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QCAM Insight ++ The macro perspective ++ FX market talk
Economic activity ++ Inflation ++ FX markets ++ Financial markets
Number of the month

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Contents

QCAM Insight

There is more to the yen than just carry

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Caught between disappointingly low inflation and growing pressure to reduce the negative side effects of QE, the Bank of Japan (BoJ) decided to give in a bit to the banks and insurance companies while reinforcing its commitment to boost inflation by maintaining low interest rates. That means the carry trade lives on, but there is more to the yen than just interest rates.

At its meeting on July 31, the BoJ faced a dilemma. Core inflation had fallen back to just 0.2 percent in June, while banks and insurance companies complained bitterly about the negative side effects of the BoJ's current policy stance on their financial performance. Given Japan's 20-year struggle with low inflation and the unparalleled monetary policy efforts to reflate the economy, it would seem sensible to ask whether 2 percent inflation is a realistic target. But that was probably too much to ask for one policy meeting and doing so make the BoJ look like it was admitting defeat.

Instead, the BoJ decided to help financial institutions just a bit by reducing the balance of bank reserves subject to the negative rate from 10 trillion yen to 5 trillion yen, widening the target band for 10-year JGB yields around zero from 10bps to 20bps, and skewing ETFs purchases towards the TOPIX and away from the Nikkei. More importantly, and similar to the ECB, the BoJ also introduced a new forward guidance to maintain the current extremely low levels of short- and long-term interest rates for an extended period of time.

Risk aversion hurts the yen carry trade

For FX markets, the BoJ's announcement extends the life of the famous yen carry trade. After the policy announcement the yen weakened by about 1 percent versus the US dollar but has since regained all lost ground. Indeed, the yen carry trade is not a foolproof bet on interest rate differentials. The risk environment is critical for investors who borrow yen to buy higher-yielding currencies. In periods of rising uncertainty, investors tend to reduce their short yen positions.

The VIX is a popular measure of risk sentiment. However, the VIX itself is currently probably lower than normal due to excess liquidity. Thus, other factors play a role as well. A current concern for carry investors is the pressure on emerging markets, notably the economic crisis in Turkey, and the trade conflict between the US and China, which have recently squeezed Chinese equity markets and the yuan. Political tensions in the Middle East, especially related to Iran, and the trouble spots in Europe, notably Italy and Brexit, also play a role in market sentiment today.

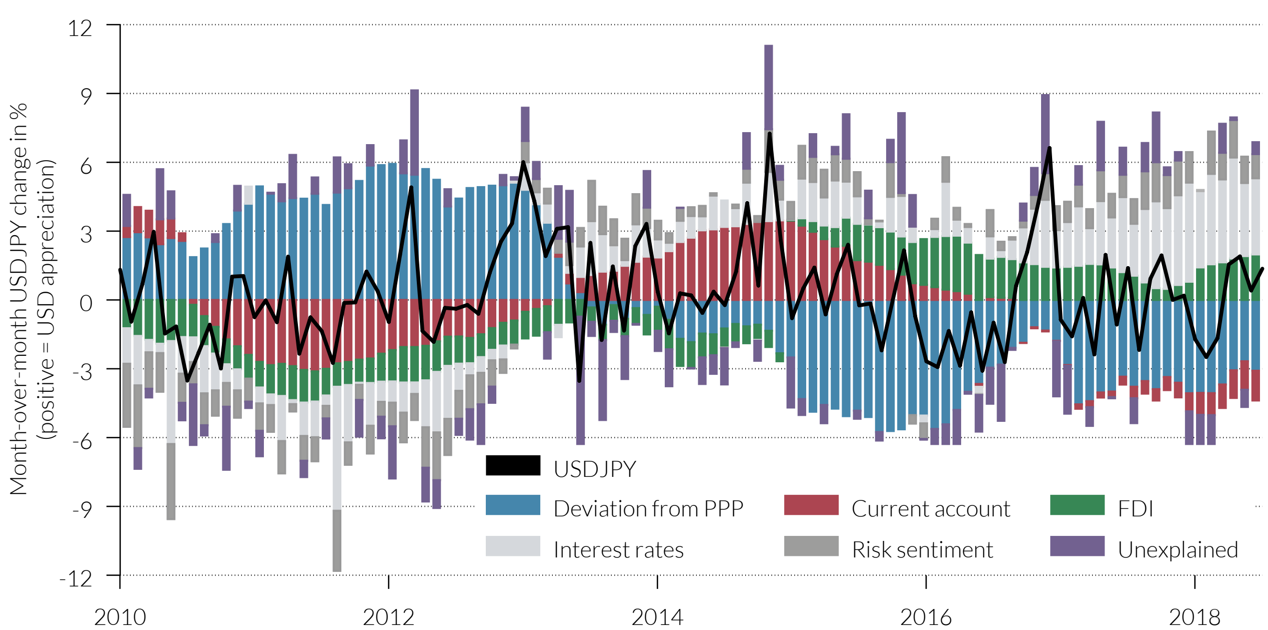
Balance of payments and purchasing power parity matter too

Moreover, the yen exchange rate is not just a function of interest rate differentials and risk sentiment. The QCAM macro-anatomy of monthly USDJPY changes shows that other factors play an important role as well.

- Purchasing power parity (PPP) has a strong gravitational pull for the yen. Currently, PPP stands around 85.1 for USDJPY (see page 15), which would imply an undervaluation of the yen by about one standard deviation. As the chart below shows, this exerts a powerful force against further yen weakness.
- The current account is another important driver. The deteriorating US current account deficit versus the steady current account surplus in Japan provides increasingly support for the yen, which is a notable change from three or four years ago.
- Foreign direct investment flows (FDI) are also important. Currently, Japan is a net exporter of FDI capital and the US is a net importer. However, US FDI inflows are heavily influenced by the recent corporate tax changes and the repatriation of overseas earnings. That factor is likely to prevail for some time longer but should fade going into next year.

Given all these forces at play, forming a clear outlook for USDJPY is tricky. In our judgment, the carry trade is weakened a bit by current risk concerns, while undervaluation and current account balances should provide critical support for the yen. Thus, significant yen weakness (USDJPY at 120) only seems likely if risk sentiment dramatically improves, which we believe is unlikely for the rest of the year.

Macro-anatomy of USDJPY



Source: QCAM Currency Asset Management

The macro perspective

The US economy gathers steam once more

Despite the very advanced stage of the economic cycle, US economic growth is accelerating again. In the Eurozone, on the other hand, the positive momentum of 2017 has not fully carried over into this year. Growth remains robust but risks lurk for both the US and the Eurozone.

The American economy is late in the cycle. The current upswing began in the summer of 2009 but so far there are few apparent geriatric complaints. In the second quarter of 2018, the US posted its highest economic growth in four years, although some special factors did play a role in this brisk performance. For example, the good export figures were probably due to foreign buyers increasing their purchases of US products before potential tariffs make them more expensive. That said, leading indicators are currently showing that high growth is also expected in the second half of this year.

There are several reasons for this surge in growth momentum. First, the sentiment of American companies and consumers is hearty – although there are some signs that trade disputes may leave their mark. Second, monetary policy remains expansionary. The US Federal Reserve has increased interest rates regularly in recent quarters. However, if inflation trends and expectations are taken into account, real interest rates remain at historically low levels. Third, the US economy is benefiting from the recent tax reforms. However, we note, a fiscal package so late in the cycle is very unusual.

The question is, how sustainable is this recent spate of growth? On the one hand, there is the risk that the fiscal package will primarily feed inflationary pressures. Monetary policy makers must hope that the current, well-ordered path of rate hikes will be sufficient to keep inflation under control. On the other hand, public debt is taking on unhealthy dimensions. According to International Monetary Fund forecasts, US public debt will even exceed that of Italy by 2023.

Eurozone growth, with some question marks

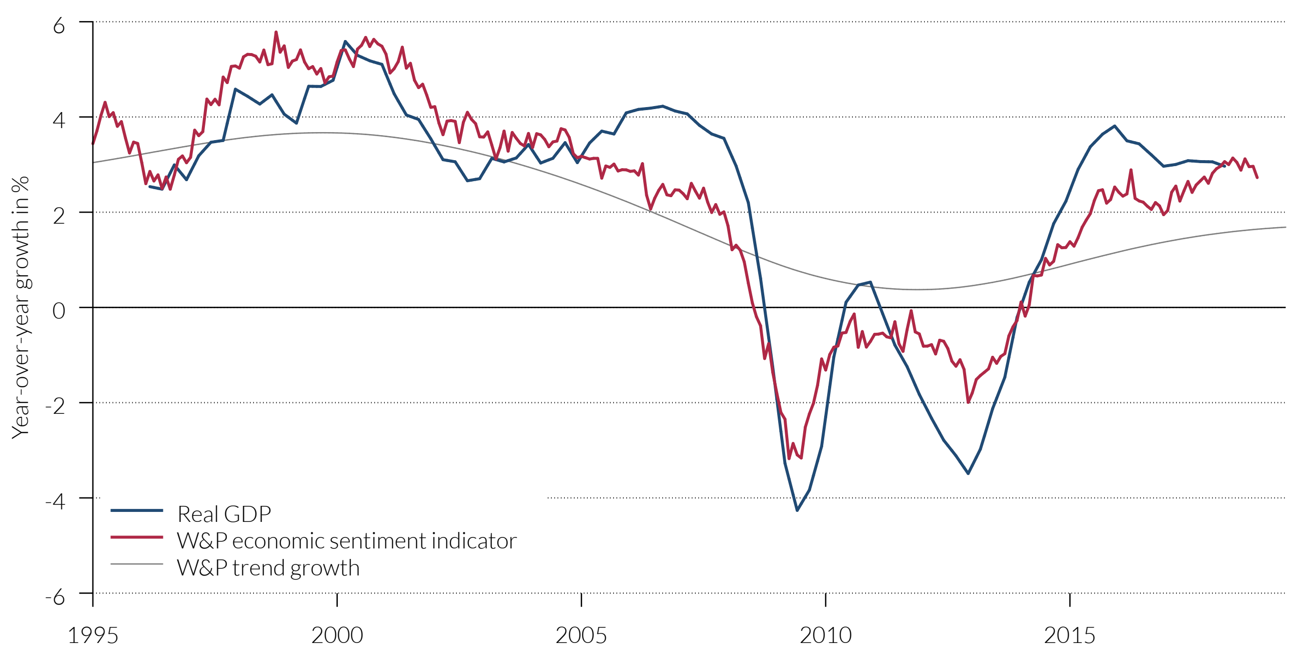
In the Eurozone, the preliminary estimates for economic growth in the second quarter – especially in comparison with the US – were slightly disappointing. European growth is still robust, but it is much lower than it was in 2017. That is also due to Germany, where economic signals in recent months show that the previous growth momentum is fading. However, given Germany's economic strength in recent years, its full capacity utilization and a labour market close to full employment, a return to potential growth would be welcome. Thus, overheating phenomena can be reduced. For political-economic reasons, too, it would be help the Eurozone if inflation did not continue to rise in Germany. The dissatisfaction of the German population with the European Central Bank would continue to rise if inflation rates were to remain above 2 percent, as the low-interest-rate policy and its costs for savers could hardly be justified.

