

LIVERPOOL INVESTMENT LETTER

January 2017



Cardiff Business School

Ysgol Busnes Caerdydd

Julian Hodge Institute of Applied Macroeconomics

supported by



LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

Editorial and Research Direction: Patrick Minford[†].

Senior Research Associates: Kent Matthews[†], Anupam Rastogi, Peter Stoney.

Research Associates: Vo Phuong Mai Le[†], David Meenagh[†], Francesco Perugini, Yongdeng Xu[†].

[†] Cardiff Business School

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

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

ISSN 0951-9262

Disclaimer

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

LIVERPOOL INVESTMENT LETTER

January 2017

CONTENTS

| | Page |
|---|-------------|
| The Brexit Red Herring and the Great British Boom Revisited | 3 |
| <p>Far from the UK economy slowing under the impact of Brexit as the consensus was convinced would happen, it has powered on. Manufacturing too, which was supposed on the consensus view to slow in all respects, worried sick by Brexit uncertainty. The only uncertainty is whether the government will lose its nerve and settle for the status quo, alias a ‘soft Brexit’; or as is inevitable given the referendum vote, move on to establish free trading relationships around the world. The last is unambiguously positive for the economy. The city too will thrive on that scenario as the world’s top financial centre. The main risk to the outlook is that the Bank will be too slow to raise interest rates and will trigger an inflationary boom of which it loses control.</p> | |
| Focus on Japan | 5 |
| Market Developments | 7 |
| Summary and Portfolio Recommendations | |
| Indicators and Market Analysis | |
| Foreign Exchange | 9 |
| Government Bond Markets | 10 |
| Major Equity Markets | 11 |
| Emerging Equity Markets | 12 |
| Commodity Markets | 17 |
| UK Forecast Detail | 18 |
| World Forecast Detail | 20 |

THE BREXIT RED HERRING AND THE GREAT BRITISH BOOM REVISITED

So upset with Brexit are the great mass of consensus UK forecasters that, poor dears, they are almost to the last forecaster saying 2017 will be a weak year for growth, with inflation rising and hitting the wretched consumer and HM Treasury in the pocket. But where is the beef?

As so often in conditions of ‘uncertainty’ firms and consumers consult their own finances and look at the future through spectacles that are hardened to a fair built-in level of uncertainty — after all, we live with uncertainty about politics, about the rest of the world, and about relative prices of oil and other important things all the time. Why on earth would they obsess about an event which indeed is uncertain in outcome but whose dimensions range from a fine success in opening up Britain to the markets of the world on the basis of full free trade all the way to just the status quo (the ‘soft Brexit’) if nerves were totally to fail? This is simply an exercise in not knowing the full extent of the upside!

The business cycle indicators are all relentlessly positive. Manufacturing, where one might have thought some negative sentiment could have kicked in, has been buoyed by the high profits promised by a large sterling depreciation. Yes, under Brexit there are the prospects that profits could be dented by much more competition in the home market as EU protection from the customs union is removed. But with sterling so competitive and the scope in most manufacturing firms to raise productivity by more hi-tech methods and ‘going up the value-added chain’, firms are not blinking at all.

The most ludicrous spectacle has been of City PR people, well versed in and attached to the Brussels lobby machine, warning of doom and gloom for City business in the EU and worldwide. The opposite is the case: the City will be a big gainer from Brexit as traded services, where our comparative advantage lies, will receive an inflow of resources from the once-EU-protected parts of the economy such as agriculture and manufacturing. The City will thrive not just because of this but also because of taking back control of regulation from the finance-hostile EU. Yes, there may be some silly self-harming efforts by the EU to threaten or even enact limited protection. But the possible extent is limited by its worldwide obligations and its commitment to free capital mobility under Maastricht; also EU business affected by ‘passporting’ which the EU could fiddle with, is quite a small slice of City business — around 9% on our estimates. Anyway in a world market dominated by free entry and tough competition EU protection will only switch a little demand away from the City not affect world demand in total and so have no effect either on world prices: the City can respond by attracting more business from elsewhere at the same price and profit.

Table 1: Summary of Forecast

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|-----------------------------------|-------|--------|-------|-------|-------|-------|-------|
| GDP Growth ¹ | 2.9 | 2.2 | 2.2 | 2.6 | 2.7 | 2.8 | 3.2 |
| Inflation CPI | 1.7 | 0.2 | 1.2 | 1.9 | 3.1 | 3.0 | 2.1 |
| Wage Growth | 1.2 | 2.4 | 2.9 | 3.9 | 6.2 | 6.2 | 4.6 |
| Unemployment (Mill.) ² | 1.1 | 0.8 | 0.7 | 0.8 | 0.8 | 0.7 | 0.7 |
| Exchange Rate ³ | 87.1 | 91.6 | 80.4 | 76.4 | 75.1 | 74.6 | 74.4 |
| 3 Month Interest Rate | 0.6 | 0.6 | 0.4 | 1.0 | 2.5 | 3.5 | 3.0 |
| 5 Year Interest Rate | 1.8 | 1.3 | 0.9 | 1.2 | 1.5 | 2.5 | 3.0 |
| Current Balance (£bn) | -99.9 | -103.7 | -89.0 | -77.7 | -65.1 | -43.2 | -32.6 |
| PSBR (£bn) | 83.3 | 71.2 | 69.0 | 54.7 | 38.7 | 28.3 | 13.0 |

¹Expenditure estimate at factor cost

²U.K. Wholly unemployed excluding school leavers (new basis)

³Sterling effective exchange rate, Bank of England Index (2005 = 100)

Our forecast remains basically unaltered by Brexit. It is for strong growth in the upper part of the 2–3% range, with rising inflation and wage growth. We are rather anxious about the Bank’s tendency to go with the weak consensus because this could lead to more monetary looseness and strengthen what is already a strong boom. We do not really want inflation to get seriously out of control yet one more time in the UK’s relatively recent history. For those with long enough memories there was the Barber/Heath boom of the early 1970s, then the Lawson boom of the later 1980s. In both cases the Treasury underestimated the economy’s strength because of an obsession with similar issues at those times. With Barber/Heath it was the gut fear of rising unemployment, when it turned out to be the result of supply-side problems, not of demand inadequacy. With Nigel Lawson’s Treasury it was worries about the share market (and in particular the ready sale of the government’s stake in BP) and also another obsession — with sterling’s valuation as an indicator of monetary tightness, a serious mistake of that era that went on also to force us into the EU’s Exchange Rate Mechanism in 1990 with disastrous results.

Today again the EU is in the obsessional mix — as always the EU rarely fails to be a distracting element in British policy, we must hope now for the last time.

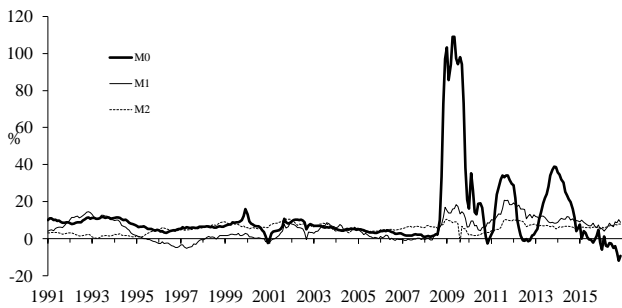
Brexit talk will dominate 2017 as Article 50 talks will start in February/March at last and negotiations proper will occur. We must hope that a clear outline of their result will quickly emerge. We expect no progress in reaching a trade deal and so a rapid move to WTO terms, where the prospects are basically good for an opening up of free trade. In other areas, like foreign policy cooperation on terrorism, and rights for existing EU and UK residents abroad we cannot see any real problems delaying agreement. Once the initial flurry of threats and political grandstanding is over, business will be done and the issues will move to practical action whereby the UK leaves the EU orbit entirely but with cooperation in key areas.

Manufacturing will remain strong, as indicated by current surveys. So will services which are the core of the modern UK economy. Sterling will gradually revert to pre-Brexit levels but not before exerting a strong corrective to the UK current account deficit. Inflation will rise and later in the year the Bank will have to come off its loosening stance with higher interest rates and reversing of QE.

