LIVERPOOL INVESTMENT LETTER

February 2013

Cardiff Business School
Cardiff University

Julian Hodge Institute of Applied 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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CONTENTS

THE PROLONGED CREDIT CRUNCH AND ITS REPERCUSSIONS

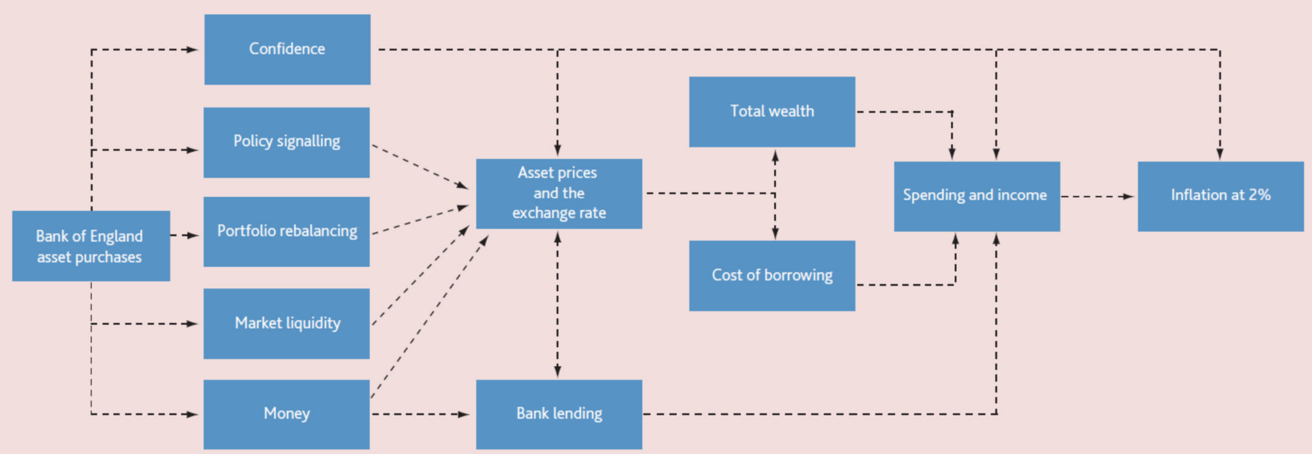
The idea of Quantitative Easing was to boost the economy by raising credit and money supply growth and drive down interest rates to private sector borrowers. As QE has grown in size steadily and has yet failed conspicuously to raise credit growth to drive down interest rates to the bulk of borrowers, particularly SMEs, the Bank of England has widened their view of the 'transmission mechanism' to include other channels. Figure 1 is the latest explanation from the BoE.

Table 1: Summary of Forecast

		2010	2011	2012	2013	2014	2015	2016
GDP Growth[1]		1.8	0.9	0.1	1.5	2.0	2.4	2.6
Inflation	CPI	3.7	4.7	2.8	2.8	2.6	2.2	2.0
	RPIX	4.8	5.3	3.3	3.3	3.1	2.8	2.7
Unemployment (Mill.)								
	Ann. Avg.[2]	1.5	1.5	1.6	1.5	1.4	1.3	1.2
	4th Qtr.	1.5	1.6	1.6	1.5	1.3	1.2	1.1
Exchange Rate[3]		80.4	80.0	83.0	83.5	82.7	82.1	81.5
3 Month Interest Rate		0.7	0.9	0.9	0.9	1.7	2.1	2.2
5 Year Interest Rate		2.4	2.0	0.9	1.3	1.8	2.1	2.4
Current Balance (£bn)		−37.3	−20.4	−51.9	−52.2	−52.8	−53.0	−52.0
PSBR (£bn)		115.1	94.2	95.4	98.2	84.7	72.2	60.5

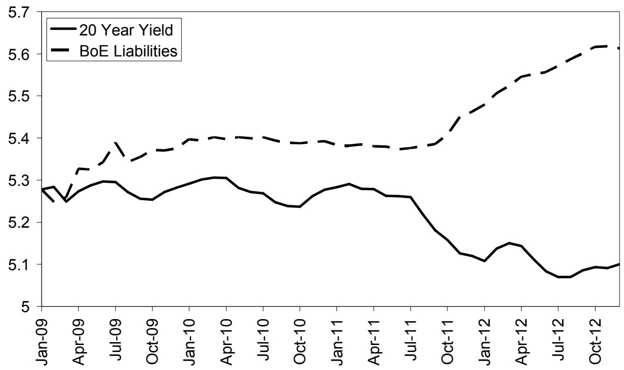
[1]Expenditure estimate at factor cost
[2]U.K. Wholly unemployed excluding school leavers (new basis)
[3]Sterling effective exchange rate, Bank of England Index (2005 = 100)

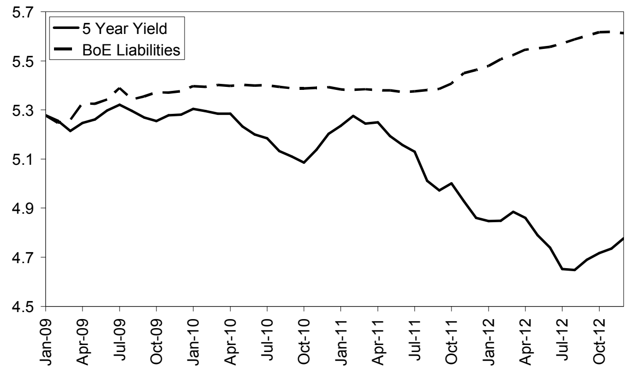
Figure 1 Stylised transmission mechanism for asset purchases

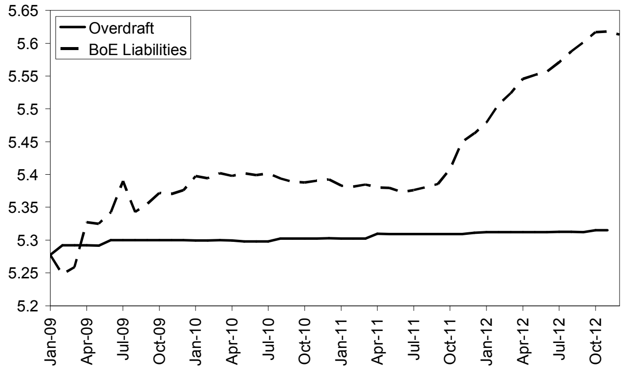


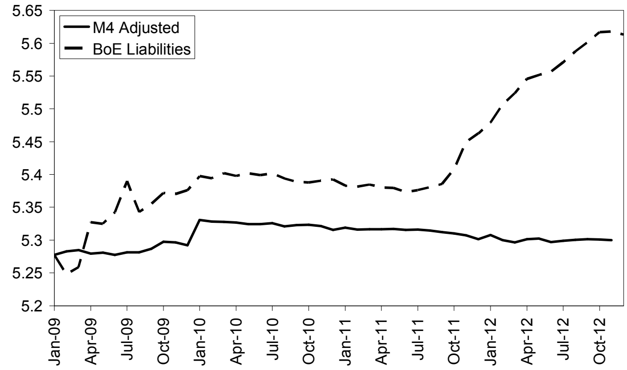
Now it is clearly difficult to establish what QE has done because there is no previous experience of these circumstances to draw on as a model. Nor do our theories tell us much. Some theories suggest it could have an effect — these stress that assets are weak substitutes for each other and so buying classes of assets should drive up their price. Other theories suggest it has little effect because assets are close substitutes and as there are plenty out there, one would have to buy an awful lot of them to drive up the price (of all of them). A further problem is that the circumstances today are those of massive new regulation on the banks, so that QE has coincided with a rival government programme designed (put crudely) to prevent the banks from lending to any other than the most safe borrowers (i.e. governments and very large businesses).

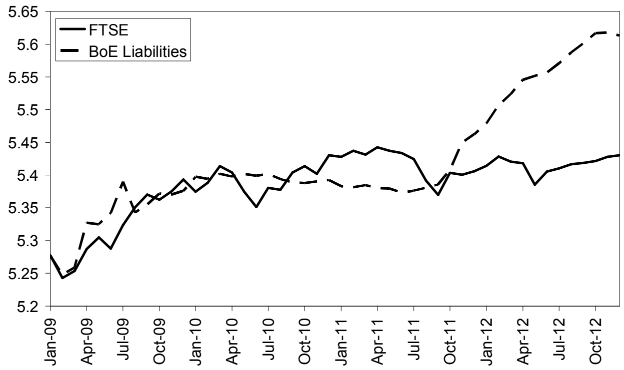
Nevertheless one can argue as follows: a programme as big initially and cumulatively getting so much larger should make a difference to what is going on. A natural 'counterfactual' is what was happening before compared to what happened after and then again after it got steadily bigger. We could find effects on asset prices a) when each QE tranche was announced b) on their trend as QE took hold c) on their rate of change in response to amounts purchased in the marketplace by QE issuance. We could also find effects b) and c) on the money supply and credit rates. What we do find, as the following charts show, is that there are weak or negligible 'announcement effects' (a) but there are strong trend effects on gilt prices, some trend effect on equity prices, and a very weak but positive trend effect on the money supply (b); as for effects of QE purchases on changes in any of these, there is no effect. Finally, what about effects of any sort on the rate of interest on credit for small borrowers, where we use the overdraft rate as a proxy? There is no discernible affect at all.







