QCAM®
Currency
Asset
Management

NOVEMBER 2018

FX MONTHLY

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

www.q-cam.com

QCAM Currency Asset Management AG
Guthirtstrasse 4
6300 Zug
Switzerland

Wellershoff & Partners Ltd.
Zürichbergstrasse 38
8044 Zürich
Switzerland

Wellershoff & Partners Ltd. is a strategic research partner of QCAM Currency Asset Management AG. This includes the regular exchange on fundamental developments in the global economy and on financial markets as well as their influence on currency markets. What is more, Wellershoff & Partners Ltd. is available to QCAM Currency Asset Management AG for selected events as well as client meetings.

Imprint
Content, concept, and layout:
QCAM Currency Asset Management AG, Zug, and Wellershoff & Partners Ltd., Zürich
Editorial deadline: November 14, 2018
FX Monthly is published monthly in English and German.

FX Monthly
November 2018

Contents

QCAM®
Currency
Asset
Management

QCAM Insight

Limiting the impact of emerging market volatility

Bernhard Eschweiler, PhD, Senior Economist
QCAM Currency Asset Management AG

October was a challenging month for financial markets. Some emerging market currencies did better than expected, though not well enough to offset the losses from earlier in the year. Hedged investors were well served and they slept well, too. Dynamic overlay can also help manage EM volatility, which looks likely to continue.

Financial markets came under pressure in October as participants reassessed the probability of further Fed tightening and other risks such as the US-China trade conflict and Italy's budget standoff with the EU. Equity markets were hardest hit but the USD did well, thanks to America's strong economic performance. Markets took a breather between the end of October and early November but we think volatility is set to return.

Some EM currencies have fared better lately …

On average, emerging market currencies did better than many feared. In fact, the JPMorgan EM effective exchange rate index gained more than 1 percent in USD terms in October. However, gains were unevenly distributed. The big winners were the Brazilian real (+8.8 percent) and the Turkish lira (+8.7 percent). The BRL was boosted by the hope that President-elect Jair Bolsonaro would revive the economy, while the TRY benefitted from an unprecedented current account swing from deficit to surplus. However, many other EM currencies – including the Chinese yuan, the Indian rupee and the South African rand – fell in October.

… but the trend is not upwards

While EM currencies have performed better lately, they are down roughly 15% versus the USD in effective terms since the start of the year. After a two-year pause, the decline in EM currencies this year continues a trend that started in 2011. There are many factors behind the downtrend in EM currencies, ranging from economics to financial issues and politics. But the decline's most striking correlation is with the erosion of EM current account balances (see chart). After the pre-crisis boom, the aggregated EM current account balance is back to zero. This is per se not a bad thing and has much to do with the decline of China's surplus. But more and more EM countries are running deficits, and some are quite large. With globalization stalling and protectionism gaining ground, it is unlikely that this trend will change soon.

Hedging is safer

Thus, while some EM currencies are cheap on a fair-value basis (see page 5) and have more upside potential, investors are well advised to consider hedging. For example, investors in the JPMorgan EM Government Bond Index (JPM GBI) lost 9.1 percent year-to-date in unhedged USD terms but only 0.1 percent in hedged terms. Of course, 2018 is extreme. Over the last ten years, unhedged and hedged annualized returns of the JPM EM GBI were roughly the same (3.4 and 3.5 percent, respectively), but the volatility of the hedged returns was just 2.9 percent versus 11.8 percent for the unhedged returns. For the MSCI EM Equity Index, the unhedged annualized return over the last ten years was 5.4 percent versus 5.8 percent for the hedged index, with volatilities of 21.3 and 15.1 percent, respectively.

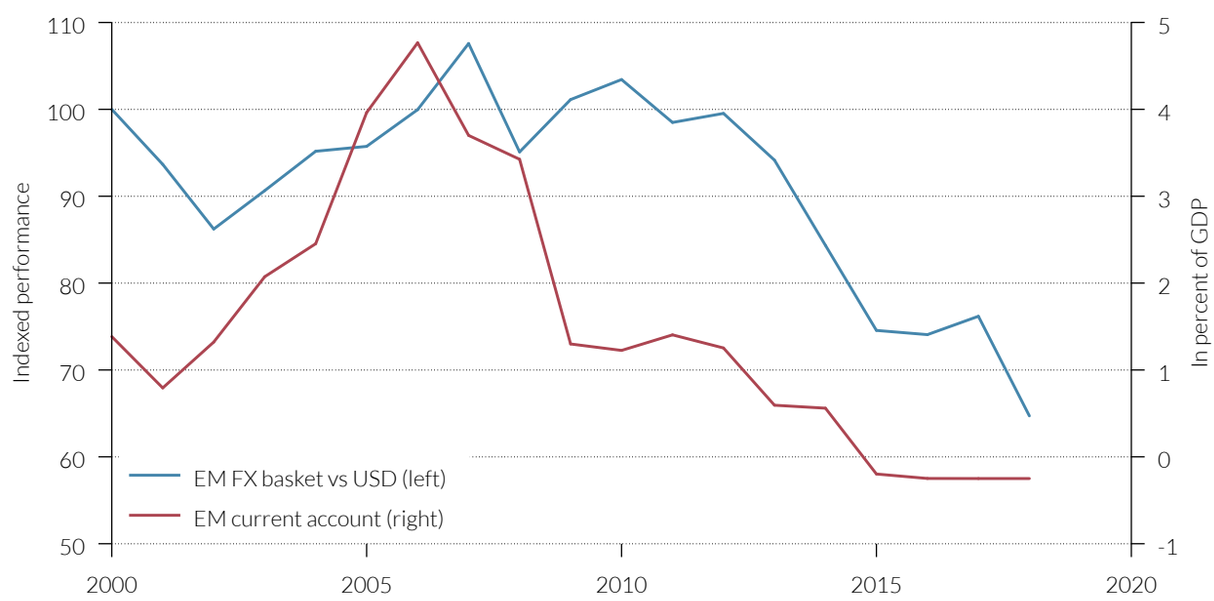
Dynamic overlay is even better

In some cases, dynamic overlay is even better than just hedging. At QCAM, we find that technical overlay strategies like momentum work well for many EM currencies because of their trend-like behavior. We also look at fundamentals. For example, back-testing a strategy based on historical IMF macro-forecast revisions for Brazil produces superior absolute and risk-adjusted returns over the past ten years for both the MSCI Brazil and the JPMorgan GBI Brazil. With EM currency markets becoming more liquid, hedging and dynamic overlay are powerful tools to deal with EM currency volatility without imposing prohibitive sacrifices on investors' returns.