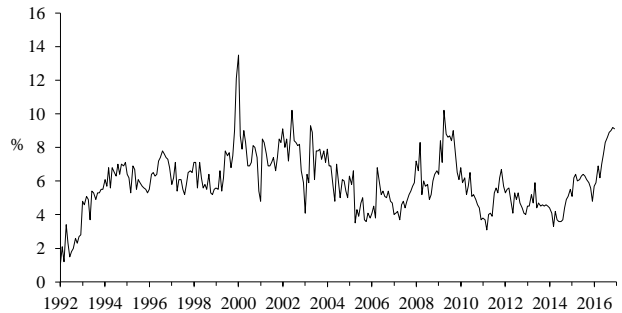
Rates will be rising in the US as President Trump's fiscal stimulus of lower marginal tax rates, more infrastructure spending, and deregulation take hold. The era of the 'zero

lower bound' and even 'negative interest rates' will come to a close in 2017 for the Anglo-Saxon world. The euro area will get there later as it will still have banking problems in 2017. It will also face political problems; and the euro-area could contract in size with the exit of any of France, Germany, Italy or the Netherlands. It is too early to call the death of European monetary union but the writing is on the wall, foretelling its geographical contraction.

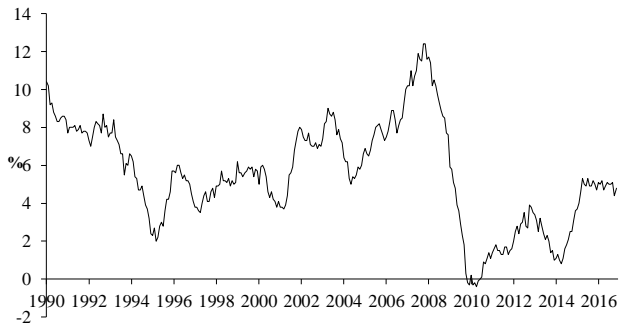
U.S.: Growth in Monetary Aggregates (Yr - on - Yr)



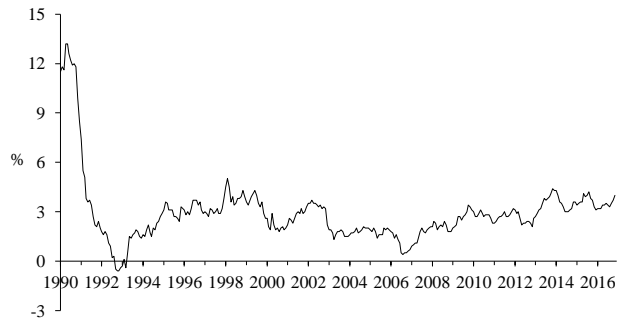
UK: Notes and Coins in Circulation Growth



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

Japan approved record budget for FY2017

The Japanese government has recently approved a record-high ¥97.45 trillion (\$831 billion) budget for fiscal year (FY) 2017, as swelling social security costs moved Japan further away from its goal of reining in overall spending and restoring its tattered fiscal health. The budget for the year starting in April also features increased defence spending for the fifth straight year since Abe took office in 2012 and expenditures to rejuvenate the economy by investing in growth areas. (See Table 2)

Excluding debt-servicing costs, a record-high ¥73.93 trillion is earmarked for policy spending in the general account. Among major outlays, social security costs — including pensions and medical expenses — will increase 1.6% from the fiscal 2016 initial budget to ¥32.47 trillion. Spending on Education is expected to reach ¥5.36 trillion while Defence spending comes to a record-high of ¥5.13 trillion, up 1.4%, to better respond to security threats mainly from China's maritime assertiveness and North Korea's ballistic missile development, they said. A total of ¥5.98 trillion is allocated for public works projects and other purposes such as strengthening the defence of the Senkaku islets, claimed by China, in the East China Sea, and boosting tourism in Japan to achieve a goal of attracting 40 million foreign visitors in 2020. Among other things, the fiscal 2017 budget includes funds to give better pay to nursery teachers and workers at elderly care facilities, and to encourage research and development in areas largely seen as promising, such as artificial intelligence, robotics and the so-called "Internet of Things.". Finally, a budget for the Japan Coast Guard reaches a record high of ¥210.6 billion on the initial budget basis.

On the revenue front, tax revenue is expected to increase 0.2% (nearly ¥2 trillion) to ¥57.71 trillion from the current year's initial budget in anticipation of the yen's weakening that should boost corporate earnings. However, the yen's advance against other major currencies prompted the government to cut its fiscal 2016 tax revenue estimate from its initial plan by ¥1.74 trillion and issue additional government bonds even before the fiscal year ends in March. Overall the tax revenue will enable Japan to cut its dependence on debt, albeit slightly, to 35.3% from 35.6% in the fiscal 2016 initial budget. New bond issuance is reduced by ¥62.2 billion yen to ¥34.37 trillion yen in fiscal 2017, while total issuance comes to ¥153.96 trillion, with roughly two-thirds of that amount for refinancing bonds. The latest tax revenue estimate is based on the government's projection that the economy will grow 1.5% in real terms, which is more upbeat than the around 1% expansion projected by private-sector economists.

Table 2: Japanese Fiscal Budget

| Outline of fiscal 2017 general account budget | | |
|--|------------------|---------------|
| Revenue | | |
| Tax revenue | ¥57,712.0 | (0.2%) |
| Nontax revenue | ¥5,372.9 | (14.7%) |
| Debt issuance | ¥34,369.8 | (-0.2%) |
| Expenditures | | |
| Social security | ¥32,473.5 | (1.6%) |
| Public works | ¥5,976.3 | (0.0%) |
| Education, science | ¥5,356.7 | (0.0%) |
| Defence | ¥5,125.1 | (1.4%) |
| National tax revenue grants to local governments | ¥15,567.1 | (1.9%) |
| Debt servicing | ¥23,528.5 | (-0.4%) |
| General account budget | ¥97,454.7 | (0.8%) |
| Special account for reconstruction work | ¥2,689.6 | |

Figures in billions, numbers in parentheses show change from initial fiscal 2016 budget. Expenditures excluding debt servicing add up to ¥73,926.2 billion, up 1.1%.

The government has portrayed the new budget as a move toward both economic recovery and better fiscal health. However, economists and practitioners believe that the assessment rests on precarious foundations. First of all, the administration of Prime Minister Shinzo Abe is sticking to a fiscal reform plan that depends heavily on revenue increases due to economic growth. For instance, the government expectations of a ¥2 trillion tax revenue increase in fiscal 2017 might be too rosy a scenario, given uncertainties over the policies of Trump, who broached protectionist ideas on trade issues on his "America first" campaign. There is no guarantee that the yen's downtrend following Trump's victory will continue, while the forecast seems to underline the fact that after four years of Abenomics, a lot of its "fruits" depend on the yen's exchange rate.

Furthermore, there remains no prospect for reducing the outstanding public debt, with the amount of national and local governments combined topping ¥1,000 trillion (over 200% of GDP), the heaviest debt burden among industrialized nations, as the administration keeps tapping the benefits of economic growth to pay for increased spending. The nation's primary balance deficit — a condition in which the government is unable to pay for its expenditures except for debt-servicing costs without issuing new debt — will increase for the first time in five years, putting the government's target of turning the primary balance into a surplus in 2020 further in doubt.

The government's sense of urgency over fiscal rehabilitation and reducing the debt load seems to be receding at least in part due to the Bank of Japan's (BOJ) monetary easing and its negative interest rate policy, which has significantly pushed down interest rates on government bonds — since March 2013, when the BOJ implemented a policy shifts by

raising the inflation target explicitly to 2% and kicking off the most rapid balance sheet expansion among the leading central banks, the BOJ's holdings of Japanese Government bonds (JGBs) have jumped by nearly a factor of four, rising from 11% to 37% of total JGBs outstanding, to a total of ¥357.5 trillion yen of JGBs as of the end of November 2016. The debt-servicing costs of ¥23.5 trillion set aside for fiscal 2017, nearly a quarter of the general account expenditures, is based on a record-low assumed interest rate of 1.1%, which has also helped reduce the issuance of new bonds to make up for the revenue shortfall. But that assumption might be in question given that the US plans to raise its policy interest rates next year — in addition to the rise this month

— may put upward pressure on long-term rates in Japan, potentially pushing up its debt-servicing costs.

