LIVERPOOL INVESTMENT LETTER

March 2019

Cardiff Business School
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Julian Hodge Institute of Applied Macroeconomics

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LIVERPOOL RESEARCH GROUP IN MACROECONOMICS

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

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 published on behalf of the group by Liverpool Macroeconomic Research Limited, which holds the copyright

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THE PUBLIC FINANCES AND THE LABOUR MARKET TELL THE MOST RELIABLE STORY

Great attention is lavished on the early estimates of GDP when they come out. Yet they are notoriously inaccurate. When ten years later all the data are in, they can be revised by several percent. By contrast, employment and unemployment data are little revised, as they are based entirely on largescale surveys of the labour market. As for the public finances, they are public accounting statistics that are accurate on arrival.

Of course, the labour market figures have been telling us clearly that we are at full employment, with wages now rising faster than prices, record employment and unemployment at its lowest since the 1970s — probably lower, since we only had the benefit claimant count then and this routinely lies below the modern survey measure.

But it is the public finances that tell the most upbeat story about the economy. On the basis of the figures up to January the 2018/19 outturn for public borrowing looks like being only £22 billion; down from £72 billion in 2015/16, a fall of about 2.5% of GDP in only three years. Over the same period government receipts have risen about 17%. Usually they rise about 1.4 times money GDP, which would suggest indirectly that money GDP has grown by about 12% in the last three years, about 4% a year. Against this the ONS estimate of money GDP growth is 3.7%. But from this they derive an output estimate of only 1.7% a year growth; yet labour costs have been rising weakly suggesting production costs of GDP may only have been rising at 1.5% a year. The ONS says 2%.

When you set all this also beside the booming labour market, it does indeed confirm that the ONS could be getting growth too low; growth could be more like 2.5% than the ONS' 1.7%. But because GDP revision is glacial, we will not know for another ten years, by which time the mistake will be too late to correct the policies that inaccurate pessimism may have caused.

Fortunately, we know the public finances for sure. With borrowing now running at 1% of GDP, the debt/GDP ratio is falling fast. When correctly measured to exclude the Bank's operations to buy up debt by printing money, it is now 74% of GDP and falling by about 2 percentage points a year. On our projections of borrowing post-Brexit, it will reach 60% of GDP by 2024 with no change in fiscal policies.

This gives the Chancellor room to plan a rise in borrowing of 25 billion a year from 2020, and a further rise of another £40 billion from 2025, while still reaching a 'safe' 60% debt/GDP ratio by 2025. This 'headroom' can be used to improve UK competitiveness by a variety of tax cuts including: From the viewpoint of supply-side incentives, corporation tax and the two top rates are the highest priorities for tax cutting. If corporation tax and the top rate were both cut by 2% in 2020, and the very top rate by 7% (to equality with the top rate), the cost would be of the order of £9 billion. Together, with additional spending of £16 billion, a 'Brexit dividend' from 2020 of £25 billion would begin to reduce the strains in the public sector and also give a useful boost to competitiveness.

Table 1: Summary of Forecast

	2016	2017	2018	2019	2020	2021	2022
GDP Growth[1]	1.9	1.8	1.5	1.9	2.0	2.1	2.3
Inflation CPI	1.1	2.6	2.4	2.2	2.1	2.0	2.0
Wage Growth	2.4	2.9	2.7	2.8	2.9	2.8	2.8
Unemployment (Mill.)[2]	0.8	0.8	0.8	0.8	0.7	0.7	0.6
Exchange Rate[3]	82.1	77.4	78.5	76.6	76.1	76.3	75.6
3 Month Interest Rate	0.5	0.4	0.8	1.3	2.4	3.1	3.1
5 Year Interest Rate	0.7	0.6	1.2	2.5	3.3	3.8	3.8
Current Balance (£bn)	-90.9	-66.3	-62.9	-48.8	-41.2	-30.6	-18.4
PSBR (£bn)	45.1	39.4	30.9	22.3	6.9	-6.9	-18.5

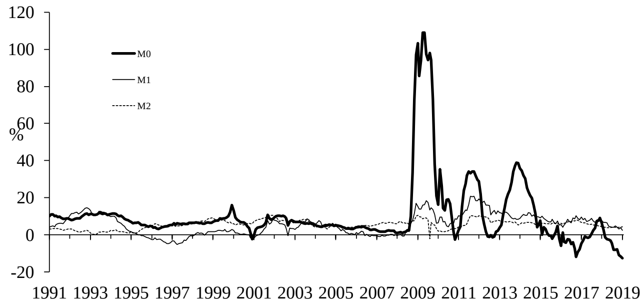
[1]Expenditure estimate at factor cost
[2]U.K. Wholly unemployed excluding school leavers (new basis)
[3]Sterling effective exchange rate, Bank of England Index (2005 = 100)

From 2025, the further dividend of £40 billion per annum could be taken. At this point,

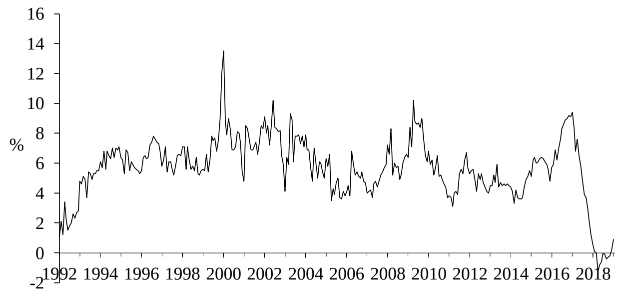
- The standard rate could be cut by 2%, at a cost of £12 billion (raising the tax threshold is very expensive and hardly affects any marginal rates, mainly going in the form of lower taxes to the better off, barely helping the less well-off because they lose benefits); or else VAT could be cut by 1.5% for roughly the same cost
- Corporation tax could be cut another 3%, costing another £10 billion ; and
- The top rate could come down by 2%, costing around £3 billion.
- The remaining £15 billion could be used on spending.

With the use of the Brexit dividend (i.e., the 'Post-Brexit Fiscal Fund') in this way, it would be plain to all that, indeed, Britain was 'open for business'.

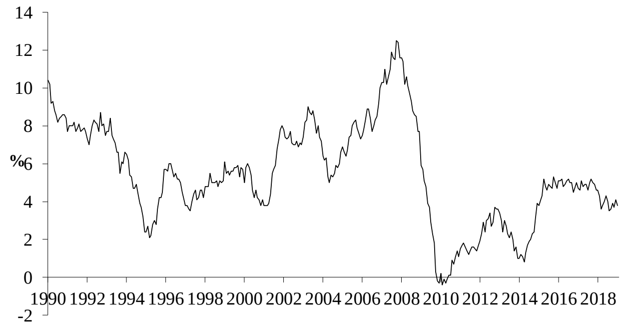
U.S.: Growth in Monetary Aggregates (Yr - on - Yr)



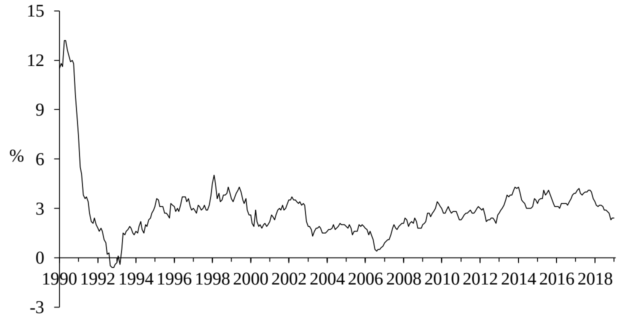
UK: Notes and Coins in Circulation Growth



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

Japanese Economy Hit by Trade War

The Japanese economy rebounded in the last quarter of 2018, after a series of natural disasters and weak investment caused a contraction in the third quarter. GDP rose 0.3% versus the previous quarter, according to preliminary figures from the Cabinet Office — in 2018, the economy grew 0.7% in real terms, up for the seventh straight year.

