |
| Japan | 1.70 | 1.4 | 2.0 | 33.00 | 16.87 | 54.97 |
| UK indexed[2] | –0.79 | | 2.4 | –5.00 | | –3.79 |
| Hong Kong[3] | 2.60 | 6.8 | 1.6 | 5.00 | −1.25 | 14.75 |
| Malaysia | 3.30 | 5.5 | 1.6 | 58.00 | −1.25 | 67.15 |
| Singapore | 3.50 | 4.5 | 1.6 | 36.00 | −1.25 | 44.35 |
| India | 1.40 | 8.0 | 1.6 | 31.00 | −1.25 | 40.75 |
| Korea | 1.10 | 3.0 | 1.6 | −12.00 | −1.25 | −7.55 |
| Indonesia | 2.20 | 6.1 | 1.6 | 41.00 | −1.25 | 49.65 |
| Taiwan | 2.80 | 3.4 | 1.6 | 29.00 | −1.25 | 35.55 |
| Thailand | 3.20 | 4.1 | 1.6 | 38.00 | −1.25 | 45.65 |

**Bonds: Contribution to £ yield of:**

| | Redemption Yield | Changing Nominal Rates | Currency | Total |
|---|---|---|---|---|
| UK | 1.73 | −2.70 | | –0.97 |
| US | 1.98 | −1.20 | −1.25 | –0.47 |
| Germany | 0.30 | −12.00 | 10.31 | −1.39 |
| Japan | 0.34 | −3.60 | 16.87 | 13.61 |

**Deposits: Contribution to £ yield of:**

| | Deposit Yield | Currency | Total |
|---|---|---|---|
| UK | 0.56 | | 0.56 |
| US | 0.26 | −1.25 | –0.99 |
| Euro | 0.02 | 10.31 | 10.33 |
| Japan | 0.10 | 16.87 | 16.97 |

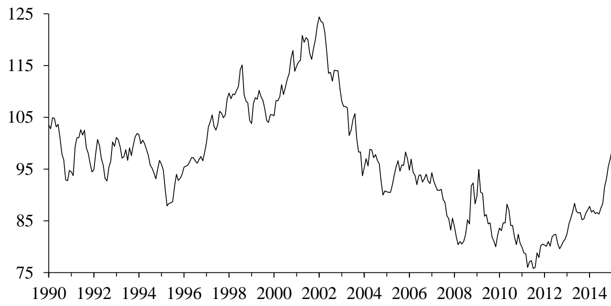
[1] Yields in terms of €s or $s can be computed by adjusting the £-based yields for the expected currency change.
[2] UK index linked bonds All Stocks
[3] Output based on China.

**Table 3: Portfolio(%)**

| | Sterling Based Investor | | Dollar Based Investor | | Euro Based Investor | |
|---|---|---|---|---|---|---|
| | February Letter | Current View | February Letter | Current View | February Letter | Current View |
| UK Deposits (Cash) | 5 | 5 | 5 | 5 | 1 | 1 |
| US Deposits | - | - | - | - | - | - |
| Euro Deposits | - | - | - | - | - | - |
| Japanese Deposits | - | - | - | - | - | - |
| UK Bonds | - | - | - | - | - | - |
| US Bonds | - | - | - | - | - | - |
| German Bonds | - | - | - | - | - | - |
| Japanese Bonds | - | - | - | - | - | - |
| UK Shares | 19 | 19 | 14 | 14 | 17 | 17 |
| US Shares | 14 | 14 | 19 | 19 | 16 | 16 |
| German Shares | 14 | 14 | 14 | 14 | 21 | 21 |
| Japanese Shares | 9 | 9 | 9 | 9 | 11 | 11 |
| Hong Kong/Chinese Shares | 4 | 4 | 4 | 4 | 4 | 4 |
| Singaporean Shares | 4 | 4 | 4 | 4 | 4 | 4 |
| Indian Shares | 4 | 4 | 4 | 4 | 4 | 4 |
| Thai Shares | 3 | 3 | 3 | 3 | 3 | 3 |
| South Korean Shares | 4 | 4 | 4 | 4 | 4 | 4 |
| Taiwanese Shares | 4 | 4 | 4 | 4 | 3 | 3 |
| Brazilian Shares | 4 | 4 | 4 | 4 | 3 | 3 |
| Chilean Shares | 4 | 4 | 4 | 4 | 3 | 3 |
| Mexican Shares | 4 | 4 | 4 | 4 | 3 | 3 |
| Peruvian shares | 4 | 4 | 4 | 4 | 3 | 3 |
| Other: | | | | | | |
| Index-linked bonds (UK) | - | - | - | - | - | - |