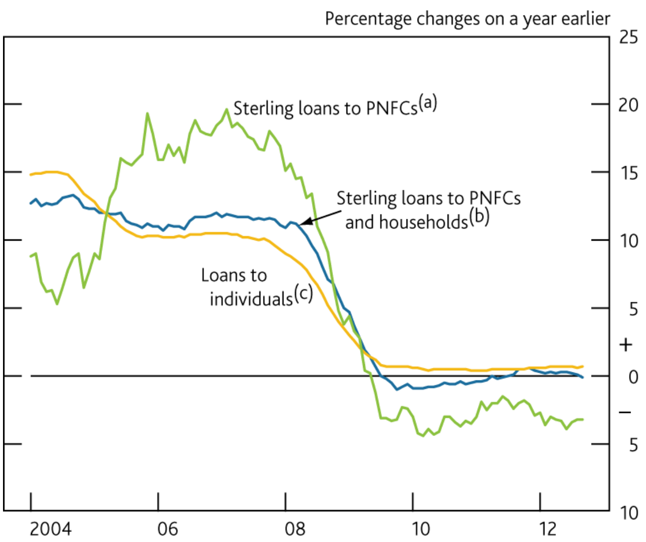




The graphs above show the trends of the (log of the) BoE balance sheet (cumulated QE plus special liquidity provisions, which occurred in the earlier part of the crisis and were first replaced by QE before its later even greater growth) against the (logs of the) various indicators we are interested in. What the eye can see in the trend relationships is also what we find with statistical testing of 'cointegration' where two trends are related in such a way that any error around them is untrended.

What they tell us crucially is that there was no effect on credit rates to small borrowers. Yet banks' main social function is as the (unique) provider of external finance to

Figure 2: Credit Growth



small businesses. We can also see from the chart of credit growth (Figure 2) that this has been negative throughout the QE programme, with no visible effect.

The asset prices affected have been gilts, where the BoE now holds one third of the total supply; and to some extent the FTSE, whereas yields on gilts have dropped investors have bought shares as the only available alternative.

Meanwhile we know that the rise in money supply is roughly equal to the rise in the QE issue; in other words the money issued has been deposited in the banks and has then been placed by the banks straight back in the BoE as bankers' balances, this earning a useful 'turn' of 0.5% (bank rate) on the extra deposits (for which no interest is paid). Thus the main beneficiaries of QE have been the government facing much lower interest rates on its bonds, banks and large share-issuing firms. The main losers have been savers. As for SMEs (for whom credit conditions have actually tightened), there is no evidence that QE made things worse for them; but they certainly did not improve them.

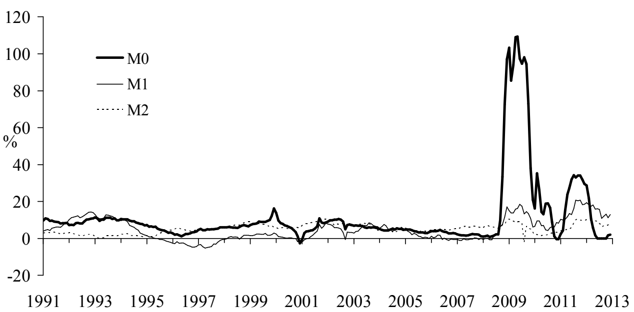
Why has this been? Effectively QE has been hurled into a situation where the main actors, the banks, are being heavily regulated in a quite new way and thus are hugely unwilling to take on extra risk. Credit to SMEs would add to 'risk rating' and require extra tranches of both capital and liquidity, which are expensive. By contrast holding government bonds is deemed riskless which further adds to the demand for gilts.

This problem is now beginning to dawn on regulators worldwide (for the situation elsewhere is not much different). There are signs of a loosening of the regulative screw in consequence. Here we have the Funding for Lending Scheme. In the EU the Commission is reportedly cooling on ring-fencing banks. In Basel the Committee for Basel 3 is now putting back the timetable for the new requirements and loosening the liquidity regulations.

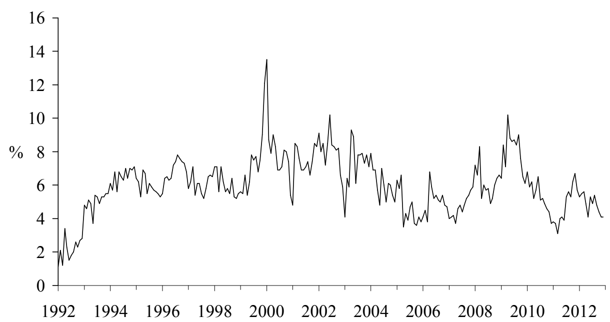
Unfortunately these changes are coming late and they are too small. The western world rushed into regulation in a panic without thinking about the massive social and economic cost of blocking the credit channel. Now it is hard to reverse engines and there is confusion as the old arguments need to be swallowed. Furthermore in the accompanying bail-out of the banks they created a cosy new bank cartel, with government having a big interest in increasing its profits so that they could sell their bank shares off at a good price. The scenario has helped governments with the costs of borrowing and the costs of the bail-out but has damaged growth and so probably been net damaging to the taxpayer. It is a mess created by bureaucratic reactions without thought for market consequences.

This situation overhangs the growth prospects. It seems that there are nevertheless some signs of better growth, with the eurozone crisis abating and the US housing market recovering. Nevertheless the West has scored an impressive own goal, and growth remains subpar; much remains to be done to repair its long term performance.

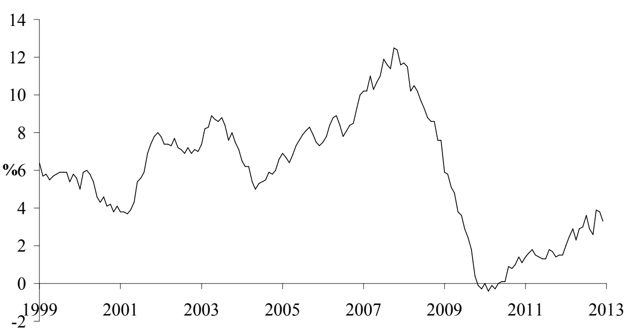
U.S.: Growth in Monetary Aggregates (Yr - on - Yr)



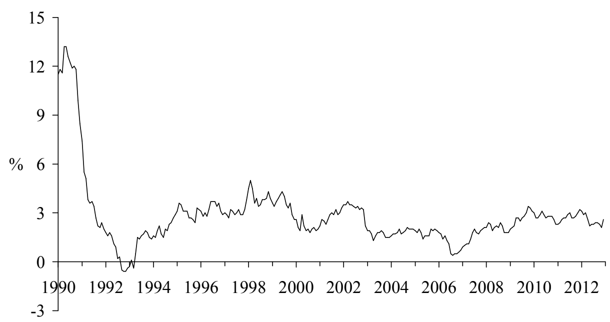
UK: Notes and Coins in Circulation Growth



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

The Liberal Democratic Party is back

For nearly the entire post World War II era, the Liberal Democratic Party (LDP) has ruled Japan, its blend of export-led economics and lavish public-works spending spawning both the nation's economic boom and then protracted financial contraction. Now, after a three-year interlude in which the Democratic Party of Japan (DPJ) betrayed its mandate to breathe fresh air into the country's stale politics, the conservative LDP has returned to power, with a decisive win in the general elections last month. The LDP captured 294 seats in the 480-seat lower house of parliament, with its minority partner, the New Komeito Party, picking up another 31 seats — prior to the election, the LDP held only 118 seats.

The LDP's hawkish party leader Shinzo Abe, who served for one year as Prime Minister before resigning in 2007, returned to the same post, to become Japan's seventh Prime Minister in less than seven years. Abe's previous term was distinguished by his miserable approval ratings and scandals among members of his Cabinet, leading to his sudden resignation in September 2007. But in the weird and wacky world of Japanese politics, such issues as competency do not seem to matter much. Abe has got a chance to redeem himself.

Looking at his policy statements, the odds do not look good. If Abe is a blast from the past, so are his economic policies. The agenda he has put forward during the campaign promises a return to the days of policies that have already proved unable to extricate Japan from 20 years of economic malaise. He offered no new or bold ideas for modernising the economy. The most encouraging sign is that Abe says he has learnt from his last spell in office. That time round, his energies were diverted by ministerial blunders and a needless controversy over Japan's wartime guilt. This time, he says, the priority is the economy, especially ending deflation. That is as it should be. Japan's economy remains moribund. It has recently fallen back into recession, for the fifth time in 15 years. Government debt is already the heaviest in the industrialized world — the IMF expects Japan's government debt to reach a dizzying 237% of GDP this year, compare that with 171% for Greece, and 107% for the US. Consumer prices are below where they were two decades ago, depressing consumption, confidence and corporate investment. A strong yen adds to the woes.