Back-tested performance of equity and bond investments in Brazil over the last 10 years

	MSCI		JPM GBI	
Percent a.r. in USD	**Return**	**Volatility**	**Return**	**Volatility**
Not hedged	-1.5	33.0	5.3	18.6
Hedged	-0.2	20.8	4.5	5.5
Macro strategy	2.9	22.8	8.0	8.9

Emerging Markets FX exchange rate and current account



Sources: IMF, MSCI, J.P. Morgan, QCAM Currency Asset Management

QCAM®
Currency
Asset
Management

The macro perspective

The US economy has passed its peak

The American economy continues moving at a rapid pace but we think it may have passed its peak. The recent data from the real estate market, in particular, has been disappointing. Growth is also slower in the Eurozone. However, leading indicators continue to point to above-potential growth in the short term in both the Eurozone and the US.

The US economy would have to grow for another half a year to post the longest upswing in its history. As defined by the National Bureau of Economic Research, the current upturn will be fully ten years old in the summer of 2019, exceeding the previous record, from the 1990s, for the longest economic expansion. The indicators currently suggest that this new record will in fact be achieved. A US recession is nowhere in sight in the short term.

In retrospect, the preliminary estimate of economic growth for the third quarter of 2018, an annualized rate of 3.5 percent, also indicated strong momentum. For 2019, however, lower growth rates must be expected. The diminishing effects of this year's tax cuts together with rising interest rates and more volatile financial markets are all sources of headwinds. And the decline in investment in the third quarter this year is another worrying development. Excluding the real estate sector, investment grew at its lowest level in two years. Given the high corporate profits and the prevailing optimism about the economy, the anaemic state of investment is remarkable. Companies are optimistic but apparently at the same time they are cautious.

The US real estate market as a leading indicator

Investment growth in residential construction contracted in the third quarter and, we note, a softening real estate sector has proven to be a reliable indicator of an imminent downturn in the past. Historically, if the number of new construction projects or houses sold decreases significantly, the end of a recovery has not been too far away. Both these metrics have been disappointing in recent months. Actually, the robust labour market and the associated job security should feed demand for housing. But today's higher mortgage rates and higher house prices are making building or buying a home less affordable. The tax reforms may also have contributed to the weaker market. Deducting mortgage interest rates has become less attractive with the reforms, making the total bill more expensive for potential homebuyers.

Developments in the real estate sector are good leading indicators, since waning momentum in real estate can have a direct impact on other areas of the economy, feeding a slowdown beyond the real estate sector itself. For example, consumption typically suffers when house prices develop negatively. Moreover, the real estate market's status as a good leading indicator also reflects the sector's sensitivity to interest rates, which makes it the first area of the economy to show that higher rates are slowing economic momentum.

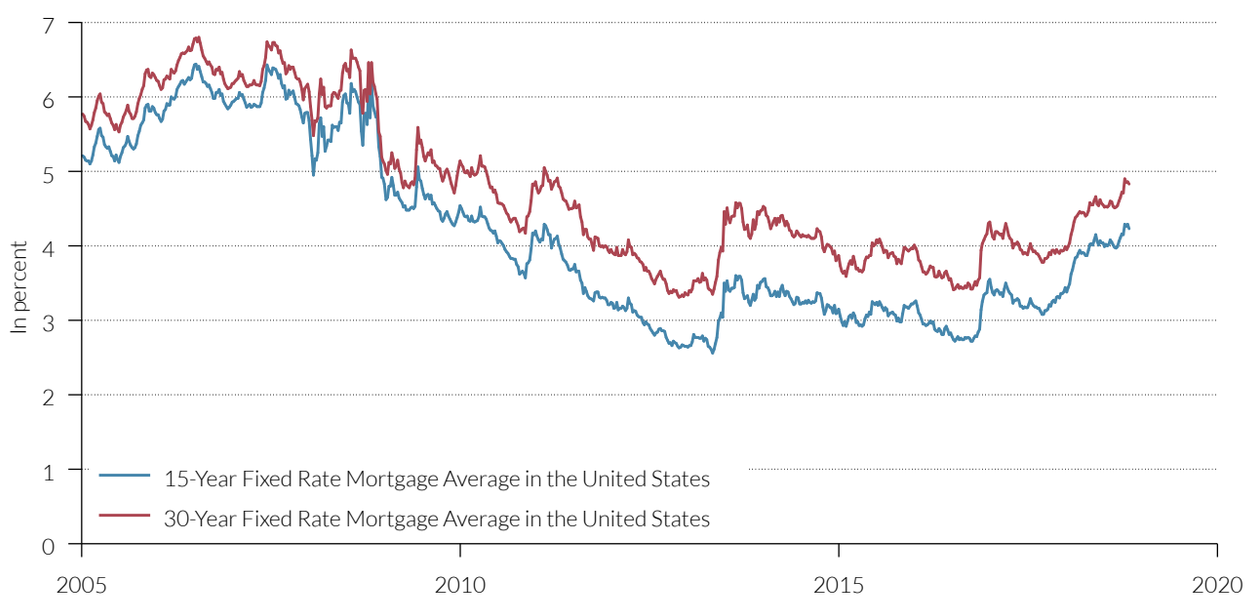
And trimming economic momentum via higher interest rates is precisely the goal of the Federal Reserve to keep inflation rates under control. Historically, interest rates are not yet at very high levels (see chart). In contrast to the run-up to the previous financial crisis, the US real

estate and mortgage markets are also showing significantly less exaggerations. Housing prices and mortgage volumes, when put in the context of incomes, are at much lower levels today. Also, lending remains cautious. The number of loans granted to persons with a lower credit rating has not increased. In sum, the housing price bubble that burst before the 2008 financial crisis is less likely today.