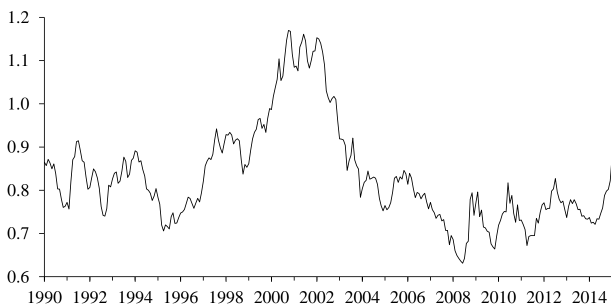
# INDICATORS AND MARKET ANALYSIS
# FOREIGN EXCHANGE MARKETS

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



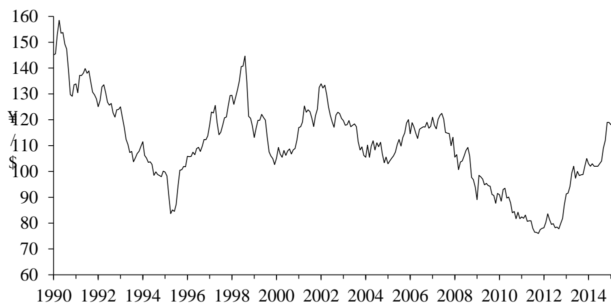

**UK: Dollars Per Pound Sterling**

**Euro per US dollar**




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

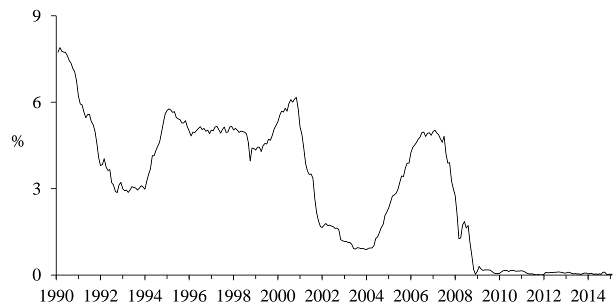
**Japan : Yen Per U.S. Dollar**



# GOVERNMENT BOND MARKETS

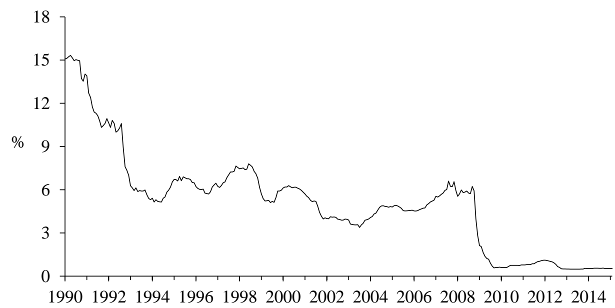
**U.S.: Yield on Long-Term Government Bonds**

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



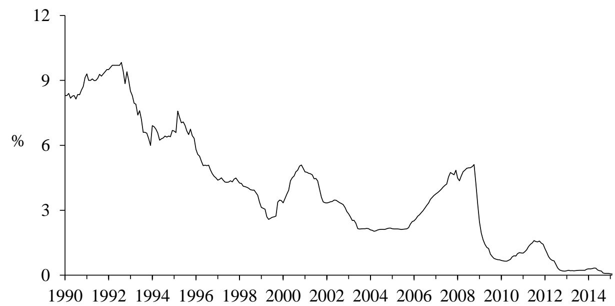

**U.K. : Yield on Long-Term Government Bonds**

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



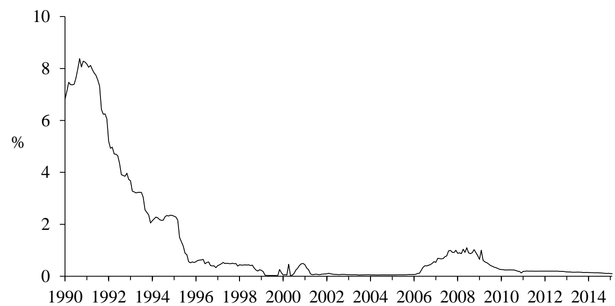

**Germany: Yield on Public Authority Bonds**

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



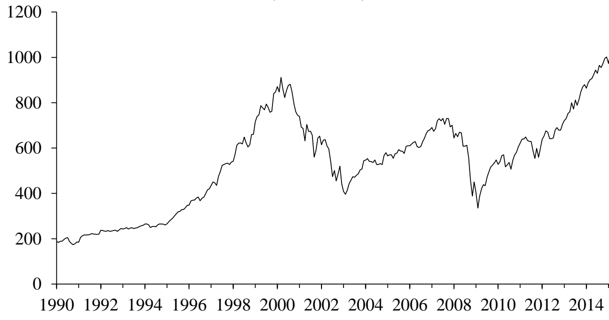

**Japan: Yield on Long-Term Government Bonds**

**Japan : 3 Month Money Market Rate**

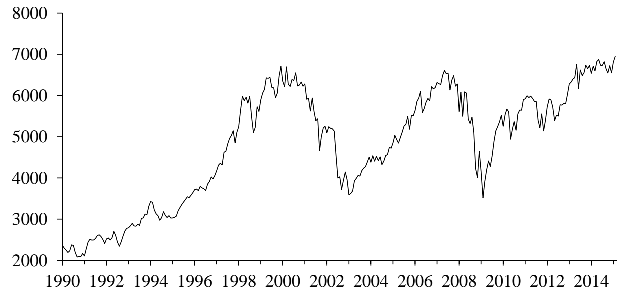


# MAJOR EQUITY MARKETS

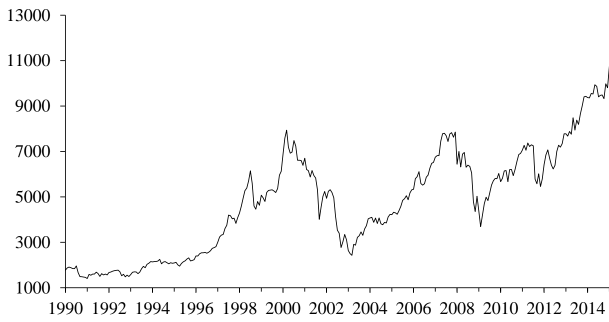
**U.S. : S & P 400 Industrial**
**(1985=100)**




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




**Germany : DAX 30**




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

# EMERGING MARKETS

Anupam Rastogi

## India

Is there a hype attached to India's emerging golden era? Is the Government of India leading India to a slippery path as the President of Brazil Dilma Rousseff did in her first term of office between 2011 and 2014?

The crushing defeat of Prime Minister Modi in the Delhi state election has not derailed the government's economic reform agenda and made him more accommodative to opposition's demand. And he has gained victory over hardline Hindu publications associated with the BJP to fall in line behind his economic reforms.

The much awaited central government budget appeared to tread a middle path with some significant changes such as a reduction in the country's corporate tax rate lowered to 25% from 30% over the next four years and higher infrastructure spending. It also included tax benefits for citizens and even an additional 50 billion rupees of spending on country's controversial rural employment plan. While the deficit target of 4.1% of gross domestic product for the current fiscal year will be achieved, the government said it would delay its plan to reduce that ratio to 3% starting April 2017. Earlier the government had said it would reach the 3% target in the year starting April 2016. The government would ramp up infrastructure spending by 700 billion rupees ($11.36 billion) to build new roads, expand railways and set up ports and other facilities. No one has pronounced the budget to be populist. Though industrialists have welcomed the budget, markets remained subdued.

The budget seems to be a medium term economic plan of the government which the government plans to achieve in 4–5 years' time frame. It has set out to provide a universal pension plan, insurance backed health plan for all and establishment of a sovereign fund to invest in industries and infrastructure are all laudable. The benefit of these would be perceptible in 3–4 years' time. The devil is in details and now Modi needs to prove he is the transformative leader the country needs.