In his campaign, Abe called on the Bank of Japan (BOJ) to adopt a formal inflation target of 2% and to buy construction bonds directly from the government in unlimited quantities until it gets there. He might be right about the BOJ introducing a formal inflation target. Japan would be better off if its central bank were given a clearer, bolder goal, and politicians are the right people to set it. But he is wrong to want to meddle in how the BOJ achieves that goal. Financial markets will become alarmed if the BOJ starts to lose its independence. That could raise the cost of servicing Japan's huge national debt and undermine the central bank's credibility.

Behind his idea of having the central bank directly buy construction bonds from the government is the LDP's proposal of spending Y200 trillion for public works projects and other emergency stimulus spending over 10 years for the purpose of making the nation resilient to natural disasters. The measures are intended to revive the economy ahead of the elections in June, to give Abe's party a better chance of winning the upper house and, with it, control of Parliament. Abe will have to hurry to retain the support of Japan's weary voters, who have shown themselves quick to turn against leaders who fail to deliver on promises of change. "The most urgent issue is that he needs to show results or lose the election, and he is working on all kinds of things to spend and print money that could produce results in the short-term", said Martin Schulz, senior economist at Fujitsu Research Institute.

Will any of these ideas work? Perhaps Abe can give the economy a short-term jolt. But history tells us that this archaic slate of policies will not cure what ails Japan. The LDP has tried again and again to repair the economy through construction spending, while the BOJ has repeatedly engaged in easy money strategies. None of this has worked and there is no reason to believe Abe's strategy will succeed this time around.

To solve the economic problem Japan is facing, appropriate government action combined with proper monetary policy by the central bank should be associated with structural reform. That would include reducing bureaucratic meddling in the economy, deregulating domestic markets to boost efficiency and bring down costs, encouraging entrepreneurship, and integrating more with a rapidly growing Asia. Will the LDP pursue any of these more fundamental reforms? Signs of appetite for deregulation and structural reform now are few. Though Abe has made some positive noises about joining the negotiations to form the Trans-Pacific Partnership (TPP), a US-backed free-trade agreement, the LDP platform rejects the idea — a Kyodo news agency survey showed that more than 84% of the LDP parliamentary party opposed Japan joining the TPP. "If you look at the seats (in parliament), 40% are urban and 60% are non-urban. Are we really going forward with TPP or economic reform? That's not so easy", said Robert Feldman, chief economist at Morgan Stanley MUFG Securities in Tokyo. "The question is whether Abe will have the fortitude and guts and energy and bull-headedness to push through (reforms)". Even more, his cash-pumping strategy would likely reduce the pressure, at least in the short term, to push through politically difficult market-opening measures. In other words, it seems that the last election will not bring much change on the economic front. Japan will muddle on.

MARKET DEVELOPMENTS

Because regulation is now being seen more widely as the problem, there will be gradual loosening. QE is likely to stop once this occurs and so gilt prices are likely to fall. Holding gilts looks especially risky. A further risk is inflation if QE is not withdrawn fast enough. Equities look less vulnerable.

Table 1: Market Developments

	Market Levels		Prediction for Jan/Feb 2014	
	Jan 2	**Jan 31**	**Previous Letter**	**Current View**
Share Indices				
UK (FT 100)	6027	6277	8758	8876
US (S&P 500)	1462	1498	1660	1685
Germany (DAX 30)	7779	7776	9661	9658
Japan (Tokyo New)	860	940	1003	1078
Bond Yields (government long-term)				
UK	2.00	2.11	2.10	1.80
US	1.84	1.98	4.00	4.00
Germany	1.45	1.69	4.00	4.00
Japan	0.79	0.75	1.50	1.50
UK Index Linked	–0.02	–0.28	–0.40	–0.40
Exchange Rates				
UK ($ per £)	1.63	1.59	1.58	1.58
UK (trade weighted)	83.9	80.9	81.3	83.1
US (trade weighted)	81.5	82.5	80.5	80.5
Euro per $	0.76	0.74	0.79	0.79
Euro per £	1.23	1.17	1.25	1.25
Japan (Yen per $)	87.2	91.3	81.0	81.0
Short Term Interest Rates (3-month deposits)				
UK	0.58	0.59	1.40	1.30
US	0.38	0.37	0.60	0.60
Euro	0.13	0.18	2.50	2.50
Japan	0.15	0.13	0.40	0.40

Table 2: Prospective Yields[1]

Equities: Contribution to £ yield of:

	Dividend Yield	Real Growth	Inflation	Changing Dividend Yield	Currency	Total
UK	3.40	1.8	2.6	37.00		44.80
US	2.00	2.5	2.0	8.00	0.38	14.88
Germany	3.10	1.5	1.7	21.00	–6.79	20.51
Japan	2.00	1.7	0.0	13.00	11.62	28.32
UK indexed[2]	–0.28		2.2	–8.00		–5.68
Hong Kong[3]	2.20	7.5	2.0	–6.00	0.38	6.08
Malaysia	3.10	4.5	2.0	32.00	0.38	41.98
Singapore	3.30	2.9	2.0	4.00	0.38	12.58
India	1.40	6.5	2.0	2.00	0.38	12.28
Korea	1.10	3.5	2.0	–21.00	0.38	–14.02
Indonesia	2.20	6.4	2.0	30.00	0.38	40.98
Taiwan	3.40	3.2	2.0	20.00	0.38	28.98
Thailand	2.70	4.2	2.0	20.00	0.38	29.28

Bonds: Contribution to £ yield of:

	Redemption Yield	Changing Nominal Rates	Currency	Total
UK	2.11	3.10		5.21
US	1.98	–20.20	0.38	–17.84
Germany	1.69	–23.10	–6.79	–28.20
Japan	0.75	–7.50	11.62	4.87

Deposits: Contribution to £ yield of:

	Deposit Yield	Currency	Total
UK	0.59		0.59
US	0.37	0.38	0.75
Euro	0.18	–6.79	–6.61
Japan	0.13	11.62	11.75

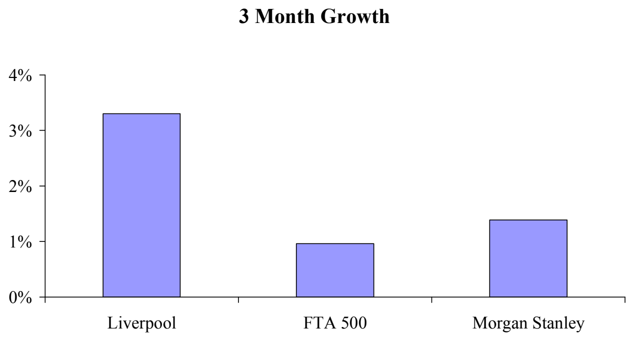
[1] Yields in terms of €s or $s can be computed by adjusting the £-based yields for the expected currency change.
[2] UK index linked bonds All Stocks
[3] Output based on China.

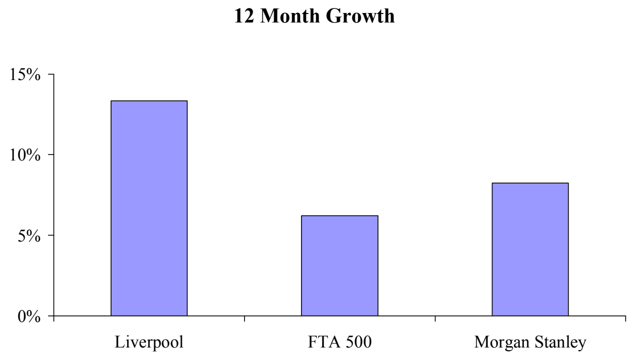
Table 3: Portfolio(%)

	Sterling Based Investor		Dollar Based Investor		Euro Based Investor	
	January Letter	**Current View**	**January Letter**	**Current View**	**January 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)	-	-	-	-	-	-

PORTFOLIO PERFORMANCE

The charts below, and the Table opposite, measure the performance of the Liverpool Model Portfolio against the FTA Non-financials share index, and the Morgan Stanley World Capital International index, over the period from June 1992 to end-January 2013.





