LIVERPOOL INVESTMENT LETTER

November 2019

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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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BUDGETING FOR BREXIT

In the Table below we update our calculations for projected government borrowing post-Brexit, in the light of our latest forecasts. We build in assumptions about the government's projected additional post-Brexit spending plans, which we have called the 'Fiscal Fund'. We do this assuming a Conservative government and the EU Deal agreed by Boris Johnson. Under a Labour government, plainly we would need to make big changes to our forecasts; given that Labour would take an axe to key parts of the private economy, these would include largescale disruption to growth.

Our latest updated Budget for Brexit on the current post-Brexit forecast shows substantial scope for cuts in taxes and additional spending on infrastructure and vital public services. The projection in the Table below shows that additional measures costing £25 billion a year from 2020 and an extra £65 billion a year from 2025 are consistent with bringing public debt down to around 60% of GDP by 2027. This debt is counted free of any Bank monetary operations, on the assumption that the Bank of England unwinds all its operations in public debt, reversing QE; this is in line with the assumption that monetary policy would be normalised by then. This implies that all public debt is held outside the public sector itself — at present about a third is held by the Bank and so is not public sector debt at all in theory.

	Brexit PSBR	+Fiscal Fund	Debt	GDP (Mkt Prices)	Debt/GDP % (ratio without Fund)
2018	41.4		1559	2127	73.3
2019	37.4		1716	2215	77.5
2020	20.4	25	1761	2310	76.2 (75.1)
2021	7.0	25	1793	2410	74.4 (72.3)
2022	3.0	25	1821	2514	72.4 (69.5)
2023	-10.0	25	1836	2630	69.8 (63.4)
2024	-15.5	25	1846	2753	67.0 (62.5)
2025	-25.0	65	1885	2891	65.2 (58.8)
2026	-35.0	65	1916	3035	63.1 (54.7)
2027	-45.0	65	1936	3187	60.7 (50.7)

Note: Public sector net debt (excluding public sector banks) estimated at £1646 billion at end 2017–18 FY (in Sept 2017 £1638 billion, source ONS.)

Table: The Path of Public Borrowing and Debt with The Post-Brexit Fiscal Fund (£ Billion, Current Prices)

The key point however at present is to note the overwhelming need, explained above, for fiscal policy to drive up interest rates. This could well call for far more borrowing than is pencilled in above; we cannot know how much is needed until we see how interest rates respond.

But to those who fear the government risks insolvency by being so aggressive in fiscal policy, we make two points.

Table 1: Summary of Forecast

	2016	2017	2018	2019	2020	2021	2022
GDP Growth[1]	1.9	1.8	1.4	1.7	2.0	2.1	2.11
Inflation CPI	1.1	2.6	2.5	1.9	2.1	2.0	2.0
Wage Growth	2.4	2.8	3.1	3.1	3.6	3.1	3.1
Unemployment (Mill.)[2]	0.8	0.8	0.9	0.9	0.8	0.7	0.7
Exchange Rate[3]	82.1	77.4	78.5	80.1	80.7	80.6	80.5
3 Month Interest Rate	0.5	0.4	0.7	0.9	1.3	2.4	3.1
5 Year Interest Rate	0.7	0.6	1.0	1.4	1.6	2.5	3.4
Current Balance (£bn)	-90.9	-68.3	-81.3	-86.4	-41.1	-31.2	-23.1
PSBR (£bn)	56.1	53.7	40.8	37.7	20.7	7.0	3.1

[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 = w

First, in the current market place government bond issues are being priced at extremely low interest rates because they are seen uniquely as entirely safe — the UK government has never defaulted and is backed by UK taxpayers, law-abiding people/firms who always pay up. Second, suppose the government for example issues £220 billion of debt over the coming decade as we assume and it does so at current rates (R) of around 2%. Then suppose in 2027 interest rates have risen to 5%. Make the simple assumption purely for ease of illustration that all this debt is perpetuities paying an annual coupon, whose price is therefore coupon/R. Then the £220 billion issue turns out in 2027 to be worth only £90 billion; the government makes a substantial capital gain, which plainly protects its solvency in a strong way. Effectively it will only have really borrowed £90 billion, and its debt/GDP ratio would be only 54% in 2027.

Most commentators, including the OBR, the IFS and most macro forecasters, and even it would seem the Treasury itself, have not caught up with these key facts of the macro situation, and hence are giving advice that is quite outdated. As Lord Keynes once said 'If the facts change, I change my mind; what do you do?'.

The effects of using the post-Brexit Fiscal Fund

Matters do not end there. The Fiscal Fund will have dynamic effects on the UK economy, by cutting taxes and boosting growth-friendly infrastructure. Our arithmetic above computes the debt evolution on the basis of £65 billion p.a. fiscal expansion by 2025, on the assumption that solvency concerns drive debt to a 'safe' 60% of GDP by 2027. As we have said fiscal policy should be more aggressive than this in order to drive up interest rates to reasonable levels at which monetary policy bites again. Such rates might be around 5%, and require a lot more borrowing than we have assumed in our safe arithmetic; indeed to drive UK rates up, if world rates remain mired around 2–3%, the UK has to look more risky and the pound be forced to strengthen by seriously aggressive borrowing. For illustrative purposes we will assume the extra borrowing reaches £100 billion pa by 2025.

This would make possible various tax cuts which could boost the UK's competitiveness. Here is the current cost of such tax cuts — a 1% rate cut in

- Corporation tax would cost £3.2 billion by 2025
- The standard rate of income tax £5.6 billion
- The top rate of income tax £1.5 billion
- The very top ('additional') rate £0.2 billion.

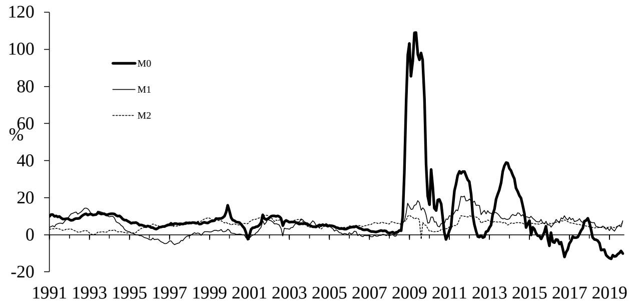
So, a cocktail of pro-entrepreneur tax cuts worth £100 billion could be:

1. Cut corporation tax by 10%: £32 billion
2. Abolish the very top additional 5% rate: £1 billion
3. Cut the top rate of income tax to 30%: £15 billion.
4. Cut the standard rate of income tax by 5%: £28 billion.

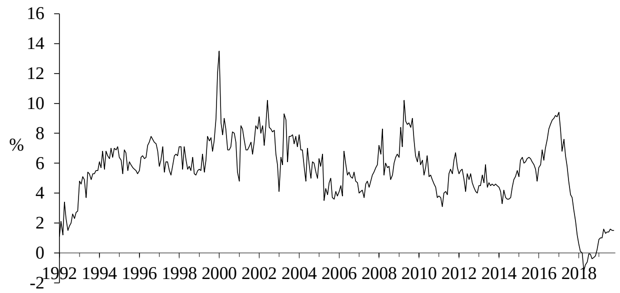
This would give a total of £76 billion, representing a weighted average tax cut across all income of about 15%, leaving £24 billion extra (about 1% of GDP) for spending on public services and infrastructure. According to the Liverpool supply side model of the UK, every 1% off the average tax rate gains 1% on GDP in the long run by making the labour market more competitive. The second round effects of Brexit through the Fiscal Fund would therefore boost the economy by a further 15% over the two decades from 2025 — or another 0.7% p.a. on growth from 2025–2045. How should we evaluate the effects of the remaining £24 billion extra spend on public services? We know that these also boost growth by raising private productivity. On the basis that politicians will decide on these as opposed to the same in tax cuts if they judge they will have the same effects on growth, we could assess that this spending would also raise growth proportionately — by about a third (23/77) of the tax cut programme, namely another 0.23% per annum.