India's Finance Ministry hopes the country's economic growth could accelerate to as much as 8.5% in the coming fiscal year, which could make it the world's fastest-growing large economy. This represents a significant acceleration over the 7.4% growth expected for the current fiscal year, which ends March 31. The government believes that falling oil prices and Prime Minister Modi's commitment to economic overhauls have improved the country's outlook despite uncertainties about interest rates in the U.S. and continuing troubles in the Eurozone. India is in a "sweet spot," the government believes: Inflation has eased, international investors are bullish on India and the government in New Delhi has a strong mandate for change. The government is avowed to pursue "a persistent, encompassing, and creative instrumentalism," while also taking "bold steps in a few areas that signal a decisive departure from the past." The Modi government's orientation towards market is not out of conviction but on the basis that markets are far superior to the government machinery.

**India: BSE Sensitive**

The government has appointed a top-flight team of economists and can-do bureaucrats. This has led to renewed interest in the Indian economy among investors. If the prime minister sticks to his resolve on easing land acquisition, raising foreign-investment caps, knitting India into a single market through a goods-and-services tax, and simplifying taxation and labour laws that discourage private investment, he would go down in the history as a transformative leader.

The wholesale price index declined 0.39% from a year earlier in January. That was only the fourth time in decades that India has reported a fall and its biggest decline since the aftermath of the 2008 financial crises. But, consumer inflation climbed to 5.11% in January from 4.28% a month earlier on higher food prices. However, it is much less than the central bank target of 6% to be achieved by December 2015. The Indian government and the Reserve Bank of India have agreed on a monetary policy framework, which will make managing inflation the key determinant in the central bank's policy decisions

Over the last six months, the rupee has changed little against the dollar but has appreciated relative to other currencies. It gained nearly 17% against the euro, 15% against the Japanese yen, and around 10% against the British pound. The central bank is not worried about the

rupee's recent movement yet but it has been taking steps to ensure that the rupee stays in a range between 60 rupees to 62 rupees to the dollar and it hasn't done much to try to arrest the rupee's rise against other currencies.

Forex reserves rose to $333 billion, surpassing previous records in recent weeks, as well as a September 2011 high of $320.79 billion. The reserves are now good enough to weather tension on the forex markets when the U.S. Federal Reserve starts tightening. The government believes that flows of foreign capital into India will slow down rather than stop when the U.S. Fed starts tightening.

In short, If PM Modi is successful in ensuring timely execution, then India's dream to reach 8–10% GDP growth shall soon become a reality.

| | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 |
|---|---|---|---|---|---|
| GDP (%p.a.) | 6.9 | 6.0 | 7.4 | 8.0 | 8.0 |
| WPI (%p.a.) | 7.0 | 6.5 | 5.0 | 5.0 | 5.0 |
| Current A/c(US$ bill.) | -50.0 | -34.0 | -20.0 | -30.0 | -30.0 |
| Rs./$(nom.) | 60.0 | 62.0 | 63.5 | 64.0 | 65.0 |

## China

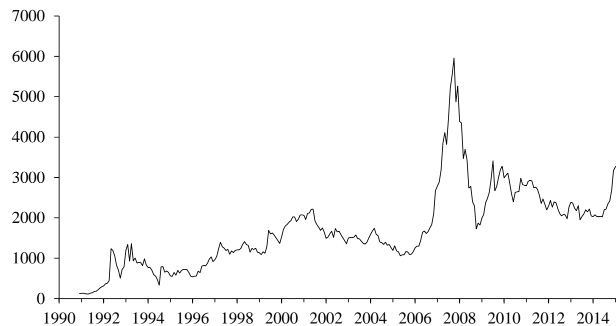
China grew 7.4% in 2014 and in line with China's gradual policy of becoming a domestic oriented economy, growth will slide marginally this year, led by the downturn in the previously overheated real estate market. But, the preliminary HSBC China Manufacturing Purchasing Managers' Index, a gauge of nationwide manufacturing activity, rose to 50.1 in February compared with a final reading of 49.7 in January. However, there are growing expectations that the government will implement more easing measures to stimulate the economy. The National People's Congress starts in the first week of March and the government is likely to lay down its economic road map.

China's coal consumption and production fell last year for the first time in 14 years, confirming a trend that has become one of the heaviest weights sinking the global coal market but in line with its agenda of trying to diminish air pollution and capitalize on falling oil and gas prices.

China's consumer-price index rose 0.8% on year in January, down from an already low 1.5% rise on year in December. This was the slowest growth in consumer prices in five years, rising 0.8% in January compared with the year before. Producer prices, which have been in deflationary mode for nearly three years, fell 4.3% as raw material prices continued to slide. Consumer prices get distorted due to the lunar calendar and we expect consumer prices to rebound in February. The shrinking population of pigs may put pressure on consumer prices as pork prices go up later in the year.

China cut benchmark interest rates for the second time in three months as worries mount about the slowing growth and the threat of deflation. The People's Bank of China, the central bank, cut the benchmark one-year lending rate by 25 basis points to 5.35% and the one-year benchmark deposit rate by the same amount to 2.5%. A further monetary easing is possible if growth continues to slide and deflation looms.

**China: SSE Composite Index**




China posted a record $60 billion trade surplus in January, up from a $49.6 billion surplus in December, while foreign direct investment came in at $13.92 billion in January, up 29.4% from a year earlier and slightly better than December's $13.32 billion. But, exporters are holding on to foreign exchange rather than convert it into yuan. Last year China had a record trade surplus of $382.46 billion, up from $259.75 billion in 2013.

There is some evidence that financial authorities are reversing years of intervention in foreign-exchange markets aimed at stopping the yuan from rising too rapidly against the dollar. State Administration of Foreign Exchange official has suggested that the yuan would remain "basically stable" in 2015. The yuan lost about 2.5% against the dollar last year, its first annual loss in two decades, and has edged down almost 1% so far this year. The yuan is unlikely to decline much further, given the central bank's desire for a steady currency. The put options data suggest that the yuan would depreciate moderately against a strong U.S. dollar, but appreciate significantly against most other major currencies.

Chinese regulators are planning to levy a 10% capital-gains tax on the country's first foreign investors. The tax would apply mostly to stock investments under the foreign currency-denominated Qualified Foreign Institutional Investors program and a similar, yuan-denominated scheme for the period between Nov. 17, 2009, and Nov. 16, 2014. The program, known as QFII, grants foreign portfolio managers quotas to invest in mainland shares.