Another situation prevails, for example, in Spain. The labour market has not completely recovered from the economic crisis there 10 years ago. Continuous above-trend growth would be needed. However, the graph shows that sentiment indicators have also been declining in recent months. This is a cause for concern, although indicators continue to signal growth above potential. Fiscal-policy room to manoeuvre is limited in Spain, as it is in many other Eurozone countries. The ECB's monetary policy, however, will remain supportive for some time to come. The ECB has announced that it will raise interest rates at the earliest in autumn 2019, after ending its bond-purchasing programme at the end of this year.

A risk map with many hotspots

The risk map for global economic development shows numerous potential flashpoints. The trade disputes initiated by the US are expected to continue for a few rounds, with difficult-to-estimate consequences for the global economy. Meanwhile, in the light of recent developments, an orderly exit of Great Britain from the European Union seems even more unlikely than previously anticipated. And lastly, developments in various emerging economies demand our attention, especially in Turkey, where considerable turbulence can be expected in the coming quarters.

Sentiment indicators in Spain are growing slightly gloomier



Source: Thomson Reuters Datastream, Wellershoff & Partners

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FX market talk

Renminbi ripples and trade war rumbles

For decades, China's currency closely tracked its purchasing power parity in US dollar terms (see chart). But over the past three months, the renminbi has deviated sharply from this path. Uncertainty around tariffs and capital flows between China and the US is the proximate cause for the weakening of the renminbi against the dollar. But we think, despite their signalling, the Chinese authorities are unlikely to want their currency to deviate too far or too fast from its fundamental value.

The chart on the next page shows monthly averages for the USDCNY spot rate and the purchasing power parity rate of the renminbi against the dollar. This long period, extending over more than two decades, nicely captures the nominal outperformance of the Chinese currency, as China's producer price inflation has been persistently lower than that of the US.

The renminbi stayed so close to its USD purchasing power value because it has been tightly managed by China's central bank. This can also be gleaned from the rise in China's foreign exchange reserves, from USD 140 billion in January 1998 to almost USD 4 trillion by August 2014. After years of being on the receiving end of dollar inflows, the situation changed in 2014. China sold the market a trillion dollars from its foreign exchange reserves from September 2014 until January 2017, as it tried to prevent the demand for dollars from causing a damaging depreciation of the renminbi. Notice how, even though a falling renminbi resulted in rising inflation relative to the US, the Chinese authorities did not permit an overly wide gap to open up between the renminbi's spot rate and its purchasing power parity rate.

Does China welcome a weaker CNY?

Between January 2017 and July 2018, China's foreign exchange reserves hovered in a narrow range around USD 3.1 trillion, implying less direct intervention by the authorities than in previous periods. This may be part of the reason why the renminbi weakened so rapidly from April to July of this year. The authorities essentially stood by and watched. At least, that is what one had to conclude after studying the official foreign exchange levels. Of course, given China's extensive capital controls, there are a many other administrative tools available to prevent the large-scale purchase of a foreign currency. But looking at the history of the last twenty years, it is significant to see the renminbi weaken as quickly as it did from April to July. We estimate its central purchasing power parity rate at 6.41 USDCNY, with a range of 6.22 to 6.61. By July, the renminbi's average spot rate was above 6.80. By that measure, the renminbi was cheap against the US dollar.

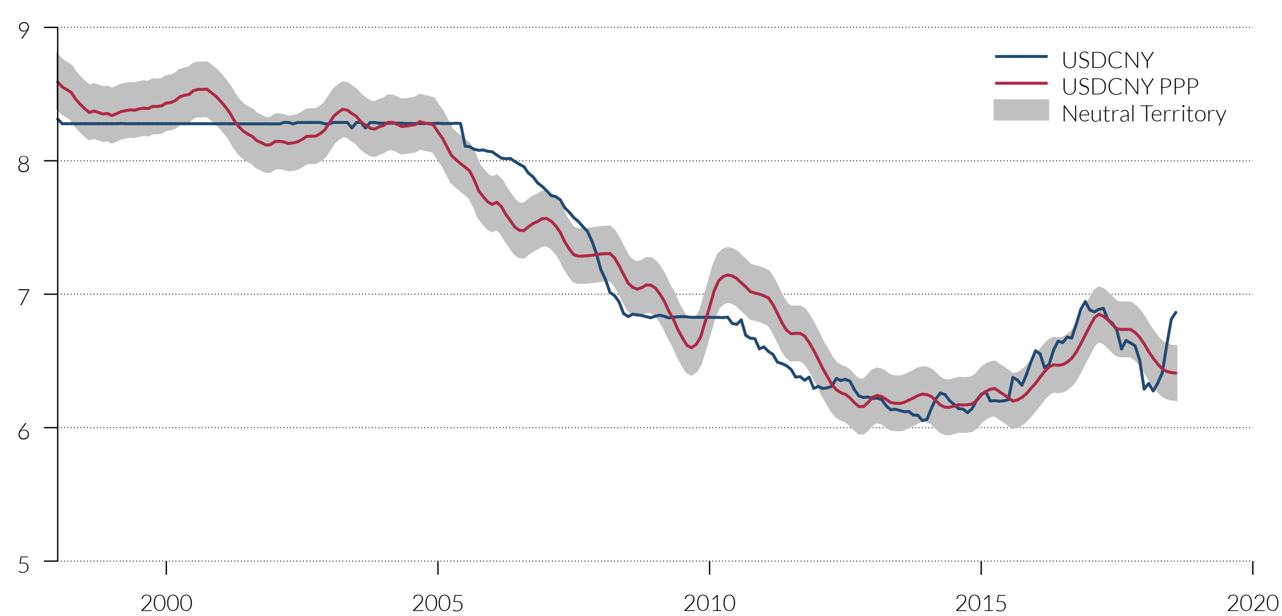
If the renminbi were a fully market-determined currency, it should have weakened if its major trading partner threatened to escalate the imposition of tariffs on all of its bilateral exports. And this indeed is what happened. However, given how tightly the authorities of this communist country have managed the exchange rate over decades, we would also interpret the rapid weakening of the CNY in 2018 as a signal to the US. The message is that China has various measures in its tool kit to counter the Trump administration's anti-China policies. Previously, the US complained constantly about China's FX interventions and threatened to brand it a "currency manipulator." The Chinese authorities now seem to be saying, let the US see what happens when our central bank decides not to intervene significantly in the FX market. Thus, China is showing the US that it has a range of resources to bring to this game of attrition.

Given China's importance as a trading partner and competitor, a weakening CNY also has implications for other currencies in the region, including for Australia, South Korea, Taiwan and even Singapore. The worry is that, having picked a fight with China, the US has underestimated the trade and currency ripple effects that can spread more broadly in the region.

The limits of passivity

Gamesmanship aside, the Communist Party of the People's Republic of China obviously does not want a weakening renminbi to undermine its citizen's confidence. Neither does it want inflation expectations to become untethered. High inflation has historically been associated with bad government and hard times in China. There is a limit, therefore, to how long the Chinese authorities will stand by as their currency slides against the US dollar. We are certain that the authorities in Beijing will continue to keep a close eye on the renminbi's deviation from PPP.

China's renminbi takes an unusual path



Source: Thomson Reuters Datastream, Wellershoff & Partners

Economic activity

After the weak start to the new year, the signs in many of the advanced economies are once again pointing to growth acceleration. The Eurozone economy is an exception to this. According to first flash estimates, the EU economy has still not really found traction in the second quarter.

The US is currently providing the biggest growth impulses among the advanced economies. According to an initial estimate, the US economy posted its strongest growth in about four years in the second quarter, at an annualized rate of 4.1 percent. The most important growth driver between April and June was private consumption, which accounted for almost 2.7 percent of total growth. However, foreign trade was also surprisingly strong, not least because of exporters' early deliveries to clients trying to circumvent retaliatory tariffs from China.

The British economy appears to have gained some momentum in the second quarter, despite the stubborn shadows cast by Brexit. For some weeks now, it has become apparent that British private consumption in particular has regained momentum.