On this basis we could project the whole post-Brexit programme from the new Fund could boost growth from 2025 by some 1% per annum.

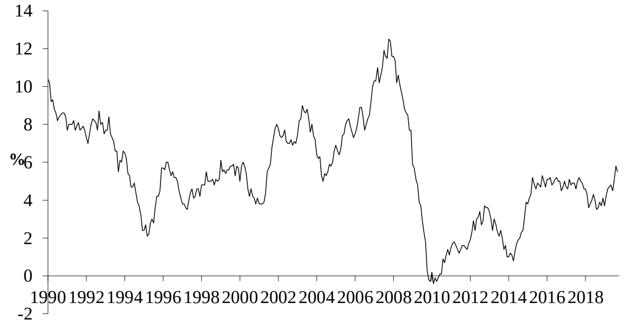
U.S.: Growth in Monetary Aggregates (Yr - on - Yr)



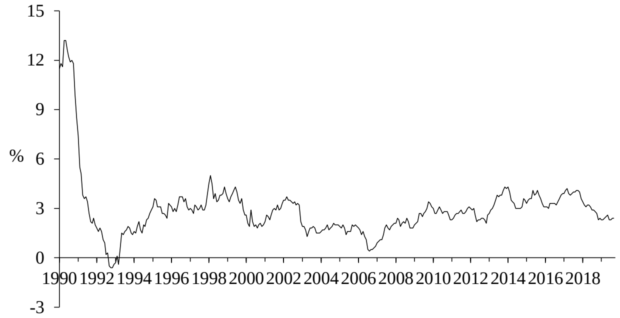
UK: Notes and Coins in Circulation Growth



Eurozone M3 Growth



Japan: Growth of M2+CD's



FOCUS ON JAPAN

Francesco Perugini

Japanese Economy Slowing Down

Since the beginning of 2019, Japan's economy has generally continued to recover slowly, however, some of the recent economic indicators are signalling Japan's losing dynamics and domestic production and investment are stagnating as the global economy slows. In its recent economic assessment, the Cabinet Office said that Japan's economic fundamentals are "deteriorating" as a result of an economic slowdown overseas.

Recent data showed that Japanese exports fell for a 10th straight month in September, dropping at a sharper pace than forecast as shipments to China and South Korea slipped. Outbound shipments fell 5.2% year-on-year last month, according to the Ministry of Finance, an improvement on the 8.2% fall in August. However, it was a steeper fall than the 4% decline forecast by economists in a recent poll. Exports to China fell 6.7% on the back of a slowdown in Asia's biggest economy and its trade tensions with the United States, while shipments to South Korea tumbled 15.9%. A historical feud between Seoul and Tokyo has spilled over into trade in recent months with Japan, in retaliation against Korean import boycotts, imposing export controls on three key chemicals that are crucial to South Korea's semiconductor industry. Imports dipped 1.5%, against forecasts of a 2.8% fall. The figures resulted in a trade deficit of ¥122.9 billion.

Overall, for the first half of fiscal 2019, Japan's goods trade recorded a deficit of ¥847.99 billion, marking the second consecutive half-year period of deficit. During the April–September period, exports sagged 5.3% and imports sank 2.6%. "The Bank of Japan is most worried about a deterioration in the export outlook so this data should provide some relief, however, we think it's too early to sound the all clear", said Marcel Thieliant, senior Japan economist with Capital Economics. Thieliant also said the fall could be explained by lower export prices but expects shipments to slow further in 2020 to notch a 2.7% fall from the 1.5% dip in 2019. Masato Koike, an economist at the Dai-ichi Life Research Institute, said Japan's "exports could recover, albeit moderately" as there were signs of a rebound in demand for electronic devices in China in September, compared with the past few months, and also due to a recent trade truce between Beijing and Washington.

As for manufacturing activity, it shrank at its fastest pace in more than three years in October as Japan was buffeted by a global slowdown, a consumption tax rise and a deadly typhoon. The latest Jibun Bank flash manufacturing purchasing managers index — an early reading which is published about a week prior to the official PMI reading — yielded a reading of 48.5 for the month so far, down from 48.9 in September — any figure below 50 indicates that the manufacturing sector is contracting. It is the worst reading since June 2016, the data showed. New manufacturing orders fell by the most since 2012. The gauge has been stuck in contraction territory for much of the year. Activity was hit during the month by Typhoon Hagibis, which barrelled through Japan in October killing scores and shutting down large swathes of Tokyo. A long-scheduled increase in consumption tax is also set to hit spending in the country. "Japan's economy hit a widely-expected bump in October following the consumption tax increase which took effect during the month," said Joe Hayes, an economist at IHS Markit. "Manufacturing new orders declined at the fastest rate in almost seven years as trade tensions and global economic weakness restricted exports." Jibun Bank's flash services PMI index, which measures the health of Japan's services sector, produced a reading of 50.3 for October. That reading held in expansionary territory but was down from 52.8 in September's reading.

Expectations are also on a negative trend. In a recent poll, Japanese companies overwhelmingly think the nation's longest post-war expansion is peaking, with two-thirds expecting a tax hike imposed this month by Prime Minister Shinzo Abe to hurt the economy. "The tax hike will hurt consumer sentiment considerably, which will exert an unpredictable impact on the Japanese economy," a manager at a food-processing company wrote in the survey.

Meanwhile, in the recent World Economic Outlook, IMF economists forecast Japan's economy would grow just 0.5% next year, its structural problems compounded by the trade war waged by its two largest trade partners and the prospect of being hit by sanctions by the US. The report said that to their credit, Japanese companies have improved profitability and, almost alone among the world's largest economies, reduced speculative debt, but a downturn on the scale of the global financial crisis would render too large a portion of corporate debt unserviceable. Alert and anticipatory policy is required; while their influence is limited, Japanese policymakers must do more to shape the global economic environment.

The Japanese economy still has many problems to solve, such as dealing with a shrinking population and an aging society, restoring local vitality, advancing social security reform and improving its fiscal condition. As for the policy measures taken by the Japanese government, Japan has entered the era of negative interest rates and the space for monetary policies is very limited. Unfortunately with the one instrument that it has left to boost demand, raise interest rates and escape the Zero Lower Bound, the Abe government is spooked by a record debt ratio (around 250% of GDP) and ongoing fiscal deficits.

However, it needs to ignore these, on the solid grounds that the debt holders are almost entirely domestic, and regard public debt as like money, with indeed virtually a zero interest rate like money. The Abe government needs to borrow a large amount more to stimulate the economy and push up rates. It should not be relying on a weak world economy to pull it out of impending slump. In fact, the more it can push up demand, raise the yen and alarm foreign debt holders, the better its chance of raising interest rates. In desperate times governments need to tear up their intellectual comfort blanket and take tough unusual measures. To strengthen such fiscal action, it should also continue to loosen restrictions and push forward its economic growth strategies and structural reform.

MARKET DEVELOPMENTS

In spite of the global slowdown, due to the US-China tariff war, the prospects of continued growth remain good, even if it is slow for a time. Raw materials remain in plentiful supply. There is scope for fiscal policy to help boost demand and interest rates. This continues to be a time to avoid bonds. Equities should be able to ride out higher rates with growth improving.