Private consumption, which accounts for more than half of the nation's economy, rose 0.6% as households spent more on eating out and travelling. Final sales of domestic product, a measure of underlying demand in Japan, rose at a healthy annualised pace of 2.1%. Capital expenditure was up 2.4% as firms took advantage of record-high corporate earnings to boost capacity and productivity. Toshimitsu Motegi, minister in charge of economic and fiscal policy, told a news conference that, on the whole, the economy continues to recover moderately but warned that risks abroad — including the heightened trade tensions — "warrant caution." Prime Minister Shinzo Abe's government said last month the Japanese economy is likely to be in the midst of its longest expansion phase since the end of World War II. His Liberal Democratic Party hopes to leverage the success of his Abenomics policy of drastic monetary easing, fiscal stimulus and structural reforms in local and national elections this year.

However, economists are less optimistic. Takeshi Minami, chief economist at the Norinchukin Research Institute, said the economic expansion may be nearing an end as a severe labour shortage and tepid wage gains take their toll. "I think we'll be seeing more and more signs of a soft landing," which could be triggered by a fall in household spending following a planned increase in consumption tax — from 8% to 10% — in October, he said. "Against the slowdown in overseas economies, exports will continue to slump," echoed Taro Saito, director of economic research at NLI Research Institute, a research centre based in Tokyo.

Indeed, the main drag on Japan's economy in recent month came from overseas demand. Net exports pushed down GDP by 0.3 of a percentage point, as a 2.7% growth in imports outpaced a 0.9% rise in exports. Demand from China for high-tech products has suffered in particular from a slowdown in the Chinese economy, with its ongoing tariff war with the United States. Smartphone output has collapsed in mainland China. Only in the December month, exports shrank at the quickest pace in two years, as shipments to China tumbled — the year-on-year drop of 3.8% marked the sharpest fall since October 2016, according to preliminary data from Japan's finance ministry. Exports to Asia shrank 6.9%, with those to China, Japan's largest market in the region, falling 7% and shipments to Hong Kong and South Korea down 17.3% and 11.6%, respectively. The drop in China was driven by falls in exports of chip-making machinery and communications equipment in the wake of the US-China trade dispute and Washington's complaints to Beijing over technology transfers. Japanese companies are already starting to feel the fallout from the dispute between the US and China. Apple supplier Nidec issued a profit warning last month, blaming US-China tension for a sharp drop in orders of its motors for Chinese auto and appliance makers at the end of last year.

The question for Japan is whether the impact of the Chinese economic slowdown will extend to its own manufacturing and capital spending. The automobile industry suffered an 8.6% setback, but that can be blamed on Subaru temporarily shutting down its main assembly plant in Gunma Prefecture due to a defective component. Other manufacturers had more non-operational days in January than in typical years, however. Japanese corporate managers have started taking a defensive approach against the trade frictions and the slackening global economy, said Kentaro Arita of Mizuho Research Institute. "Some manufacturers are moving to delay capital expenditures, and growth will soften," said Arita.

Meanwhile, in an attempt to revitalize the economy, last month Japanese lawmakers passed a ¥3.04 trillion supplementary budget that funds disaster-proof projects. The budget comes on top of the initial budget, which climbed to a record ¥97.71 trillion amid swelling social security costs, and an earlier supplementary budget worth ¥935.6 billion. Also, the Bank of Japan is likely to stay on hold, with GDP neither strong enough to encourage monetary tightening, nor weak enough to create pressure for further stimulus. The main question about Japan's economy this year will be the impact of raising consumption tax in October. A similar rise from 5% to 8% in 2014 pushed the economy into a recession. Prime Minister Shinzo Abe's government is determined to avoid the same result this time around, bringing in a discounted tax rate for food, and promising lots of stimulus spending to offset the hit from higher taxes. But to weather external economic pressures, Japan will need to move ahead with reforms that will bolster internal demand. The government needs to persistently pursue necessary policies, such as deregulation measures that would boost productivity.

MARKET DEVELOPMENTS

The world economy has been upset by the Trump tariff wars. But these should be settled soon, with China and the EU adopting better trade practices. Meanwhile, our projections suggest world growth will continue for a good decade at moderate to strong rates, with massive excess capacity in raw materials underpinning it.

Table 1: Market Developments

	Market Levels Feb 8	Market Levels Mar 4	Prediction for Dec/Jan 2019/20 Previous Letter	Prediction for Dec/Jan 2019/20 Current View
Share Indices				
UK (FT 100)	7071	7134	9348	9432
US (S&P 500)	2708	2793	3030	3125
Germany (DAX 30)	10907	11593	17920	19047
Japan (Tokyo New)	1539	1628	1966	2078
Bond Yields (government)				
UK	1.15	1.27	3.00	3.00
US	2.66	2.76	3.80	3.80
Germany	0.00	0.09	1.00	1.00
Japan	–0.01	–0.02	0.10	0.10
UK Index Linked	–1.69	–1.68	1.00	1.00
Exchange Rates				
UK ($ per £)	1.29	1.32	1.32	1.32
UK (trade weighted)	78.53	80.06	76.1	76.1
US (trade weighted)	100.46	100.12	102.5	102.5
Euro per $	0.88	0.88	0.88	0.88
Euro per £	1.14	1.16	1.16	1.16
Japan (Yen per $)	109.73	118.85	112.5	112.5
Short Term Interest Rates (3-month deposits)				
UK	0.90	0.87	2.10	2.10
US	2.68	2.65	3.00	3.00
Euro	–0.34	–0.31	0.00	0.00
Japan	0.00	0.00	0.10	0.10

Table 2: Prospective Yields [1]

Equities: Contribution to £ yield of:

	Dividend Yield	Real Growth	Inflation	Changing Dividend Yield	Currency	Total
UK	3.60	2.0	2.2	28.00		35.80
US	1.99	1.9	2.1	7.90	–0.21	13.68
Germany	3.30	1.6	1.7	61.00	0.41	68.01
Japan	1.90	0.5	1.2	26.00	–0.80	28.80
UK indexed[2]	–1.69		2.2	5.00		5.53
Hong Kong[3]	2.60	5.6	2.1	–15.00	–0.21	–4.91
Malaysia	3.30	4.8	2.1	43.00	–0.21	52.99
Singapore	3.50	2.7	2.1	10.00	–0.21	18.09
India	1.40	8.0	2.1	23.00	–0.21	34.29
Korea	1.10	2.9	2.1	–21.00	–0.21	–15.11
Indonesia	2.20	5.4	2.1	26.00	–0.21	35.49
Taiwan	2.80	2.1	2.1	9.00	–0.21	15.79
Thailand	3.20	3.8	2.1	27.00	–0.21	35.89