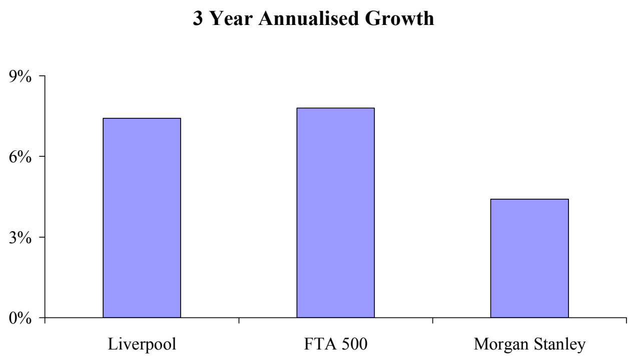


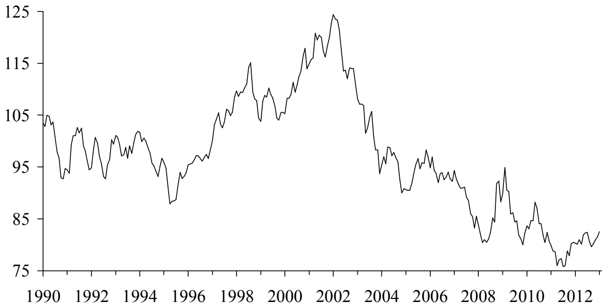
Table 4: Liverpool Portfolio Evaluation (End-June 1992 = 100)

Date	Index of Liverpool Portfolio	FTA Non Financials Index Total Return	Morgan Stanley World Capital International Index Total Return
2007			
1st Jan	331.94	361.22	382.93
Apr	343.65	376.53	389.99
Jul	364.54	403.07	403.44
Oct	378.18	401.46	405.04
2008			
1st Jan	394.93	411.25	403.19
Apr	387.93	367.01	365.34
Jul	386.86	381.90	355.90
Oct	399.43	324.99	335.11
2009			
1st Jan	437.80	314.73	323.33
Apr	423.18	294.99	283.79
Jul	440.33	315.62	295.72
Oct	506.73	375.37	355.96
2010			
1st Jan	525.13	408.79	365.52
Apr	562.49	436.43	399.80
Jul	530.11	382.77	351.60
Oct	570.59	435.61	378.02
2011			
1st Jan	618.84	476.51	413.02
Apr	619.56	481.43	420.69
Jul	629.42	494.36	418.86
Oct	546.47	437.69	358.02
2012			
1st Jan	574.29	482.11	384.40
Apr	628.86	495.88	414.96
Jul	603.72	480.40	398.13
Oct	630.11	507.18	410.42
Nov	630.10	507.13	408.24
Dec	642.36	510.35	414.79
2013			
1st Jan	652.78	512.06	416.11

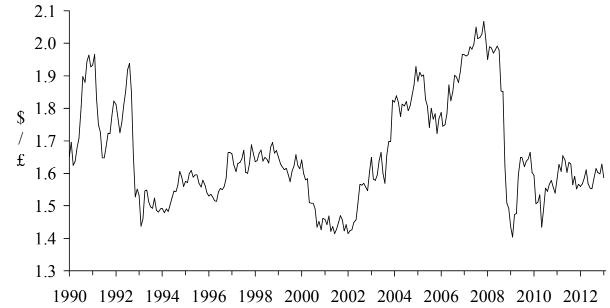
Source: Rensburg Sheppards Investment Management Limited, Liverpool Stock Exchange

INDICATORS AND MARKET ANALYSIS
FOREIGN EXCHANGE MARKETS

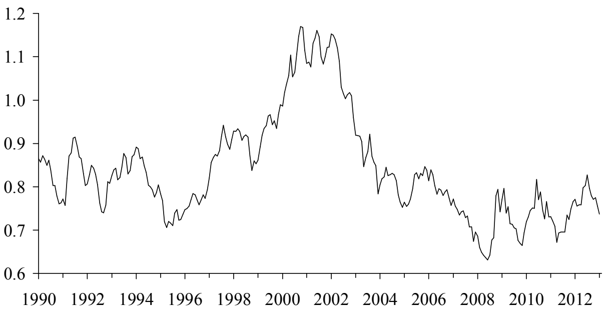
US : Trade Weighted Index
(Bank of England 1990 = 100)



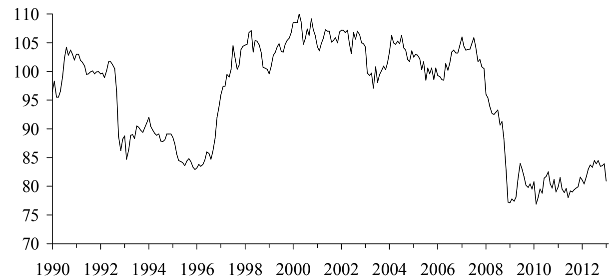
UK: Dollars Per Pound Sterling



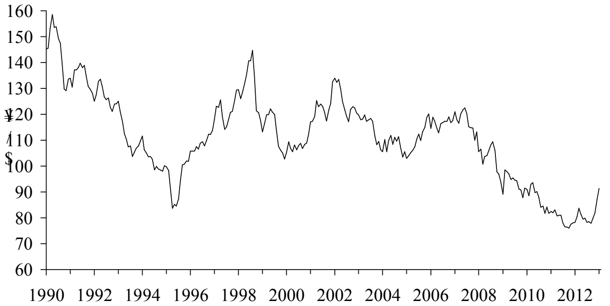
Euro per US dollar



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

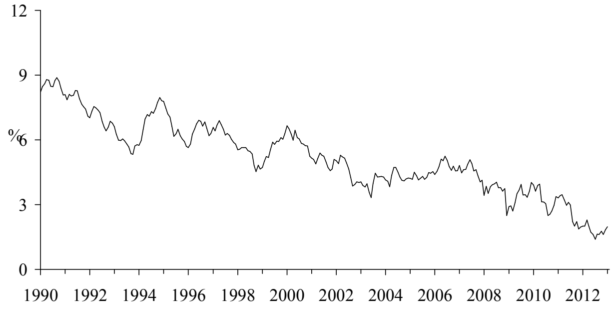


Japan : Yen Per U.S. Dollar

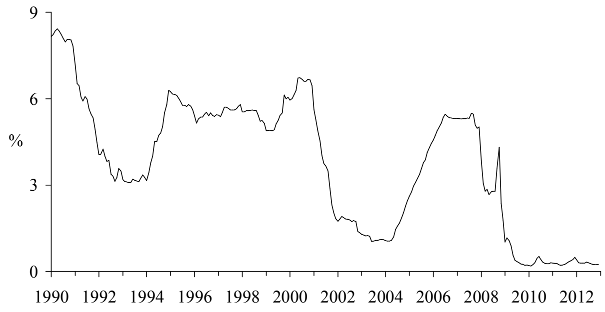


GOVERNMENT BOND MARKETS

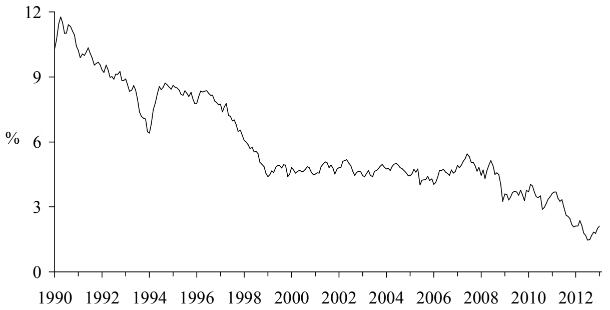
U.S.: Yield on Long-Term Government Bonds



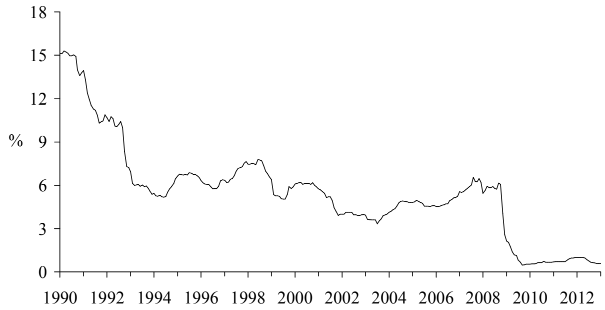
U.S. : 3-Month Certificate of Deposit



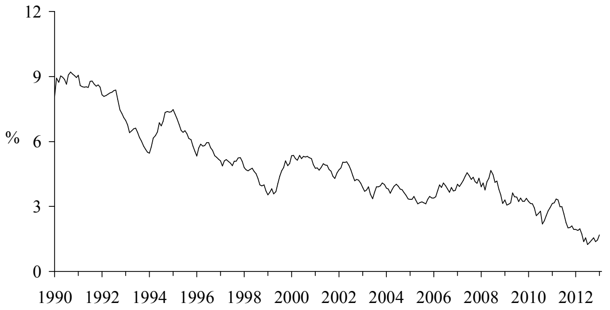
U.K. : Yield on Long-Term Government Bonds



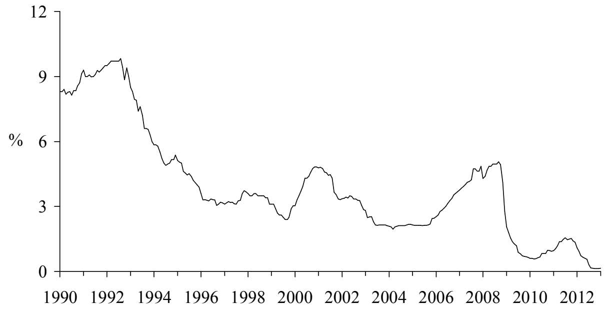
U.K. : 3-Month Interbank Rate



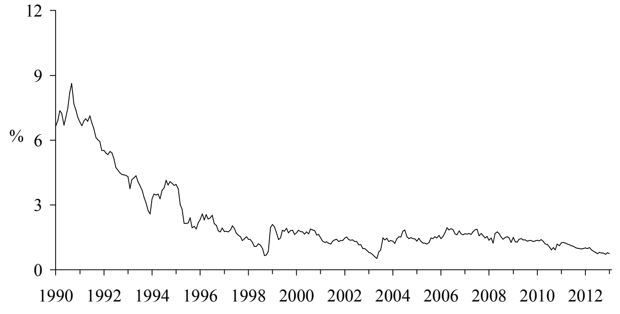
Germany: Yield on Public Authority Bonds