In sum, the government used several methodologies to keep new debt issues from significantly surpassing those for fiscal 2016. To cure Japan's deep-rooted fiscal ills, the government needs to cut spending through unremitting efforts focused on cost efficiency and reshaping the tax code for higher revenue, while stoking economic growth to boost tax receipts. Prime Minister Abe's management of the economy, premised as it is on the expectation of swelling tax revenues, is reaching its limits.

MARKET DEVELOPMENTS

As the post-Brexit quarters have shown this is a good environment for equities and the bond market has finally crashed, with worse to come. The Trump programme of deregulation, more infrastructure spending, and largescale tax cuts will move the US firmly away from zero interest rates and will also push the UK, and eventually the EU in the same direction. The eurozone still has an awkward year to negotiate, with elections all over; the cracks are showing in

the euro but it may still hang on onto 2018 by the skin of its teeth. How long this monetary union can continue in spite of its deep flaws and in the teeth of democratic opposition is impossible to gauge. Logically it should no longer exist, as the needs of so many countries are for independent monetary and fiscal policies, as a backdrop to launch and sustain supply-side reform.

Table 1: Market Developments

| | Market Levels | | Prediction for Dec/Jan 2017/18 | |
|---|---------------|--------|--------------------------------|--------------|
| | Dec 7 | Jan 4 | Previous Letter View | Current View |
| Share Indices | | | | |
| UK (FT 100) | 6902 | 7190 | 11285 | 11755 |
| US (S&P 500) | 2241 | 2271 | 2757 | 2793 |
| Germany (DAX 30) | 10987 | 11584 | 17018 | 17944 |
| Japan (Tokyo New) | 1491 | 1554 | 2099 | 2189 |
| Bond Yields (government) | | | | |
| UK | 1.36 | 1.34 | 1.20 | 1.20 |
| US | 2.35 | 2.45 | 2.80 | 2.80 |
| Germany | 0.26 | 0.18 | 0.70 | 0.70 |
| Japan | -0.02 | 0.07 | 0.10 | 0.10 |
| UK Index Linked | -1.60 | -1.64 | 0.10 | 0.10 |
| Exchange Rates | | | | |
| UK (\$ per £) | 1.26 | 1.23 | 1.40 | 1.40 |
| UK (trade weighted) | 78.79 | 77.50 | 77.30 | 77.30 |
| US (trade weighted) | 105.21 | 108.11 | 102.0 | 102.0 |
| Euro per \$ | 0.93 | 0.95 | 0.93 | 0.93 |
| Euro per £ | 1.17 | 1.17 | 1.30 | 1.30 |
| Japan (Yen per \$) | 113.6 | 117.3 | 112.0 | 112.0 |
| Short Term Interest Rates (3-month deposits) | | | | |
| UK | 0.40 | 0.35 | 1.00 | 1.00 |
| US | 0.95 | 1.10 | 1.30 | 1.30 |
| Euro | -0.36 | -0.36 | -0.20 | -0.20 |
| Japan | -0.30 | -0.30 | 0.00 | 0.00 |

Table 2: Prospective Yields¹

| Equities: Contribution to £ yield of: | | | | | | |
|--|------------------|------------------------|-----------|-------------------------|----------|--------|
| | Dividend Yield | Real Growth | Inflation | Changing Dividend Yield | Currency | Total |
| UK | 3.40 | 2.6 | 1.9 | 59.00 | | 66.90 |
| US | 1.90 | 2.5 | 1.5 | 19.00 | -13.84 | 11.06 |
| Germany | 2.60 | 1.8 | 1.1 | 52.00 | -10.91 | 46.59 |
| Japan | 1.70 | 1.2 | 0.6 | 39.00 | -8.92 | 33.78 |
| UK indexed ² | -1.39 | | 1.5 | 2.00 | | 2.27 |
| Hong Kong ³ | 2.60 | 6.0 | 1.5 | -5.00 | -13.84 | -8.74 |
| Malaysia | 3.30 | 5.4 | 1.5 | 55.00 | -13.84 | 40.36 |
| Singapore | 3.50 | 2.0 | 1.5 | 23.00 | -13.84 | 2.16 |
| India | 1.40 | 8.0 | 1.5 | 24.00 | -13.84 | 26.06 |
| Korea | 1.10 | 3.0 | 1.5 | -19.00 | -13.84 | -27.24 |
| Indonesia | 2.20 | 5.2 | 1.5 | 31.00 | -13.84 | 25.06 |
| Taiwan | 2.80 | 3.4 | 1.5 | 14.00 | -13.84 | 6.86 |
| Thailand | 3.20 | 3.1 | 1.5 | 35.00 | -13.84 | 19.96 |
| Bonds: Contribution to £ yield of: | | | | | | |
| | Redemption Yield | Changing Nominal Rates | Currency | Total | | |
| UK | 1.34 | 1.40 | | | | 2.74 |
| US | 2.45 | -3.50 | -13.84 | | | -14.89 |
| Germany | 0.18 | -5.20 | -10.91 | | | -15.39 |
| Japan | 0.07 | -0.30 | -8.92 | | | -8.95 |
| Deposits: Contribution to £ yield of: | | | | | | |
| | Deposit Yield | Currency | Total | | | |
| UK | 0.35 | | 0.35 | | | |
| US | 1.10 | -13.84 | -12.74 | | | |
| Euro | -0.36 | -10.91 | -11.27 | | | |
| Japan | -0.30 | -8.92 | -8.92 | | | |

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 | |
|--------------------------|-------------------------|--------------|-----------------------|--------------|---------------------|--------------|
| | December Letter | Current View | December Letter | Current View | December 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

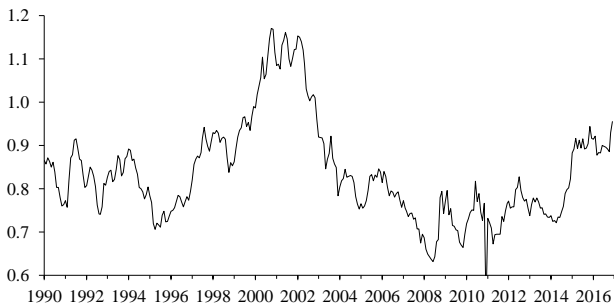
**US : Trade Weighted Index
(Bank of England 1990 = 100)**