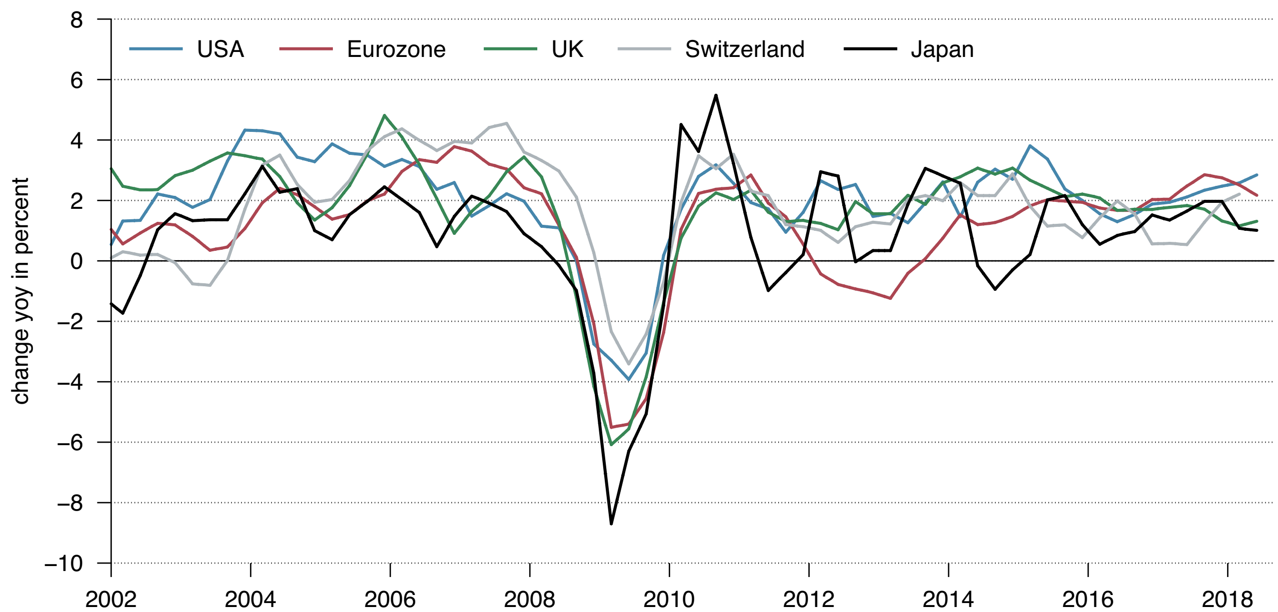
Growth overview

	Trend growth[1]	Real GDP growth[2]				W&P economic sentiment indicators[3]			
		Q3/2017	Q4/2017	Q1/2018	Q2/2018	4/2018	5/2018	6/2018	7/2018
United States	1.7	2.3	2.5	2.6	2.8	3.4	3.8	4.0	3.4
Eurozone	1.0	2.8	2.8	2.5	2.2	3.2	3.2	3.1	3.1
Germany	1.4	2.7	2.8	2.0	2.0	3.6	3.6	3.4	3.6
France	0.7	2.8	2.8	2.2	1.7	2.4	2.2	2.3	2.3
Italy	0.2	1.8	1.6	1.4	1.1	1.7	1.5	1.7	1.6
Spain	1.6	3.1	3.1	3.0	2.7	3.1	2.9	3.0	2.7
United Kingdom	1.8	1.7	1.3	1.2	1.3	2.3	2.5	2.5	2.7
Switzerland	1.5	1.3	1.9	2.2	–	2.3	2.6	2.6	2.6
Japan	0.4	2.0	2.0	1.1	1.0	2.7	2.8	2.8	2.7
Canada	1.6	3.1	3.0	2.3	–	1.6	1.9	1.7	1.7
Australia	2.4	2.8	2.4	3.1	–	3.3	3.3	3.3	3.3
Brazil	1.4	1.5	2.2	1.6	–	1.5	0.7	0.2	0.6
Russia	0.1	2.2	0.9	1.3	1.8	1.2	-0.3	-0.5	-1.9
India	7.7	6.3	7.0	7.7	–	6.6	6.5	6.7	6.6
China	7.4	6.8	6.8	6.8	6.7	7.1	7.1	7.0	6.9
Advanced economies[4]	1.4	2.5	2.4	2.3	2.4	3.4	3.6	3.7	3.4
Emerging economies[4]	6.0	5.7	5.5	5.7	5.7	5.3	5.0	5.2	5.1
World economy[4]	3.5	4.1	4.0	4.1	4.1	4.4	4.4	4.6	4.3

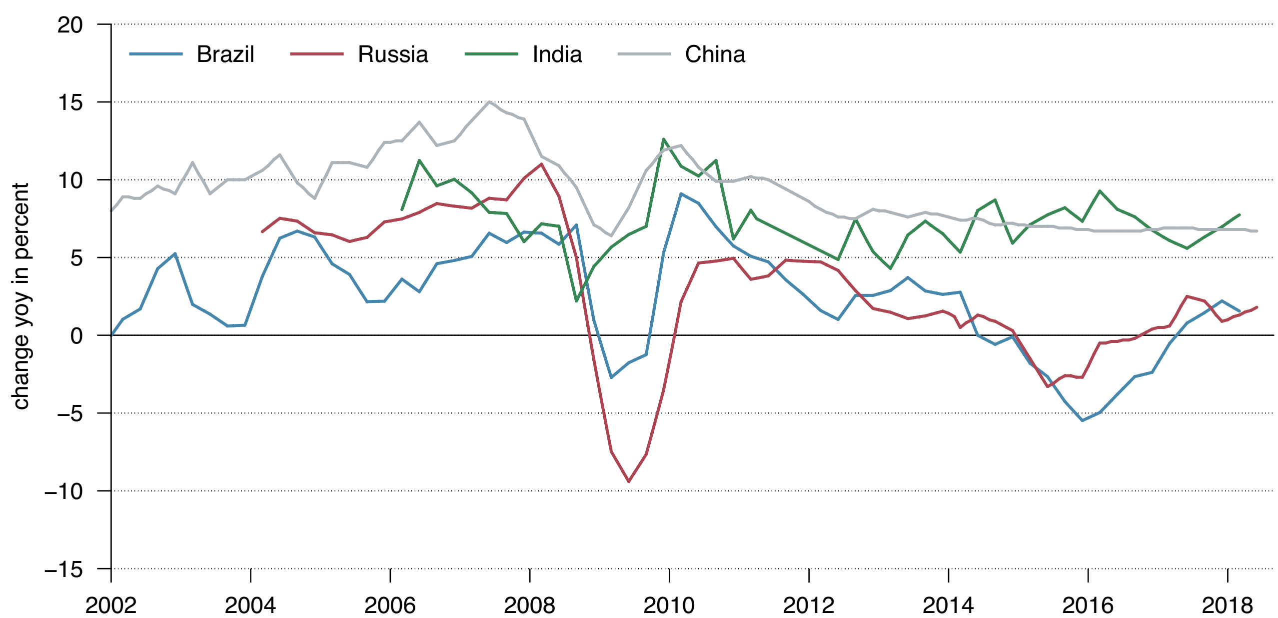
[1] Current year-on-year trend growth rate of real GDP, in percent, according to the proprietary trend growth model of Wellershoff & Partners.
[2] Year-on-year growth rate, in percent.
[3] Wellershoff & Partners economic sentiment indicators are based on consumer and business surveys and have up to 6 months lead on the year-on-year growth rate of real GDP.
[4] Calculations are based on nominal GDP weights derived from purchasing power parity exchange rates.

Source: European Commission, Penn World Table, Thomson Reuters Datastream, Wellershoff & Partners

Economic growth in advanced economies



Economic growth in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

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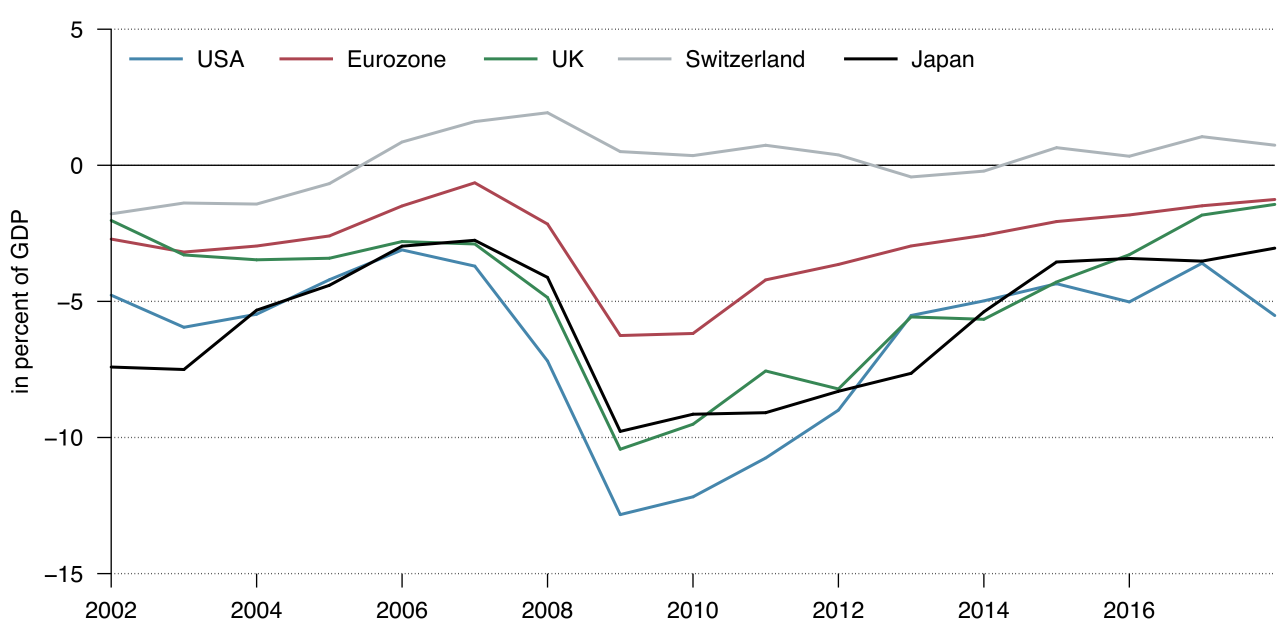
Economic indicators

Overview

	Global GDP share[1]		Current account[2]		Public debt[2]		Budget deficit[2]		Unemployment rate[3]	
	Ø 5 years	Current	Ø 5 years	Current	Ø 5 years	Current	Ø 5 years	Current	Ø 5 years	Current
United States	23.4	23.3	-2.3	-2.8	105.5	107.1	-4.7	-5.5	5.6	3.9
Eurozone	16.3	16.4	3.6	4.0	108.9	107.1	-2.2	-1.3	10.7	8.3
Germany	4.7	4.8	8.0	8.3	78.8	68.4	0.7	1.5	6.4	5.2
France	3.4	3.3	-0.6	-0.5	119.2	122.0	-3.5	-2.3	9.7	8.7
Italy	2.6	2.5	1.9	2.2	155.0	153.0	-2.7	-1.8	11.9	10.9
Spain	1.7	1.7	1.5	1.7	114.4	113.5	-5.2	-2.4	21.9	15.2
United Kingdom	3.6	3.4	-5.2	-3.1	113.4	116.8	-4.1	-1.4	5.4	2.5
Switzerland	0.9	0.8	10.0	10.7	42.8	40.8	0.3	0.7	3.2	2.4
Japan	6.3	5.9	2.5	3.7	218.9	225.5	-4.7	-3.0	3.4	2.4
Canada	2.2	2.1	-3.1	-3.2	88.4	86.6	-0.7	-0.8	6.8	5.8
Australia	1.8	1.7	-3.3	-1.9	36.9	41.7	-2.7	-1.7	5.8	5.3
China	14.2	16.1	1.9	1.2	42.0	51.2	-2.4	-4.1	4.0	–
Brazil	2.7	2.4	-2.5	-1.6	71.5	87.3	-7.1	-8.3	9.3	12.4
India	2.8	3.3	-1.3	-2.3	69.0	68.9	-7.0	-6.5	–	–
Russia	2.2	2.0	2.8	4.5	15.5	18.7	-2.1	0.0	5.4	4.7