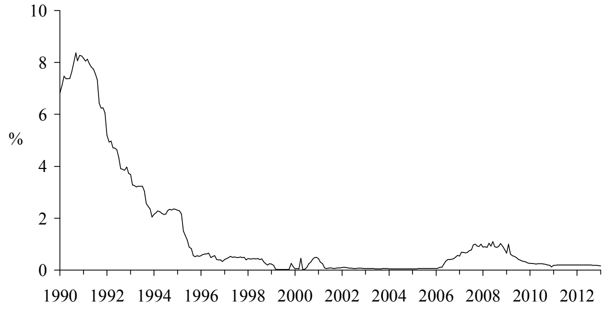
Germany : 3-Month Interbank Deposit Rate



Japan: Yield on Long-Term Government Bonds

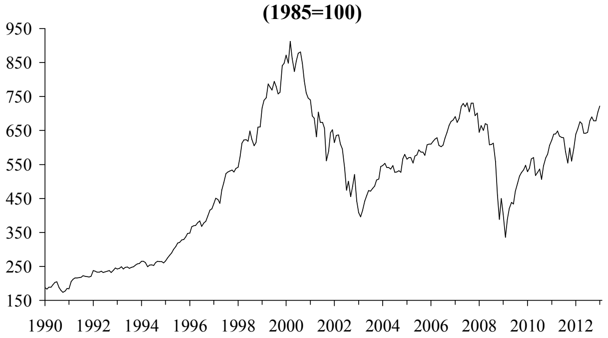


Japan : 3 Month Money Market Rate

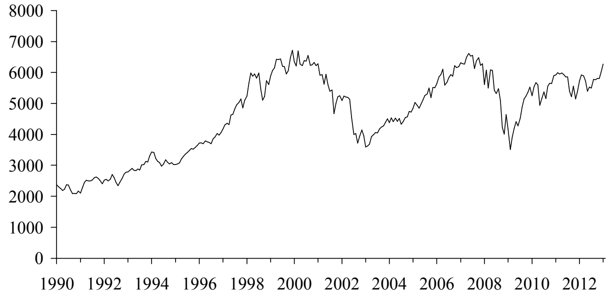


MAJOR EQUITY MARKETS

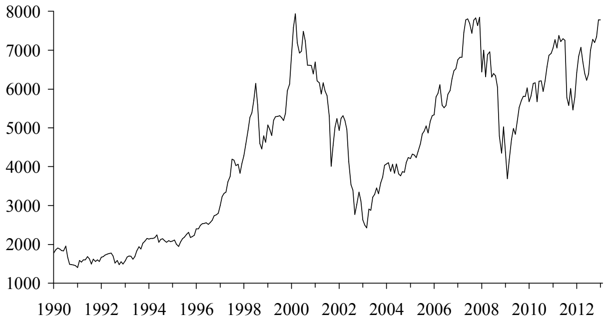
U.S. : S & P 400 Industrial
(1985=100)



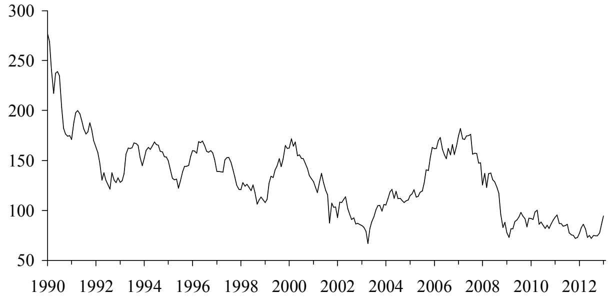
U.K. : FTSE-100 Index
(10 April 1962=100)



Germany : DAX 30



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



EMERGING MARKETS

Anupam Rastogi

India

The GDP growth in output for this financial year, which ends in March 2013, will be at the slowest pace in 10 years at 5.3%. The Indian government and the central bank have taken note of this and are trying to reverse the trend.

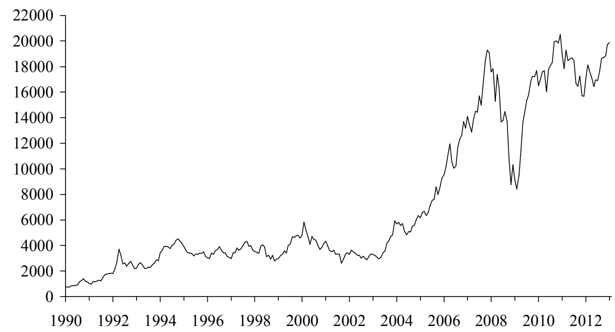
Wholesale price inflation is likely to ease to 6.8% by the end of the fiscal year, according to the central bank, compared with its earlier forecast of 7.5% in 2011–12. However, in December India's consumer price index rose 10.56% from a year earlier, compared with a 9.90% increase in November. This was largely because of rising food prices.

The central bank has cut its key lending rate by a quarter of a percentage point to 7.75% and lowered banks' minimum cash deposit requirement to 4%, a near 40-year low now. According to the central bank the moderation in inflation "provides the opportunity for monetary policy to act in conjunction with fiscal and other measures to stem the growth risks". There is a fighting chance that the central bank will be ready to cut rates more in its March meeting. The bank has raised the limit of investment in government securities (G-Secs) by foreign institutional investors (FIIs) and long-term investors by $5 billion, from $20 billion to $25 billion. It also hiked the investment limit in corporate bonds by these entities by $5 billion to $50 billion from $45 billion. This is essentially to reduce the current account deficit in the current fiscal year.

Further, in order to signal an investor friendly environment, the government has delayed the introduction of controversial tax avoidance laws from April 2014 until April 2016. The government has confirmed that the new rules would not apply to investments made before August 2010, relieving concerns that the rules could allow India's tax authorities to reopen historic tax claims.

In an unusual way, finance minister Palaniappan Chidambaram will meet investors in Hong Kong, Singapore, Germany and the U.K. "to sell the India story". The government rolled out a series of policy initiatives that sought to restore confidence in the government's ability to rein in the fiscal slippage. The measures included an increase in rail fares after a gap of 10 years and the decontrol of diesel prices. The majority of its fiscal slippages have been on account of rising subsidies, which have considerably strained resources for more productive spending. Chidambaram expects that the economy will grow at 6.5–7% in the next fiscal year and it will bounce back to around 8% growth in 2014–15. He has hinted that banking reforms are coming.

India: BSE Sensitive



The country's current account deficit widened 5.4% of gross domestic product, which has been of concern to the rating agencies. Moody maintains its sovereign rating at Baa3 — the lowest investment-grade rating — with a Stable outlook whereas other rating agencies have negative outlook on India.

India's Sensex has rallied by 20% in the past year and is now at its highest level in the last two years. Foreign institutional investors have piled $25 billion into the market over the past 12 months. There is a hype around Palaniappan Chidambaram's charm offensive to persuade investors that India is serious about reform and fiscal consolidation. In historical terms it is just catching up with the S&P 500 and the Hang Seng index.

	10–11	**11–12**	**12–13**	**13–14**	**14–15**
GDP (%p.a.)	7.5	6.2	5.3	6.5	6.5
WPI (%p.a.)	9.0	7.5	7.0	6.8	6.0
Current A/c(US$ bill.)	–31.0	–40.0	–80.0	–60.0	–60.0
Rs./$(nom.)	49.0	49.5	54.5	55.0	54.0

China

China's GDP rose 7.9% from a year earlier in the fourth quarter, compared to 7.4% expansion in the third quarter of 2012. For the past year as a whole Chinese growth was 7.8%, its slowest in more than a decade, dragged down by global woes and a domestic campaign to deflate a property bubble. China's gross domestic product may grow above 8% in 2013.

Inflation is the main concern in China's economy in 2013. It could average around 3.5% for the year, which is considerably higher than a 2.6% increase in prices in 2012. In December, Chinese inflation accelerated as cold weather led to a spike in vegetable prices. Consumer prices rose 2.5% in December from a year earlier, up from a 2.0% pace in November. The main contributor to inflation was the cost of food. We may see prices artificially low this January and artificially high in February due to the Lunar year celebrations in February.

There are tentative signs that the Chinese economy is rebalancing itself. Urban disposable income rose 12.6% for the year, outpacing the 9.8% growth in nominal GDP. Incomes must grow faster than the economy as a whole if consumption is to play a stronger role in driving growth. Further, China reported that its working-age population shrank for the first time ever in 2012. The number of Chinese people aged between 15 and 59 fell 3.45m to 937.37m. The main reason for the decrease was China's population control policies. However, the number of employed people continued to increase, partly as a result of rural residents moving to cities. These two long-term trends are of vital importance to China's future.