Bonds: Contribution to £ yield of: –

	Redemption Yield	Changing Nominal Rates	Currency	Total
UK	1.27	–17.30		–16.03
US	2.76	–10.40	–0.21	–7.85
Germany	0.09	–9.10	0.41	–8.60
Japan	–0.02	–1.20	–0.80	–2.02

Deposits: Contribution to £ yield of:

	Deposit Yield	Currency	Total
UK	0.87		0.87
US	2.65	–0.21	2.44
Euro	–0.31	0.41	0.10
Japan	0.00	–0.80	–0.80

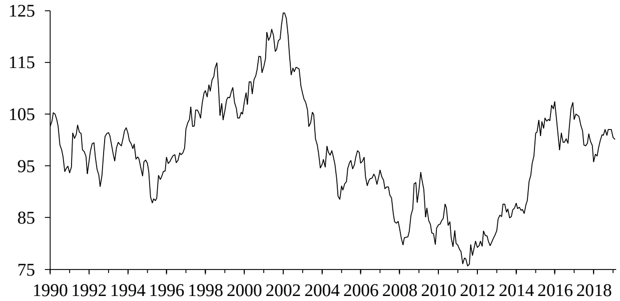
[1] Yields in terms of €s or $s can be computed by adjusting the £-based yields for the expected currency change.
[2] UK index linked bonds All Stocks
[3] Output based on China.

Table 3: Portfolio(%)

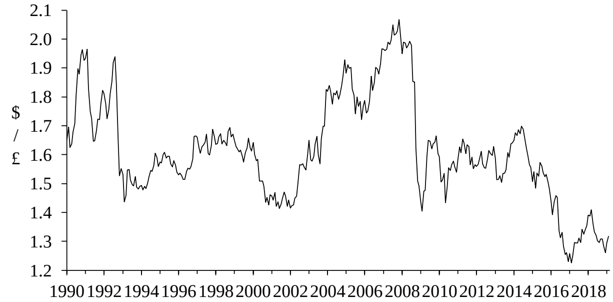
	Sterling Based Investor		Dollar Based Investor		Euro Based Investor	
	February Letter	Current View	February Letter	Current View	February Letter	Current View
UK Deposits (Cash)	5	5	5	5	1	1
US Deposits	-	-	-	-	-	-
Euro Deposits	-	-	-	-	-	-
Japanese Deposits	-	-	-	-	-	-
UK Bonds	-	-	-	-	-	-
US Bonds	-	-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

INDICATORS AND MARKET ANALYSIS
FOREIGN EXCHANGE MARKETS

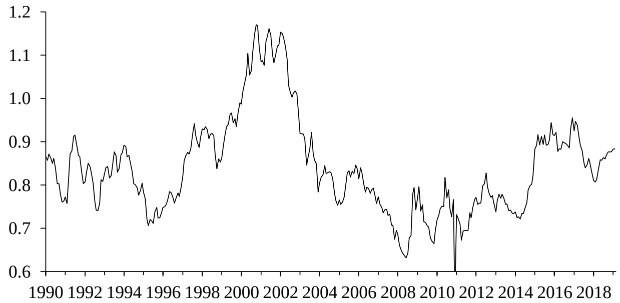
US : Trade Weighted Index
(Bank of England 1990 = 100)



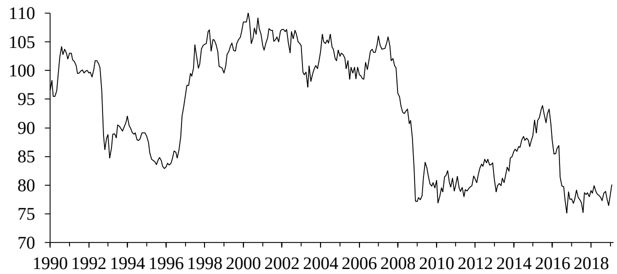
UK: Dollars Per Pound Sterling



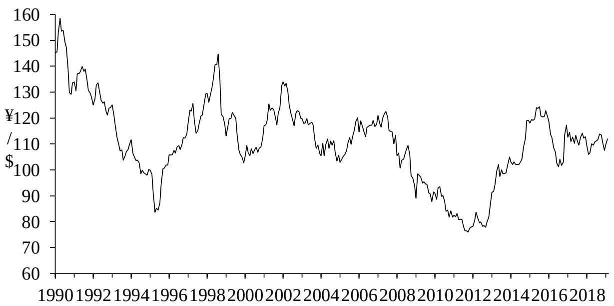
Euro per US dollar



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

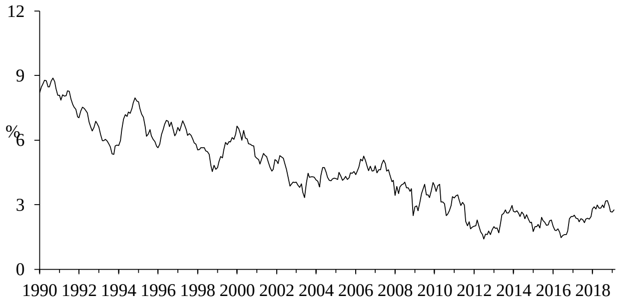


Japan : Yen Per U.S. Dollar

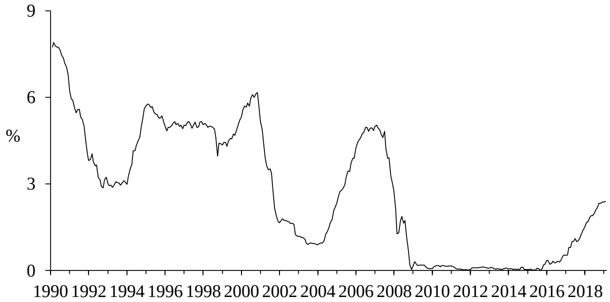


GOVERNMENT BOND MARKETS

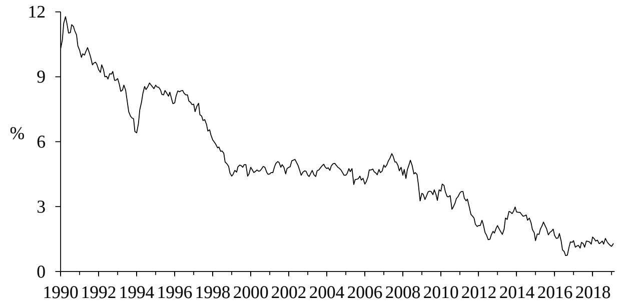
U.S.: Yield on Long-Term Government Bonds