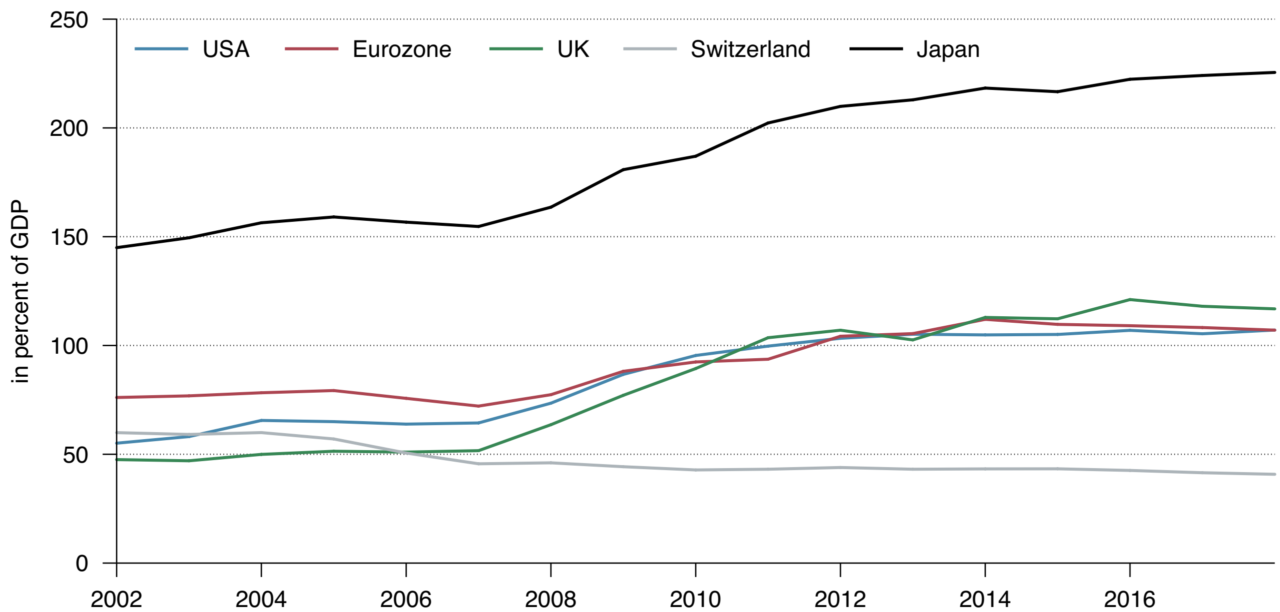
[1] In percent; calculations based on market exchange rates. [2] In percent of nominal GDP. [3] In percent.

Budget deficits in advanced economies

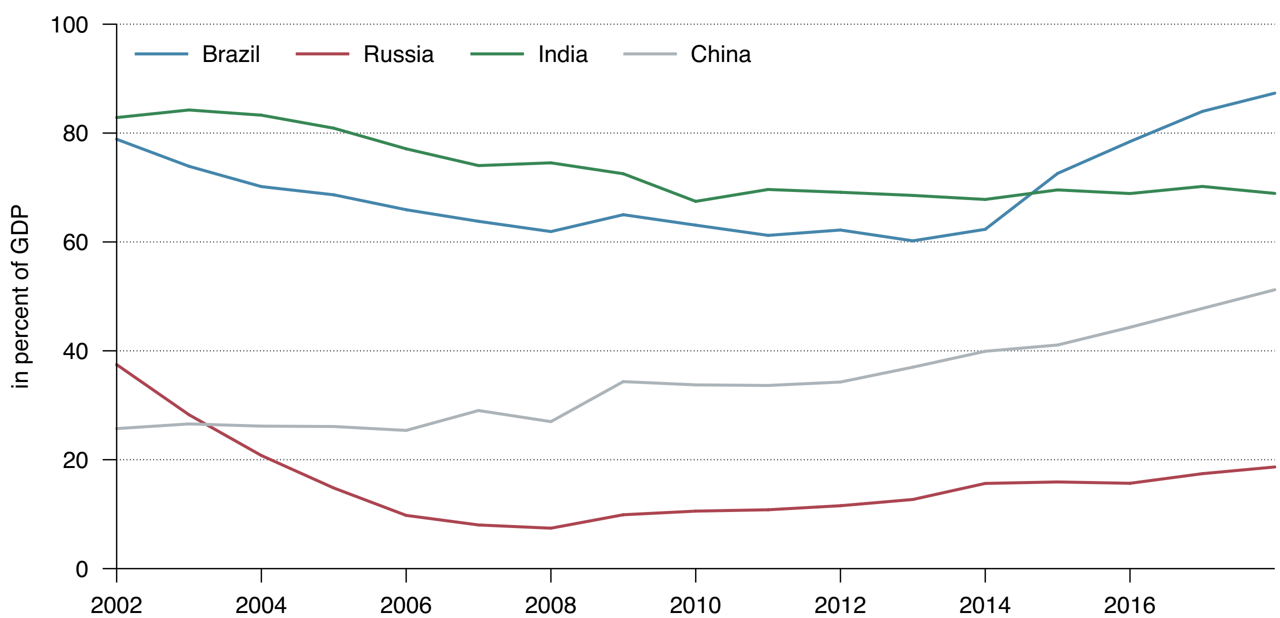


Source: Thomson Reuters Datastream, Wellershoff & Partners

Public debt in advanced economies



Public debt in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

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Inflation

After rising energy prices accelerated inflationary momentum in many advanced economies in recent months, upward pressure on inflation lately seems to be easing.

Inflation in the US – as tracked by the Fed's preferred measure, the personal consumption expenditures price index – came in at 2.2 percent in June, unchanged from May. At the end of the second quarter, the core rate also moved sideways, at 1.9 percent, which is still below the Fed's 2 percent target. The recent easing on the inflation front should play into the hands of the US Federal Reserve because this leaves the monetary guardians the necessary latitude to continue their strategy of gradually tightening monetary policy.

In the UK, inflation stood at 2.4 percent in June, moving sideways for the third straight month. The stable inflation rate in recent months is likely to be the result of two countervailing effects that are currently in balance. On the one hand, the inflationary effect of the pound's devaluation following the Brexit vote is slowly but surely fading out, which is suppressing the rise in British consumer prices. Meanwhile, rising energy prices are boosting prices in Britain.

Inflation overview

	Ø 10 years[1]	Inflation[2]				Core inflation[3]			
		4/2018	5/2018	6/2018	7/2018	4/2018	5/2018	6/2018	7/2018
United States	1.6	2.5	2.8	2.9	3.0	2.1	2.2	2.3	2.4
Eurozone	1.3	1.3	1.9	2.0	2.2	0.8	1.1	0.9	1.1
Germany	1.2	1.6	2.2	2.1	2.0	1.6	1.7	1.7	1.5
France	1.0	1.6	2.0	2.0	2.3	–	–	–	–
Italy	1.3	0.5	1.0	1.3	1.5	0.5	0.8	0.8	0.7
Spain	1.2	1.1	2.0	2.3	2.3	0.8	1.1	1.0	0.9
United Kingdom	2.3	2.4	2.4	2.4	2.5	2.1	2.1	1.9	1.9
Switzerland	0.0	0.8	1.0	1.1	1.2	0.5	0.4	0.5	0.5
Japan	0.3	0.6	0.6	0.7	–	0.3	0.3	0.2	–
Canada	1.6	2.2	2.2	2.5	–	1.5	1.3	1.3	–
Australia	2.3	2.0	2.0	2.1	–	1.9	1.9	1.8	–
Brazil	6.0	2.8	2.9	4.4	4.5	3.0	2.7	3.3	3.6
Russia	8.0	2.4	2.4	2.3	2.5	1.9	2.0	2.3	2.4
India	7.6	4.6	4.9	4.9	4.2	–	–	–	–
China	2.3	1.8	1.8	1.9	1.5	2.0	1.9	1.9	1.9
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World economy[4]	2.8	2.2	2.5	2.6	2.6	1.5	1.6	1.6	1.6

[1] Average annual consumer price inflation, in percent.

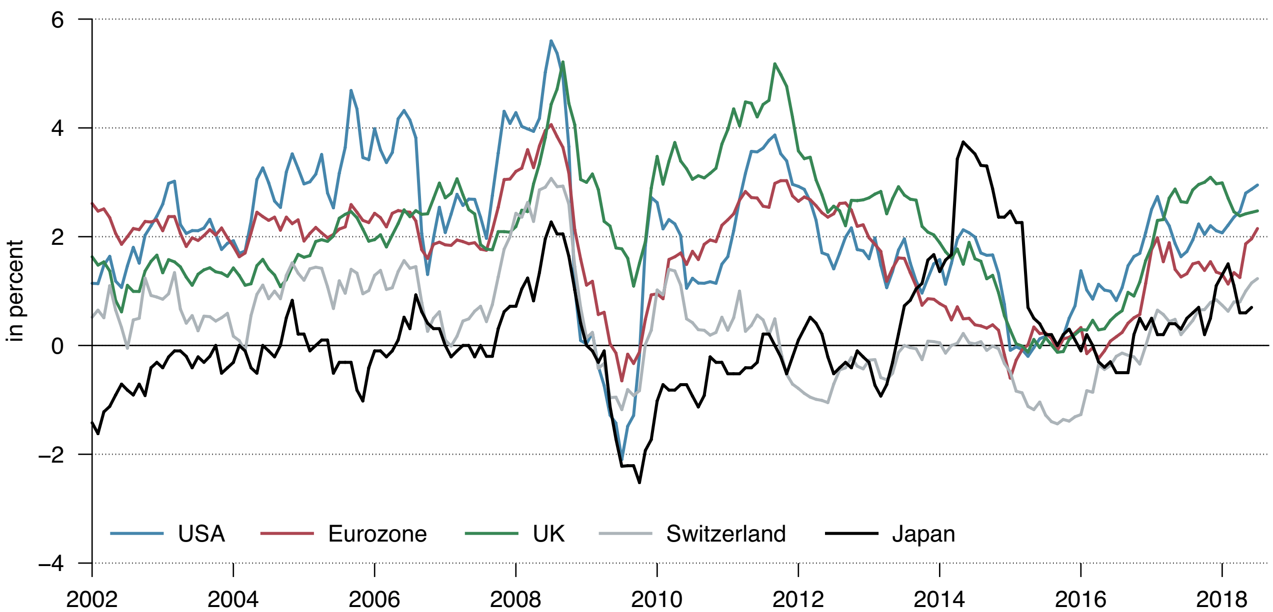
[2] Year-on-year change of the consumer price index (CPI), in percent.