Table 1: Market Developments

	Market Levels		Prediction for Sep/Oct 2020	
	Oct 2	Nov 7	Previous Letter	Current View
Share Indices				
UK (FT 100)	7123	7406	9487	9636
US (S&P 500)	2888	3085	3231	3452
Germany (DAX 30)	11925	13289	18758	20027
Japan (Tokyo New)	1596	1698	2118	2216
Bond Yields (government)				
UK	0.36	0.36	3.00	1.30
US	1.63	1.63	3.80	2.-0
Germany	−0.81	−0.25	1.00	−0.40
Japan	−0.17	−0.17	0.10	−0.10
UK Index Linked	−2.22	−1.89	1.00	1.00
Exchange Rates				
UK ($ per £)	1.23	1.28	1.32	1.32
UK (trade weighted)	76.28	79.43	76.1	80.7
US (trade weighted)	103.81	102.24	102.5	102.5
Euro per $	0.91	0.91	0.88	0.85
Euro per £	1.12	1.16	1.16	1.12
Japan (Yen per $)	107.35	109.34	112.5	112.5
Short Term Interest Rates (3-month deposits)				
UK	0.80	0.84	2.10	2.00
US	2.07	1.88	3.00	1.80
Euro	−0.53	−0.48	0.00	−0.50
Japan	−0.20	−0.20	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	2.1	2.0	26.00		33.70
US	1.99	1.9	2.1	7.90	−2.96	10.93
Germany	3.30	1.0	1.7	48.00	3.34	57.34
Japan	1.90	0.3	1.2	29.00	−5.94	26.46
UK indexed[2]	−1.89		2.0	5.00		2.12
Hong Kong[3]	2.60	5.6	2.1	−15.00	−2.96	−7.66
Malaysia	3.30	4.4	2.1	39.00	−2.96	45.84
Singapore	3.50	1.0	2.1	−7.00	−2.96	−3.36
India	1.40	6.5	2.1	8.00	−2.96	15.04
Korea	1.10	1.8	2.1	−32.00	−2.96	−29.96
Indonesia	2.20	5.1	2.1	23.00	−2.96	29.44
Taiwan	2.80	2.6	2.1	14.00	−2.96	18.54
Thailand	3.20	2.1	2.1	10.00	−2.96	14.44

Bonds: Contribution to £ yield of: −

	Redemption Yield	Changing Nominal Rates	Currency	Total
UK	0.36	−9.40		−9.04
US	1.63	−3.70	−2.96	−5.03
Germany	−0.25	1.51	3.34	4.06
Japan	−0.17	−0.70	−5.94	6.81

Deposits: Contribution to £ yield of:

	Deposit Yield	Currency	Total
UK	0.84		0.84
US	1.88	−2.96	−1.08
Euro	−0.48	3.34	2.86
Japan	−0.20	−5.94	−6.14

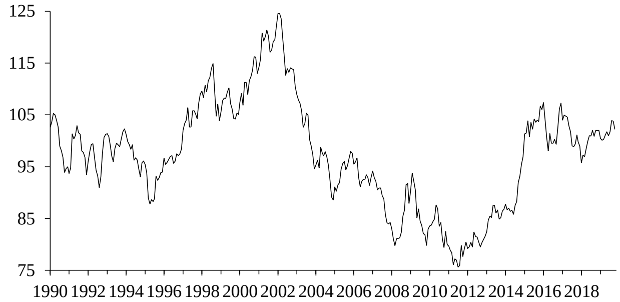
[1] Yields in terms of €s or $s can be computed by adjusting the £-based yields for the expected currency change.
[2] UK index linked bonds All Stocks
[3] Output based on China.

Table 3: Portfolio(%)

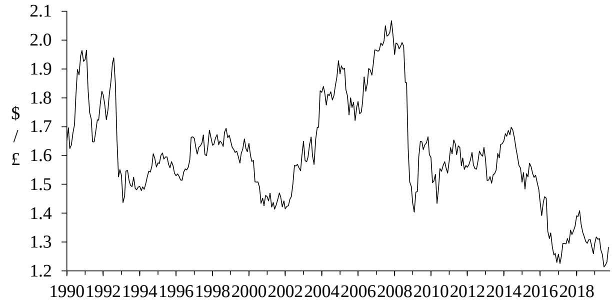
	Sterling Based Investor		Dollar Based Investor		Euro Based Investor	
	November Letter	Current View	November Letter	Current View	November Letter	Current View
UK Deposits (Cash)	5	5	5	5	1	1
US Deposits	-	-	-	-	-	-
Euro Deposits	-	-	-	-	-	-
Japanese Deposits	-	-	-	-	-	-
UK Bonds	-	-	-	-	-	-
US Bonds	-	-	-	-	-	-
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

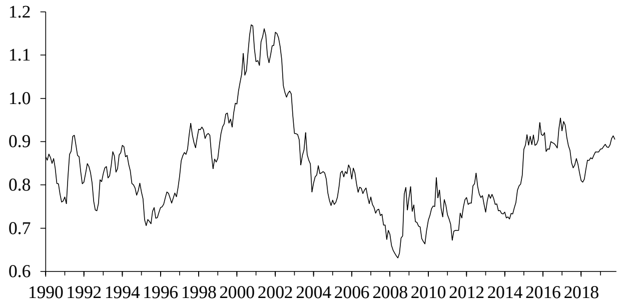
US : Trade Weighted Index
(Bank of England 1990 = 100)



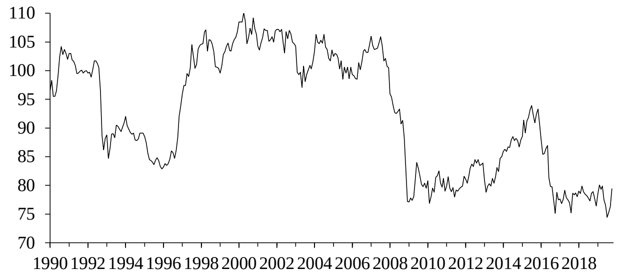
UK: Dollars Per Pound Sterling



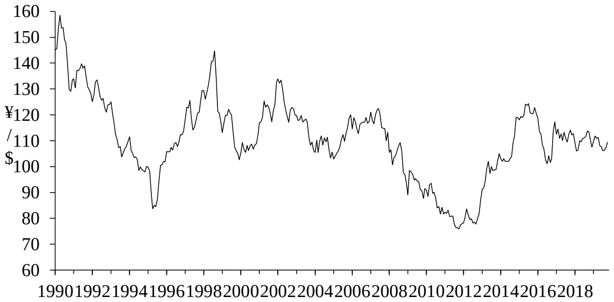
Euro per US dollar



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



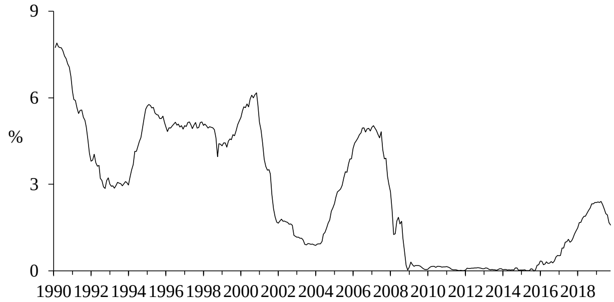
Japan : Yen Per U.S. Dollar



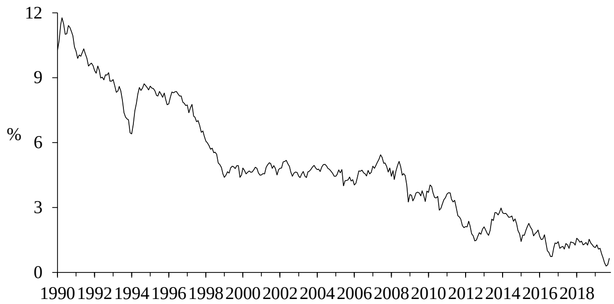
GOVERNMENT BOND MARKETS

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

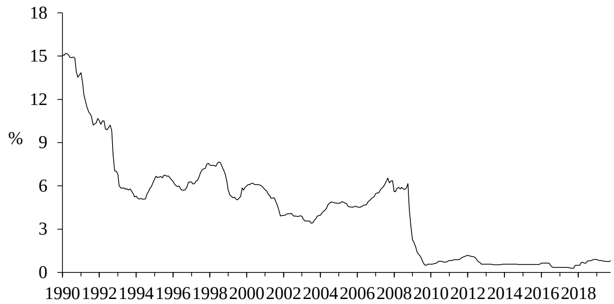
U.S. : 3-Month Treasury Bill



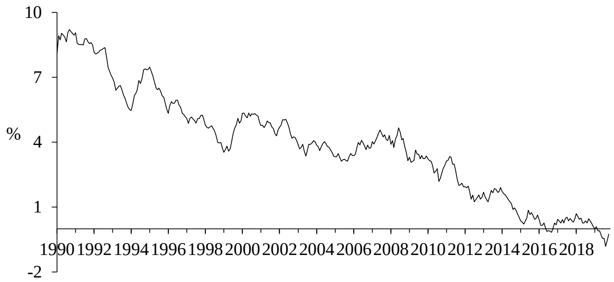
U.K.: Yield on Long-Term Government Bonds