Notwithstanding the depreciation of yuan and a fear of a levy on capital gains, a massive stock-market rally, especially on the Shanghai Stock Exchange, has made

Chinese equities one of the world's best-performing markets in recent months.

| | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|
| GDP (%p.a.) | 7.7 | 7.4 | 6.8 | 6.5 | 6.0 |
| Inflation (%p.a.) | 3.5 | 2.0 | 2.0 | 2.0 | 2.0 |
| Trade Balance(US$ bill.) | 260 | 382 | 350 | 320 | 300 |
| Rmb/$(nom.) | 6.2 | 6.2 | 6.3 | 6.3 | 6.2 |

## South Korea

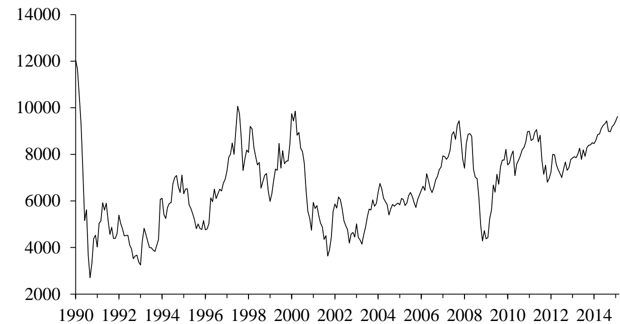
The government expects economic growth quickening this year after rising to 3.3% last year from 3.0% in 2013. South Koreans are on a borrowing binge. Cheap credit is fuelling rapid growth in household debt, which recorded its biggest quarterly gain on record at the end of 2014. In February, the central bank cited high household debt as the primary reason for not cutting rates further for now. According to a report by McKinsey & Co, the South Korean household debt may be unsustainable. The firm estimated household debt equal to 81% of gross domestic product in 2014, higher than a 77% ratio in the U.S. and 54% in Germany.

Core inflation is likely to be 2.5% in 2015. The Bank of Korea will probably have to respond through interest rates rather than asset purchases should the nation's economic situation deteriorate, Governor Lee Ju Yeol told parliament last month, responding to a lawmaker's question on whether quantitative easing is needed to spur growth. The BOK, which cut interest rates twice last year, has held them since October.

South Korea's trade surplus hit an all-time high of 7.66 billion U.S. dollars in February as imports declined at a faster pace than exports. The trade balance has stayed in the black for 37 months in a row. Exports, which account for about half of the economy, retreated 3.4% from a year earlier to 41.46 billion dollars last month. Imports plunged 19.6% to 33.8 billion dollars. The export decline was "mainly attributable" to fewer working days due to the Lunar New Year and falling prices for oil products and petrochemical products. Distortions in economic indicators during January-February will likely let the Bank of Korea hold policy steady at its March 12 meeting while awaiting global data.

The won dropped 0.6% in February to 1,109 to a dollar keeping it very competitive against most its trading partners.

| | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|
| GDP (%p.a.) | 3.0 | 3.3 | 3.4 | 3.0 | 3.0 |
| Inflation (%p.a.) | 1.3 | 2.0 | 2.5 | 2.0 | 2.1 |
| Current A/c(US$ bill.) | 71.0 | 80.0 | 80.0 | 84.0 | 88.0 |
| Won/$(nom.) | 1100 | 1080 | 1120 | 1100 | 1100 |




## Taiwan

The economy grew 3.74% in 2014, much higher than the government's estimate, and now the government is confident that the economy would expand 3.8% in 2015. The lower crude-oil prices have hurt some exports but it is offset by growth in electronics shipments. However, the economy faces headwinds from slowing global economic growth, slowing foreign trade, volatile international oil prices and drought in several parts of Taiwan which may lead to a second round of water rationing. If the rainy season doesn't come on time, Taiwan's businesses, the tourism industry and the manufacturing industry will all face unpredictable risks.

Inflation will continue to remain subdued this year as oil prices remain soft. Taiwan's consumer-price index is forecast to edge up only 0.26% in 2015, down from 0.91% previously estimated.

The lower oil price benefits Taiwan as the island imports almost all of its energy needs. The government expects imports to drop 2.07% this year, compared with its previous estimate for a 3.43% growth. The continuous drop in oil prices will improve corporate profits, resulting in salary raises and benefit consumption. More investment from semiconductor makers is expected due to the rising demand for high-end microchips from mobile telecom

products and big data applications, thus creating beneficial conditions for private investments.

Export growth stalled in the fourth quarter, despite the recent uptick in U.S. demand, as the Eurozone slows and demand cools in China, Taiwan's biggest trading partner. Exports are expected to grow only 1.02% this year, compared with 2.74% last year and a previous estimate of 3.56%.

In the current account, export growth expanded 0.5% year-on-year as a significant increase in electronics exports more than offset a decrease in minerals exports. Imports contracted by 4.8% year-on year, owing to a decline in imports of agricultural and industrial raw materials and capital equipment.

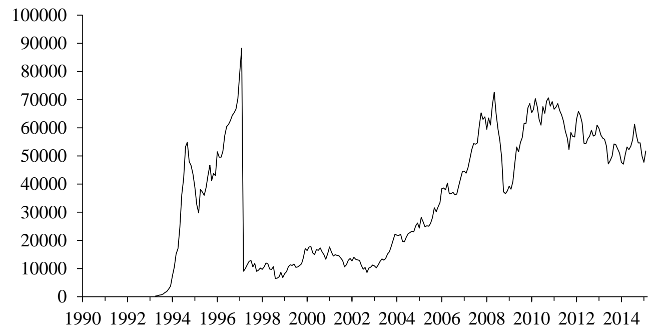
Taiwan had a trade surplus, even though exports expanded only 0.5%, due to imports contracting 4.8%. This would give the central bank room to continue with its accommodative monetary policy throughout this year. Rates have been consistently low for more than three years.

| | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|
| GDP (%p.a.) | 2.1 | 3.7 | 3.8 | 3.3 | 3.3 |
| Inflation (%p.a.) | 1.2 | 1.5 | 1.5 | 1.6 | 1.6 |
| Current A/c(US$ bill.) | 50.6 | 57.4 | 60.0 | 64.0 | 68.0 |
| NT$/$(nom.) | 30.0 | 31.0 | 32.0 | 32.5 | 33.0 |

## Brazil

Brazil is heading towards two consecutive years of contraction since the Great Depression. Partly because it's main trading partner China is slowing down, damaging demand for Brazilian iron ore, soybeans and other commodities and weakening the currency. Drought has left reservoirs feeding hydroelectric dams near record lows. With a 5% cut in electricity supply, the economy will shrink one percentage point. Brazilians are realizing that they were sold a false prospectus in the last presidential election. President Dilma Rousseff is raising taxes, has increased petrol prices, and has proposed cuts in pension and other benefits to shore up country's economy. She is desperately trying to prevent downgrading of the sovereign rating. She has embraced some of the very orthodox policies she eschewed on the campaign trail, her popularity has plummeted. Just 23% of Brazilians in an early February poll rated her performance as "excellent or good". Retail-sales volume tumbled 2.6% in December from November. The central bank has predicted 0.5% negative growth in 2015. The economy shrank 0.2% in 2014. The IBGE will officially report 2014 GDP numbers on March 27.