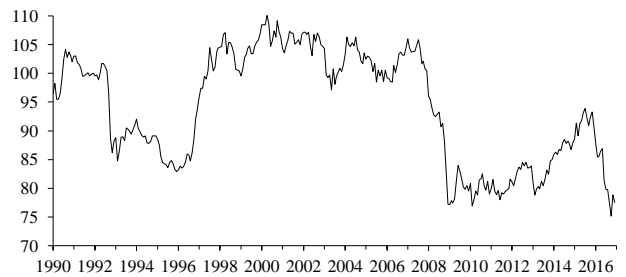
UK: Dollars Per Pound Sterling



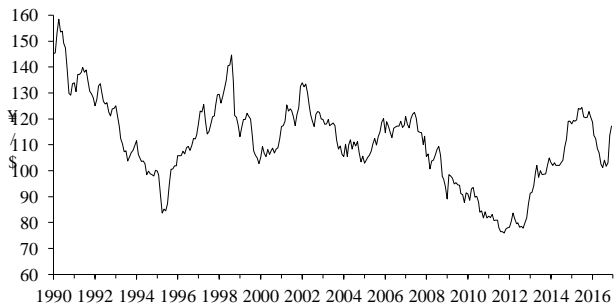
Euro per US dollar



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



Japan : Yen Per U.S. Dollar

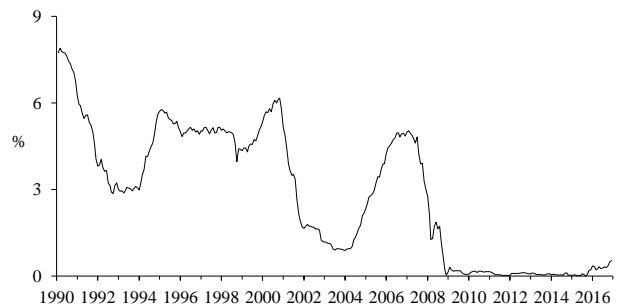


GOVERNMENT BOND MARKETS

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



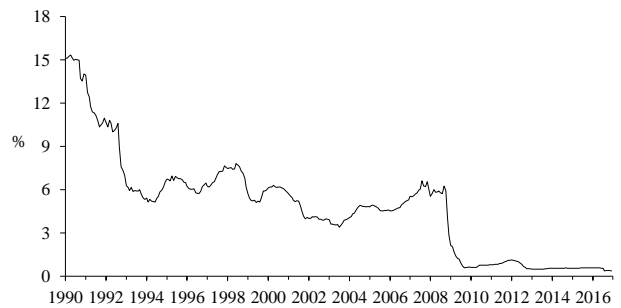
U.S. : 3-Month Treasury Bill



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



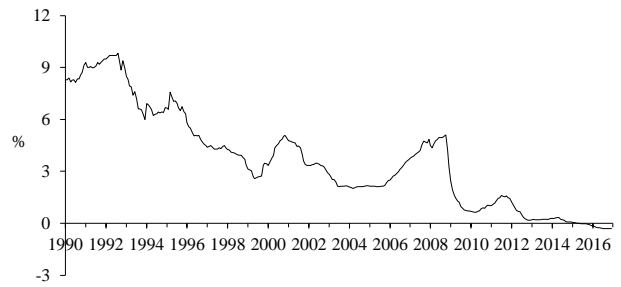
U.K. : 3-Month Interbank Rate



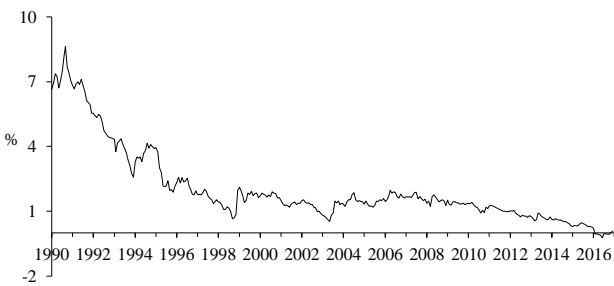
Germany: Yield on Public Authority Bonds



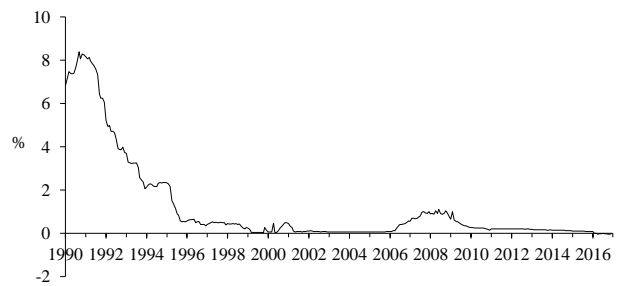
Germany : 3-Month Interbank Deposit Rate



Japan: Yield on Long-Term Government Bonds

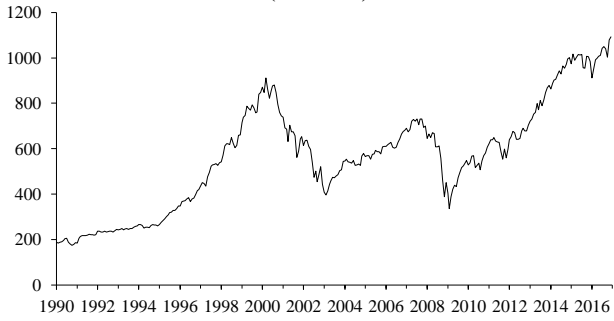


Japan : 3 Month Money Market Rate

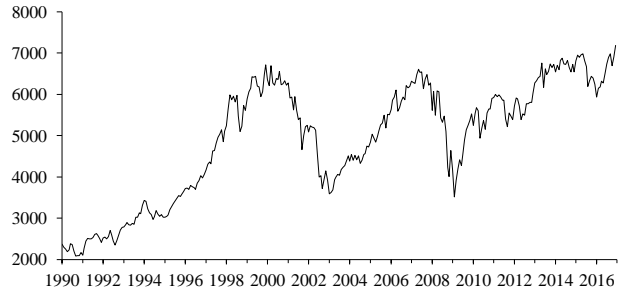


MAJOR EQUITY MARKETS

**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

In 2016–17, GDP growth is expected to slow down to about 6.5% as there was disruption to economic activity due to the November 2016 demonetization of large value currency. Some believe that sudden withdrawal of currency will permanently reduce economic growth by approximately 100 basis points. According to us, it will pay off in the long-term by promoting digital-payment systems that increase efficiency and transparency. It will help in improving tax to GDP ratio and other economic ills with which Indian economy was besotted in the last seventy years.

In one of the first signs that tax collection has improved, the government has cut the amount it borrowed by 180 billion rupees (\$2.64 billion) from its earlier estimate of about 4.25 trillion rupees. This implies that in future there will be a positive impact on fiscal position of the country.

In the last two months, millions of Indians have signed up for mobile wallets. Mom-and-Pop shops, tea stalls and rickshaw drivers who had never even used a credit card have learned how to accept payments through their inexpensive smartphones. Whether people have accepted this change or not will be known on March 11, 2017, when the results of provincial assemblies, which are going to polls will be declared. Initial opinion polls suggest that Prime Minister Modi's party has a commanding lead in most of the provinces. Despite the problems caused by demonetization, voters are so far willing to back the prime minister. One thing does resound with people — he is trying to clean up the system.

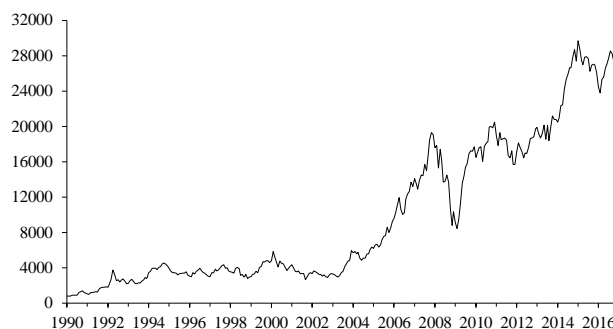
There is likely to be collateral damage to other long-term reforms. The move to replace India's tangle of local and state taxes with a single goods and services levy faces further delay. Concerns among businesses are growing that the goods and services tax (GST), which has been in the works for more than a decade, is unlikely to be implemented by April — the target set by the Indian government.

India's consumer inflation slowed to the weakest level in two years in November, as food prices continued to cool. The benchmark consumer-price index rose 3.63% from a year earlier, slower than October's 4.2% increase.

India's merchandise exports grew for the third consecutive month in November with 20 of the 30 export sectors registering a growth in outward shipments, but higher imports due to spike in gold purchases led to a sharp increase in trade deficit.

In 2016, the Indian rupee depreciated roughly 3%. In 2017, the rupee value will depend on the broader trend of US Dollar and RBI action in the market. We expect that the broad trend of the US Dollar would be upward and the RBI would shore up the reserves in the first quarter of 2017, after

India: BSE Sensitive



China: SSE Composite Index



a near USD 11 billion depletion in Q4 2016. Therefore, we expect rupee to depreciate roughly 3% in 2017.

The benchmark index gained 1.9% in 2016, recovering slightly from the previous year's 5% fall. The gain in India was much lower compared with a 39% rise in Brazil's Bovespa index.

| | 14–15 | 15–16 | 16–17 | 17–18 | 18–19 |
|-------------------------|-------|-------|-------|-------|-------|
| GDP (%p.a.) | 7.3 | 7.6 | 6.5 | 7.5 | 8.0 |
| WPI (%p.a.) | 6.0 | 5.2 | 4.5 | 4.0 | 4.0 |
| Current A/c(US\$ bill.) | -34.0 | -24.0 | -24.0 | -26.0 | -28.0 |
| Rs./\$(nom.) | 62.0 | 66.5 | 68.2 | 70.2 | 72.0 |

China

The Chinese economy ended 2016 in reasonably strong form. Growth in industrial production and retail sales, kept the GDP expansion on course to hit the government's target for the year, though the momentum is flagging. A flood of money from the central bank for lending followed by high levels of government spending on infrastructure has helped the economy's performance this year. The economy is likely to slow down slightly in the current year.

China will maintain its proactive fiscal policy and strengthen management of local government debt in 2017, and shift away from the nation's easy monetary policy. The fiscal deficit expanded to 4.5% in 2016 from 3% in 2015.