Lower growth in the Eurozone

The slowdown in economic growth has continued in the Eurozone. At 0.2 percent quarter-on-quarter, the preliminary growth estimate for the third quarter is low. But this in itself is no reason for pessimism, in our view. First, the past few months have been influenced by some quite special factors. For example, production in the German auto industry was disappointing because a new testing cycle led to delays in the delivery of new cars. Additionally, there have also been some positive developments. The Spanish economy continues to show robust growth and Spain's leading indicators have halted their decline. Finally, the leading indicators of all Eurozone countries are still at levels that indicate growth rates above their respective potential.

Interest rates on US mortgages are rising



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

FX market talk

EM currencies still unusually cheap

While the more liquid, free-floating emerging market currencies have made up some of their losses over the past month, they continue to show an unusually large valuation gap relative to the US dollar. The Chinese renminbi now finds itself in uncharted waters.

Within the emerging markets universe, there are huge differences between what is traded — for example, net energy importers vs. net energy exporters — and which assets are available to residents and non-residents — that is, the extent of capital controls. These factors are worth bearing in mind when currencies sometimes inexplicably drift far away from their fundamental (or purchasing power parity) value.

The impact of foreign holdings

Given the growing importance of emerging market bond markets, and local currency bonds in particular, foreign holdings of local currency bonds are an important factor to take into account when assessing the potential impact of risk-on, risk-off trades on individual exchange rates. For example, non-residents held 43 percent of local currency South African government bonds at the end of Q1 2018, compared to just 4.5 percent in the case of India and a mere 2.6 percent in the case of China. Solely based on this factor, it would not be surprising, therefore, that the South African rand had a greater correlation with global risk-on, risk-off indicators than has so far been the case with the renminbi.

When we look at a broader index of emerging market currencies that reflects the most liquid local currency bonds – those including Brazil, Indonesia, Poland, Mexico, South Africa, Thailand, Russia, Colombia, Turkey, Malaysia, Hungary, Peru, as shown in the chart – we see that so far 2018 has witnessed the most extreme deviation from purchasing power parity in this century. The backdrop, of course, is well known: the US tightening cycle is under way; the Fed's balance sheet has started to decline as QE goes into reverse.

Our chart shows, however, that the sell-off in this index of emerging market currencies went too far and too fast. By the end of September 2018 (we use month-end data), the gap between this index and purchasing power parity stood at 25 percent That is, these currencies were undervalued against the US dollar by about a quarter. It should not have been too surprising, therefore, that we saw this index of emerging market currencies subsequently appreciate by 4 percent over the past month. But that still leaves a large undervaluation of about one-fifth.

As the graph shows, the gap between the blue and red lines can also narrow due to a rising red line. We are now likely to see a bit of acceleration in that red line as higher inflation in some of these emerging markets begin to erode purchasing power. Turkey is currently the most extreme example of this trend: consumer prices rose by 25 percent in Turkey in October.

Indian rupee adjusts

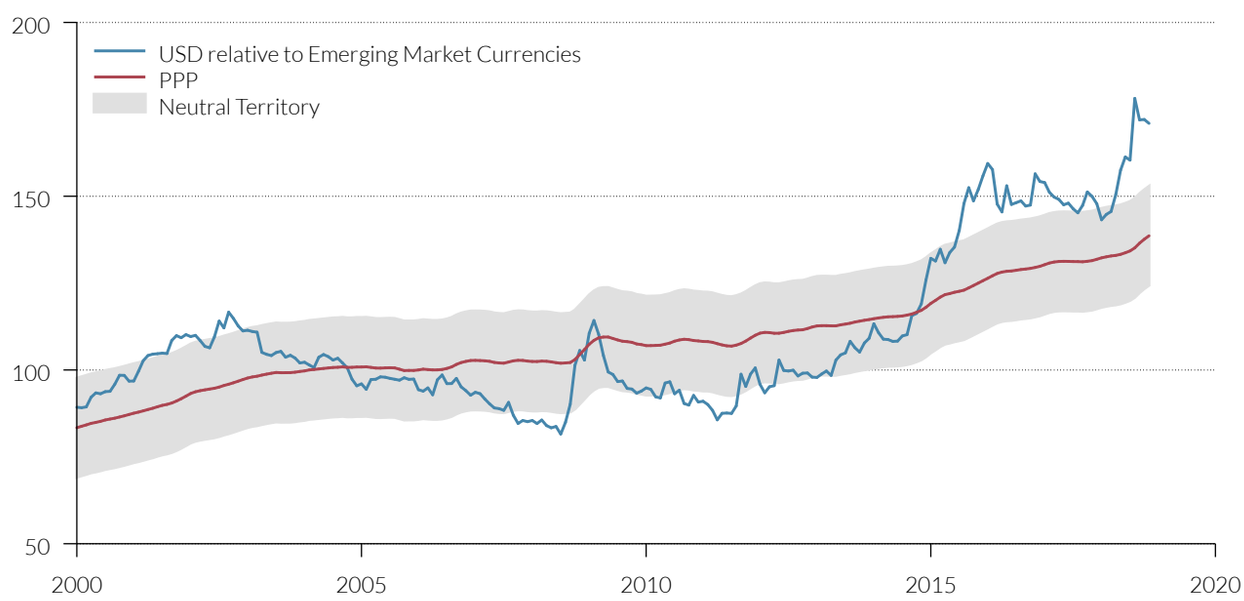
This year started out with the often-heard view that the Indian rupee was "too strong". And, indeed, our purchasing power parity numbers confirm that the currency had been trading on the strong side of this metric for a while. But

when the adjustment came, it was relatively fast: a 15 percent loss in value against the US dollar from January to early October this year. Our current estimate of the end-October purchasing power parity rate of USDINR is 67, showing that the rupee was around 11 percent undervalued. This is by no means an excessive undervaluation and we would not see this as a strong signal to buy the rupee at this point.