Labour strikes are rippling across the country. Truckers have blocked busy highways to protest higher fuel prices. Public-sector workers in Brasília have walked off the job because of delayed paychecks caused by tight government budgets. And higher taxes on automobiles have added to a sales slump that sent auto workers to the picket line to protest layoffs. The government announced a six-month freeze on the price of the fuel, along with a one-year grace period for truckers to repay certain loans from the state development bank and the establishment of a permanent committee to discuss minimum payments and other issues important to truckers.




Inflation is likely to hit 7.5% this year which would be above the central bank's 6.5% limit and Brazil's highest annual inflation rate since 2004.

After a cap on government spending and investment, as well as additional tax increases for businesses, the government announced a higher-than-expected primary surplus for January at 21.1 billion reais, or 0.61% of GDP. Those savings are largely the handiwork of new Finance Minister Joaquim Levy, who has spearheaded the austerity efforts. But it is still well off the 1.2% mark he has set as this year's target, suggesting more belt tightening ahead.

The jobless rate in six of Brazil's major metropolitan areas rose to 5.3% in January, compared with 4.3% in December, according to the Brazilian Institute of Geography & Statistics, or IBGE. There is flight of capital also and many people are leaving the country. The joke around Brasilia is — "Miami is the biggest Brazilian city outside of Brazil right now."

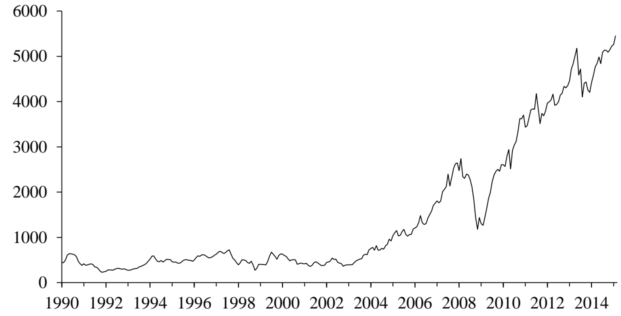
The real has fallen by 30% against the dollar since May 2013: a necessary shift, but one that adds to the burden of the $40 billion in foreign debt owed by Brazilian companies that falls due this year. Not surprisingly, well known bear investor Mark Mobius says that this may be the time to buy Brazilian stocks, given their low prices and the likelihood of Brazil's economy improving over the medium term.

| | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|
| GDP (%p.a.) | 2.5 | -0.2 | -0.5 | 0.5 | 1.0 |
| Inflation (%p.a.) | 5.9 | 6.5 | 7.5 | 6.5 | 6.0 |
| Current A/c(US$ bill.) | -75.0 | -70.0 | -70.0 | -70.0 | -80.0 |
| Real/$(nom.) | 2.3 | 2.4 | 2.8 | 2.8 | 2.8 |