China wants to shift its energy mix to natural gas from coal and by 2020, 10% of total energy consumption coming from gas compared to 4% in 2010. Production of natural gas is picking up. Natural-gas output jumped 6.7% in 2012 from a year earlier. But to meet its goals, China will have to bring unconventional shale-gas production online. The government is targeting up to 3.5 trillion cubic feet of annual shale-gas production by the end of the decade, up from close to nothing today. That is closing in on the level of production in the U.S. Recent, concessions given to private developers, however, smell more of a land grab than an effective policy to open up acreage. China's technically recoverable shale-gas resources are 1,275 trillion cubic feet but most of the acreage is in inhospitable terrain.

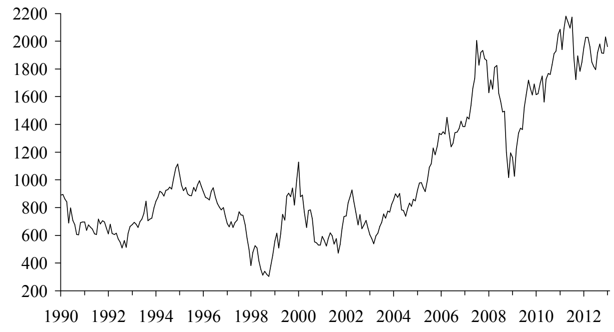
China's yuan is steady at around 6.22 to the US dollar and there is potential for around 2% yuan appreciation against the dollar in 2013 and again in 2014. This is more to do with the U.S. monetary base expanding over the next two years.

Foreign direct investment into China fell in 2012 for the first time since 2009 as the Chinese economy expanded at its slowest pace in 13 years and rising labour costs made other investment destinations more attractive. Total FDI into the country was $111.7 billion last year, 3.7% lower than 2011. On the other hand, outbound Chinese direct investment jumped 28.6% from a year earlier to a record $77.2 billion.

A mini-wave of China-based issuers have gone to market in Germany, where Deutsche Börse has welcomed them with Frankfurt's lower listing fees, easier qualification requirements and a faster IPO process.

	10	11	12	13	14
GDP (%p.a.)	10.3	9.2	7.8	8.0	7.5
Inflation (%p.a.)	5.9	4.3	2.6	3.5	3.0
Trade Balance(US$ bill.)	183	155	140	130	120
Rmb/$(nom.)	6.6	6.3	6.3	6.2	6.1

Korea: Composite Index



South Korea

Gross domestic product in fourth quarter of 2012 was just 1.5% higher than a year earlier, giving rise to full-year growth to 2%. In 2011, South Korean GDP grew 3.6%.

South Korea's economy is more exposed to global demand as exports contribute more than half of GDP. Exports fell in 2012 for the first time in three years as growth weakened in China, the country's largest export destination, and as the European debt crisis undercut the global economy. The Seoul government would run a fiscal deficit of 0.3% of the gross domestic product in 2013 to help boost the country's economy. The government expects the economy to grow 3.8% in 2013. Monetary easing, carried out last year, will boost the economy this year, lifting private sector investment and perhaps arrest falling prices of residential property market.

The government has already "front-loaded" the 2013 budget, with more spending in the first half of the year intended to give an early boost to the economy. Park Geun-hye, the incoming president, is likely to introduce a stimulus package soon after taking office. She plans to increase social spending by about $25 billion a year while avoiding tax rises. Fiscal stimulus is more of an imperative for the South Korean economy because South Korean leaders are trying to find ways to prevent the country's low birth rate from stalling its economic rise. South Korea's strict immigration laws have exacerbated the effect of its exceptionally low birth rate of about 1.2 children per woman. Families do not want to have children due to the high cost of childcare and after-school tuition.

Park Geun-hye, who will take office on February 25, has promised to expand state childcare provision and slash university tuition fees: both moves that could boost birth rates by lowering the cost of child rearing. She has promised to provide a clean administration but it is turning out to be difficult as her nominee for the PM post Kim Yong-joon, a 74-year-old former judge, stepped down amid shady deals over decades-old property transactions.

Investment in the economy also may rise in the coming year as companies had held back their investment plans because Ms Park's liberal opponents campaigned on promises of a stern crackdown on big businesses. Ms Park, on the other hand, is seen as a relatively business-friendly president, which could stimulate broader economic growth.

The central bank expects the inflation rate to be 2.5% in 2013 and expects consumer inflation to accelerate to 2.8% in 2014. The Bank of Korea left the base rate unchanged at 2.75% at its first review of the year, following two rate cuts last year, in July and October.

South Korea's exports rose 4% year on year but declined 1.2% from the previous quarter. The exports have been impacted by the rise of the South Korean won, which has appreciated by 10% against the dollar since late May last year. South Korea announced a package of measures to help smaller businesses hit by a surge in the Korean won, which has appreciated over 26% in the local currency against the Japanese yen. The measures include offers of state funds and lower interest rates on loans to small companies which export auto parts and other ancillary products.

	10	11	12	13	14
GDP (%p.a.)	6.3	3.6	2.0	3.0	3.5
Inflation (%p.a.)	2.9	4.0	2.2	2.5	2.8
Current A/c(US$ bill.)	28.2	27.0	44.0	28.0	28.0
Won/$(nom.)	1150	1100	1100	1100	1050

Taiwan

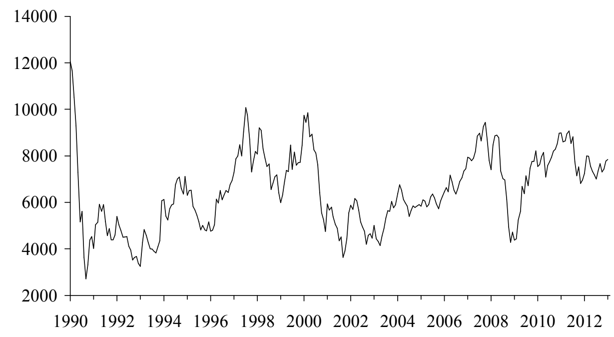
Taiwan's GDP grew by 3.4% year-on-year in the fourth quarter of 2012, which shall bring full-year growth to 1.25% in 2012. As the Chinese economy is looking up, Taiwan's economy may grow more than 3% in 2013. According to the Council for Economic Planning and Development (CEPD) Taiwan's economy is showing a green signal representing stability. The economic leading indicator stood at 134.7 in December, a rise of 0.9% from November according to the CEPD report. The leading indicator has improved consistently in the last five months.

Taiwan's consumer prices rose 1.61% from a year earlier in December. Consumer price inflation may rise to 1.5% in 2013.

In line with the leading indicators, Taiwan's export orders climbed for a fourth month in December, signalling stronger demand from the U.S. and China. The Taiwan dollar gained more than 4% in 2012 against its U.S. dollar. This may not hurt exports in the coming months.

Taiwan and China have formally established a direct yuan-clearing system between them, marking another step in China's internationalization of its currency and increasing economic ties between them. Taiwan is the third place with such a clearing arrangement with China, after Hong Kong and Macau, and further its goal of becoming an offshore yuan trading hub.

Taiwan: Weighted TAIEX Price Index



Taiwan's and China's central banks signed an agreement that will permit direct settlement of yuan payments between China and Taiwan, without first converting their currencies into U.S. dollars, which is the current practice.

Taiwanese banks and exporters have welcomed a direct clearing system because it is likely to result in increased trade across the Taiwan Strait and greater use of the yuan on the island.

	10	11	12	13	14
GDP (%p.a.)	10.8	4.0	1.3	3.0	3.2
Inflation (%p.a.)	1.3	1.2	1.6	1.5	1.5
Current A/c(US$ bill.)	16.0	18.0	20.0	22.0	23.0
NT$/$(nom.)	31.0	30.0	29.5	29.5	29.0

Brazil

Brazil's economy posted GDP growth of 1.1% in 2012 compared to 2.7% in 2011 and a robust rate of 7.5% in 2010. Government is ready for a fiscal stimulus which may push economic growth in 2013 to 3.6%. The government is considering a reduction in Brazil's primary budget surplus for a broader economic recovery. At present the government's targeted primary fiscal surplus (before debt repayments), is set at 3.1% of GDP.

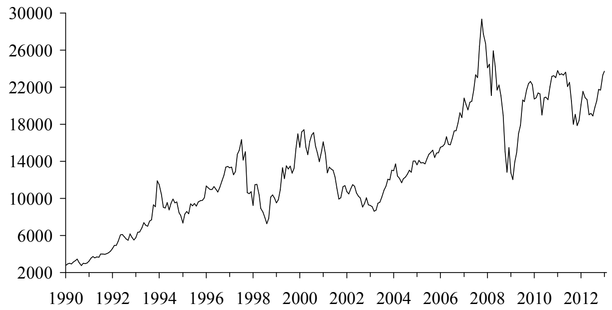
Consumer price inflation was 5.84% in 2012, well above the government's target of 4.5%. There is little chance that inflation would moderate in 2013. The government uses the currency as a tool for controlling inflation. Brazil's currency is hovering between BRL2.02 and BRL2.05 in recent weeks, the market is virtually regulating itself as it believes that this exchange rate is acceptable to the government. If inflation remains stubbornly above 6% in 2013, the benchmark Selic rate may be raised to 8.25%. At present, Brazil's Selic base interest rate stands at a historic low of 7.25%.