Chinese renminbi free to float a bit more

While the financial media have proclaimed that the renminbi falling below 7 would be significant, from a macroeconomic point of view this nominal level is irrelevant. The significant number in our model is 6.40 – which was the purchasing power of the renminbi against the US dollar at the end of October. This means that the CNY was around 9 percent cheaper than its purchasing power parity. This is unusual for two reasons: first, over the past eighteen years, the Chinese currency has tended to be managed close to its PPP level; and second, since 2010, when there were phases of deviation between spot and PPP, the renminbi tended to be on the strong side of its PPP. In other words, the currency tended to be a disinflationary instrument for the Chinese economy. Now, following a round of global dollar strength, combined with the recent US-China trade disputes, the renminbi is acting as a partial shock absorber for the Chinese economy—a new role. A weaker renminbi represents an easing of Chinese monetary policy and is good for China's exporters. For importers, the Chinese authorities have announced that they would reduce import tariffs on a range of items as well as lowering some taxes. China is appears to be using the current trade disagreement with the US as an opportunity to try out some stimulatory options from its toolbox. We are, therefore, entering uncharted waters with the renminbi.

EM currencies at lowest valuation in the past 18 years



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

Economic activity

According to preliminary year-over-year estimates, the US economy grew by 3.5 percent in the third quarter. This is a somewhat weaker pace than in the previous quarter, when the US economy expanded by a strong 4.2 percent. The main growth driver was private consumption. For both goods and services, the numbers again improved slightly compared to the second quarter, which led to a pleasing 4 percent increase in private consumption overall. By contrast, the figures for investment and exports were weaker overall in a quarter-over-quarter comparison.

According to a first flash estimate of 0.2 percent, the Eurozone economy grew at a slower quarter-over-quarter rate in Q3 than it has in the past four years. In light of this, we look at our leading indicator for Eurozone growth. Although the weaker growth trend is now clearly visible in the data, acute alarm signals for the European economy are still absent. For the final quarter of 2018, this and the still positive sentiment makes us remain optimistic.

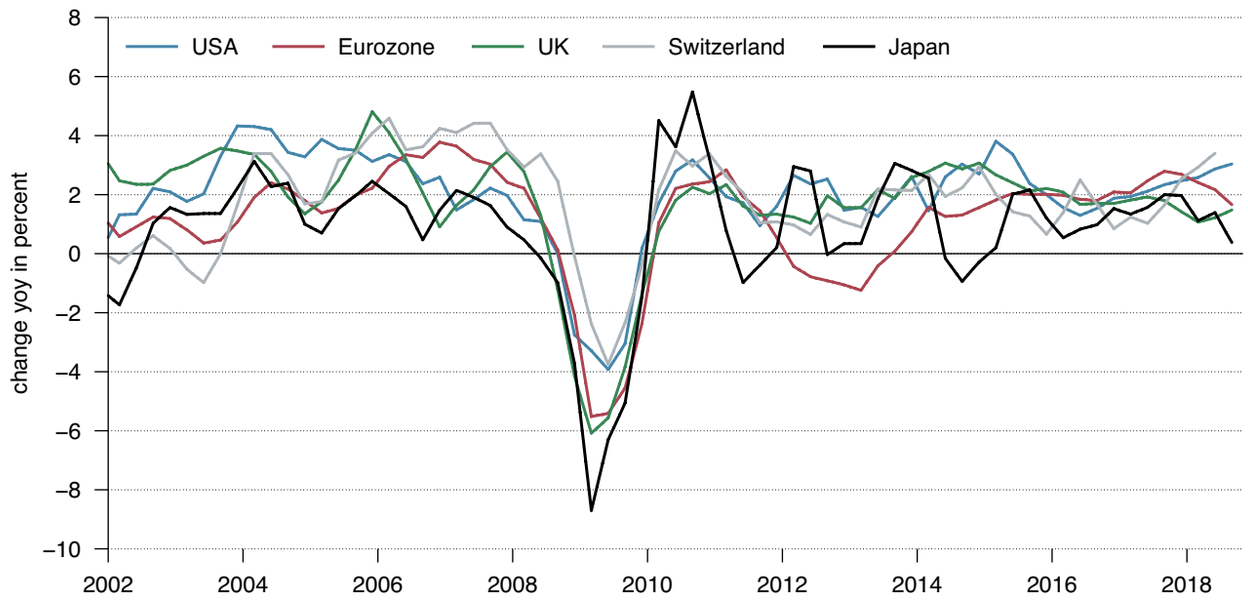
Growth overview

	Trend growth[1]	Real GDP growth[2]				W&P economic sentiment indicators[3]			
		Q4/2017	Q1/2018	Q2/2018	Q3/2018	7/2018	8/2018	9/2018	10/2018
United States	1.7	2.5	2.6	2.9	3.0	3.4	4.1	4.3	3.9
Eurozone	1.0	2.7	2.4	2.2	1.7	3.1	3.0	2.9	2.8
Germany	1.4	2.8	2.0	2.0	1.2	3.5	3.5	3.5	3.3
France	0.7	2.8	2.1	1.7	1.5	2.3	2.2	2.0	1.8
Italy	0.2	1.6	1.3	1.2	0.8	1.6	1.5	1.5	1.4
Spain	1.6	3.1	2.8	2.5	2.5	2.7	2.6	2.4	2.7
United Kingdom	1.8	1.4	1.1	1.2	1.5	2.6	2.8	2.6	2.7
Switzerland	1.5	2.5	2.9	3.4	–	2.7	2.6	2.6	2.4
Japan	0.4	2.0	1.1	1.4	0.4	2.6	2.6	2.6	2.5
Canada	1.6	3.0	2.3	1.9	–	1.7	1.5	1.7	1.7
Australia	2.4	2.4	3.2	3.4	–	3.3	3.2	3.0	3.1
Brazil	1.4	2.1	1.2	1.0	–	-0.2	-0.4	0.1	–
Russia	0.1	0.9	1.3	1.9	1.3	-1.8	-1.1	0.0	1.2
India	7.7	7.0	7.7	8.2	–	6.7	6.6	6.7	6.7
China	7.4	6.8	6.8	6.7	6.5	6.9	6.7	6.4	6.5
Advanced economies[4]	1.4	2.4	2.3	2.5	2.4	3.4	3.7	3.7	3.5
Emerging economies[4]	6.0	5.5	5.7	5.6	5.5	5.0	4.8	4.7	4.8
World economy[4]	3.5	4.0	4.0	4.1	4.0	4.3	4.3	4.3	4.2