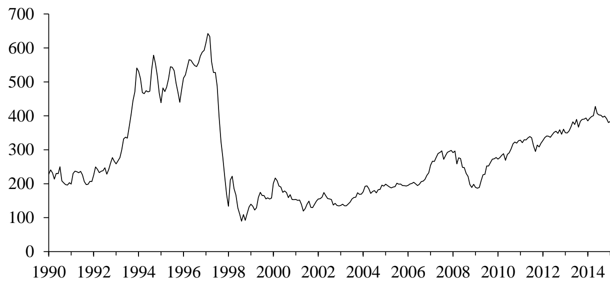
## Other Emerging Markets

**Hong Kong: FT-Actuaries**

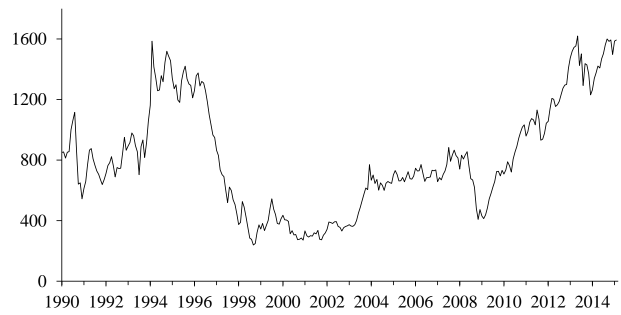
**Indonesia: Jakarta Composite**



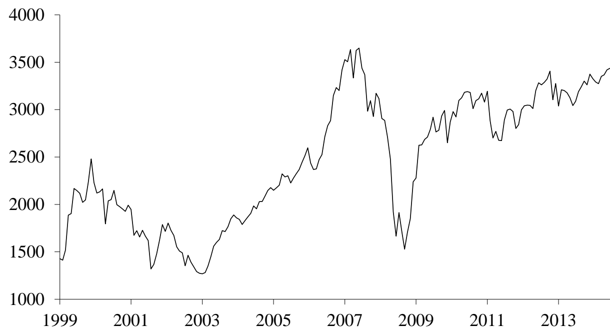

**Malaysia: FT-Actuaries (US$ Index)**



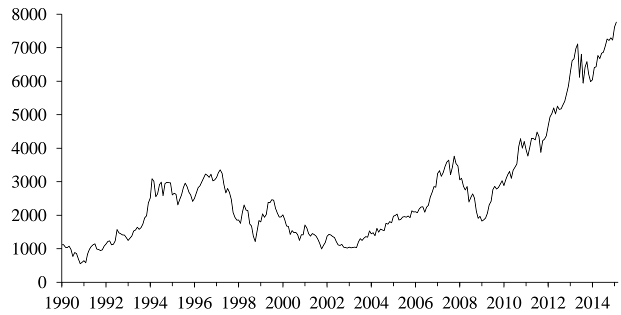

**Thailand: Composite Index**




**Singapore: Straits Times Index**

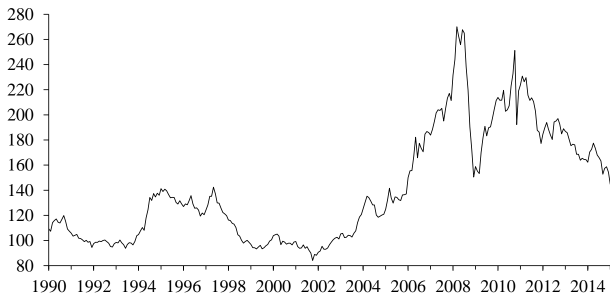



**Philippines: Manila Composite**

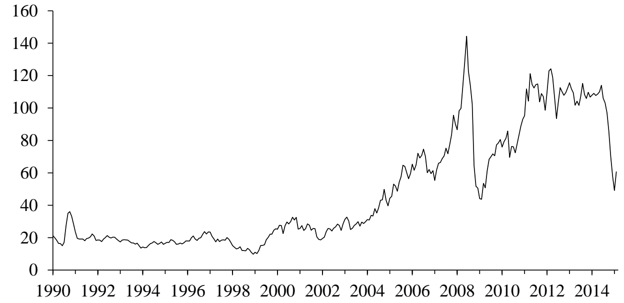


# COMMODITY MARKETS

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

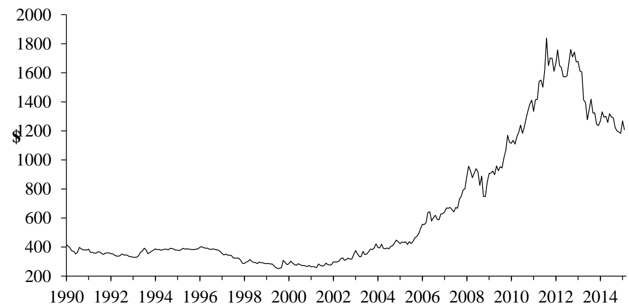



**Oil Price: North Sea Brent (in Dollars)**

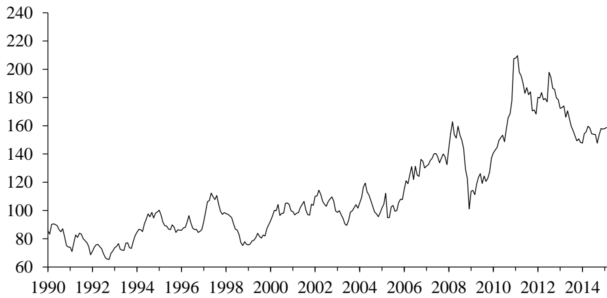



**Commodity Price Index (Sterling)**
**(Economist, 2000=100)**

**Gold Price (in Dollars)**




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



# UK FORECAST DETAIL

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

| | Inflation %[1] (CPI) | Short Dated (5 Year) Interest Rates | 3 Month Int. Rates | Nominal Exchange Rate (2005=100)[2] | Real Exchange Rate[3] | Real 3 Month Int. Rates %[4] | Inflation (RPIX) | Real Short Dated Rate of Interest[5] |
|---|---|---|---|---|---|---|---|---|
| 2013 | 1.9 | 1.3 | 0.6 | 81.5 | 85.4 | -1.3 | 3.1 | -0.4 |
| 2014 | 1.7 | 1.9 | 0.6 | 87.7 | 92.7 | -1.0 | 2.5 | 0.1 |
| 2015 | 1.4 | 2.2 | 1.0 | 90.3 | 95.4 | -0.7 | 2.3 | 0.3 |
| 2016 | 1.7 | 2.5 | 1.6 | 90.4 | 95.6 | -0.1 | 2.4 | 0.6 |
| 2017 | 1.7 | 2.5 | 2.0 | 90.4 | 95.7 | 0.0 | 2.5 | 0.5 |
| 2018 | 2.0 | 2.5 | 2.1 | 90.1 | 95.7 | 0.1 | 2.7 | 0.5 |
| 2013:1 | 1.9 | 1.0 | 0.6 | 80.4 | 84.0 | -1.1 | 3.3 | -0.8 |
| 2013:2 | 1.7 | 0.9 | 0.5 | 80.6 | 84.1 | -1.5 | 3.1 | -0.9 |
| 2013:3 | 2.1 | 1.5 | 0.5 | 81.3 | 85.1 | -1.4 | 3.2 | -0.2 |
| 2013:4 | 1.9 | 1.7 | 0.5 | 83.6 | 88.6 | -1.1 | 2.7 | 0.1 |
| 2014:1 | 1.7 | 1.8 | 0.6 | 85.6 | 90.4 | -1.1 | 2.7 | 0.3 |
| 2014:2 | 1.7 | 1.9 | 0.6 | 86.9 | 91.3 | -1.2 | 2.6 | 0.4 |
| 2014:3 | 1.7 | 1.9 | 0.6 | 88.0 | 93.1 | -0.8 | 2.5 | 0.5 |
| 2014:4 | 1.5 | 1.9 | 0.6 | 90.3 | 95.8 | -1.0 | 2.3 | 0.4 |
| 2015:1 | 1.4 | 2.2 | 0.7 | 90.2 | 95.2 | -0.9 | 2.3 | 0.7 |
| 2015:2 | 1.4 | 2.1 | 0.9 | 90.3 | 95.2 | -0.8 | 2.2 | 0.5 |
| 2015:3 | 1.4 | 2.2 | 1.1 | 90.7 | 95.8 | -0.5 | 2.2 | 0.6 |
| 2015:4 | 1.5 | 2.3 | 1.2 | 90.2 | 95.6 | -0.5 | 2.3 | 0.6 |

[1] Consumer's Expenditure Deflator
[2] Sterling Effective Exchange Rate Bank of England
[3] Ratio of UK to other OECD consumer prices adjusted for nominal exchange rate
[4] Treasury Bill Rate less one year forecast of inflation
[5] Short Dated 5 Year Interest Rate less average of predicted 5 year ahead inflation rate