[3] Core inflation is a measure of inflation that excludes certain items that can experience volatile price movements, such as energy and certain food items; year-on-year change of the core consumer price index, in percent.

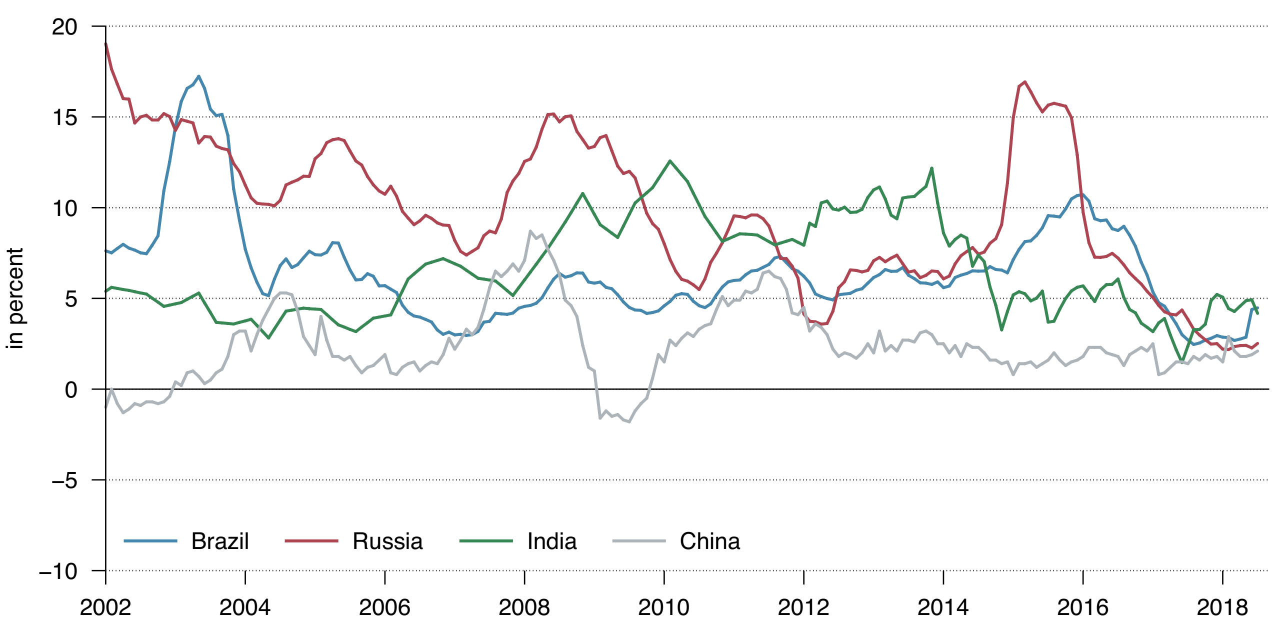
[4] Calculations are based on nominal GDP weights derived from purchasing power parity exchange rates.

Source: Thomson Reuters Datastream, Wellershoff & Partners

Consumer price inflation in advanced economies



Consumer price inflation in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

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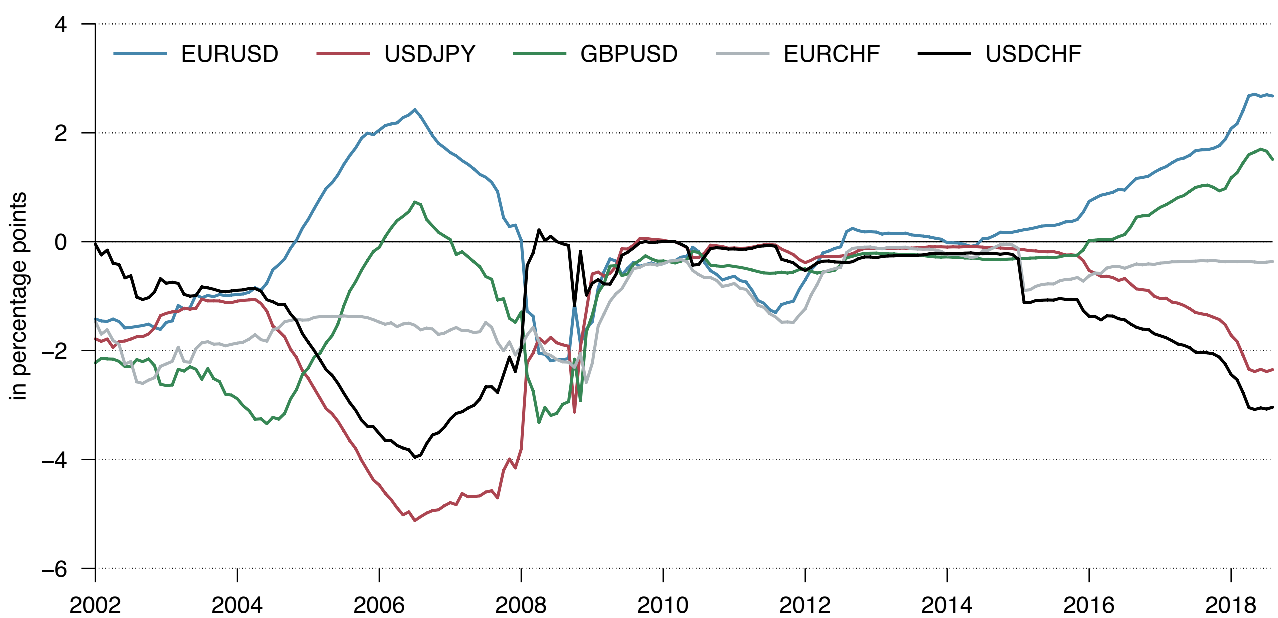
Interest rates

Interest rate differentials overview

	Current exchange rate	Interest rate differentials 3 months[1]				Interest rate differentials 12 months[1]			
		Current	1 year ago	Ø 5 years	Ø 10 years	Current	1 year ago	Ø 5 years	Ø 10 years
EURUSD	1.131	2.68	1.70	0.93	0.22	3.05	1.98	1.21	0.39
USDJPY	110.5	-2.35	-1.36	-0.76	-0.53	-2.68	-1.63	-1.07	-0.80
GBPUSD	1.267	1.51	1.04	0.29	-0.13	1.77	1.14	0.37	-0.10
EURCHF	1.125	-0.36	-0.34	-0.40	-0.59	-0.28	-0.26	-0.41	-0.68
USDCHF	0.994	-3.04	-2.04	-1.33	-0.81	-3.33	-2.24	-1.61	-1.07
GBPCHF	1.260	-1.53	-1.01	-1.05	-0.95	-1.56	-1.10	-1.24	-1.17
CHFJPY	111.1	0.69	0.69	0.58	0.28	0.65	0.61	0.54	0.27
AUDUSD	0.722	0.82	-0.18	-1.11	-2.18	1.29	0.17	-0.61	-1.61
USDCAD	1.317	-0.36	-0.02	0.36	0.46	-0.49	-0.08	0.12	0.24
USDSEK	9.226	-2.69	-1.84	-0.93	0.06	-3.02	-1.91	-1.11	-0.13
USDRUB	67.5	4.48	7.43	9.06	8.29	4.29	6.91	8.46	8.18
USDBRL	3.925	4.88	7.03	11.66	10.34	4.62	6.12	9.87	9.55
USDCNY	6.904	0.48	3.02	3.27	3.08	0.45	2.66	2.85	2.69
USDTRY	6.047	19.88	11.79	10.77	9.71	22.24	11.54	10.68	9.84
USDINR	69.88	7.47	7.47	8.65	7.85	4.48	4.49	6.44	5.94

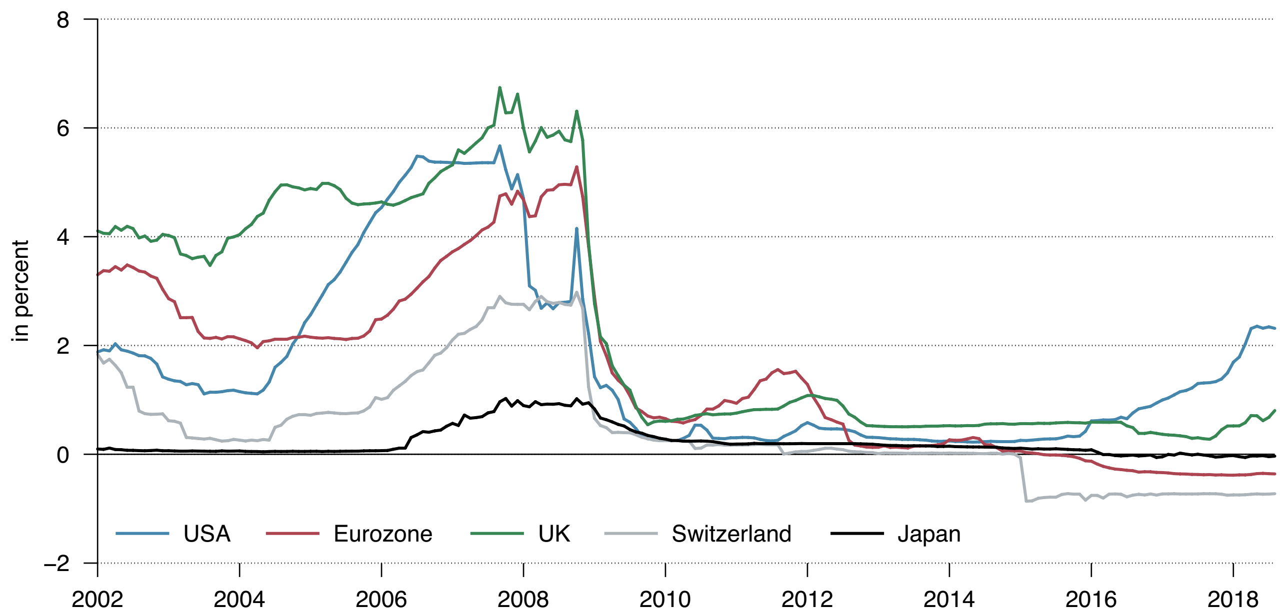
[1] The gap in interest rates between the second currency and the first one, in percentage points; e.g. US dollar minus euro for EURUSD.