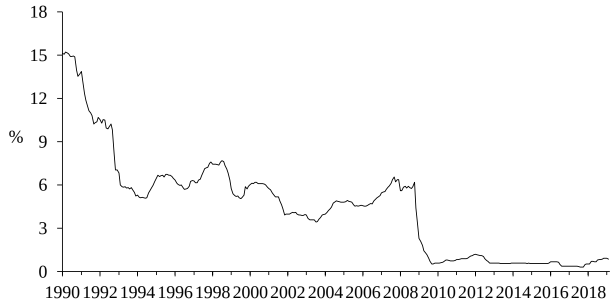
U.S. : 3-Month Treasury Bill



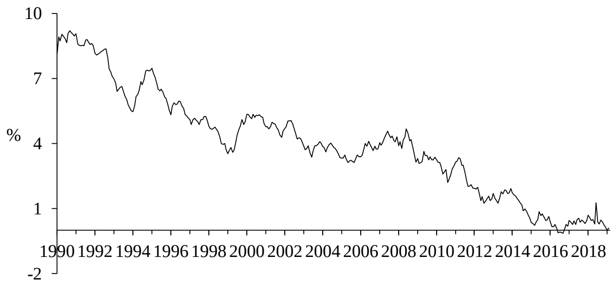
U.K.: Yield on Long-Term Government Bonds



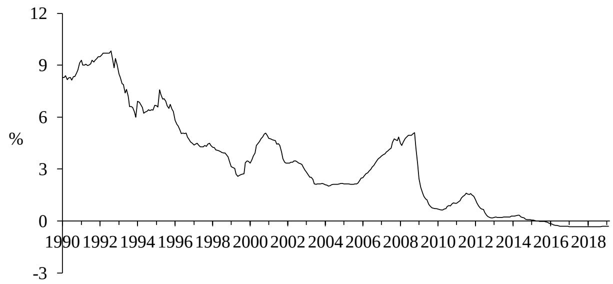
U.K. : 3-Month Certificate of Deposit Rate



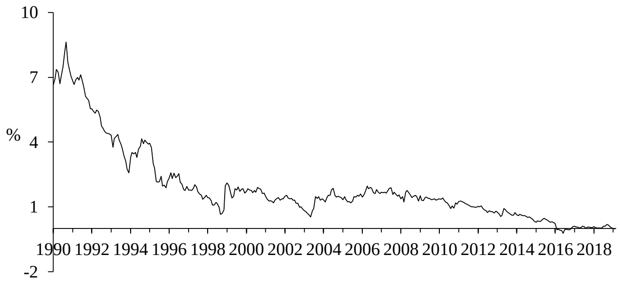
Germany: Yield on Public Authority Bonds



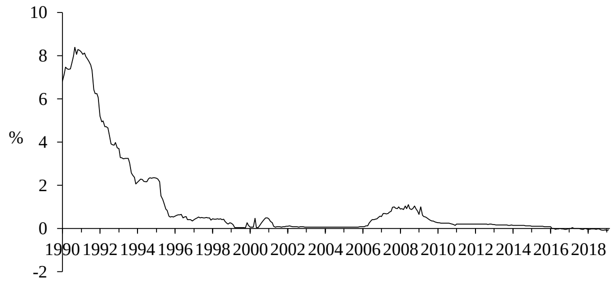
Germany : 3-Month Interbank Deposit Rate



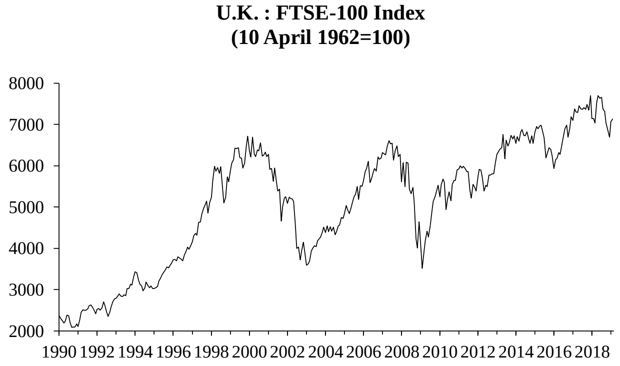
Japan: Yield on Long-Term Government Bonds

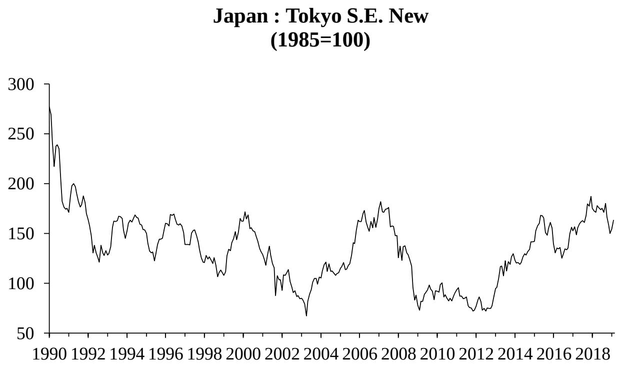


Japan : 3-Month Money Market Rate



MAJOR EQUITY MARKETS





EMERGING MARKETS

Anupam Rastogi

India

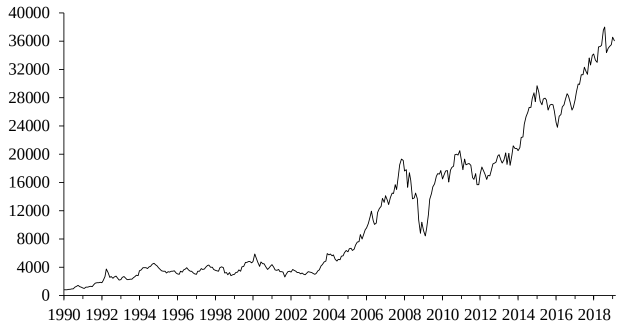
India's GDP growth in Q3 FY19 slid to 6.9% compared to the 7.1% GDP growth seen in the previous quarter. In the FY 2019, India will achieve growth of just 7%. A slowdown in growth momentum supported the Reserve Bank of India's sudden dovish turn in early February when it cut rates and changed its policy stance to "neutral" to boost expansion after a sharp fall in inflation. However, global uncertainty over trade conflicts, Brexit and oil prices could add to growth headwinds in India according to the Reserve Bank of India's Monetary Policy Committee. The government's several tax cuts to support spending and growth in a bid to lure middle-class voters in the forthcoming general election would boost economic growth in the 2019–20 fiscal year. India is likely to get normal southwest monsoon in 2019, according to weather forecasters. This augurs well for the country's agriculture sector and will boost crop yields.

Prime Minister Narendra Modi has laid out his vision for making India a USD 10-trillion economy, and the third-largest in the world, saying he wants the nation to have countless start-ups, and be a global leader in electric vehicles. One could argue that reforms in the last four and a half years have changed the picture.

India's annual rate of inflation based on wholesale prices eased to 2.76% in January from 3.02%, reported for the corresponding month of 2018. The consumer price index in the coming fiscal year will remain around 4%. With the policy rate of 6.5%, the real policy rate is about 2.6%, which is one of the highest in the world.