## Labour Market and Supply Factors (Seasonally Adjusted)

| | Average Earnings (1990=100)[1] | Wage Growth[2] | Unemployment (New Basis) Percent[3] | Millions | Real Wage Rate[4] (1990=100) |
|---|---|---|---|---|---|
| 2013 | 239.8 | 1.1 | 4.2 | 1.42 | 132.7 |
| 2014 | 242.3 | 1.0 | 3.0 | 1.05 | 131.9 |
| 2015 | 247.0 | 1.9 | 2.6 | 0.90 | 132.6 |
| 2016 | 255.3 | 3.4 | 2.4 | 0.83 | 134.8 |
| 2017 | 264.9 | 3.8 | 2.2 | 0.77 | 137.6 |
| 2018 | 277.2 | 4.7 | 2.0 | 0.73 | 141.3 |
| 2013:1 | 236.4 | 0.7 | 4.6 | 1.54 | 131.8 |
| 2013:2 | 242.0 | 1.9 | 4.4 | 1.49 | 134.5 |
| 2013:3 | 240.0 | 0.7 | 4.1 | 1.39 | 132.6 |
| 2013:4 | 240.8 | 1.1 | 3.7 | 1.27 | 132.1 |
| 2014:1 | 241.0 | 1.9 | 3.4 | 1.17 | 132.1 |
| 2014:2 | 241.8 | -0.1 | 3.1 | 1.08 | 132.2 |
| 2014:3 | 242.6 | 1.1 | 2.8 | 0.98 | 131.7 |
| 2014:4 | 243.8 | 1.2 | 2.8 | 0.95 | 131.7 |
| 2015:1 | 244.4 | 1.4 | 2.7 | 0.93 | 132.1 |
| 2015:2 | 245.6 | 1.6 | 2.6 | 0.91 | 132.4 |
| 2015:3 | 247.8 | 2.2 | 2.5 | 0.89 | 132.8 |
| 2015:4 | 250.2 | 2.6 | 2.5 | 0.87 | 133.1 |

[1] Whole Economy
[2] Average Earnings
[3] Wholly unemployed excluding school leavers as percentage of employed and unemployed, self employed and HM Forces
[4] Wage rate deflated by CPI

## Estimates and Projections of the Gross Domestic Product[1] (£ Million 1990 Prices)

| | Expenditure Index | £ Million '90 prices | Non-Durable Consumption[2] | Private Sector Gross Investment Expenditure[3] | Public Authority Expenditure[4] | Net Exports[5] | AFC |
|---|---|---|---|---|---|---|---|
| 2013 | 149.7 | 716792.3 | 422942.6 | 280112.3 | 186839.5 | -43986.8 | 129115.4 |
| 2014 | 153.5 | 735082.7 | 424682.2 | 303904.9 | 189743.4 | -47874.8 | 135373.4 |
| 2015 | 157.8 | 755636.4 | 429872.6 | 315514.3 | 193150.9 | -42988.5 | 139912.9 |
| 2016 | 161.7 | 774498.7 | 439815.9 | 323556.4 | 197878 | -42985.8 | 143766.2 |
| 2017 | 165.8 | 793916.4 | 450535.5 | 332193.9 | 201835.6 | -42994.6 | 147654.4 |
| 2018 | 169.9 | 813828.5 | 461630.8 | 340980.7 | 205872.3 | -43013.8 | 151641.9 |
| | | | | | | | |
| 2013/12 | 1.7 | | 0.8 | 6.9 | -0.8 | | 6.5 |
| 2014/13 | 2.6 | | 0.4 | 9.0 | 1.6 | | 5.2 |
| 2015/14 | 2.8 | | 1.2 | 3.8 | 1.8 | | 3.5 |
| 2016/15 | 2.5 | | 2.3 | 2.6 | 2.5 | | 2.8 |
| 2017/16 | 2.5 | | 2.4 | 2.7 | 2.0 | | 2.7 |
| 2018/17 | 2.5 | | 2.5 | 2.6 | 2.0 | | 2.7 |
| | | | | | | | |
| 2013:1 | 148.3 | 177519.5 | 105980.9 | 63263.4 | 48156.3 | -9136.5 | 30744.6 |
| 2013:2 | 149.2 | 178660.4 | 105506.8 | 65944.1 | 45724.2 | -8941.9 | 29572.8 |
| 2013:3 | 150.3 | 179940.8 | 105672.5 | 73909.9 | 46393.6 | -13073.1 | 32962.1 |
| 2013:4 | 150.9 | 180671.6 | 105782.4 | 76994.9 | 46565.5 | -12835.3 | 35835.9 |
| | | | | | | | |
| 2014:1 | 151.8 | 181776.6 | 105866.5 | 74932.1 | 48251.1 | -12765.7 | 34507.4 |
| 2014:2 | 153.1 | 183257.9 | 106231.6 | 73897.9 | 46774.2 | -11870.1 | 31775.8 |
| 2014:3 | 154.2 | 184619.2 | 106439.4 | 77309.5 | 47552.7 | -12488.8 | 34193.7 |
| 2014:4 | 154.9 | 185429.0 | 106144.7 | 77765.3 | 47165.3 | -10750.2 | 34896.5 |
| | | | | | | | |
| 2015:1 | 155.8 | 186559.3 | 106671.4 | 75321.1 | 49960.4 | -10752.3 | 34641.4 |
| 2015:2 | 156.9 | 187849.0 | 107200.8 | 78870.5 | 47084.9 | -10749.7 | 34557.4 |
| 2015:3 | 158.9 | 190255.7 | 107732.8 | 80635.2 | 47855.5 | -10744.9 | 35222.9 |
| 2015:4 | 159.5 | 190972.3 | 108267.5 | 80687.6 | 48250.2 | -10741.7 | 35491.2 |