Interest rate differentials

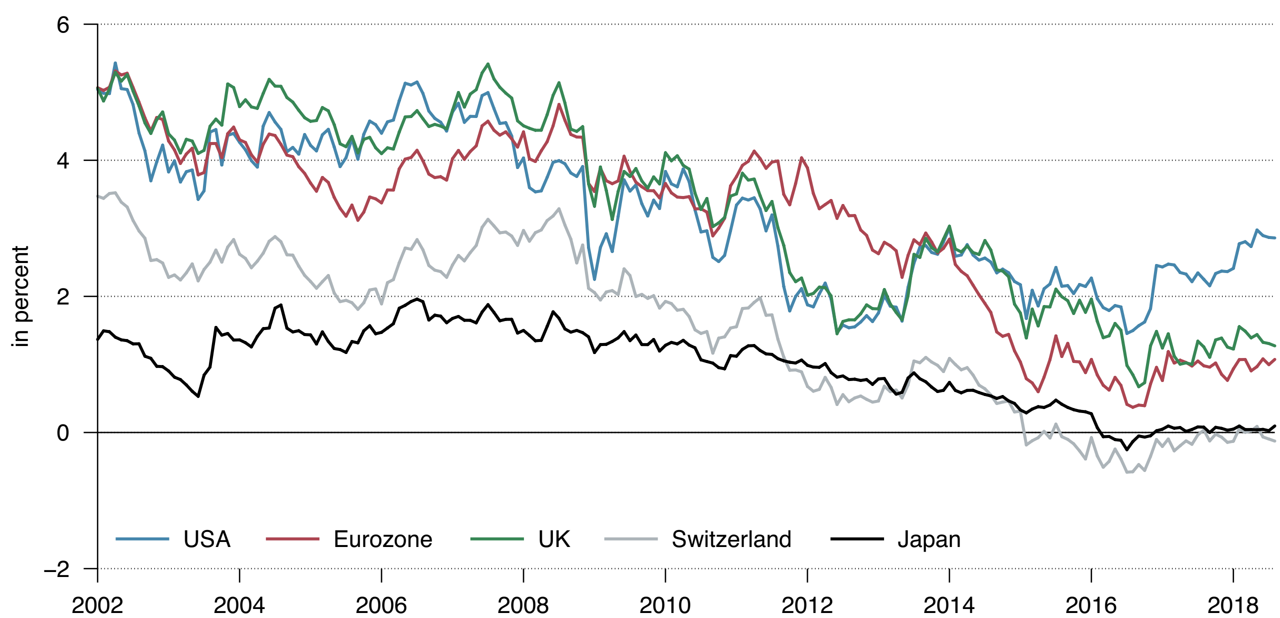


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

3-month Libor



10-year government bond yields



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

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FX markets

The Swiss franc developed a bit more vigorously in July than in June. As a result, we saw a slight gain against the dollar and the pound. The Swiss currency gained slightly more against the Japanese yen. In contrast, for example, the franc posted a minus against the Swedish krona and the euro.

The Turkish lira is likely to remain a source of concern for the markets in the near future. The lira has continued to lose value in recent weeks, also because the Turkish central bank still refrains from further interest rate hikes. Additional devaluation pressure on the lira is currently coming from the US. US President Donald Trump has threatened severe sanctions against Turkey if the Turkish government continues to refuse to release a US pastor from house arrest.

The Chinese renminbi has come under increasing pressure in recent weeks due to weaker growth momentum and the escalating trade dispute with the US. Since the beginning of the year, losses against the dollar now come to more than 5 percent. The People's Bank of China has responded and imposed a 20 percent reserve requirement on banks for bets against the renminbi. Thus, the costs for investors in such betting shops should increase significantly.

FX overview

	Current exchange rate	Performance[1]				Purchasing Power Parity[2]		
		YTD	3 months	1 year	5 years	PPP	Neutral territory	Deviation[3]
EURUSD	1.131	-5.8	-4.1	-3.5	-14.6	1.30	1.13 - 1.47	-12.8
USDJPY	110.5	-1.9	-0.3	-0.1	12.9	85.1	70.3 - 99.9	29.7
GBPUSD	1.267	-6.3	-6.2	-1.4	-18.6	1.67	1.49 - 1.9	-24.1
EURCHF	1.125	-3.9	-4.8	-1.4	-9.2	1.21	1.12 - 1.29	-6.7
USDCHF	0.994	2.0	-0.8	2.2	6.4	0.93	0.81 - 1.05	7.0
GBPCHF	1.260	-4.5	-6.9	0.7	-13.4	1.55	1.33 - 1.77	-18.7
CHFJPY	111.1	-3.9	0.5	-2.2	6.1	91.7	77.5 - 105.8	21.2
AUDUSD	0.722	-7.7	-3.9	-7.7	-20.5	0.75	0.64 - 0.89	-3.2
USDCAD	1.317	5.1	2.9	3.2	27.3	1.19	1.09 - 1.29	10.6
USDSEK	9.226	12.7	5.5	14.0	41.0	7.33	6.33 - 8.32	25.9
USDRUB	67.5	17.2	9.1	12.7	104.4	44.2	35.1 - 53.2	52.8
USDBRL	3.925	18.3	6.5	22.7	67.4	2.84	2.29 - 3.38	38.4
USDCNY	6.904	6.0	8.4	3.4	12.9	6.41	6.21 - 6.61	7.8
USDTRY	6.047	59.5	35.7	71.0	211.2	3.34	3.02 - 3.67	80.9
USDINR	69.88	9.5	3.2	9.0	13.8	–	–	–

[1] Performance over the respective period of time, in percent.
[2] Purchasing power parity (PPP) is estimated based on the relative development of inflation rates in two currency markets; the neutral territory is determined by +/- 1 standard deviation of the historical variation around the PPP value.
[3] Deviation of the current spot rate from PPP, in percent.

Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

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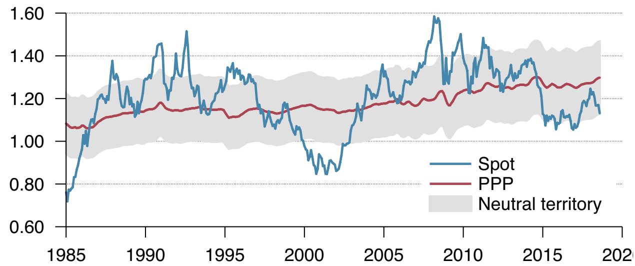
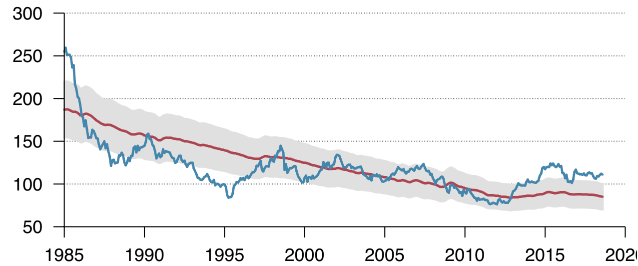
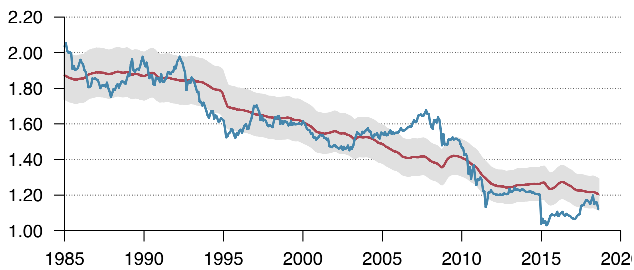
EURUSD