India's merchandise exports grew 3.74% on a year-on-year basis in January to $26.4 billion, from $25.4 billion reported for the corresponding month of last year. The country's trade deficit was at $14.73 billion compared to $15.67 billion in January last year. Taking merchandise and services together, the overall trade deficit for the first ten months of the current fiscal year was at $90.6 billion, compared to $75.7 billion during April–January of 2017–18. In response to the Trump administration's trade balance agenda, India has argued that it is the only major country whose goods trade surplus with the US narrowed in both 2017 and 2018.

India: BSE Sensitive



The rupee is hovering around 71 to the US dollar amid fears of escalation in geo-political tensions, besides weakening investor sentiments in domestic equity market. Foreign exchange reserves have remained around $400 billion.

Indian policy makers have taken a cue from China and EU, and have increased pressure on American firms and tweaked regulations to favour domestic players. The proposed e-commerce rules include an emphasis on data localization, calling for the establishment of more local data centres and server farms. Multinational e-commerce firms typically use computing resources all over the world. Companies would be given three years to comply with the requirement, according to the draft policy. Meanwhile, India's telecommunications regulator is considering new rules that could force Facebook to let officials access encrypted messages between users on national security grounds.

The Valentine's Day attack by Pakistan, which killed at least 40 Indian soldiers, marked a sharp escalation of the conflict in Indian Kashmir. Indian warplanes bombed targets inside Pakistan for the first time since the Indo-Pak war in 1971, hitting what Indian officials described as a terrorist training camp. To avoid further escalation, the international community is putting pressure on Pakistan to take measures and not allow its soil to train terrorists. India has taken an aggressive stance and moral high ground as its soldiers got killed. All signs are that both countries would come to table and descale the conflict soon.

	17–18	**18–19**	**19–20**	**20–21**	**21–22**
GDP (%p.a.)	6.7	7.0	7.3	8.0	8.0
WPI (%p.a.)	3.5	3.9	3.9	4.0	4.0
Current A/c(US$ bill.)	-26.0	-70.0	-64.0	-64.0	-60.0
Rs./$(nom.)	65.0	70.2	71.5	72.5	73.5

China

China's economy is showing the first signs of recovery after months of slowdown. The People's Bank of China's monetary easing and the trade truce with the U.S. has turned sentiments positive.

The Lunar New Year, which was celebrated in February, was noticeably subdued. China's search-engine giant Baidu, as well as Alibaba, had sent signals of slowing down of the economy.

China's 6.6% growth rate in 2018 was the lowest since 1990. In 2019, we expect the economy to grow 6%.

U.S. tariffs on $200 billion of Chinese goods, which had been scheduled to rise to 25% from 10% from March 1, has been put on hold, with President Trump saying "substantial progress" has been made on several key sticking points between the two countries. According to initial discussions, which are yet to be ratified by Chinese politburo, Beijing would commit to cut subsidies for state-owned companies and disclose when its central bank intervenes in currency markets. China has also pledged to "de-emphasize" its plans to dominate in emerging technologies, outlined in its Made-in-China 2025 plan. Trade tensions between the world's two largest economies have weighed on many economies in the region and were dragging global growth as well.

Inflation remained muted in January. China's inflation slowed across its producer and consumer sectors in January, which provides the central bank more room to stimulate slowing economic growth. The producer-price index edged up 0.1% in January, slowing from a 0.9% on-year gain in December, according to the National Bureau of Statistics. China's consumer price index rose 1.7% in January from a year earlier, compared with a 1.9% increase in December. January's increase was the slowest in 12 months.

As the US Fed is easing off, the central bank of China is expected to further cut rates for its lending facilities and if conditions worsen, might be more willing to cut benchmark rates.

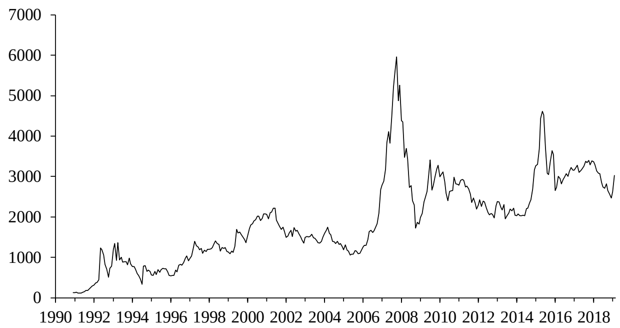
China's exports surprisingly accelerated in January. Exports surged 9.1% from a year earlier in January.

The US President Mr. Trump said if trade talks continued to make progress, he would host a summit with Chinese President Xi Jinping to end a year-long trade fight. China has already made many concessions in the financial sector and hopes to use financial reforms and a more efficient capital market to re-energize a debt-laden economy and pacify the US.

The USD/CNY is soon going to test its 2018 high of 6.8. With China reflating and the US dollar strengthening in near term, the USD/CNY will remain soft.

MSCI has announced that it would quadruple the contribution of mainland Chinese companies to its benchmarks. This move would make shares in Shanghai and Shenzhen to be included in portfolios for many international

China: SSE Composite Index



Korea: Composite Index

investors. The decision is likely to attract tens of billions of dollars into Chinese stocks. The world's second-largest economy is also set to enter a world bond index in April and a rival global stock index in June 2019. The ramp-up is happening faster than expected given that China's stocks only gained a place in MSCI's global indexes last year. It has come about as Beijing seriously followed up with international capital with a slew of steps to improve market access in the last one year.

	17	18	19	20	21
GDP (%p.a.)	6.8	6.6	6.0	5.6	5.4
Inflation (%p.a.)	1.6	2.2	2.3	2.3	2.0
Trade Balance(US$ bill.)	400	300	300	300	260
Rmb/$(nom.)	6.6	6.8	7.0	7.1	7.1

South Korea

President Moon Jae-in's flagship economic policy, "income-led growth," gave a push to economic growth in the last two years. But it increased minimum wages dramatically since he took office in 2017. Those increases are now driving a rise in unemployment and a slump in global trade is already affecting Korea's growth prospects in 2019. The unemployment rate jumped to a nine-year high in January as more people shunned low-paying work in the face of rising minimum wages.

South Korea's central bank, the Bank of Korea, as expected, has kept its base rate unchanged at its meeting on February 28. The seven-day repurchase rate is left at the current 1.75%. The policymakers are unlikely to raise rates this year as inflation remains fragile. With the U.S. Federal Reserve adopting a cautious approach in a shift that signalled its tightening cycle, might be at an end, the central bank has a breather for the time being. Moreover, the potential for a positive outcome from U.S.-China trade talks, has improved sentiment in financial markets and exports growth is likely to resume.

The Korean Won declined as the US/North Korea summit began in the last week of February. The won has remained steady against the U.S dollar this year. But, an abrupt end to the summit may see the won depreciating in the coming weeks. The KOSPI has risen 9.29% so far this year.