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

## Financial Forecast

| | PSBR/GDP %[1] | GDP[1] (£bn) | PSBR (£bn) Financial Year | Debt Interest (£bn) | Current Account (£ bn) |
|---|---|---|---|---|---|
| 2013 | 5.9 | 1549.7 | 91.1 | 47.1 | -65.9 |
| 2014 | 5.7 | 1613.9 | 91.5 | 52.2 | -80.9 |
| 2015 | 4.5 | 1685.8 | 75.8 | 55.9 | -72.0 |
| 2016 | 3.2 | 1758.3 | 56.5 | 60.5 | -72.3 |
| 2017 | 1.3 | 1835.2 | 24.3 | 63.2 | -72.7 |
| 2018 | 0.2 | 1919.5 | 3.7 | 64.9 | -73.3 |
| | | | | | |
| 2013:1 | 3.5 | 373.6 | 13.0 | 11.9 | -14.1 |
| 2013:2 | 8.1 | 374.9 | 30.5 | 11.2 | -8.4 |
| 2013:3 | 5.0 | 385.5 | 19.4 | 11.5 | -22.2 |
| 2013:4 | 8.1 | 394.8 | 32.1 | 11.9 | -21.1 |
| | | | | | |
| 2014:1 | 2.3 | 394.6 | 9.1 | 12.4 | -19.3 |
| 2014:2 | 8.0 | 393.5 | 31.6 | 12.8 | -20.9 |
| 2014:3 | 5.1 | 403.1 | 20.6 | 13.0 | -23.2 |
| 2014:4 | 7.4 | 407.9 | 30.0 | 13.1 | -17.4 |
| | | | | | |
| 2015:1 | 2.3 | 409.4 | 9.2 | 13.3 | -15.7 |
| 2015:2 | 6.8 | 412.5 | 28.1 | 13.6 | -18.9 |
| 2015:3 | 5.0 | 421.0 | 20.9 | 13.9 | -19.9 |
| 2015:4 | 5.4 | 425.8 | 22.9 | 14.2 | -17.5 |

1 GDP at market prices (Financial Year)

# WORLD FORECAST DETAIL

**Growth Of Real GNP**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| U.S.A. | 2.5 | 1.6 | 2.3 | 2.2 | 2.3 | 3.0 |
| U.K. | 1.9 | 1.6 | 0.7 | 1.7 | 2.6 | 2.8 |
| Japan | 4.7 | –0.4 | 1.7 | 1.6 | 0.3 | 1.2 |
| Germany | 4.1 | 3.6 | 0.4 | 0.1 | 1.4 | 1.3 |
| France | 1.9 | 2.1 | 0.4 | 0.4 | 0.4 | 0.8 |
| Italy | 1.7 | 0.6 | –2.3 | –1.9 | –0.3 | 0.4 |

**Real Short-Term Interest Rates**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| U.S.A. | –3.0 | –2.0 | –1.4 | –1.6 | –1.2 | –0.8 |
| U.K. | –3.6 | –2.4 | –1.1 | –1.3 | –1.0 | –0.7 |
| Japan | 0.5 | 0.2 | –0.2 | –2.6 | –1.3 | –1.3 |
| Germany | –1.3 | –0.6 | –0.9 | –0.8 | –1.0 | –1.4 |
| France | –1.3 | –0.6 | –0.3 | –0.4 | –0.4 | –0.9 |
| Italy | –2.0 | –1.6 | –0.6 | –0.2 | –0.2 | –0.9 |

**Real Long-Term Interest Rates**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| U.S.A. | 1.2 | 0.3 | 0.2 | 0.4 | 0.7 | 1.5 |
| U.K. | 0.3 | 0.2 | –0.8 | –0.4 | 0.1 | 0.3 |
| Japan | 0.3 | –0.2 | –0.7 | –1.2 | –1.3 | –1.1 |
| Germany | 1.2 | 1.2 | 0.2 | 0.1 | –0.5 | –0.7 |
| France | 1.6 | 1.7 | 0.7 | 0.5 | –0.2 | –0.5 |
| Italy | 1.2 | 1.5 | 0.7 | 0.5 | –0.2 | –0.5 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| U.S.A. | 84.0 | 79.8 | 81.6 | 82.1 | 83.0 | 83.2 |
| U.K. | 88.6 | 88.7 | 92.4 | 90.8 | 98.6 | 101.4 |
| Japan | 79.5 | 80.6 | 79.6 | 63.5 | 61.1 | 60.7 |
| Germany | 101.3 | 100.1 | 96.7 | 99.0 | 100.5 | 100.2 |
| France | 103.5 | 102.9 | 99.5 | 100.7 | 101.7 | 101.4 |
| Italy | 107.4 | 107.2 | 105.2 | 106.9 | 107.8 | 107.0 |

[1] The real exchange rate is the domestic price level relative to the foreign price level converted into domestic currency. A rise in the index implies an appreciation in the real exchange rate.

**Growth Of Consumer Prices**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| U.S.A. | 1.6 | 3.1 | 2.1 | 1.5 | 1.7 | 1.3 |
| U.K. | 4.5 | 3.5 | 2.1 | 1.9 | 1.7 | 1.4 |
| Japan | –0.7 | –0.3 | 0.0 | 0.4 | 2.8 | 1.4 |
| Germany | 1.1 | 2.1 | 2.0 | 1.5 | 1.0 | 1.2 |
| France | 1.5 | 2.1 | 2.0 | 0.9 | 0.6 | 0.6 |
| Italy | 1.5 | 2.8 | 3.0 | 1.2 | 0.2 | 0.4 |

**Nominal Short-Term Interest Rates**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| U.S.A. | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.6 |
| U.K. | 0.7 | 0.9 | 0.9 | 0.6 | 0.6 | 1.0 |
| Japan | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 |
| Germany | 0.8 | 1.4 | 0.6 | 0.2 | 0.2 | 0.1 |
| France | 0.8 | 1.4 | 0.6 | 0.2 | 0.2 | 0.1 |
| Italy | 0.8 | 1.4 | 0.6 | 0.2 | 0.2 | 0.1 |

**Nominal Long-Term Interest Rates**

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| U.S.A. | 3.1 | 1.9 | 1.8 | 2.1 | 2.5 | 3.4 |
| U.K. | 2.4 | 2.0 | 0.9 | 1.3 | 1.9 | 2.2 |
| Japan | 1.2 | 1.0 | 0.9 | 0.7 | 0.5 | 0.8 |
| Germany | 2.8 | 2.7 | 1.6 | 1.6 | 1.2 | 1.2 |
| France | 2.8 | 2.7 | 1.6 | 1.6 | 1.2 | 1.2 |
| Italy | 2.8 | 2.7 | 1.6 | 1.6 | 1.2 | 1.2 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| U.S.A.[1] | 83.73 | 78.08 | 80.90 | 85.50 | 88.60 | 89.00 |
| U.K. | 1.58 | 1.61 | 1.59 | 1.55 | 1.56 | 1.55 |
| Japan | 87.48 | 79.36 | 80.51 | 98.00 | 104.50 | 104.00 |
| Eurozone | 0.75 | 0.71 | 0.78 | 0.79 | 0.74 | 0.75 |

[1] The series for the USA is a trade weighted index (1990=100); the series for the UK is $ per £

* Forecasts based on the Liverpool World Model