The country's exports declined 5% and imports fell only 1% due to strong currency in 2012. Investment in the economy has fallen to 20% and the country is looking for growth drivers to bring back economic growth rate of over 5% a year in medium term.

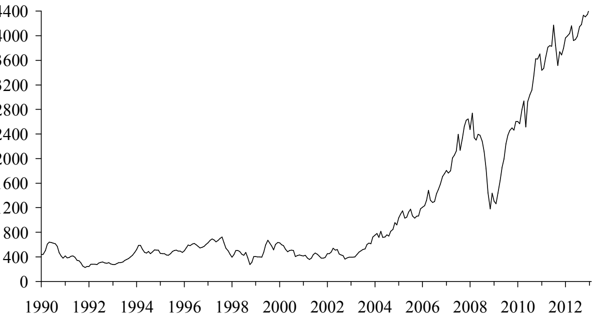
	10	**11**	**12**	**13**	**14**
GDP (%p.a.)	7.5	2.7	1.1	3.6	3.5
Inflation (%p.a.)	5.9	6.5	5.8	5.5	5.4
Current A/c(US$ bill.)	−47.3	−52.6	−60.0	−65.0	−60.0
Real/$(nom.)	1.7	1.5	2.0	2.0	2.0

Other Emerging Markets

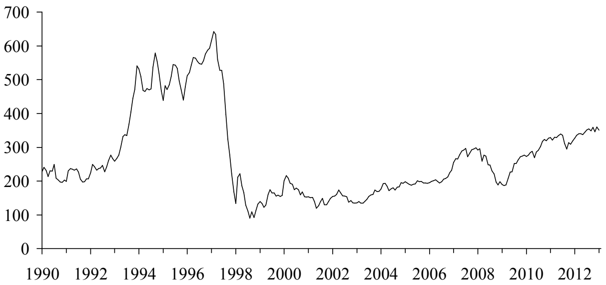
Hong Kong: FT-Actuaries



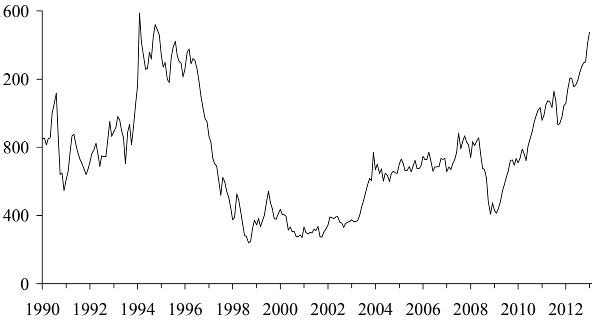
Indonesia: Jakarta Composite



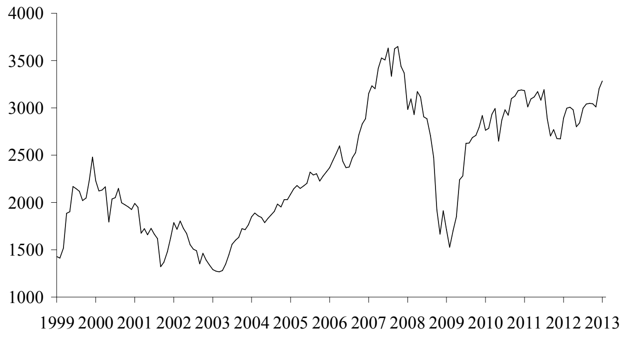
Malaysia: FT-Actuaries (US$ Index)



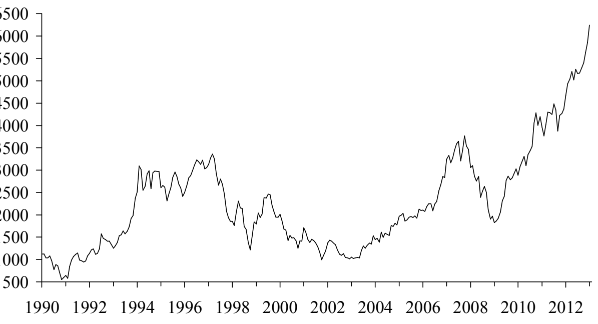
Thailand: Composite Index



Singapore: Straits Times Index

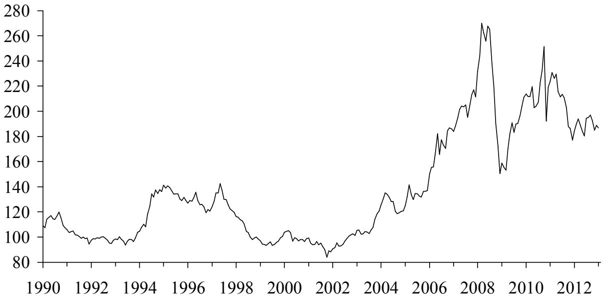


Philippines: Manila Composite

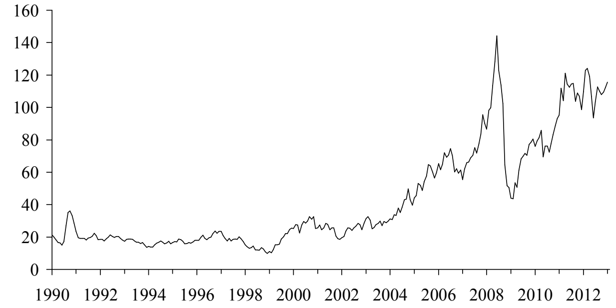


COMMODITY MARKETS

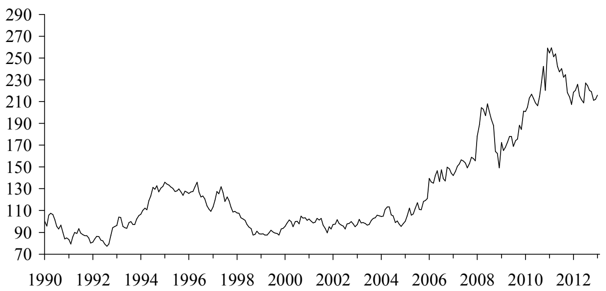
Commodity Price Index (Dollar)
(Economist, 2000=100)



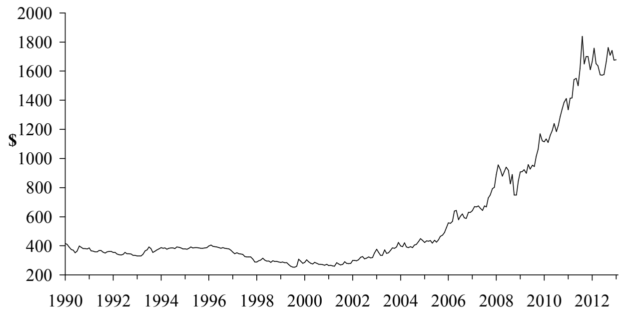
Oil Price: North Sea Brent (in Dollars)



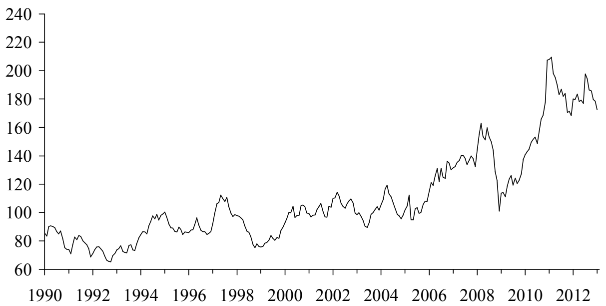
Commodity Price Index (Sterling)
(Economist, 2000=100)



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]
2010	3.7	2.4	0.7	80.4	87.9	-3.6	4.8	-0.2
2011	4.7	2.0	0.9	80.0	89.7	-3.1	5.3	-0.2
2012	2.8	0.9	0.9	83.0	94.0	-1.9	3.3	-1.3
2013	2.8	1.3	0.9	83.5	95.7	-1.6	3.3	-0.8
2014	2.6	1.8	1.7	82.7	95.5	-0.5	3.1	-0.3
2015	2.2	2.1	2.1	82.1	95.5	0.1	2.8	0.0
2012:1	2.7	1.1	1.1	81.2	91.4	-2.0	3.8	-1.1
2012:2	3.1	0.9	1.1	83.2	94.3	-1.6	3.2	-1.2
2012:3	2.7	0.7	0.8	84.1	95.3	-2.0	2.9	-1.4
2012:4	2.8	0.8	0.6	83.6	95.2	-2.0	3.3	-1.4
2013:1	2.9	1.0	0.8	83.7	95.5	-1.8	3.4	-1.2
2013:2	2.8	1.3	0.9	83.2	95.4	-1.6	3.3	-0.8
2013:3	2.8	1.5	0.9	83.7	96.0	-1.6	3.3	-0.6
2013:4	2.7	1.5	1.1	83.3	95.8	-1.3	3.2	-0.6
2014:1	2.6	1.8	1.3	83.1	95.8	-1.1	3.2	-0.3
2014:2	2.5	1.8	1.7	82.3	95.2	-0.6	3.1	-0.2
2014:3	2.6	1.7	1.8	82.4	95.2	-0.3	3.1	-0.3
2014:4	2.5	1.8	1.9	82.7	95.8	-0.2	3.0	-0.2