China's consumer inflation picked up for a third-straight month in November, while industrial inflation came in much stronger than expected. Apart from higher food prices, China's still-strong housing market has pushed up prices for household goods and general consumer demand. But, a recent rebound in commodities prices helped improve companies' profitability by pulling China's producer prices out of deflation. China's consumer-price index increased 2.3% in November from a year earlier.

China's overall exports rose in December, pointing to a sixth straight month of improving conditions in the Chinese export sector. Companies reported that export prices increased for a fourth month and that profits rose for a second straight month, despite rising costs. With volumes and new orders increasing as well, companies held a generally bullish outlook heading into 2017. But, China's exports to the US are set to fall in 2016 for the first time since the height of the global financial crisis. The decline marks a sharp turnaround from the period between 2010 and 2015, when Chinese exports to the US rose at a compound annualized growth rate of 5.6%, outstripping nominal US gross domestic product growth of 3.7% a year. In 2017, however, Chinese exports to the US are likely to get a boost from a stronger US economic growth if Mr. Trump pursues the expansionary fiscal policy.

China's central bank has been selling dollars from its forex reserves, which stood at just over \$3tn at the end of November, in an effort to slow the renminbi's fall. That has kept the renminbi from falling through Rmb7 to the dollar — a level Chinese officials did not want the currency to breach quickly.

The yuan has dropped nearly 7% against the dollar in 2016, nearly double the decline from the year before. Some analysts and investors expect the currency to break the psychologically important level of seven yuan per dollar in a few weeks' time.

The government is trying hard to not to have any precipitous fall in the yuan. The central bank has been tightening up controls on the movement of capital, making it more difficult for companies to invest overseas and limiting what individuals can do with their money. Under the new order, as of Jan. 1, individuals must fill out a detailed form when applying to tap into the \$50,000 each Chinese is entitled to under an annual currency-conversion quota.

Behind China's capital outflows, there are three major forces. First, Chinese companies are trying to pay down the huge amounts of dollar debt they have accumulated in the

past. Second, Chinese individuals are looking for higher returns overseas amid worsening asset bubbles at home. Third, Chinese businesses investing more overseas as the domestic economy is plagued by persistent overcapacity. As the yuan gets weaker, the desire among companies and individuals to move money out becomes stronger, which in turn puts even more downward pressure on the yuan. To prevent more funds from exiting, the authorities have taken measures to restrict outbound investments by Chinese companies as well as individuals. But the battle to keep money at home is likely to get even tougher next year, as many investors expect the yuan to weaken further.

Peter Navarro is set to lead a new National Trade Council in the White House. He is an academic who once ran for Congress as a Democrat. He is a Harvard-trained economist and University of California Irvine professor, is the author of *Death by China* and other books that paint the country as America's most dangerous adversary. China has warned Donald Trump that "co-operation is the only correct choice". Adding to rising tensions between the two countries, the US Office of the Trade Representative has put Alibaba, China's biggest e-commerce platform, back on its "notorious markets" blacklist of companies accused of being involved in peddling fake goods.

A gesture President Xi Jinping could make, is a significant and persuasive offer on the U.S.–China Bilateral Investment Treaty (BIT), which Mr. Xi has cited as a high priority. If China tabled a drastically reduced negative list in the BIT, with fewer areas ruled out to U.S. investment, as well as reduced equity caps where they remain, it would be an easier sell to the American public and to the U.S. Congress. This could also address growing calls for reciprocity in investment.

In a surprising revelation, China's top statistician has acknowledged the country's problems with falsification of economic data, pledging severe punishment for perpetrators. Ning Jizhe, director of the National Bureau of Statistics, wrote in a column for Communist party mouthpiece the *People's Daily* that currently, some local statistics are falsified, and fraud and deception happen from time to time, in violation of statistics laws and regulations.

| | 14 | 15 | 16 | 17 | 18 |
|---------------------------|-----------|-----------|-----------|-----------|-----------|
| GDP (%p.a.) | 7.4 | 6.9 | 6.6 | 6.0 | 5.8 |
| Inflation (%p.a.) | 2.0 | 1.4 | 2.0 | 2.0 | 2.0 |
| Trade Balance(US\$ bill.) | 382 | 550 | 420 | 400 | 380 |
| Rmb/\$(nom.) | 6.2 | 6.4 | 6.7 | 7.2 | 7.4 |

South Korea

For Ms. Park Geun-hye, 2016 culminated in her impeachment by the Senate amid an influence peddling scandal. Now, the country's nine-member Constitutional Court would rule on the validity of the impeachment vote. Going by the mood of public, and the court is known to swing in favour of public opinion, it is a foregone conclusion that the court would uphold the impeachment vote. The impeachment has left Ms. Park in limbo, not able to exercise her executive powers but not losing her title.

Regardless of who inhabits the presidential Blue House next — outgoing UN Secretary-General Ban Ki-moon, perhaps — the Park years were years of drift and indecision.

Annual growth fell to 2.6% year-on-year in Q3, down from 3.3% and 2.8% in Q2 and Q1 of 2016. In the current year, growth would be around 2.5% at a time when the political scene is troubled with impeached president and faster presidential election in 2017. Looking ahead, we expect economic growth to stay at 2.5% in 2018.

Inflation is estimated to accelerate to 1.6% in 2017 from 1.0% this year due to higher oil prices. Inflation remained subdued with consumer prices rising 1.3% in November 2016 — below the central bank's annual target of 2%. Private spending and business investment remain frail in Korea.

The Bank of Korea kept its base rate unchanged for a sixth straight month as expected, sticking to its cautious wait-and-see stance as it assesses the impact on the economy of the latest U.S. rate increase and political uncertainty stemming from the impeachment of President Park Geun-hye.

Exports rose 6.4% from a year earlier, to \$45.07 billion, in December, after a revised 2.5% gain in November. Imports gained 7.3% from a year earlier, to \$38.07 billion, in December, following the previous month's revised 9.3% rise. The trade surplus narrowed to \$7 billion in December, from a revised \$8.20 billion in November. Korean exports continue to face stiff headwinds.

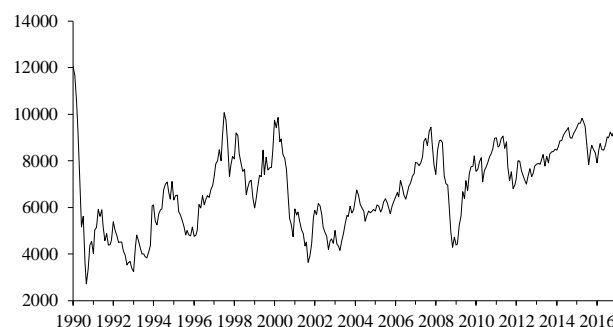
In contrast, foreign investors have bought a net Won1.8tn worth of South Korean shares in the wake of the US election, lured by low valuations and expected earnings growth. The flows have helped the benchmark Kospi index reach a 12-week high of 2,050. Market hopes that a new government could usher in measures to squeeze the conglomerates, including the Samsung, Hyundai and LG groups, with regulations to boost transparency, restrict lobbying and encourage corporate restructuring.

A state-run think tank in South Korea is raising the possibility of the country being labelled a currency manipulator along with China. Korea was listed in the U.S. Treasury Department's currency watch list in October, along with China, Japan, Germany, Taiwan and Switzerland, for

Korea: Composite Index



Taiwan: Weighted TAIEX Price Index



meeting two of the three criteria used to monitor currency practices.

| | 14 | 15 | 16 | 17 | 18 |
|-------------------------|------|------|------|------|------|
| GDP (%p.a.) | 3.3 | 2.6 | 2.5 | 2.5 | 2.5 |
| Inflation (%p.a.) | 2.0 | 0.7 | 1.0 | 1.6 | 1.2 |
| Current A/c(US\$ bill.) | 80.0 | 90.0 | 88.0 | 88.0 | 86.0 |
| Won/\$ (nom.) | 1080 | 1180 | 1160 | 1140 | 1140 |

Taiwan

Taiwan's economy is growing again. It expanded at a year-over-year pace of just over 2% in the third quarter and continued momentum in the fourth quarter, as the island benefited from a jump in demand for electronics parts. Taipei expects growth of 1.87% in 2017.

The central bank left its main policy rate unchanged at 1.375%, for a second time after a cycle of aggressive cuts to help restart the economy and boost inflation in September.