	17	18	19	20	21
GDP (%p.a.)	3.1	2.7	2.6	2.6	2.7
Inflation (%p.a.)	1.9	1.5	1.6	1.6	1.7
Current A/c(US$ bill.)	88.0	86.0	80.0	78.0	70.0
Won/$(nom.)	1100	1130	1120	1120	1160

Taiwan

Taiwan's gross domestic product growth rate in 2018 is expected to increase by 2.6%, decreasing from 3.08% in 2017. The economic slowing down has begun since Q3 2018. The slump in net exports was a factor for the decelerating economic growth while domestic consumption remained resilient. Apart from the softening global demand, the growing trade dispute between the United States and China weighed down on Taiwan's export performance. The island has relied on exporting intermediate goods to China for final assembly. The final consumption goods are exported to the United States after being manufactured in China.

As the US retaliation tariff to the ICT products weans out, Taiwan's economy will benefit. As China opens up further its economy by cutting the import tariffs, Taiwan will have opportunities to export a variety of goods to China with lower tariff. This will help to diversify Taiwan's export structure from ICT to other products. We expect GDP growth in 2019 to slow down to 2.2%.

Industrial production in December registered a 1.22% drop from the same month in 2017. The Purchasing Managers' Index in December fell to 44.8, the lowest level since the index was introduced in mid-2012.

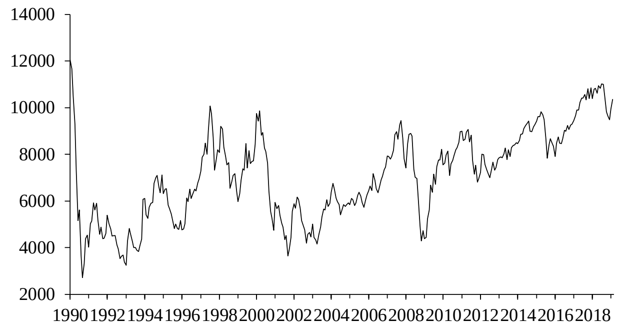
Inflation has remained subdued and would continue to undershoot the central bank's target.

	17	18	19	20	21
GDP (%p.a.)	3.1	2.6	2.2	2.1	2.1
Inflation (%p.a.)	0.6	1.2	1.2	1.2	1.0
Current A/c(US$ bill.)	68.0	68.0	70.0	71.0	70.0
NT$/$(nom.)	31.0	29.8	31.0	31.0	31.5

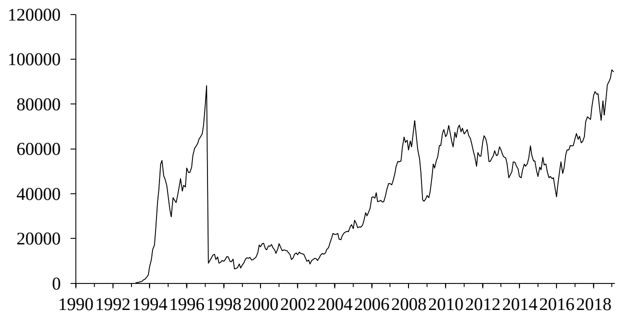
Brazil

Sluggish consumer and business spending, uncertainty surrounding the country's new president and slowing global growth led to a sharp slowdown in Brazilian economic growth in the fourth quarter of 2018. Brazil's GDP grew by only 1.1% in 2018 — much lower than anticipated earlier that year. In 2019, we expect GDP growth to be 2% as consumer and business spending would remain sluggish. The scale, scope and speed of President Jair Bolsonaro's pension reform proposals estimated to save over 1 trillion reais ($300 billion) over the next 10 years. In the current year, the savings would not come about, as it would take almost one year for the legislation to pass.

Taiwan: Weighted TAIEX Price Index



Brazil: Bovespa



Brazil's central bank is likely to keep its key Selic rate at a record low 6.50% for the rest of this year. The probability of rate cut is low even though there is a strong flow into Brazilian stocks and bonds so far this year.

Brazil's Senate has confirmed Roberto Campos Neto as central bank governor. During the confirmation hearing, he stressed that controlling inflation and reining in public spending were critical to support economic growth. Campos Neto is a former senior executive at Banco Santander Brasil SA. He is a University of California-trained economist and has spent his career in banking and market trading. He joins the Economy Minister Paulo Guedes, who is University of Chicago-trained, and advocates downsizing government and privatizing state assets.

Brazil's current account deficit last year rose to $14.51 billion, or 0.77% of gross domestic product, almost double of the $7.235 billion shortfall registered the year before, equivalent to 0.35% of GDP. The deficit doubled last year as economic growth fuelled demand for foreign goods and services.

The Brazilian Real has climbed over 11% since September as investors have put their hope in the President’s ability to overhaul the pension system. The Real is hovering around 3.7 to US dollar.

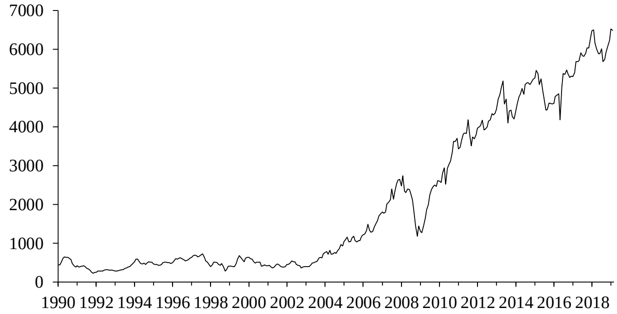
Brazilian President Jair Bolsonaro unveiled his long-awaited proposal for overhauling the country’s insolvent pension system. His proposals included raising the minimum retirement age for women from 60 to 62 and the number of years workers would have to contribute to the system from 15 to 20. The reform requires a constitutional amendment. The proposal would eliminate an option to retire, based only on the number of years workers contributed to the pension system, which currently lets women retire after 30 years of contributions and men after 35 years, regardless of their age. The plan also offers workers the option of switching their contributions to individual investment accounts, managed by either public or private entities that will be overseen by a regulator.

	17	**18**	**19**	**20**	**21**
GDP (%p.a.)	1.0	1.1	2.0	2.5	2.5
Inflation (%p.a.)	3.0	3.8	4.0	4.0	4.0
Current A/c(US$ bill.)	-7.3	-14.6	-16.0	-16.0	-16.0
Real/$(nom.)	3.2	3.8	3.7	3.7	3.8

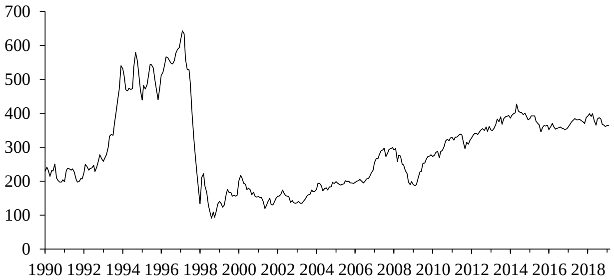
Other Emerging Markets

Hong Kong: FT-Actuaries

Indonesia: Jakarta Composite

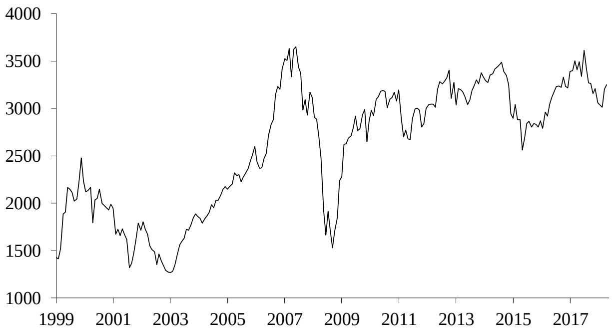


Malaysia: FT-Actuaries
(US$ Index)