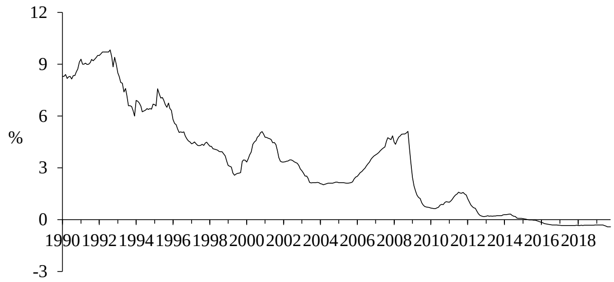
U.K. : 3-Month Certificate of Deposit Rate



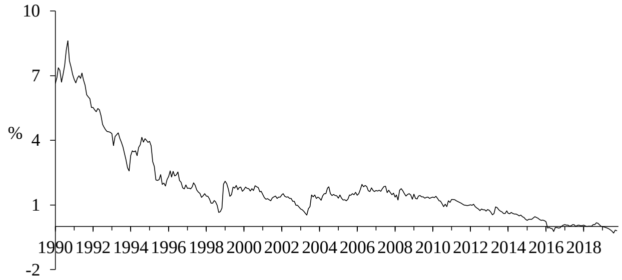
Germany: Yield on Public Authority Bonds



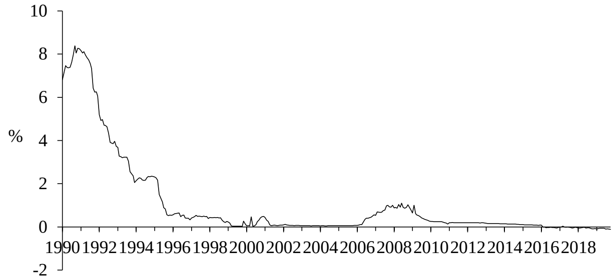
Germany : 3-Month Interbank Deposit Rate



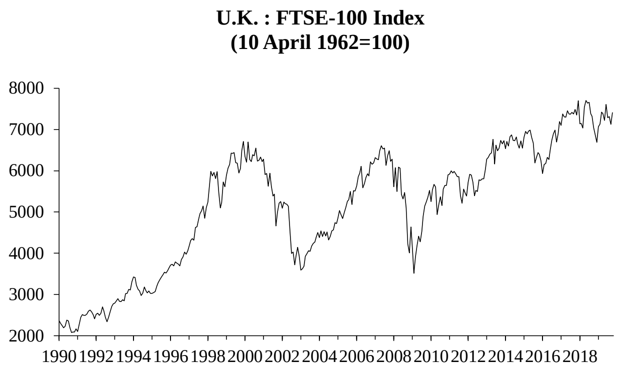
Japan: Yield on Long-Term Government Bonds

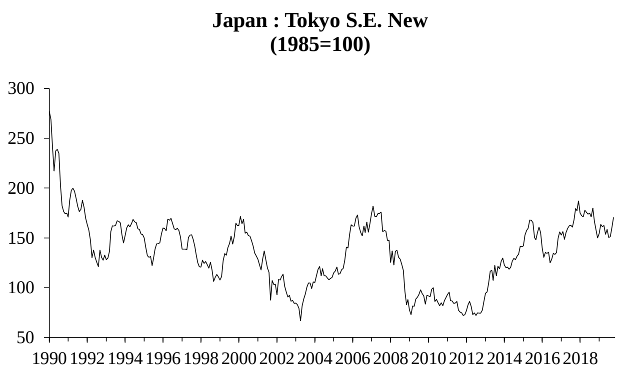


Japan : 3-Month Money Market Rate



MAJOR EQUITY MARKETS





EMERGING MARKETS

Anupam Rastogi

India

The Indian economy decelerated for the fifth consecutive quarter in April–June (June quarter). GDP expanded by a meagre 5% year-on-year, down from 8% a year earlier. This is the lowest growth since 2013. We expect economic growth to be 6% in 2019–20, before picking up to 6.5% in 2020–21 and 7.2% in 2021–22 as the RBI's lowering of cost of funds feeds into the economy, investment demand picks up at the back of lowering of corporate tax cuts and agricultural output zooms at the back of bountiful Southwest monsoon.

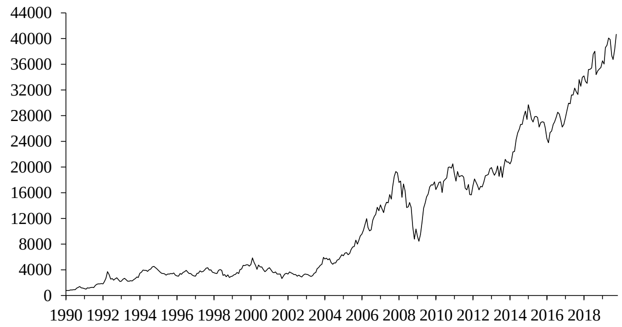
The International Monetary Fund (IMF) had pegged India's economic growth rate at 7.2% for FY20 in its April outlook and scaled down the growth rate to 6.1% in its recent outlook in October.

Indian retail inflation probably reached a 12-month high in September, but still leaving room for further interest rate cuts because it is expected to remain below the Reserve Bank of India's target. India's annual consumer inflation rose to 3.7% in September, its highest in a year but lower than the central bank's target of 4 to 6%. Hence, the RBI has been quite vocal about the fact that they would continue to support growth and they have left the door open for more policy cuts. The Reserve Bank of India lowered its rate to 5.15% from 5.40% in October, its fifth rate reduction in a row. The bank said it would continue with an accommodative stance as long as necessary to revive growth. Expectations are that RBI will cut interest rates by another 25 basis points on 5th December. Since February, RBI has trimmed key policy rates by 135 basis points to hit a multi-year low of 5.15%.

India's merchandise exports as well as imports contracted the most in more than three years in September, reflecting a slump in global demand as well as in India. Merchandise exports shrank 6.57% to $26 billion, while imports dropped 13.9% to $36.9 billion, narrowing India's trade deficit to a seven-month low of $10.9 billion. Slowing domestic demand is primarily driving this (decline in imports), demonstrated by contractionary core import growth, In September, India's trade deficit slipped to a seven-month low of $10.9 billion as exports and imports witnessed the steepest fall in three years. Merchandise exports shrank 6.57% to $26 billion, while imports dropped 13.9% to $36.9 billion. Category wise, both consumption and capital-oriented imports witnessed sharp declines in September.