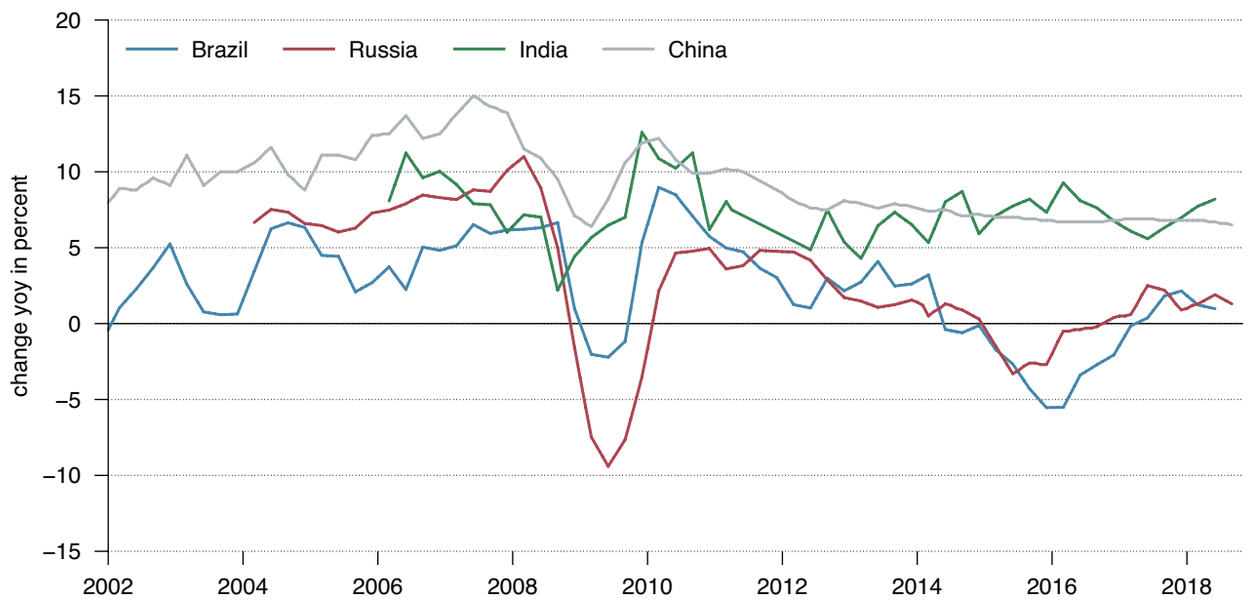
[1] Current year-on-year trend growth rate of real GDP, in percent, according to the proprietary trend growth model of Wellershoff & Partners.
[2] Year-on-year growth rate, in percent.
[3] Wellershoff & Partners economic sentiment indicators are based on consumer and business surveys and have up to 6 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

QCAM®
Currency
Asset
Management

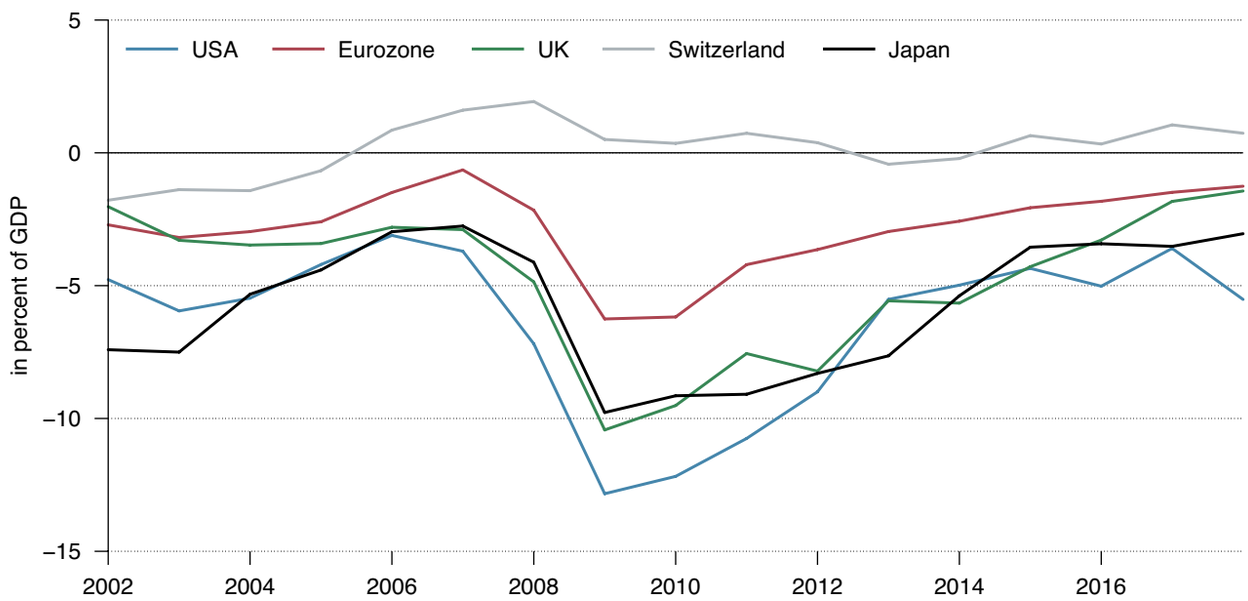
Economic indicators

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	23.5	24.2	-2.3	-2.8	105.5	107.1	-4.7	-5.5	5.6	3.7
Eurozone	16.3	16.2	3.6	4.0	108.9	107.1	-2.2	-1.3	10.7	8.1
Germany	4.7	4.7	8.0	8.3	78.8	68.4	0.7	1.5	6.4	5.1
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	10.0
Spain	1.7	1.7	1.5	1.7	114.4	113.5	-5.2	-2.4	21.9	14.9
United Kingdom	3.6	3.3	-5.2	-3.1	113.4	116.8	-4.1	-1.4	5.4	2.7
Switzerland	0.9	0.8	10.0	10.7	42.8	40.8	0.3	0.7	3.2	2.4
Japan	6.3	6.0	2.5	3.7	218.9	225.5	-4.7	-3.0	3.4	2.3
Canada	2.2	2.0	-3.1	-3.0	88.4	87.3	-0.7	-1.2	6.8	5.8
Australia	1.8	1.7	-3.4	-2.8	36.8	40.5	-2.6	-1.4	5.8	5.0
China	14.2	15.9	1.9	0.7	41.8	50.1	-2.4	-4.1	4.0	–
Brazil	2.7	2.3	-2.5	-1.3	71.5	88.4	-7.1	-8.6	9.3	11.9
India	2.8	3.2	-1.3	-3.0	69.4	69.6	-7.1	-6.6	–	–
Russia	2.2	1.9	2.7	6.2	15.4	15.3	-2.1	1.6	5.4	4.5