Thailand: Composite Index

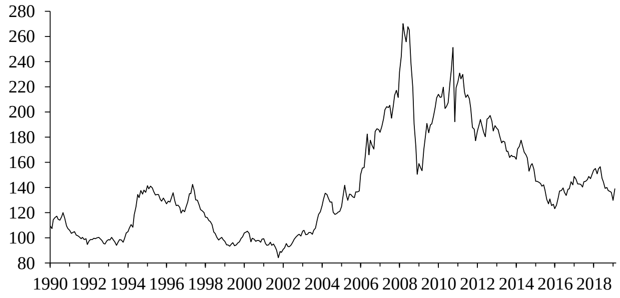
Singapore: Straits Times Index



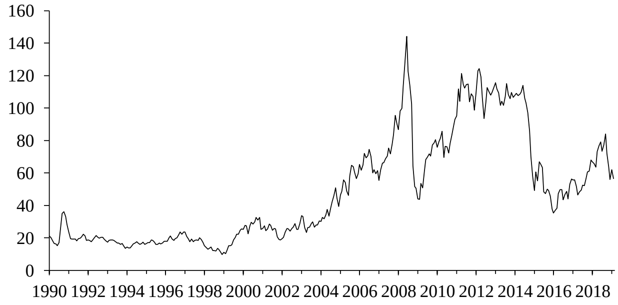
Philippines: Manila Composite

COMMODITY MARKETS

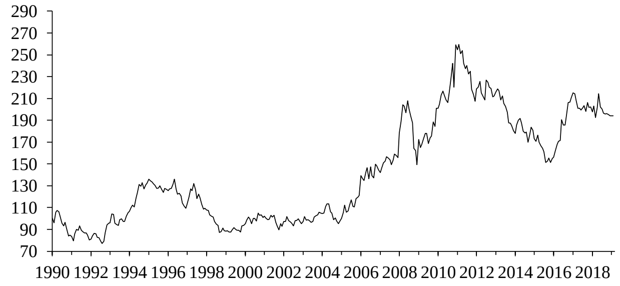
Commodity Price Index (Dollar)
(Economist, 2000=100)



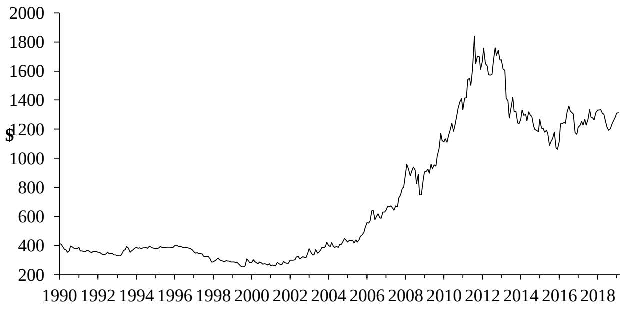
Oil Price: North Sea Brent (in Dollars)



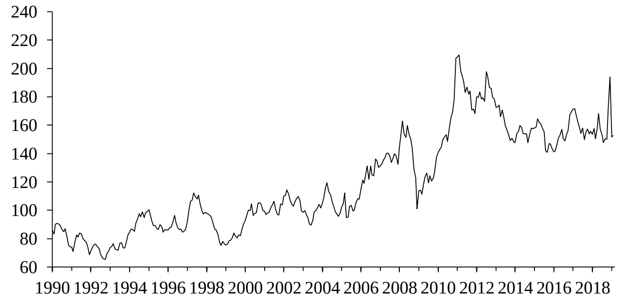
Commodity Price Index (Sterling)
(Economist, 2000=100)



Gold Price (in Dollars)



Commodity Price Index (Euro)
(Economist)



UK FORECAST DETAIL

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

	Inflation %[1] (CPI)	Short Dated (5 Year) Interest Rates	3 Month Int. Rates	Nominal Exchange Rate (2005=100) [2]	Real Exchange Rate[3]	Real 3 Month Int. Rates %[4]	Inflation (RPIX)	Real Short Dated Rate of Interest[5]
2017	2.6	0.6	0.4	77.4	75.5	-1.6	3.8	-1.5
2018	2.4	1.2	0.8	78.5	76.7	-1.5	3.4	-0.5
2019	2.2	2.5	1.3	76.6	74.6	-0.7	2.9	0.5
2020	2.1	3.3	2.4	76.1	74.3	0.4	2.7	1.4
2021	2.0	3.8	3.1	76.3	75.1	1.1	2.6	0.9
2022	2.0	3.8	3.1	75.6	74.6	1.1	2.5	0.6
2018:1	2.5	1.0	0.5	79.2	77.9	-1.7	3.7	-1.1
2018:2	2.4	1.0	0.7	79.3	77.7	-1.7	3.4	-1.1
2018:3	2.5	1.0	0.9	78.0	75.9	-1.3	3.3	-1.1
2018:4	2.3	1.8	1.0	77.6	75.4	-1.2	3.1	-0.3
2019:1	2.2	2.5	1.1	77.2	75.4	-1.0	2.9	0.5
2019:2	2.2	2.5	1.3	76.6	74.4	-0.8	2.9	0.5
2019:3	2.2	2.5	1.4	76.4	74.4	-0.6	2.9	0.5
2019:4	2.2	2.5	1.5	76.3	74.3	-0.5	3.0	0.5
2020:1	2.1	3.0	2.1	76.1	74.3	0.1	2.8	1.0
2020:2	2.1	3.0	2.1	76.2	74.3	0.1	2.8	1.0
2020:3	2.0	3.5	2.1	76.1	74.3	0.1	2.6	1.5
2020:4	2.0	3.8	3.3	76.0	74.3	1.3	2.5	1.8

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)
2017	259.1	2.9	2.2	0.8	142.2
2018	265.9	2.7	2.2	0.8	142.6
2019	273.2	2.8	2.1	0.8	143.4
2020	281.0	2.9	1.9	0.7	144.6
2021	288.9	2.8	1.6	0.7	145.7
2022	297.0	2.8	1.3	0.6	146.9
2018:1	264.6	3.0	2.3	0.8	142.9
2018:2	263.4	2.6	2.2	0.8	141.8
2018:3	268.4	3.1	2.1	0.8	143.5
2018:4	267.0	2.3	2.1	0.7	142.3
2019:1	272.0	2.8	2.0	0.7	143.7
2019:2	270.7	2.8	2.0	0.7	142.6
2019:3	275.8	2.8	2.0	0.7	144.3
2019:4	274.5	2.8	2.0	0.7	143.0
2020:1	279.9	2.9	2.0	0.7	144.8
2020:2	278.6	2.9	2.0	0.7	143.8
2020:3	283.5	2.8	2.0	0.7	145.5
2020:4	282.1	2.8	1.9	0.7	144.2