India rose 14 places in the 2019 Ease of Doing Business ranking, inching closer to its target of being counted as part of the top 50 club. While it is now the 63rd best nation to do business in, up from 77th last year, it still lags behind countries in Southeast Asia such as Malaysia (12th) and

India: BSE Sensitive



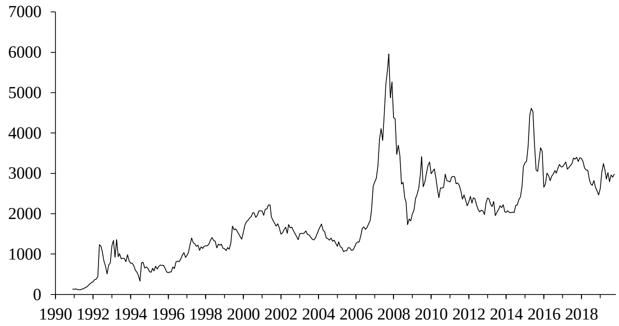
Thailand (21st), as well as China, which moved up to the 31st position. The principal drivers of this improvement have been the Insolvency and Bankruptcy Code, which saw India move up 56 ranks on the parameter "Resolving insolvency" between 2018 and 2019. Technology has also played its part, with the move towards e-filing of construction permits, property registration, and paying taxes accounting for improvements on these parameters. Taken together, these are impressive achievements and in that sense, India has earned its position on the list of "economies with the most notable improvements" for the third year in a row at number nine. The cautionary note, perhaps, is that it shares this listing with countries that can be scarcely described as open, liberal economies — Saudi Arabia, Bahrain, and Kuwait (all monarchies), Pakistan, a failed state, and China, a dictatorship.

The government is trying hard to position itself as a winner in the trade brawl between the U.S. and China. India is making a push to get Apple Inc. and other big brands to switch production there as the risks of manufacturing in China rise along with trade tensions. Reforms in land management and enforcing contracts could be the next big measures through which India can better its Ease of Doing Business ranking.

India decided against joining the RCEP trade deal, a trade agreement covering much of Asia, paving the way for 15 other countries to sign the China-backed regional deal next year. Prime Minister, Narendra Modi, said that he was guided by the impact it would have on the lives and livelihoods of many Indians, especially vulnerable sections of society. The Chinese claimed that India had raised new demands at the last minute; the Indians insisted that they were simply holding out for the same concessions they always had. These include special protections from cheap Chinese imports and a tighter integration of services trade into the agreement. The RCEP, billed as a mammoth that could be China's alternative to the Trans-Pacific Partnership, is shaping up to look more like a mouse. It seems that at this juncture, amidst fierce debate on economic growth and jobs creation, the modest tariff-related liberalizations at stake were too much for policy makers in Delhi. The deal, which now looks likely to be signed in 2020, adds China to Asia's trade agreements. Ten countries involved are the members of the Association of Southeast Asian Nations. Four of those 10 joined the Comprehensive and Progressive Agreement for Trans-Pacific Partnership with Australia, New Zealand and Japan. Many have bilateral and supplementary agreements in place.

	18–19	19–20	20–21	21–22	22–23
GDP (%p.a.)	6.8	6.0	6.5	7.2	7.4
WPI (%p.a.)	3.9	3.6	3.8	3.9	4.0
Current A/c(US$ bill.)	-70.0	-52.0	-64.0	-65.0	-65.0
Rs./$(nom.)	79.5	71.0	72.0	72.5	73.5

China: SSE Composite Index



China

China's third-quarter economic growth came in at 6%, the lowest in nearly three decades. The world's No. 2 economy has been on a downward trajectory for several years — a path with which China's leadership is satisfied with as structural changes in the economy are taking shape. On fiscal front, Beijing isn't signalling more tax cuts or bigger government spending programs any time soon.

Investment in fixed assets, a measure of construction activity that has long been a major economic driver have declined. In the first nine months, it expanded only 5.4% from a year earlier compared with a 5.5% pace in the first eight months. The government has put the final consumption expenditure at 60.5% of GDP in the first nine months of the year, with investment at 19.8% and net exports at 19.6%.

China's factory activity unexpectedly expanded at the fastest pace in well over two years in October as new export orders rose and plants ramped up production. The Caixin/Markit Manufacturing Purchasing Managers' Index (PMI) for October rose to 51.7 from 51.4 in September, marking the third straight month of expansion. This is the fastest pace for the manufacturing sector in nearly three years in October as output and new orders grew at a rate not seen in several years.

Surging pork prices pushed China's consumer inflation to a near six-year high in September. The consumer price index rose 3% in September from a year earlier, which is Beijing's inflation target of "around 3%" this year. The swine fever in Africa has severely hurt pig output in China. We are maintaining our inflation forecast the same as in the last month as the producer price index fell 1.2% from a year earlier in September. We expect China's producer price deflation would continue to act as a brake on consumer inflation.

China's central bank is not changing its accommodative monetary policy for now, even though other major central banks have eased recently amid the darkening global economic outlook.

In September, Chinese exports fell 3.2% year on year in a sign that the impact of the trade dispute had deepened from earlier in the year, while imports dropped 8.5% during the same period. In yuan terms, China's exports in September was 0.7% lower from a year ago, while imports dropped 6.2% during the same period. Due to the sharp drop in imports, China's overall trade surplus widened to $39.65 billion in September, from August's $34.8 billion surplus.

The exchange rate of the Chinese yuan against the US dollar is now at an "appropriate level", with cross-border capital flows having remained balanced since the currency weakened past seven to the dollar in early August. According to the central bank, depreciation of the yuan since the beginning of August has been driven and determined by market forces and reflects shifts in market dynamics. People's Bank of China (PBOC) governor Yi Gang has reiterated Beijing's pledges to make the yuan's exchange rate more market-driven and the capital account more convertible. The yuan will probably weaken to 7.3 per dollar by the end of 2019. The PBOC will continue to loosen monetary policy to support growth; it will probably cut reserve requirements another 50 basis points this year and lower loan prime rates.

The IMF has delayed its decision to the next round of changes to its voting structure until as late as 2023, Yi said China was "deeply disappointed", while urging the organization to push ahead with a clear timetable. The changes would give China a greater say in the crisis lender's governance, though they are subject to approval by the US, the largest shareholder. China became the third-biggest voter at the IMF in reforms ratified in 2015, up from sixth.

U.S. and Chinese officials are actively considering rolling back some tariffs to clinch the partial trade deal under negotiation. The U.S. and China have agreed in principle the first of several phases of an accord to end the dispute that has penalized hundreds of billions of dollars of trade between the two countries. The "phase one" pact would include Chinese purchases of American farm goods, rules to deter currency manipulation and some provisions to protect intellectual property and open up Chinese industries to U.S. firms. The phase one deal was widely expected to deter Mr. Trump from imposing brand-new tariffs on December 15 as planned, but negotiators now are working on a framework that would also roll back some existing tariffs.

For China, the trade war is chiefly about politics, not economics. China ran a trade surplus of more than $300 billion in 2018. China will go much farther than Trump originally envisioned to sink the United States. Mr. Trump and Chinese President Xi Jinping could meet and sign the first phase of a deal in mid-November, at the Asia-Pacific Economic Cooperation summit in Chile. The U.S. hasn't made a decision on the planned December tariffs on $156 billion in Chinese goods. Beijing will likely argue hard for the U.S. to remove that round, too.

The party's Central Committee which met behind closed doors in the last week of October for the first time since February 2018 — has reimposed its faith in the leadership of Chinese President Xi Jinping. He emerged from the Communist Party conclave with a resolute endorsement of his leadership, despite a slowing economy, a bruising trade war with the U.S. and unrest in Hong Kong.

This year's conclave came during an especially trying period for Mr. Xi, whose domineering leadership style and assertive diplomacy has drawn criticism from within the Beijing elite. Some party members and policy specialists have blamed him for concentrating too much power in his own hands, exacerbating tensions with Washington, mismanaging the domestic economy, and sowing confusion in the bureaucracy with his insistence on control and his threats to punish wayward officials.

	18	**19**	**20**	**21**	**22**
GDP (%p.a.)	6.6	6.0	5.6	5.4	5.2
Inflation (%p.a.)	2.2	2.3	2.3	2.0	1.8
Trade Balance(US$ bill.)	50.0	60.0	40.0	20.0	0.0
Rmb/$(nom.)	6.8	7.1	7.3	7.3	7.3

South Korea

South Korea's real gross domestic product (GDP) growth slowed down in the third quarter on lower fiscal spending and external uncertainties. GDP grew 0.4% in the July–September quarter compared with one percent expansion in the second quarter. Real GDP had contracted 0.4% in the first quarter on a quarterly basis. The slow growth in GDP is attributable to lower government expenditure combined with the global trade dispute and the downturn of business cycle in the global semiconductor industry.