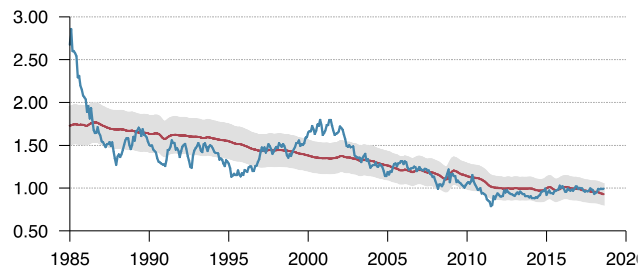
USDJPY



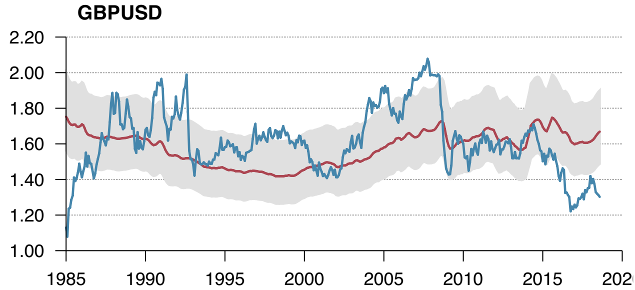
EURCHF



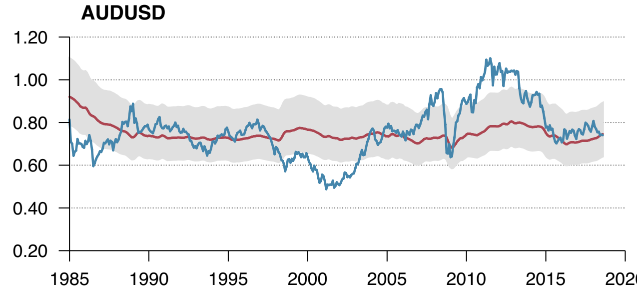
USDCHF



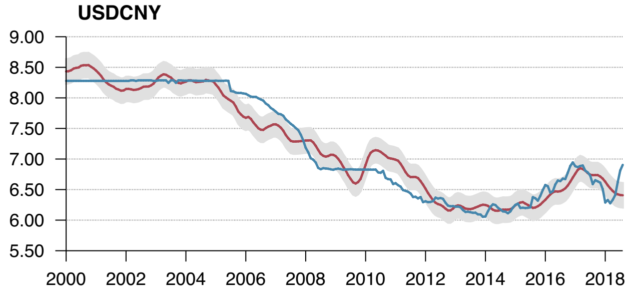
GBPUSD



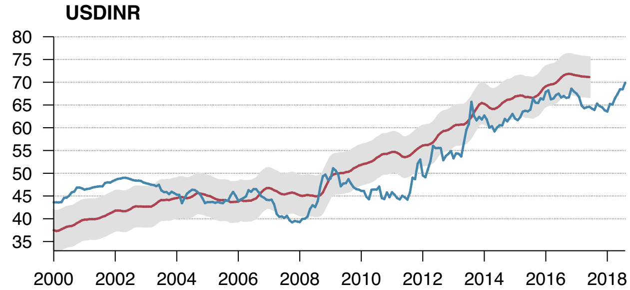
AUDUSD



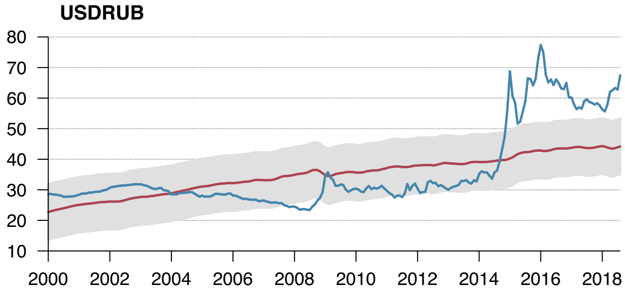
USDCNY



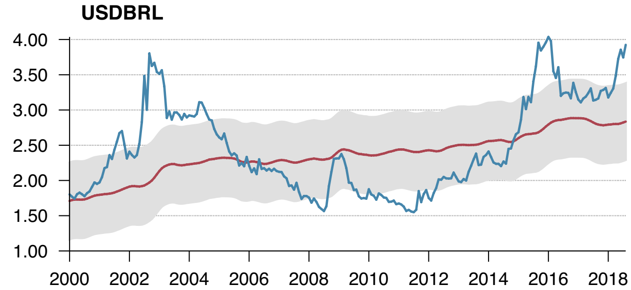
USDINR



USDRUB



USDBRL



Source: Thomson Reuters Datastream, Wellershoff & Partners

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FX volatility

FX volatility overview

	Current exchange rate	Volatility 3 months[1]				Volatility 12 months[1]			
		Historical	Implied	Ø 5 years[2]	Ø 10 years[2]	Historical	Implied	Ø 5 years[2]	Ø 10 years[2]
EURUSD	1.131	7.4	8.0	8.4	10.4	7.0	8.0	8.7	10.8
USDJPY	110.5	6.4	8.0	9.4	10.7	7.2	8.5	9.8	11.3
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EURCHF	1.125	5.8	6.2	5.8	6.5	5.5	6.4	6.4	7.0
USDCHF	0.994	6.1	6.6	8.6	10.3	7.0	7.4	9.1	10.7
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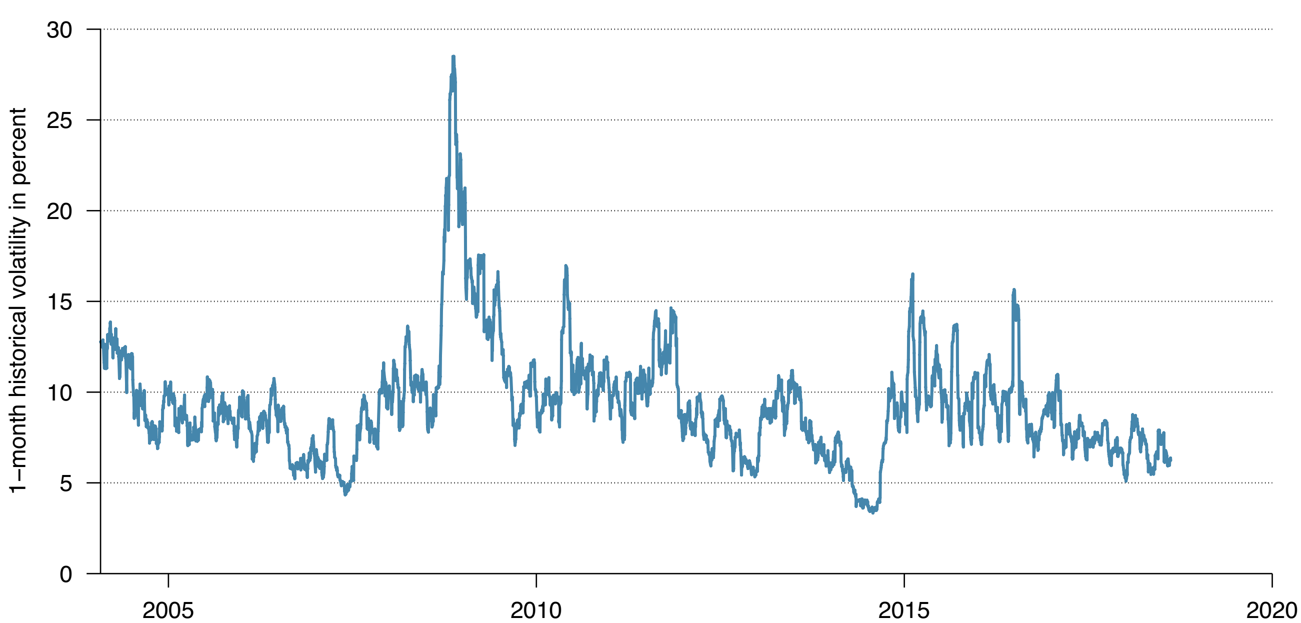
USDBRL	3.925	16.3	20.7	15.3	15.6	12.2	17.2	15.7	16.2
USDCNY	6.904	5.5	6.6	3.9	3.3	4.3	6.7	4.8	4.8
USDTRY	6.047	42.9	39.3	13.1	13.2	23.9	30.7	14.2	14.4
USDINR	69.88	5.6	7.2	7.4	9.3	4.5	7.5	8.6	10.4

[1] Annualized volatility, in percent. [2] Average of implied volatility.

QCAM volatility indicator[3]

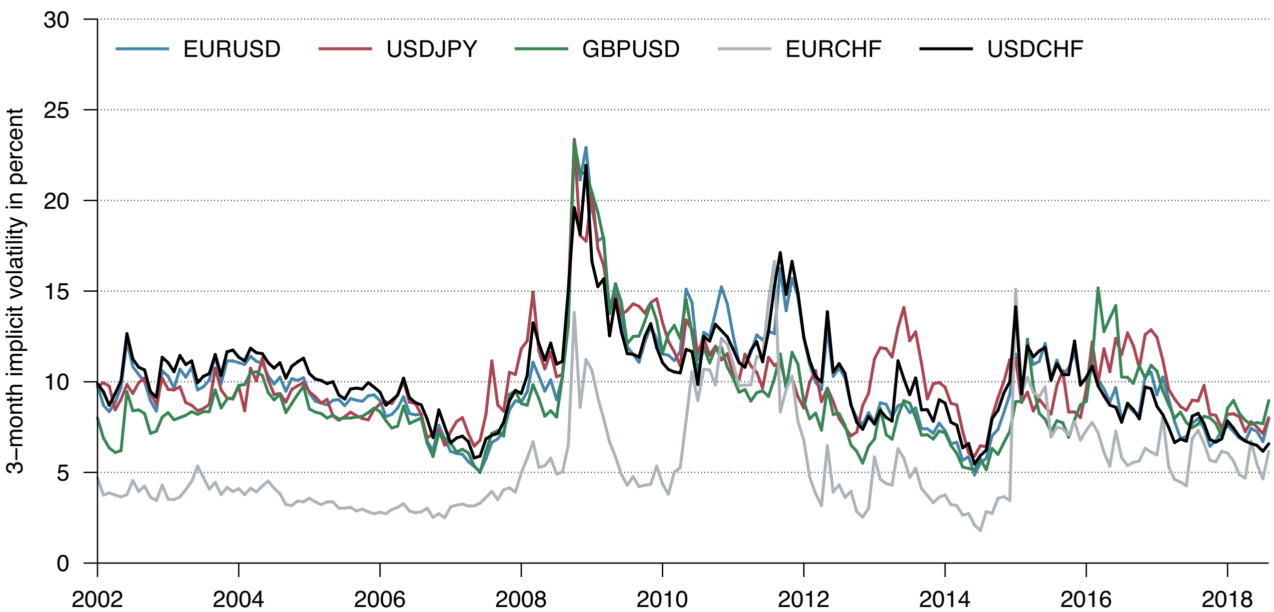


[3] The QCAM volatility indicator measures general volatility in global FX markets; the indicator is based on historical volatility of the main exchange rates, which are weighted by trading volume.

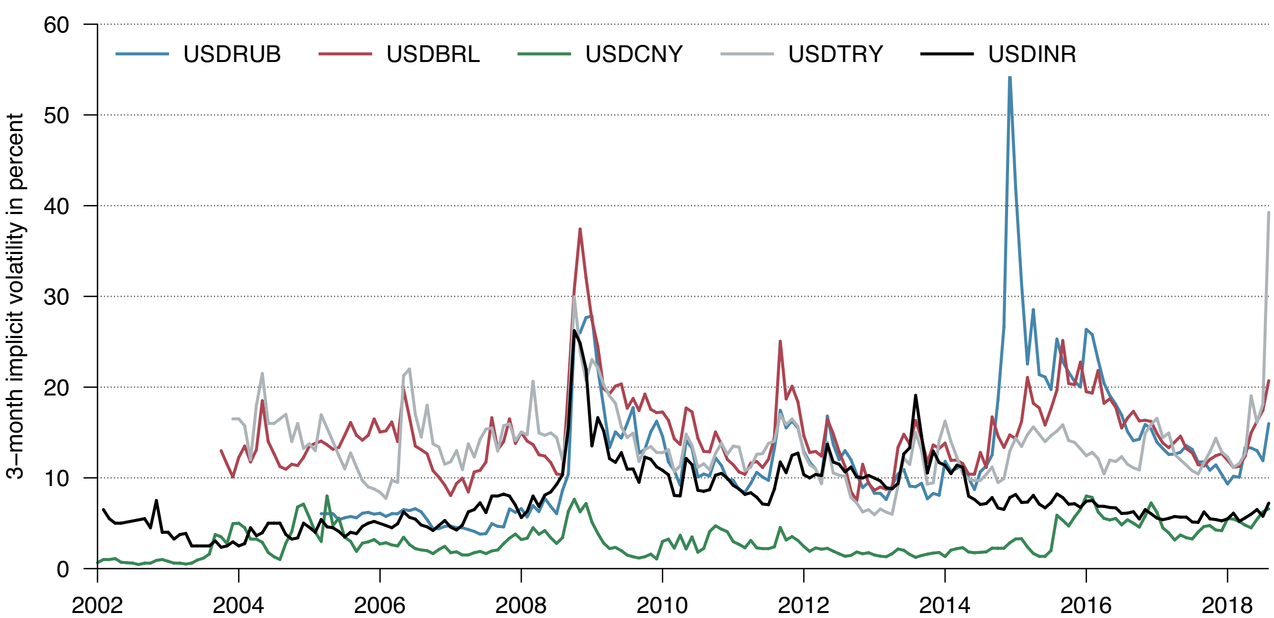
Source: Bloomberg, Thomson Reuters Datastream, QCAM Currency Asset Management, Wellershoff & Partners