1 Whole Economy
2 Average Earnings
3 Wholly unemployed excluding school leavers as a 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
2017	162.3	777336.9	443745.6	302292.1	198857.7	-65371.5	102187.0
2018	164.6	788057.2	447703.5	309777.2	199983.9	-71893.1	97213.6
2019	167.6	802696.2	454303.6	310600.3	200602.7	-62943.8	99862.6
2020	171.0	818972.8	460685.5	316674.7	201938.2	-58117.3	102210.3
2021	174.6	836108.1	467804.4	321816.8	203070.4	-52020.5	104566.0
2022	178.6	855103.2	475356.9	327523.1	204308.6	-44936.8	107148.0
2017/16	1.8		0.6	0.8	0.4		0.6
2018/17	1.4		0.9	3.2	0.6		-2.8
2019/18	1.9		1.5	0.3	0.3		2.8
2020/19	2.0		1.4	2.0	0.7		2.4
2021/20	2.1		1.5	1.6	0.6		2.3
2022/21	2.3		1.6	1.8	0.6		2.5
2018:1	163.4	195600.5	111071.3	74328.3	51436.3	-17532.1	23703.2
2018:2	164.1	196413.8	111520.6	78149.0	49061.0	-18806.3	23510.5
2018:3	165.1	197609.1	112343.6	79434.8	49642.5	-18437.4	25074.5
2018:4	165.7	198433.9	112768.1	77865.2	49844.0	-17117.3	24925.4
2019:1	166.4	199235.8	112806.5	76347.5	50526.0	-15756.7	24688.2
2019:2	167.1	200032.9	113132.9	77285.3	50009.7	-15591.0	24802.8
2019:3	168.1	201273.4	113952.7	78293.8	50056.5	-15900.9	25126.9
2019:4	168.9	202154.1	114411.5	78673.8	50010.4	-15695.2	25244.6
2020:1	169.9	203369.8	114363.4	78191.7	50860.0	-14689.5	25354.4
2020:2	170.5	204186.2	114717.5	79020.4	50335.5	-14421.8	25465.2
2020:3	171.4	205199.1	115569.5	79774.3	50315.1	-14836.7	25624.4
2020:4	172.2	206217.7	116035.1	79688.3	50427.6	-14169.3	25766.2

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

Financial Forecast

	PSBR/GDP %[1]	GDP[1] (£bn)	PSBR (£bn) Financial Year	Debt Interest (£bn)	Current Account (£ bn)
2017	2.0	2047.3	39.4	79.9	-66.3
2018	1.5	2117.0	30.9	80.0	-62.9
2019	1.0	2206.6	22.3	84.7	-48.8
2020	0.3	2297.2	6.9	91.0	-41.2
2021	-0.3	2394.8	-6.9	94.2	-30.6
2022	-0.7	2500.2	-18.5	95.4	-18.4
2018:1	-2.8	515.6	-14.3	20.2	-16.7
2018:2	3.3	518.6	16.9	19.7	-18.7
2018:3	0.7	527.9	3.8	19.8	-13.5
2018:4	1.9	532.3	10.2	20.1	-14.0
2019:1	0.0	538.2	0.1	20.4	-13.7
2019:2	2.2	541.9	11.9	20.7	-13.8
2019:3	1.7	548.8	9.2	20.9	-9.4
2019:4	1.5	554.3	8.3	21.2	-11.9
2020:1	-1.3	561.6	-7.1	21.9	-12.2
2020:2	1.3	565.4	7.5	22.0	-12.0
2020:3	0.9	570.9	5.1	22.1	-7.6
2020:4	1.0	576.9	5.5	23.5	-9.4

1 GDP at market prices (Financial Year)

WORLD FORECAST DETAIL

Growth Of Real GNP

	2015	2016	2017	2018	2019	2020
U.S.A.	2.9	1.6	2.2	2.9	2.6	1.9
U.K.	2.3	1.9	1.8	1.4	1.9	2.0
Japan	1.3	0.6	1.9	0.8	1.1	0.5
Germany	1.7	2.2	2.2	1.5	1.4	1.6
France	1.1	1.1	2.3	1.5	1.5	1.4
Italy	0.9	1.1	1.6	0.9	0.5	0.7

Growth Of Consumer Prices

	2015	2016	2017	2018	2019	2020
U.S.A.	0.1	1.3	2.1	2.4	2.1	2.2
U.K.	0.2	1.1	2.6	2.4	2.0	2.1
Japan	0.8	–0.1	0.5	1.0	1.1	1.2
Germany	0.3	0.5	1.8	1.8	1.8	1.7
France	0.0	0.2	1.0	1.3	1.3	1.5
Italy	0.1	–0.1	1.2	1.2	1.2	1.4

Real Short-Term Interest Rates

	2015	2016	2017	2018	2019	2020
U.S.A.	–1.1	–1.6	–1.0	0.3	0.4	0.8
U.K.	–0.5	–2.1	–2.0	–1.2	–0.8	0.3
Japan	0.3	–0.4	–0.9	–1.0	–1.1	–1.1
Germany	–0.6	–2.1	–2.2	–2.1	–2.0	–1.7
France	–0.3	–1.3	–2.2	–1.6	–1.8	–1.5
Italy	0.0	–1.5	–1.5	–1.5	–1.7	–1.4

Nominal Short-Term Interest Rates

	2015	2016	2017	2018	2019	2020
U.S.A.	0.2	0.5	1.4	2.4	2.6	3.0
U.K.	0.6	0.5	0.4	0.8	1.3	2.4
Japan	0.2	0.1	0.1	0.1	0.1	0.1
Germany	–0.1	–0.3	–0.3	–0.3	–0.3	0.0
France	–0.1	–0.3	–0.3	–0.3	–0.3	0.0
Italy	–0.1	–0.3	–0.3	–0.3	–0.3	0.0

Real Long-Term Interest Rates

	2015	2016	2017	2018	2019	2020
U.S.A.	0.2	0.3	0.6	0.8	1.2	1.4
U.K.	–0.7	–1.5	–1.5	–0.8	0.5	1.3
Japan	–0.4	–1.0	–1.1	–1.4	–1.4	–1.6
Germany	–0.9	–1.7	–1.5	–1.7	–1.3	–1.0
France	–0.2	–0.8	–0.8	–0.9	–0.8	–0.7
Italy	0.6	0.4	0.5	1.2	1.5	1.6

Nominal Long-Term Interest Rates

	2015	2016	2017	2018	2019	2020
U.S.A.	2.2	2.5	2.8	3.0	3.5	3.8
U.K.	1.3	0.7	0.6	1.2	2.5	3.3
Japan	0.3	0.0	0.1	0.0	0.1	0.1
Germany	0.6	0.1	0.4	0.2	0.6	1.0
France	1.0	0.7	0.8	0.7	1.0	1.2
Italy	1.6	1.7	1.9	2.8	3.3	3.5

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

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

[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)

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

[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