The International Monetary Fund revised down its 2019 growth outlook for the South Korean economy to 2% last month from 2.6% estimated six months earlier. The OECD also downgraded this year's growth outlook for the economy from 2.4% to 2.1%, while the BOK lowered its growth forecast from 2.5% to 2.2% in July. All are slightly more optimistic than our forecast of 1.6% growth of GDP in 2019.

South Korean consumers continued a campaign to boycott Japanese products and tours to Japan following Japan's tighter control in July over its export to South Korea of three materials vital to produce memory chips and display panels. In August, Japan dropped South Korea off its whitelist of trusted trading partners that are given preferential export procedure. In response, Seoul removed Tokyo from its whitelist of trusted export partners.

Korean core consumer prices, which strip out volatile items including energy and food, rose by just 0.6% in the 12 months to September, the lowest figure in almost two decades, and GDP growth has slowed. This has raised the risk that the country may be on the same track as Japan was in the 1990s.

The country's nonfinancial corporate businesses have kept their debt levels roughly stable over the past decade, at close to 100% of GDP. Households have levered up considerably, with debt levels rising to 92% of GDP in the first quarter of 2019, up 20 percentage points since the global financial crisis.

Mounting deflationary concerns and a teetering global economy have strengthened the case for an additional rate cut. The Bank of Korea (BOK) in October reduced its policy interest rate to a record low of 1.25%. We expect rates to be lowered further as the rate cut from the U.S. Federal Reserve has given the BOK room for further easing. Korea's next rate-setting meeting is scheduled for Nov. 29. BOK Governor Lee Ju-yeol told a parliamentary audit of the government offices that an active contribution of fiscal spending would be significant, vowing to manage the BOK's monetary policy to support an economic recovery.

South Korean exports climbed 4.1% in the third quarter from three months earlier, after growing 2% in the second quarter. Imports gained 0.9% in the quarter.

The South Korean won could have depreciated by another 5% by the end of 2019. It is "very volatile" and vulnerable to the trade war. However, this possibility is fading now as the US and China are engaged in rolling back their trade dispute.

	18	**19**	**20**	**21**	**22**
GDP (%p.a.)	2.7	1.6	1.8	2.2	2.2
Inflation (%p.a.)	1.5	1.1	1.5	1.5	1.5
Current A/c(US$ bill.)	86.0	80.0	78.0	70.0	70.0
Won/$(nom.)	1130	1220	1240	1260	1260

Taiwan

Taiwan's economy is basking in the US-China's trade war as the island is benefiting from shifts in trade and investments from mainland China to Taiwan. Many companies have been moving their manufacturing facilities to the island amid rising tariffs imposed on Chinese goods by the United States.

The island's annual inflation rate accelerated to 0.53% in September from 0.43% in the previous month and is expected to grow a bit more as pork prices are going to remain stubbornly high due to supply constraints.

Taiwan's exports are expected to grow 1% in September from a year earlier, logging a second straight month of growth. The strong demand for smartphones countered the effects of a prolonged U.S.-China trade war.

The Taiwan dollar is proving to be an unexpected beneficiary of the U.S.-China trade war as well.

The currency notched its first quarterly rise since March 2018, as foreign funds returned and firms redirected investments to Taiwan to avoid U.S. tariffs against China. However, Taiwan's dollar would not be allowed to continue its appreciation as a stronger currency hurts its exports. The currency could decline more than 3% by end-2019.

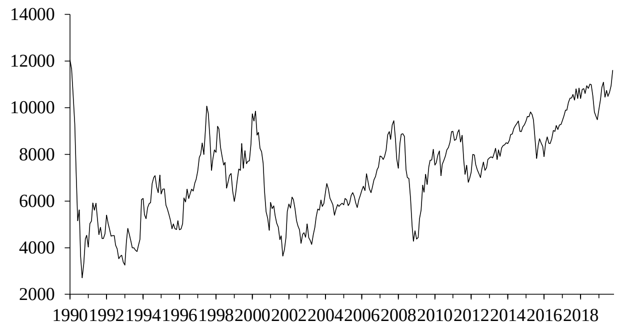
The US government is pushing Taiwan to restrict its biggest chipmaker, TSMC, from producing semiconductors for Huawei. It is reported that the US told Taiwanese diplomats in Washington that chips made by TSMC for Huawei were going straight into Chinese missiles pointing at Taiwan — a "metaphor" illustrating the risks of supplying China. Washington recognizes that Taiwan is unlikely to rein in TSMC ahead of January's presidential election, but the US would like to tighten the noose around Huawei as much as possible.

	18	19	20	21	22
GDP (%p.a.)	2.6	2.5	2.6	2.6	2.2
Inflation (%p.a.)	1.2	1.0	1.0	1.0	1.0
Current A/c(US$ bill.)	68.0	70.0	71.0	70.0	60.0
NT$/$(nom.)	29.8	31.0	31.0	31.0	31.0

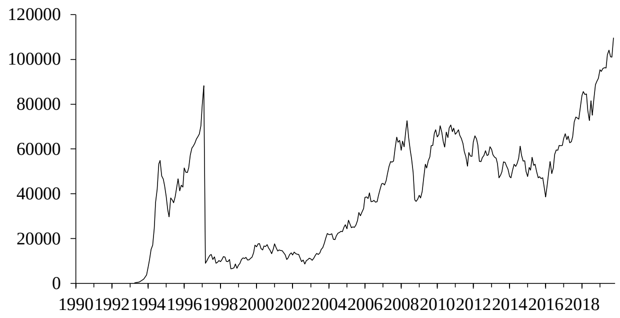
Brazil

Brazil's gross domestic product (GDP) will grow less than one percent this year due to slow economic recovery and unemployment is close to 12%. However, the economy is all set to grow at a faster pace in 2020. This will be the first time in many years when there is a combination of rising growth and falling inflation. We expect that the government's reforms of social security system and the signing of trade deals like the trade agreement between the Southern Common Market (Mercosur) and the European Union will spur economic growth.

Taiwan: Weighted TAIEX Price Index



Brazil: Bovespa



Consumer prices rose 0.09% from mid-September to mid-October, which helped push the annual rate of inflation down to 2.72%, below 3.0% for the first time since May last year and further below the central bank's official year-end 2019 target of 4.0%. As a result, Brazil's central bank cut rates for the third time in the last three months. The bank's monetary policy committee cut its benchmark Selic rate to 5% from 5.5% and said the benign outlook for consumer prices means at least one more half-point cut is probably in store. The next policy meeting is scheduled in December. The recent weakening of Brazil's real against the dollar did not push inflation which has provided impetus to the central bank to signal a lower borrowing regime. Brazil's real is trading at around 4 per US dollar as economic prospects turn positive.

Brazil aims to conclude free trade agreements between the South American free trade bloc Mercosur and Singapore and South Korea by next year. Brazil is also planning for bilateral trade deals with several other Asian countries. Mercosur will hold initial trade talks with Vietnam and Indonesia later this year, while it could seek to expand an existing trade deal with India and is also interested in an accord with Japan. Brazil wants to send a message that it is open for business.

Brazilian President Jair Bolsonaro, while visiting Saudi Arabia, said he would like his country to join OPEC. Brazil certainly produces enough oil today to be a member of the Organization of the Petroleum Exporting Countries. It long ago overtook cartel founding member Venezuela to be South America's largest producer. Joining a cartel comes with obligations but few rights. On the other hand, if leading members including Saudi Arabia or “OPEC+” allies such as Russia cut back output, non-cartel producers can benefit without sharing the cost of lost exports. But, joining of the cartel will not benefit Brazil as it would crimp their future output. Without the cartel Brazil can grow its crude output 25% by 2022 and as much as 70% by 2035.