The local currency has weakened by more than 2% since Donald Trump's presidential election victory buoyed investor sentiment on expectations for U.S. fiscal stimulus and a strengthening of its economy which shall help Taiwan's exports.

China has been wary of Mr. Trump after he took a congratulatory phone call from Taiwan president Tsai Ing-wen in early December, defying almost four decades of precedent. Under the "One China" policy, Washington has abstained from official interactions with the island, which Beijing regards as a "rogue province". Cheers in Taiwan

have faded into worries that the US president-elect may be using the island's 23m people as a bargaining chip in negotiations with Beijing.

| | 14 | 15 | 16 | 17 | 18 |
|-------------------------|-----------|-----------|-----------|-----------|-----------|
| GDP (%p.a.) | 3.7 | 0.8 | 1.5 | 1.9 | 2.0 |
| Inflation (%p.a.) | 1.5 | 0.7 | 1.0 | 1.0 | 1.0 |
| Current A/c(US\$ bill.) | 57.4 | 60.0 | 64.0 | 68.0 | 68.0 |
| NT\$/\$(nom.) | 31.0 | 32.8 | 32.5 | 32.0 | 32.0 |

Brazil

The rebounding economy of Brazil will be moderate, at a pace of 1%, instead of the 1.3% that the government was hoping to achieve, as the economy is still facing some headwinds. Brazil's manufacturing activity dropped in December, highlighting that the country's economic recession persisted in the period.

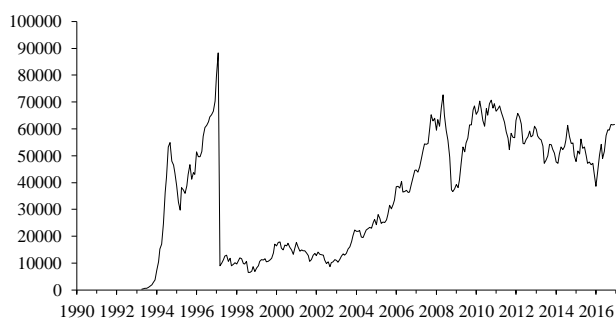
The central bank is expected to reduce its benchmark interest rate against the backdrop of a struggling domestic economy. The Selic rate, which is at 13.75%, may fall as much as 300 basis points.

In 2016, the rate of inflation ended at a projected level of 6.4%. Its consumer price index in 2017 will be around 5.7% but it would remain on a sliding path. If all goes well, inflation may reduce to 4% in 2018. The reason for a sharp drop in inflation is due to a cut in spending by the government.

Brazil's Senate has delivered a victory for embattled President Michel Temer by passing, as expected, an unpopular measure curbing public spending for years to come, as the government tries to control a ballooning budget deficit and boost investor confidence. The annual spending growth is now limited to the previous year's inflation rate, a significant change in a centralized economy in which government outlays, according to the government, grew an average 6 percentage points faster than consumer prices over the past two decades.

Brazil's unemployment rate increased in the September-to-November period, while salaries continued to decline amid a persistent recession in Latin America's largest economy. Joblessness rose marginally to 11.9% from 11.8% in the

Brazil: Bovespa



previous three-month period and from 9% during the same period last year.

Brazil posted its biggest trade surplus ever in 2016 as imports plunged amid the country's worst economic recession on record. The country had a surplus of \$4.4 billion in December, bringing the total for the year to \$47.7 billion. That beats the record of \$46.5 billion set in 2006.

Brazil's brutal recession has fuelled one of the biggest privatizations in years in the country. Federal concessions for highways, power plants, airports and railways are on the block. State and local officials are selling off public property acquired in happier times as they struggle to cover basics like payroll and pensions. For example, in São Paulo, the nation's biggest city, the incoming mayor wants to unload the Anhembi Sambadrome, site of the city's raucous annual Carnival parade. A city-owned raceway and a cavernous convention center are also expected to go up for sale.

Brazil's currency traded at 3.27 reals per dollar recently, an appreciation of more than 6% from early December. No major foreign currency has strengthened more than the Brazilian Real in recent times.

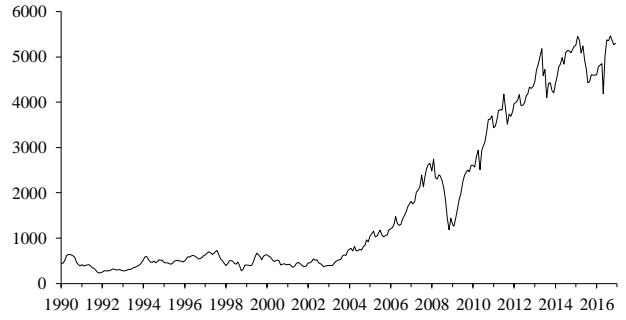
| | 14 | 15 | 16 | 17 | 18 |
|-------------------------|-----------|-----------|-----------|-----------|-----------|
| GDP (%p.a.) | 0.1 | -3.8 | -3.2 | 1.0 | 1.5 |
| Inflation (%p.a.) | 6.5 | 10.3 | 6.4 | 5.0 | 5.0 |
| Current A/c(US\$ bill.) | -104.0 | -70.0 | -28.0 | -25.0 | -25.0 |
| Real\$/\$(nom.) | 2.4 | 3.9 | 3.5 | 3.4 | 3.2 |

Other Emerging Markets

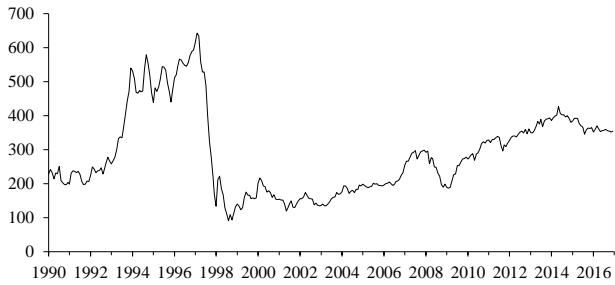
Hong Kong: FT-Actuaries



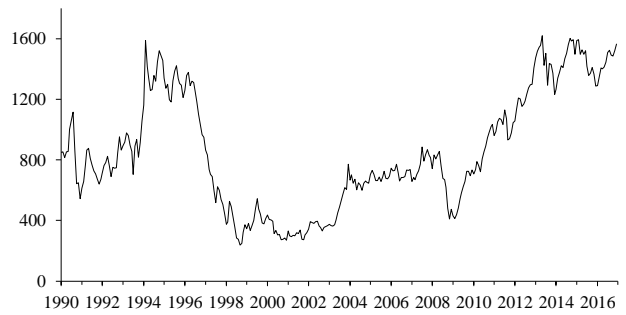
Indonesia: Jakarta Composite



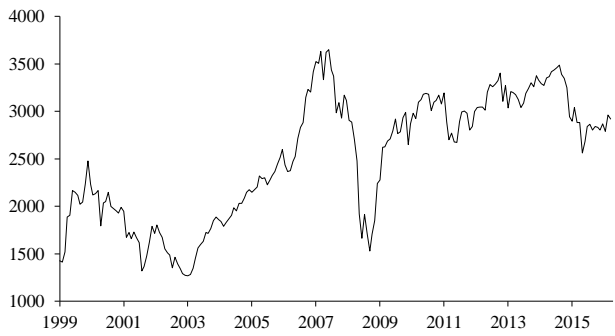
**Malaysia: FT-Actuaries
(US\$ Index)**



Thailand: Composite Index



Singapore: Straits Times Index

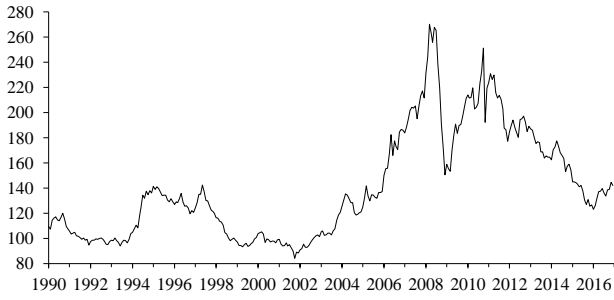


Philippines: Manila Composite

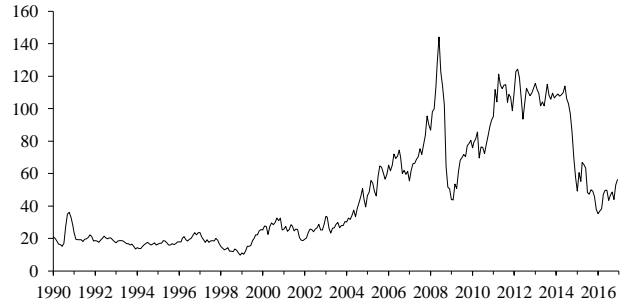


COMMODITY MARKETS

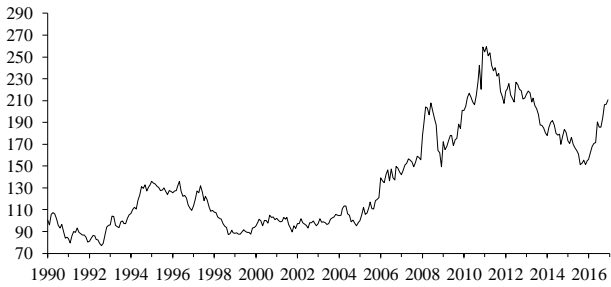
Commodity Price Index (Dollar)
(Economist, 2000=100)