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)
2010	227.1	2.4	4.6	1.50	136.7
2011	232.7	2.6	4.6	1.53	133.7
2012	236.9	1.8	4.7	1.58	132.4
2013	242.0	2.2	4.4	1.49	131.6
2014	248.9	2.8	4.0	1.37	131.9
2015	257.0	3.3	3.7	1.26	133.3
2012:1	234.7	0.7	4.8	1.61	132.7
2012:2	235.8	1.8	4.8	1.60	132.0
2012:3	237.4	1.9	4.7	1.58	132.4
2012:4	239.6	2.9	4.6	1.56	132.4
2013:1	240.4	2.4	4.6	1.54	132.1
2013:2	242.0	2.6	4.5	1.51	131.7
2013:3	242.2	2.0	4.4	1.48	131.4
2013:4	243.6	1.6	4.3	1.45	131.0
2014:1	245.5	2.1	4.2	1.42	131.4
2014:2	248.1	2.5	4.1	1.39	131.7
2014:3	249.7	3.1	4.0	1.36	132.1
2014:4	252.1	3.5	3.9	1.33	132.4

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
2010	145.1	694701.4	411042.6	234029.9	182002.2	-34548.2	97825.1
2011	146.4	701060.5	402885.3	243646.3	177479.4	-23548.2	99402.3
2012	146.5	701719.7	401183.5	249576.1	183170.0	-31081.5	101129.7
2013	148.7	712270.2	404503.8	255592.0	187385.7	-31240.0	103971.4
2014	151.8	726827.7	411964.1	261350.6	191244.9	-31189.9	106537.5
2015	155.4	744363.4	421121.2	267868.0	195837.6	-31120.2	109344.0
2010/09	1.8		0.5	7.6	0.5		0.8
2011/10	0.9		-2.0	4.1	-2.5		1.8
2012/11	0.1		-0.4	2.5	3.2		1.9
2013/12	1.5		0.8	2.4	2.3		3.2
2014/13	2.0		1.8	2.3	2.1		2.5
2015/14	2.4		2.2	2.5	2.4		2.6
2012:1	146.2	175013.2	100300.2	59839.5	47225.9	-6742.4	25610.0
2012:2	145.6	174362.8	100083.3	61272.9	44458.8	-8868.5	22583.7
2012:3	147.0	176010.2	100053.3	64467.5	45567.2	-7659.5	26418.3
2012:4	147.3	176333.5	100746.7	63996.2	45918.1	-7811.1	26517.8
2013:1	147.9	177029.8	100900.2	61159.6	48592.6	-7807.4	25814.7
2013:2	148.4	177664.5	101049.5	64387.0	45700.5	-7814.6	25658.4
2013:3	149.0	178426.4	101202.4	64777.0	46404.9	-7811.4	26147.4
2013:4	149.6	179149.4	101351.7	65268.4	46687.6	-7806.7	26350.8
2014:1	150.5	180168.3	102004.1	62894.2	49472.8	-7807.8	26397.0
2014:2	151.3	181177.2	102658.7	66223.1	46613.4	-7802.0	26513.8
2014:3	152.2	182248.0	103319.1	66062.4	47385.6	-7791.4	26725.9
2014:4	153.1	183234.3	103982.2	66171.0	47773.1	-7788.7	26900.8

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)
2010	8.7	1336.3	115.1	36.4	-37.3
2011	6.7	1406.4	94.2	42.9	-20.4
2012	6.5	1451.6	95.4	47.0	-51.9
2013	6.5	1519.3	98.2	50.6	-52.2
2014	5.3	1592.8	84.7	55.8	-52.8
2015	4.3	1666.2	72.2	59.0	-53.0
2012:1	4.6	355.1	16.3	11.5	-11.8
2012:2	1.7	351.8	6.0	11.3	-17.4
2012:3	6.2	363.1	22.7	11.8	-12.8
2012:4	9.9	367.2	36.5	11.8	-9.8
2013:1	8.2	369.5	30.2	12.0	-13.9
2013:2	6.2	373.6	23.1	12.3	-15.5
2013:3	5.9	377.2	22.1	12.4	-13.1
2013:4	5.9	382.1	22.7	12.8	-9.8
2014:1	7.8	386.3	30.3	13.1	-14.0
2014:2	5.4	391.4	21.0	13.6	-15.7
2014:3	5.6	395.4	22.1	13.8	-13.2
2014:4	5.6	400.4	22.5	14.0	-9.8

1 GDP at market prices (Financial Year)

WORLD FORECAST DETAIL

Growth Of Real GNP

	2008	2009	2010	2011	2012	2013
U.S.A.	0.0	–2.6	2.6	1.7	2.5	2.6
U.K.	–0.9	–3.9	1.8	0.9	0.1	1.5
Japan	–1.2	–6.3	4.3	–0.7	2.1	1.6
Germany	1.0	–4.7	3.6	3.0	1.1	2.0
France	0.1	–2.5	1.5	1.7	1.0	1.2
Italy	–1.3	–5.1	0.9	0.5	0.1	0.3

Growth Of Consumer Prices

	2008	2009	2010	2011	2012	2013
U.S.A.	3.8	–0.3	1.8	3.1	2.0	2.0
U.K.	3.3	1.3	3.7	4.7	2.8	2.8
Japan	1.4	–1.4	–1.0	–0.3	–0.2	0.0
Germany	2.6	0.4	1.1	2.3	1.8	1.7
France	2.8	0.1	1.5	2.1	1.6	1.6
Italy	3.4	0.8	1.5	2.8	2.7	2.8

Real Short-Term Interest Rates

	2008	2009	2010	2011	2012	2013
U.S.A.	1.8	–1.6	–1.8	–1.7	–1.5	–1.3
U.K.	2.3	–0.3	–3.6	–3.1	–1.9	–1.6
Japan	1.8	1.1	0.5	0.4	0.4	0.4
Germany	3.5	–0.4	–1.3	–0.3	0.8	0.5
France	3.8	–0.8	–1.4	–0.3	0.9	0.5
Italy	3.1	–0.8	–1.4	–0.3	–0.3	0.0

Nominal Short-Term Interest Rates

	2008	2009	2010	2011	2012	2013
U.S.A.	1.5	0.2	0.1	0.3	0.5	0.7
U.K.	5.5	1.1	0.7	0.9	0.9	0.9
Japan	0.4	0.1	0.1	0.4	0.4	0.4
Germany	3.9	0.7	0.4	1.5	2.5	2.5
France	3.9	0.7	0.4	1.5	2.5	2.5
Italy	3.9	0.7	0.4	1.5	2.5	2.5

Real Long-Term Interest Rates

	2008	2009	2010	2011	2012	2013
U.S.A.	2.2	1.3	1.1	1.2	2.0	2.0
U.K.	1.3	–0.3	–0.2	–0.2	–1.3	–0.8
Japan	2.0	1.4	1.1	1.1	1.3	1.5
Germany	3.0	2.3	1.9	1.8	2.0	2.0
France	3.0	2.2	1.9	1.8	2.0	2.0
Italy	2.8	2.2	1.9	1.8	2.0	2.2

Nominal Long-Term Interest Rates

	2008	2009	2010	2011	2012	2013
U.S.A.	3.7	3.2	3.1	3.2	4.0	4.0
U.K.	4.3	2.8	2.4	2.0	0.9	1.3
Japan	1.5	1.3	1.1	1.2	1.5	1.5
Germany	4.4	4.0	3.8	3.8	4.0	4.0
France	4.4	4.0	3.8	3.8	4.0	4.0
Italy	4.4	4.0	3.8	3.8	4.0	4.0

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

	2008	2009	2010	2011	2012	2013
U.S.A.	80.1	88.7	81.7	81.8	82.0	82.1
U.K.	87.6	76.7	78.9	80.5	84.4	85.9
Japan	87.9	89.0	80.2	79.8	79.7	80.0
Germany	105.1	105.8	99.3	99.0	99.1	99.0
France	106.4	104.3	101.7	102.0	102.0	102.1
Italy	106.6	105.4	100.5	100.8	101.0	101.1

[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
(Number of Units of Local Currency To $1)

	2008	2009	2010	2011	2012	2013
U.S.A.[1]	86.07	85.98	83.73	78.08	80.20	80.50
U.K.	1.85	1.57	1.55	1.61	1.58	1.58
Japan	103.40	93.54	87.48	79.36	81.00	81.00
Eurozone	0.68	0.72	0.75	0.72	0.78	0.79

[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