It took three presidents, four finance ministers, and countless setbacks, but Brazil finally completed an overhaul of its pension system. Brazilian senate overwhelmingly approved a revamp of the country’s insolvent social-security system, which will sharply lower spending. The legislation, which is projected to save taxpayers as much as $200 billion over 10 years, is a political victory for the president, who has been distracted by clashes with foreign leaders and lawmakers in the capital, even from his own party.

Markets have been rallying on the prospect of approval of the bill, with the Ibovespa stock index reaching a new high.

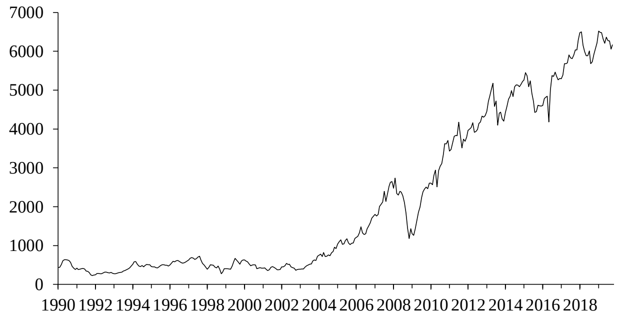
Brazil’s pension costs eat up to 45% of the federal budget. With much of the remaining funds going to pay salaries, only about 3% is left to build and maintain much-needed hospitals, schools and other infrastructure. The pension overhaul will keep the country’s debt under control and would allow policy makers to focus on growth-spurring measures.

	18	**19**	**20**	**21**	**22**
GDP (%p.a.)	1.1	0.8	1.8	2.5	2.5
Inflation (%p.a.)	3.8	3.3	3.9	4.0	4.0
Current A/c(US$ bill.)	-14.6	-36.0	-30.0	-26.0	-26.0
Real/$(nom.)	3.8	4.1	4.0	4.1	4.2

Other Emerging Markets

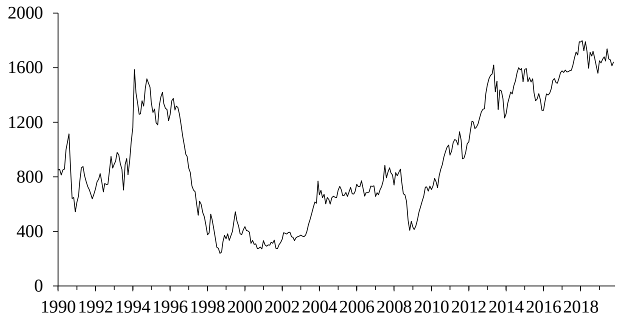
Hong Kong: FT-Actuaries

Indonesia: Jakarta Composite

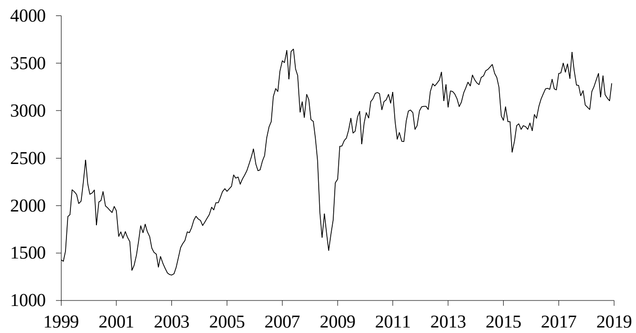


Malaysia: FT-Actuaries (US$ Index)

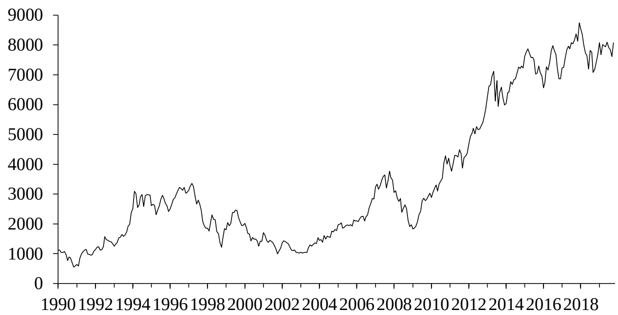
Thailand: Composite Index



Singapore: Straits Times Index

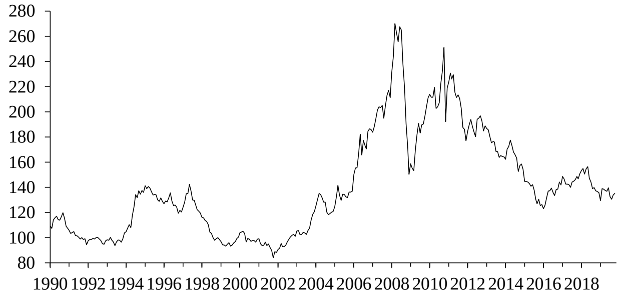


Philippines: Manila Composite

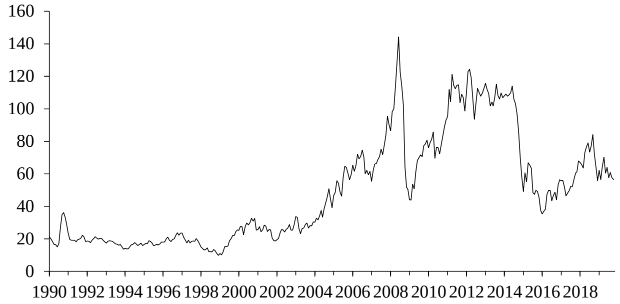


COMMODITY MARKETS

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

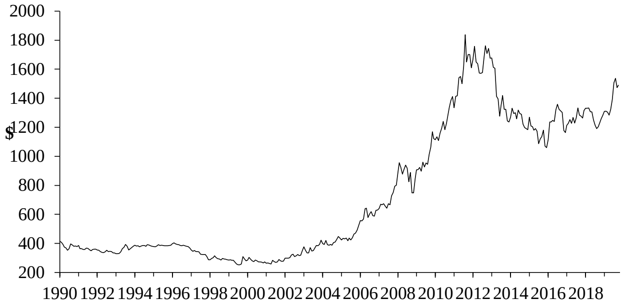


Oil Price: North Sea Brent (in Dollars)

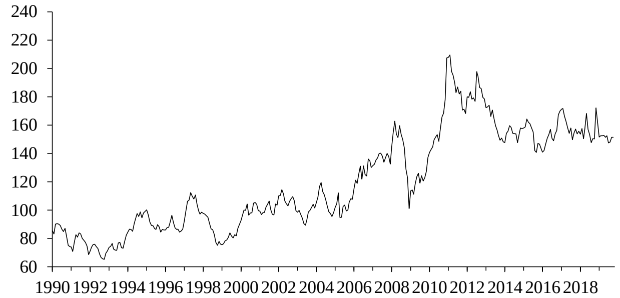


Commodity Price Index (Sterling)
(Economist, 2000=100)

Gold Price (in Dollars)



Commodity Price Index (Euro)
(Economist)