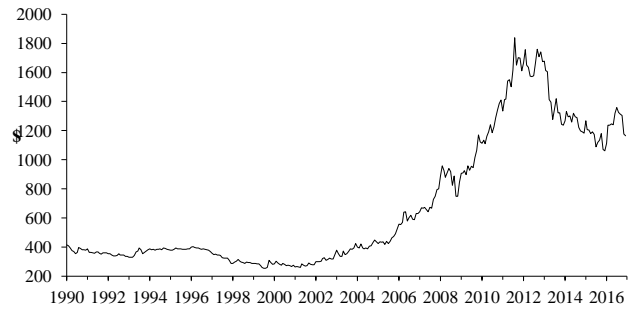
Oil Price: North Sea Brent (in Dollars)



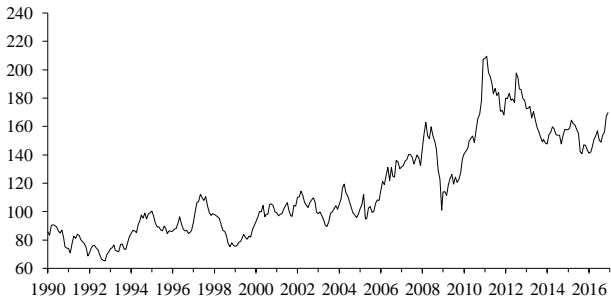
Commodity Price Index (Sterling)
(Economist, 2000=100)



Gold Price (in Dollars)



Commodity Price Index (Euro)
(Economist)



UK FORECAST DETAIL

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

| | Inflation % ¹ (CPI) | Short Dated (5 Year) Interest Rates | 3 Month Int. Rates | Nominal Exchange Rate (2005=100) ² | Real Exchange Rate ³ | Real 3 Month Int. Rates % ⁴ | Inflation (RPIX) | Real Short Dated Rate of Interest ⁵ |
|--------|-----------------------------------|---|-----------------------|---|------------------------------------|---|---------------------|--|
| 2015 | 0.2 | 1.3 | 0.6 | 91.6 | 91.6 | 0.5 | 1.0 | -1.0 |
| 2016 | 1.2 | 0.9 | 0.4 | 81.5 | 80.4 | -1.5 | 2.1 | -1.6 |
| 2017 | 1.9 | 1.2 | 1.0 | 77.9 | 76.4 | -2.1 | 2.6 | -1.5 |
| 2018 | 3.1 | 1.5 | 2.5 | 75.7 | 75.1 | -0.5 | 3.6 | -1.1 |
| 2019 | 3.0 | 2.5 | 3.5 | 74.3 | 74.6 | 1.5 | 3.5 | 0.3 |
| 2020 | 2.1 | 3.0 | 3.0 | 73.8 | 74.4 | 0.5 | 2.7 | 0.9 |
| 2015:1 | 0.9 | 1.1 | 0.5 | 89.6 | 90.3 | 0.2 | 1.0 | 0.8 |
| 2015:2 | 0.4 | 1.3 | 0.5 | 91.4 | 91.1 | 1.0 | 1.0 | 0.7 |
| 2015:3 | -0.4 | 1.4 | 0.5 | 93.0 | 92.5 | 0.5 | 1.0 | 0.4 |
| 2015:4 | 0.1 | 1.3 | 0.6 | 92.3 | 92.4 | 0.3 | 1.1 | 0.0 |
| 2016:1 | 0.3 | 0.9 | 0.7 | 87.2 | 86.8 | -1.1 | 1.4 | -0.7 |
| 2016:2 | 1.3 | 0.9 | 0.5 | 81.8 | 81.2 | -1.3 | 2.2 | -0.9 |
| 2016:3 | 1.5 | 0.9 | 0.2 | 79.4 | 77.8 | -1.7 | 2.3 | -1.0 |
| 2016:4 | 1.8 | 0.9 | 0.2 | 77.6 | 75.9 | -1.8 | 2.5 | -1.2 |
| 2017:1 | 1.8 | 1.0 | 0.5 | 78.9 | 77.4 | -2.5 | 2.5 | -1.4 |
| 2017:2 | 1.8 | 1.2 | 1.0 | 78.5 | 77.4 | -2.2 | 2.5 | -1.5 |
| 2017:3 | 1.9 | 1.2 | 1.0 | 77.3 | 75.4 | -2.2 | 2.6 | -1.7 |
| 2017:4 | 2.1 | 1.2 | 1.5 | 76.7 | 75.4 | -1.7 | 2.8 | -1.9 |

¹ Consumer's Expenditure Deflator

² Sterling Effective Exchange Rate Bank of England

³ Ratio of UK to other OECD consumer prices adjusted for nominal exchange rate

⁴ Treasury Bill Rate less one year forecast of inflation

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

Labour Market and Supply Factors (Seasonally Adjusted)

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

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 Product¹ (£ Million 1990 Prices)

| | Expenditure Index | £ Million '90 prices | Non-Durable Consumption ² | Private Sector Gross Investment Expenditure ³ | Public Authority Expenditure ⁴ | Net Exports ⁵ | AFC |
|---------|-------------------|----------------------|--------------------------------------|--|---|--------------------------|----------|
| 2015 | 156.6 | 749923.7 | 431522.8 | 302272.7 | 202850.7 | -55478.9 | 125108.2 |
| 2016 | 160.0 | 766181.1 | 444845.4 | 312701.0 | 209007.0 | -44482.0 | 145527.8 |
| 2017 | 164.1 | 786002.9 | 457714.2 | 323871.4 | 217609.3 | -32648.1 | 169393.1 |
| 2018 | 168.6 | 807345.9 | 468986.2 | 338700.7 | 221961.4 | -28471.5 | 184156.4 |
| 2019 | 173.4 | 830294.1 | 480710.9 | 358611.6 | 226400.7 | -24594.0 | 203029.4 |
| 2020 | 178.9 | 856877.5 | 492728.6 | 380617.3 | 230928.7 | -20309.5 | 220638.7 |
| 2015/14 | 2.2 | | 1.6 | 3.8 | 1.1 | | -2.3 |
| 2016/15 | 2.2 | | 3.1 | 3.4 | 3.0 | | 16.3 |
| 2017/16 | 2.6 | | 2.9 | 3.6 | 4.1 | | 16.4 |
| 2018/17 | 2.7 | | 2.5 | 4.6 | 2.0 | | 8.7 |
| 2019/18 | 2.8 | | 2.5 | 5.9 | 2.0 | | 10.2 |
| 2020/19 | 3.2 | | 2.5 | 6.1 | 2.0 | | 8.7 |
| 2015:1 | 155.5 | 186173.7 | 106852.9 | 76506.7 | 50170.8 | -14587 | 32769.7 |
| 2015:2 | 156.3 | 187104.6 | 107659.4 | 77424.8 | 50522.0 | -11925.0 | 36576.6 |
| 2015:3 | 156.7 | 187665.9 | 108265.9 | 77811.9 | 50926.2 | -14036.0 | 35302.1 |
| 2015:4 | 157.8 | 188979.5 | 108744.6 | 77033.8 | 51231.7 | -13444.0 | 34586.6 |
| 2016:1 | 158.5 | 189735.5 | 108993.6 | 76956.8 | 51590.4 | -14141.0 | 33664.2 |
| 2016:2 | 159.6 | 191063.6 | 111350.1 | 78034.1 | 52054.7 | -15661.0 | 34714.3 |
| 2016:3 | 160.4 | 192018.9 | 112275.8 | 78658.4 | 52471.1 | -13089.0 | 38297.4 |
| 2016:4 | 161.5 | 193363.1 | 112225.9 | 79051.7 | 52890.9 | -11953.5 | 38851.9 |
| 2017:1 | 162.6 | 194716.6 | 113412.9 | 79526.0 | 53472.7 | -11395.3 | 40299.7 |
| 2017:2 | 163.6 | 195884.9 | 114087.3 | 80639.4 | 54060.9 | -11303.5 | 41599.1 |
| 2017:3 | 164.6 | 197060.2 | 114765.8 | 81445.8 | 54709.6 | -10680.5 | 43180.4 |
| 2017:4 | 165.7 | 198341.1 | 115448.1 | 82260.2 | 55366.1 | -10419.5 | 44313.9 |