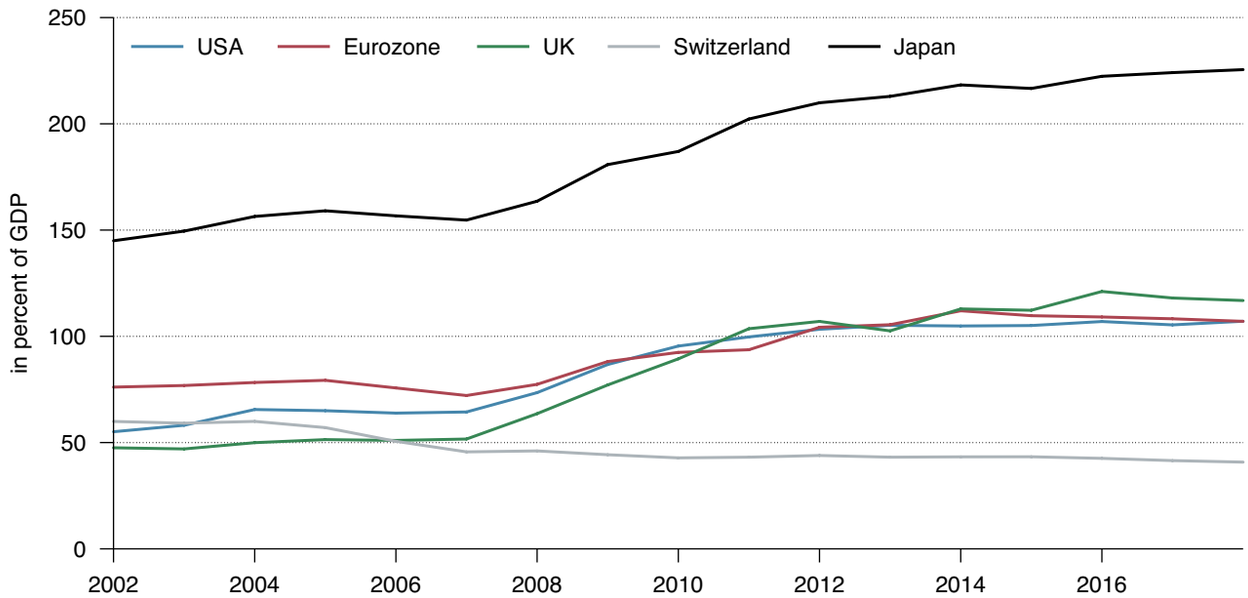
[1] In percent; calculations based on market exchange rates. [2] In percent of nominal GDP. [3] In percent.

Budget deficits in advanced economies

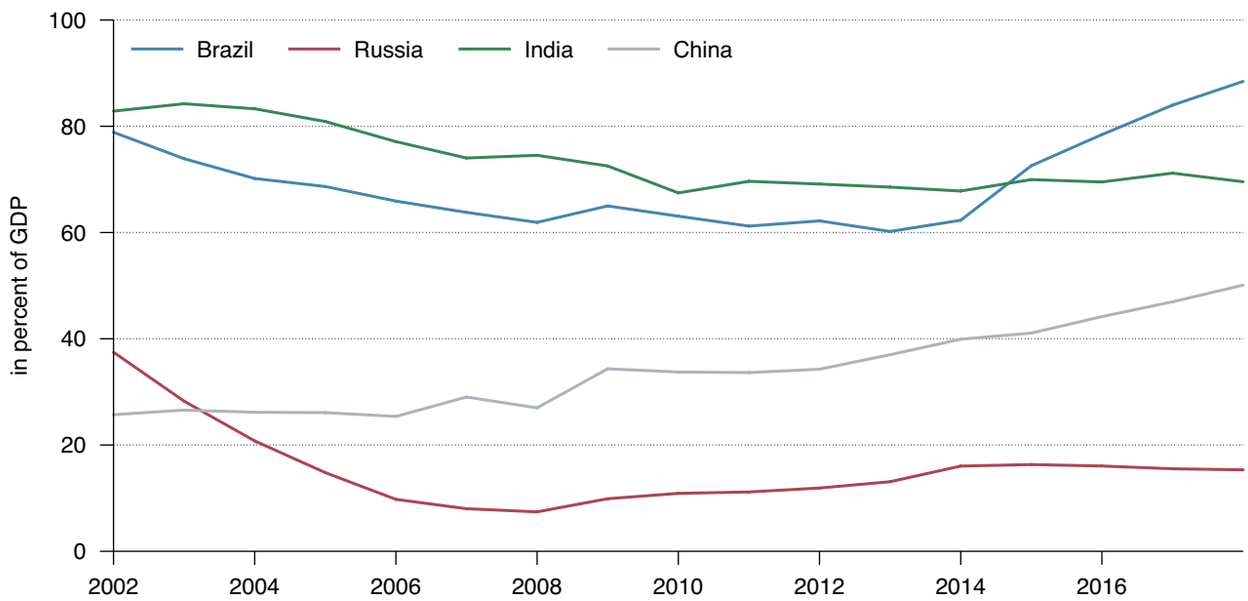


Source: Thomson Reuters Datastream, Wellershoff & Partners

Public debt in advanced economies



Public debt in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

Inflation

In Japan, the inflation rate in September reached 1.2 percent. This confirms the slightly stronger trend in consumer prices in recent months. However, inflation is currently only receiving support from oil prices, which have increased significantly since the beginning of the year. If the base effect of higher oil prices fades in the coming months, Japan's underlying weak inflationary momentum will again come to the fore. Japanese inflation remains anaemic despite ultra-expansionary monetary and fiscal policies. Core inflation, which is still around 0.5 percent, is emblematic of this weakness.