UK FORECAST DETAIL

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

	Inflation %[1] (CPI)	Short Dated (5 Year) Interest Rates	3 Month Int. Rates	Nominal Exchange Rate (2005=100)[2]	Real Exchange Rate[3]	Real 3 Month Int. Rates %[4]	Inflation (RPIX)	Real Short Dated Rate of Interest[5]
2017	2.6	0.6	0.4	77.4	75.7	-1.7	3.8	-1.5
2018	2.5	1.0	0.7	78.6	76.5	-1.3	3.3	-0.5
2019	1.9	1.0	0.9	80.1	74.7	-1.0	2.6	0.5
2020	2.1	1.3	1.1	80.7	76.0	-1.1	2.9	1.4
2021	2.0	2.4	1.9	80.6	76.3	-1.0	2.7	0.9
2022	2.0	3.0	2.4	80.5	76.6	0.1	2.7	0.6
2018:1	2.5	1.0	0.5	79.2	78.1	-1.6	3.7	-1.1
2018:2	2.5	1.0	0.7	79.3	77.9	-1.9	3.4	-1.1
2018:3	2.5	1.0	0.8	78.0	75.9	-1.3	3.2	-1.1
2018:4	2.3	1.0	0.8	78.0	74.2	-0.5	3.0	-0.3
2019:1	1.9	0.9	0.8	79.0	72.8	-0.6	2.4	-1.1
2019:2	2.0	1.0	0.8	80.4	75.3	-1.2	2.7	-1.0
2019:3	1.9	1.1	1.0	80.4	75.3	-1.2	2.6	-0.9
2019:4	1.9	1.1	1.0	80.6	75.5	-1.0	2.6	-0.9
2020:1	2.1	1.1	1.0	80.7	75.5	-1.0	2.9	-0.9
2020:2	2.0	1.2	1.1	80.9	76.3	-1.0	2.8	-0.8
2020:3	2.0	1.3	1.1	80.7	76.2	-1.0	2.7	-0.7
2020:4	2.1	1.7	1.2	80.6	76.1	-1.4	3.0	-0.3

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	2.8	2.2	0.8	141.9
2018	266.6	3.1	2.5	0.9	142.8
2019	275.7	3.6	2.4	0.9	145.2
2020	284.4	3.1	2.2	0.8	146.7
2021	293.2	3.1	1.9	0.7	148.4
2022	302.3	3.1	1.8	0.7	150.0
2018:1	264.6	3.0	2.3	0.8	142.6
2018:2	263.4	2.8	2.5	0.9	141.5
2018:3	268.0	3.0	2.5	0.9	143.2
2018:4	270.2	3.8	2.7	1.0	144.0
2019:1	273.4	3.9	2.9	1.0	145.4
2019:2	273.4	3.8	2.2	0.8	144.1
2019:3	276.9	3.3	2.2	0.8	145.2
2019:4	279.3	3.4	2.2	0.8	146.1
2020:1	282.1	3.2	2.3	0.9	147.0
2020:2	281.8	3.1	2.2	0.8	145.6
2020:3	285.4	3.1	2.2	0.8	146.7
2020:4	288.2	3.2	2.2	0.8	147.6

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	163.3	781822.0	441518.3	300818.9	200522.0	-60310.0	100727.2
2018	165.5	792730.9	445869.9	310567.1	201139.6	-41308.9	99536.9
2019	168.3	806031.5	451574.0	294378.8	204415.1	-52538.3	91648.8
2020	171.7	822255.3	457805.0	284319.5	205642.7	-30703.6	95003.4
2021	175.3	839667.4	464216.3	291654.9	206876.2	-25839.5	97212.8
2022	179.0	857300.8	470251.9	301062.7	208117.1	-22728.5	99398.9
2017/16	1.8		0.6	0.1	0.1		-6.3
2018/17	1.4		1.0	3.2	0.3		-1.0
2019/18	1.7		1.3	-4.8	1.6		-7.7
2020/19	2.0		1.4	-2.9	0.6		3.8
2021/20	2.1		1.4	2.6	0.6		2.3
2022/21	2.1		1.3	3.2	0.6		2.2
2018:1	164.4	196809.2	110809.6	73337.2	51591.3	-10814.1	24114.9
2018:2	165.1	197627.5	111248.1	78845.0	49253.6	-10094.0	25625.2
2018:3	166.1	198830.2	112094.9	76125.8	49822.6	-10001.3	23211.8
2018:4	166.6	199464.1	111717.3	82259.2	50472.1	-10399.5	26585.0
2019:1	167.6	200618.5	111589.5	85538.7	52691.8	-27678.5	21523.0
2019:2	167.5	200578.9	113662.7	72545.2	50827.1	-14023.4	22612.6
2019:3	168.8	202069.7	113170.0	67688.8	50122.1	-5107.9	23706.5
2019:4	169.4	202764.4	113151.8	68606.1	50774.1	-5728.5	23806.7
2020:1	170.7	204375.3	113061.1	76539.8	53007.9	-14821.8	23507.7
2020:2	170.6	204193.9	115140.9	68388.8	51132.9	-7013.6	23517.5
2020:3	172.3	206305.9	114754.0	69302.3	50422.3	-4284.8	23922.3
2020:4	173.2	207380.1	114849.0	70088.6	51079.6	-4583.4	24055.8

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)
2017	2.6	2048.0	53.7	18.3	-68.3
2018	1.9	2111.8	40.8	23.4	-81.3
2019	1.7	2177.2	37.2	26.5	-86.4
2020	0.9	2269.2	20.7	28.9	-41.1
2021	0.3	2364.0	7.0	32.9	-31.2
2022	0.1	2462.6	3.1	36.7	-23.1
2018:1	-2.9	517.6	-14.9	4.9	-17.7
2018:2	4.7	524.6	24.6	5.7	-19.9
2018:3	1.8	524.6	9.5	5.7	-20.5
2018:4	4.8	535.5	25.6	5.7	-23.1
2019:1	-3.6	527.1	-18.8	6.3	-37.8
2019:2	2.9	535.6	15.6	6.4	-25.4
2019:3	2.6	543.3	14.3	6.7	-10.0
2019:4	2.9	546.2	15.7	6.7	-13.2
	-2.9	517.6	-14.9	4.9	-17.7
2020:1	4.7	524.6	24.6	5.7	-19.9
2020:2	1.8	524.6	9.5	5.7	-20.5
2020:3	4.8	535.5	25.6	5.7	-23.1
2020:4					

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	2.3	1.9
U.K.	2.3	1.9	1.8	1.4	1.7	2.0
Japan	1.3	0.6	1.9	0.8	1.0	0.3
Germany	1.7	2.2	2.5	1.5	0.5	1.0
France	1.0	1.0	2.4	1.7	1.3	1.2
Italy	0.8	1.3	1.7	0.8	0.1	0.4

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	2.5	1.9	2.1
Japan	0.8	–0.1	0.5	1.0	0.6	0.7
Germany	0.3	0.5	1.5	1.8	1.4	1.5
France	0.1	0.2	1.0	1.9	1.2	1.3
Italy	0.1	–0.1	1.2	1.2	0.7	1.0

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	–1.7	–1.3	–1.0	–1.1
Japan	0.3	–0.4	–0.9	–0.5	–0.7	–1.0
Germany	–0.6	–1.8	–2.1	–1.7	–2.0	–2.1
France	–0.3	–1.3	–2.2	–1.5	–1.8	–1.9
Italy	0.0	–1.5	–1.5	–1.0	–1.5	–1.6

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	0.7	0.9	1.1
Japan	0.2	0.1	0.1	0.1	0.0	0.0
Germany	–0.1	–0.3	–0.3	–0.3	–0.5	–0.4
France	–0.1	–0.3	–0.3	–0.3	–0.5	–0.4
Italy	–0.1	–0.3	–0.3	–0.3	–0.5	–0.4

Real Long-Term Interest Rates

	2015	2016	2017	2018	2019	2020
U.S.A.	0.2	0.3	0.6	0.9	1.4	1.8
U.K.	–0.8	–1.5	–1.5	–0.5	1.4	0.9
Japan	–0.2	–0.8	–0.8	–1.0	–1.3	–1.6
Germany	–0.7	–1.5	–1.3	–1.5	–2.0	–2.3
France	–0.1	–0.7	–0.7	–0.8	–1.6	–1.9
Italy	0.8	0.6	0.8	1.6	0.0	–0.5

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	1.0	1.0	1.3
Japan	0.3	0.0	0.1	0.0	–0.1	–0.1
Germany	0.6	0.1	0.4	0.2	–0.2	–0.4
France	1.0	0.7	0.8	0.7	0.1	–0.1
Italy	1.6	1.7	1.9	2.8	1.5	1.2

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	76.7	74.6	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