¹ GDP at factor cost. Expenditure measure; seasonally adjusted

² Consumers expenditure less expenditure on durables and housing

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

⁴ General government current and capital expenditure including stock building

⁵ Exports of goods and services less imports of goods and services

Financial Forecast

| | PSBR/GDP % ¹ | GDP ¹ (£bn) | PSBR (£bn) Financial Year | Debt Interest (£bn) | Current Account (£ bn) |
|--------|-------------------------|------------------------|------------------------------|---------------------|------------------------|
| 2015 | 4.6 | 1533.1 | 71.2 | 52.0 | -103.7 |
| 2016 | 4.3 | 1592.4 | 69.0 | 52.3 | -89.0 |
| 2017 | 3.3 | 1669.4 | 54.7 | 58.2 | -77.7 |
| 2018 | 2.2 | 1770.8 | 38.7 | 65.4 | -65.1 |
| 2019 | 1.5 | 1874.6 | 28.3 | 70.3 | -43.2 |
| 2020 | 0.7 | 1473.0 | 13.0 | 52.7 | -32.6 |
| 2015:1 | 0.8 | 383.9 | 3.1 | 12.6 | -25.8 |
| 2015:2 | 7.1 | 379.3 | 26.9 | 12.8 | -20.2 |
| 2015:3 | 4.7 | 382.0 | 17.8 | 13.0 | -22.6 |
| 2015:4 | 7.0 | 387.2 | 26.9 | 13.1 | -35.1 |
| 2016:1 | -0.1 | 384.6 | -0.5 | 13.1 | -33.7 |
| 2016:2 | 5.8 | 392.0 | 22.9 | 13.1 | -14.0 |
| 2016:3 | 2.4 | 394.5 | 9.5 | 12.9 | -13.1 |
| 2016:4 | 5.8 | 402.2 | 23.2 | 13.0 | -28.2 |
| 2017:1 | 3.3 | 403.7 | 13.4 | 13.3 | -23.3 |
| 2017:2 | 5.6 | 408.9 | 22.7 | 13.9 | -14.1 |
| 2017:3 | 2.2 | 412.1 | 8.9 | 13.9 | -13.4 |
| 2017:4 | 3.9 | 421.3 | 16.4 | 14.6 | -26.8 |

¹ GDP at market prices (Financial Year)

WORLD FORECAST DETAIL

Growth Of Real GNP

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------|------|------|------|------|------|------|
| U.S.A. | 1.5 | 2.4 | 2.4 | 2.1 | 2.4 | 2.5 |
| U.K. | 2.2 | 2.9 | 2.2 | 2.3 | 2.7 | 2.8 |
| Japan | 1.4 | -0.1 | 0.5 | 1.0 | 0.8 | 0.8 |
| Germany | 0.3 | 1.6 | 1.7 | 1.8 | 1.5 | 1.6 |
| France | 0.7 | 0.2 | 1.1 | 1.4 | 1.5 | 1.6 |
| Italy | -1.7 | -0.3 | 0.8 | 1.1 | 1.3 | 1.5 |

Growth Of Consumer Prices

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------|------|------|------|------|------|------|
| U.S.A. | 1.5 | 1.6 | 0.1 | 1.3 | 2.2 | 2.0 |
| U.K. | 2.3 | 1.7 | 0.2 | 1.2 | 3.1 | 3.0 |
| Japan | 0.4 | 2.7 | 0.8 | 0.2 | 1.8 | 2.0 |
| Germany | 1.5 | 0.9 | 0.3 | 0.5 | 1.6 | 2.0 |
| France | 0.9 | 0.5 | 0.0 | 0.4 | 1.2 | 1.8 |
| Italy | 1.2 | 0.2 | 0.1 | 0.2 | 1.1 | 1.7 |

Real Short-Term Interest Rates

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------|------|------|------|------|------|------|
| U.S.A. | -1.5 | -0.1 | -1.1 | -1.2 | -0.7 | -0.5 |
| U.K. | -0.8 | -2.2 | 0.5 | -1.5 | -2.1 | -0.5 |
| Japan | -2.5 | -0.6 | 0.0 | -1.8 | -2.0 | -1.8 |
| Germany | -0.6 | -0.2 | -0.6 | -1.8 | -2.2 | -2.2 |
| France | -0.2 | 0.1 | -0.5 | -1.4 | -2.0 | -2.0 |
| Italy | 0.1 | 0.0 | -0.3 | -1.3 | -1.9 | -1.9 |

Nominal Short-Term Interest Rates

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------|------|------|------|------|------|------|
| U.S.A. | 0.1 | 0.0 | 0.2 | 1.0 | 1.3 | 1.5 |
| U.K. | 0.6 | 0.6 | 0.6 | 0.4 | 2.5 | 3.5 |
| Japan | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.2 |
| Germany | 0.3 | 0.1 | -0.1 | -0.2 | -0.2 | -0.2 |
| France | 0.3 | 0.1 | -0.1 | -0.2 | -0.2 | -0.2 |
| Italy | 0.3 | 0.1 | -0.1 | -0.2 | -0.2 | -0.2 |

Real Long-Term Interest Rates

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

Nominal Long-Term Interest Rates

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------|------|------|------|------|------|------|
| U.S.A. | 3.0 | 2.2 | 2.2 | 2.4 | 2.8 | 3.0 |
| U.K. | 1.3 | 1.8 | 1.3 | 0.9 | 1.2 | 1.5 |
| Japan | 0.7 | 0.3 | 0.3 | 0.0 | 0.1 | 0.3 |
| Germany | 1.9 | 0.5 | 0.6 | 0.4 | 0.7 | 0.9 |
| France | 1.9 | 0.5 | 0.6 | 0.4 | 0.7 | 0.9 |
| Italy | 1.9 | 0.5 | 0.6 | 0.4 | 0.7 | 0.9 |

Index Of Real Exchange Rate(2000=100)¹

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------|-------|-------|-------|-------|-------|-------|
| U.S.A. | 82.1 | 83.9 | 93.0 | 94.0 | 94.5 | 94.8 |
| U.K. | 86.5 | 93.1 | 91.6 | 80.4 | 76.4 | 75.1 |
| Japan | 63.5 | 59.8 | 56.0 | 58.4 | 58.5 | 58.6 |
| Germany | 99.0 | 99.9 | 94.7 | 95.0 | 95.2 | 95.1 |
| France | 100.7 | 100.8 | 96.2 | 96.0 | 95.9 | 95.7 |
| Italy | 106.9 | 107.5 | 102.1 | 102.0 | 101.8 | 101.7 |

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.

Nominal Exchange Rate

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------------|-------|--------|--------|--------|--------|--------|
| U.S.A. ¹ | 86.00 | 89.40 | 99.94 | 102.10 | 102.00 | 102.20 |
| U.K. | 1.55 | 1.65 | 1.53 | 1.36 | 1.30 | 1.27 |
| Japan | 98.20 | 106.70 | 120.00 | 118.40 | 112.00 | 113.00 |
| Eurozone | 0.75 | 0.76 | 0.90 | 0.95 | 0.93 | 0.92 |

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