Similar to Japan, consumer price growth in Switzerland remains subdued. For October, the inflation rate was 1.1 percent. At 0.4 percent, core inflation was once again significantly lower. In contrast to its Japanese counterpart, the relatively weak price pressure plays into the hands of the Swiss National Bank. The SNB continues to focus its monetary policy on the exchange rate against the euro. Since the European Central Bank has stated that it does intend to begin hiking interest rates before the end of 2019, the weak domestic inflation offers the Swiss monetary authorities the necessary room to manoeuvre in order to maintain their expansionary monetary policy.

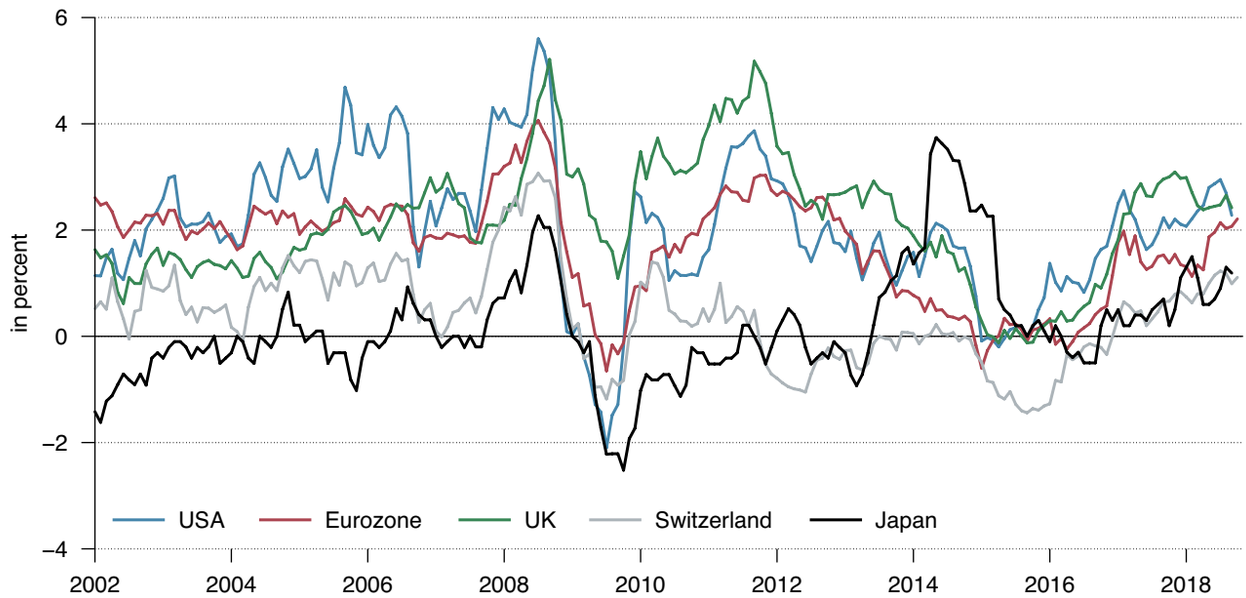
Inflation overview

	Ø 10 years[1]	Inflation[2]				Core inflation[3]			
		7/2018	8/2018	9/2018	10/2018	7/2018	8/2018	9/2018	10/2018
United States	1.5	3.0	2.7	2.3	–	2.4	2.2	2.2	–
Eurozone	1.2	2.1	2.0	2.1	2.2	1.1	0.9	0.9	1.1
Germany	1.2	2.0	2.0	2.3	2.5	1.5	1.5	1.6	1.8
France	1.0	2.3	2.3	2.2	2.2	–	–	–	–
Italy	1.2	1.5	1.6	1.4	1.6	0.7	0.8	0.7	0.8
Spain	1.1	2.3	2.2	2.3	2.3	0.9	0.8	0.8	1.0
United Kingdom	2.3	2.5	2.7	2.4	–	1.9	2.1	1.9	–
Switzerland	-0.1	1.2	1.2	1.0	1.1	0.5	0.5	0.4	0.4
Japan	0.3	0.9	1.3	1.2	–	0.3	0.4	0.3	–
Canada	1.6	3.0	2.8	2.2	–	1.6	1.7	1.5	–
Australia	2.2	2.0	2.0	1.9	–	1.6	1.4	1.2	–
Brazil	6.0	4.5	4.2	4.5	4.6	3.6	3.6	3.8	3.6
Russia	7.7	2.5	3.1	3.4	3.6	2.4	2.6	2.8	3.1
India	7.4	4.2	3.7	3.7	3.3	–	–	–	–
China	2.2	2.1	2.3	2.5	1.5	1.9	2.0	1.7	1.8
Advanced economies[4]	1.3	2.4	2.3	2.1	2.1	1.6	1.5	1.5	1.5
Emerging economies[4]	4.4	2.8	2.9	3.0	3.0	2.1	2.2	2.0	2.1
World economy[4]	2.7	2.6	2.6	2.6	2.6	1.6	1.6	1.5	1.6