QCAM® Currency Asset Management

Implicit volatility



Implicit volatility



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

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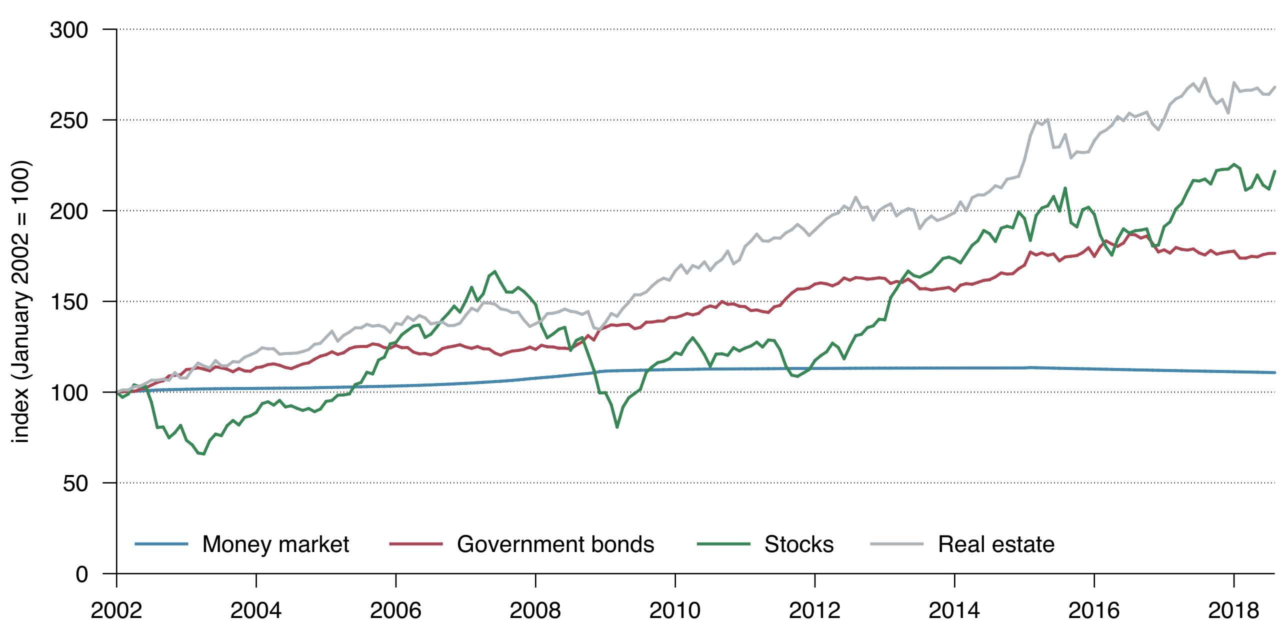
Financial markets

Performance overview

	Performance in either local curreny or USD[1]				Performance in CHF[1]			
	YTD	3 months	1 year	5 years	YTD	3 months	1 year	5 years
Swiss money market	-0.4	-0.2	-0.7	-2.2	-0.4	-0.2	-0.7	-2.2
Swiss government bonds	-0.7	2.1	-0.9	12.8	-0.7	2.1	-0.9	12.8
Swiss corporate bonds	-0.4	1.1	-0.4	11.3	-0.4	1.1	-0.4	11.3
Swiss equities (SMI)	-1.7	-0.7	2.5	32.0	-1.7	-0.7	2.5	32.0
European equities (Stoxx600)	0.3	-3.2	4.3	46.2	-3.6	-7.9	2.9	33.2
UK equities (Ftse100)	0.4	-2.8	5.6	39.4	-4.1	-9.5	6.4	21.5
Japanese equities (Topix)	-5.5	-5.9	7.3	64.6	-1.7	-6.4	9.7	56.1
US equities (S&P 500)	6.7	4.1	16.6	88.7	4.6	4.9	14.1	75.7
Emerging markets equities	-9.9	-9.3	-0.1	22.4	-11.7	-8.6	-2.3	14.0
Global equities (MSCI World)	2.3	0.1	11.2	58.8	0.2	0.9	8.8	47.9
Swiss real estate	-0.9	0.5	-0.6	37.6	-0.9	0.5	-0.6	37.6
Global real estate	0.2	4.3	4.3	39.8	-1.8	5.1	2.1	30.2
Commodities	-6.8	-9.0	-0.4	-36.6	-8.7	-8.3	-2.6	-41.0
Brent oil	5.7	-12.5	39.3	-36.9	3.6	-11.8	36.3	-41.2
Gold	-9.5	-8.4	-7.2	-13.8	-11.3	-7.7	-9.2	-19.7

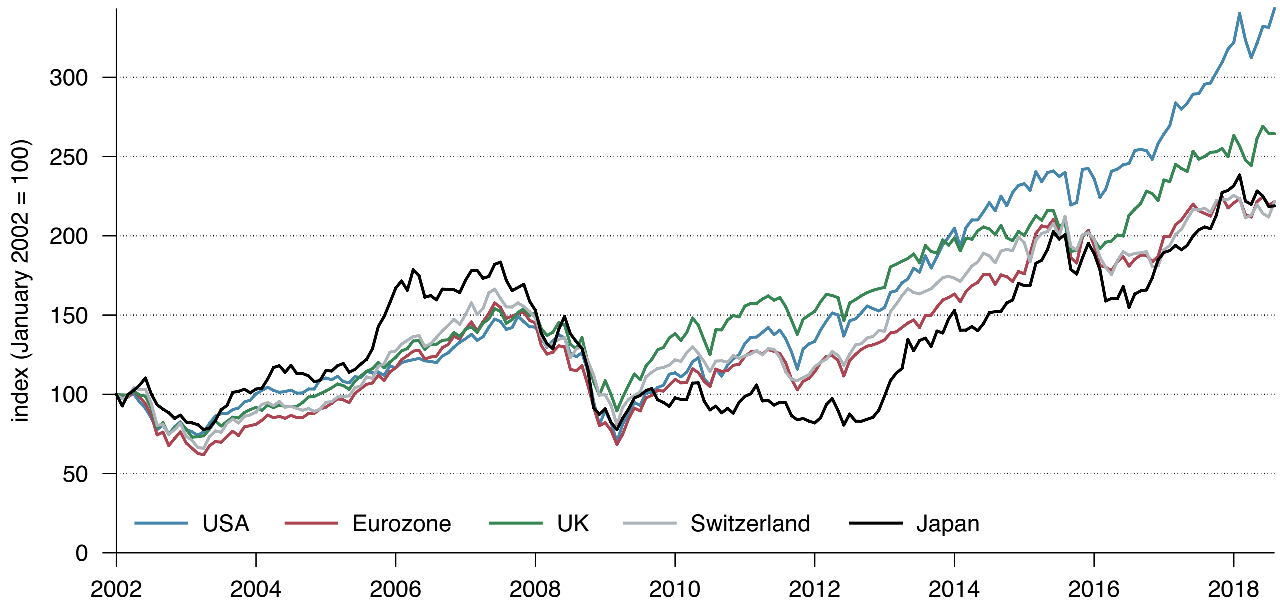
[1] Performance over the respective period of time, in percent.

Performance of selected Swiss asset classes

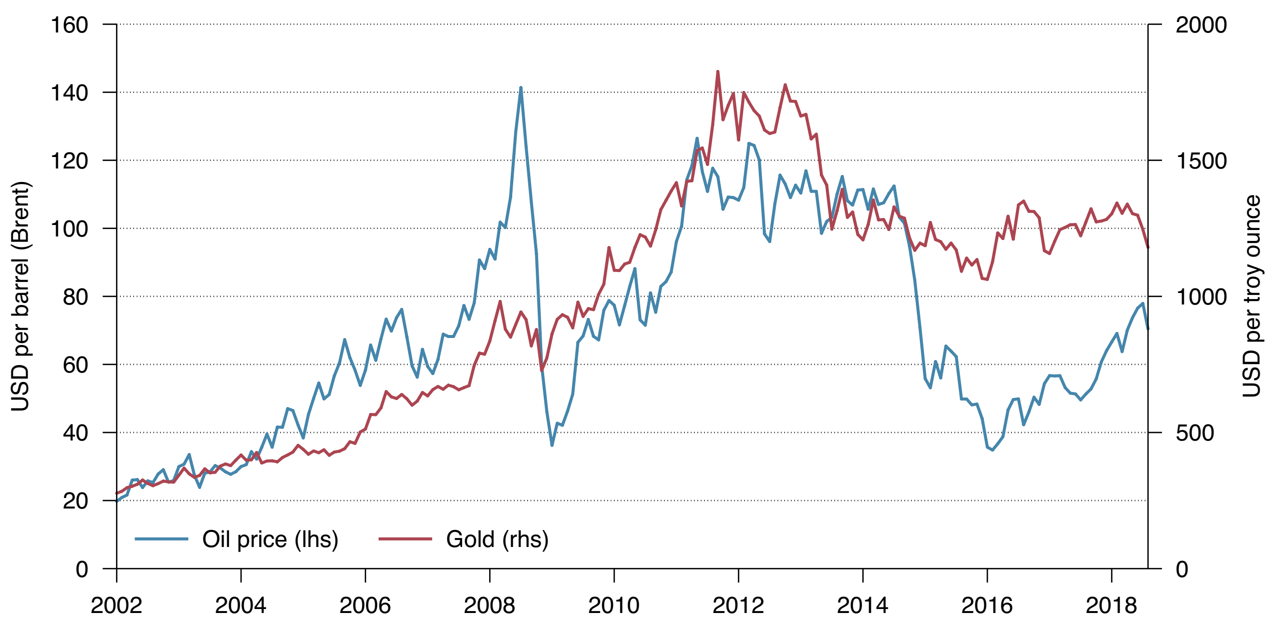


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

Performance of selected equity markets (in local currency)



Performance of selected commodity prices



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

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Number of the month

5.24 USDTRY

Turkey's lira has been in free fall for months against major currencies. That surely pleases tourists taking their holidays in Turkey. But many Turkish companies are facing big problems since they hold debt denominated in foreign currencies. There are several reasons for the recent bout of lira weakness. Among them is the fear that the central bank is being subjected to increasing political influence and may even lose its independence.