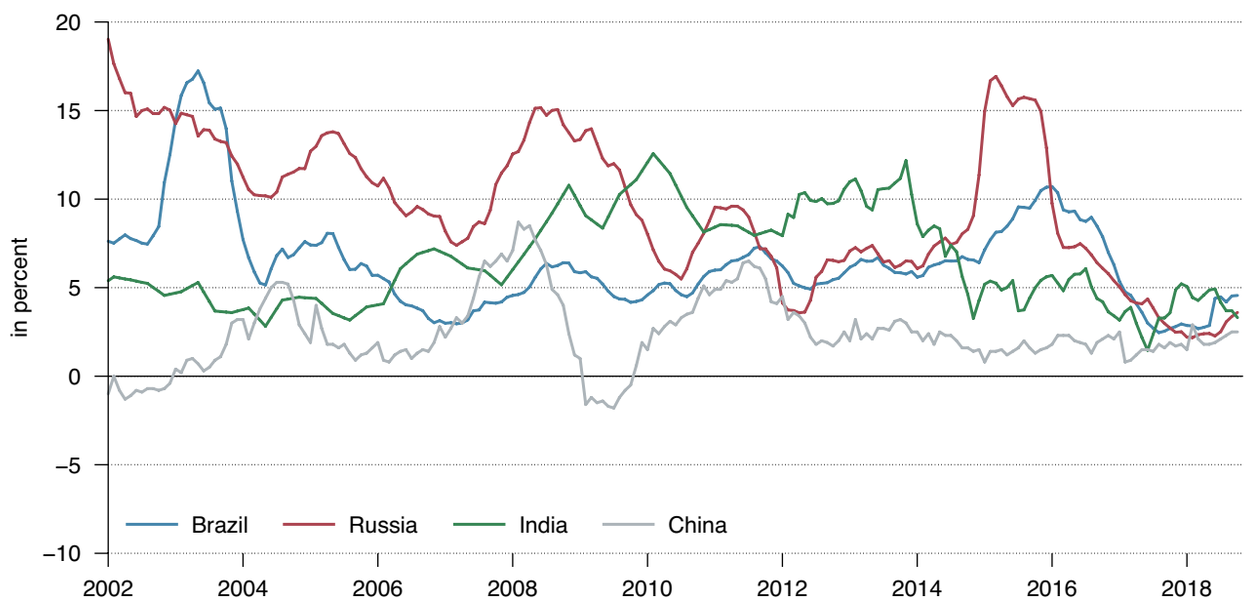
[1] Average annual consumer price inflation, in percent.
[2] Year-on-year change of the consumer price index (CPI), in percent.
[3] Core inflation is a measure of inflation that excludes certain items that can experience volatile price movements, such as energy and certain food items; year-on-year change 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

QCAM®
Currency
Asset
Management

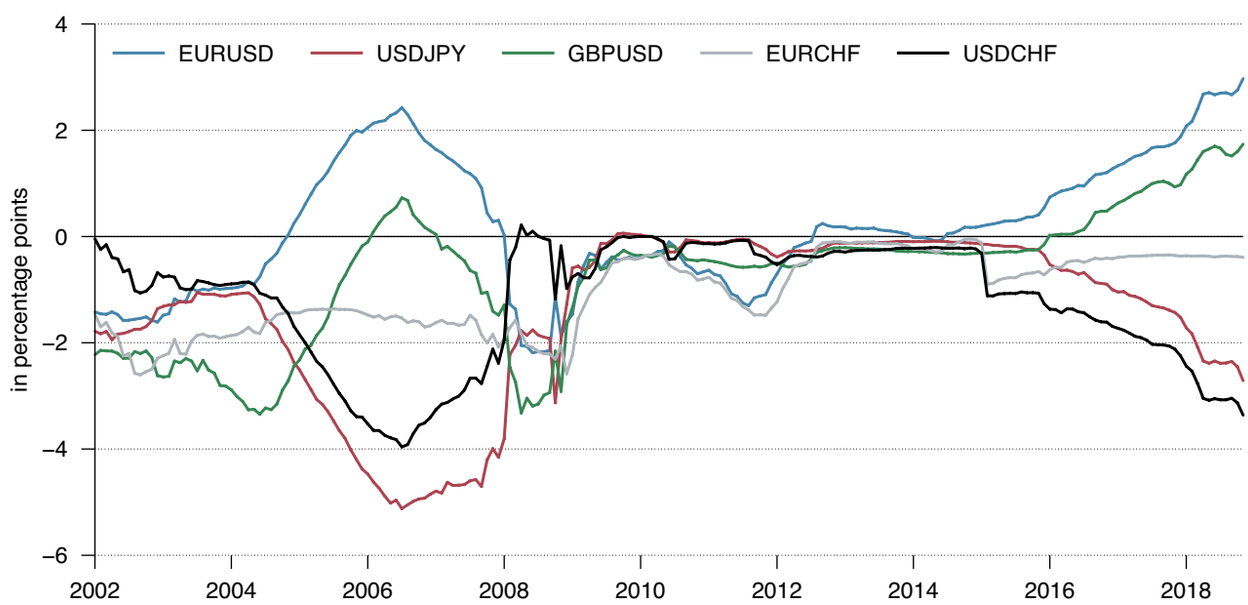
Interest rates

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	1.128	2.96	1.80	1.06	0.33	3.30	2.16	1.35	0.52
USDJPY	113.9	-2.71	-1.46	-0.88	-0.53	-3.01	-1.78	-1.20	-0.81
GBPUSD	1.300	1.74	0.89	0.38	-0.03	1.99	1.12	0.48	0.01
EURCHF	1.138	-0.40	-0.36	-0.42	-0.54	-0.37	-0.26	-0.41	-0.63
USDCHF	1.009	-3.36	-2.16	-1.48	-0.88	-3.67	-2.42	-1.77	-1.15
GBPCHF	1.311	-1.62	-1.27	-1.10	-0.91	-1.68	-1.31	-1.29	-1.14
CHFJPY	112.9	0.65	0.70	0.61	0.35	0.66	0.64	0.57	0.34
AUDUSD	0.721	1.11	-0.08	-0.95	-2.09	1.59	0.32	-0.44	-1.52
USDCAD	1.324	-0.41	-0.02	0.29	0.46	-0.57	-0.09	0.05	0.22
USDSEK	9.064	-3.05	-2.09	-1.12	-0.05	-3.19	-2.18	-1.31	-0.25
USDRUB	68.1	4.94	6.18	8.93	7.99	5.07	5.76	8.37	8.01
USDBRL	3.802	4.88	6.45	11.81	10.33	3.70	5.15	9.63	9.40
USDCNY	6.953	0.39	3.12	3.08	3.07	0.42	2.59	2.70	2.68
USDTRY	5.508	22.69	12.29	11.52	9.89	23.21	12.55	11.47	10.01
USDINR	72.66	7.47	7.47	8.47	7.83	4.21	4.44	6.25	5.93

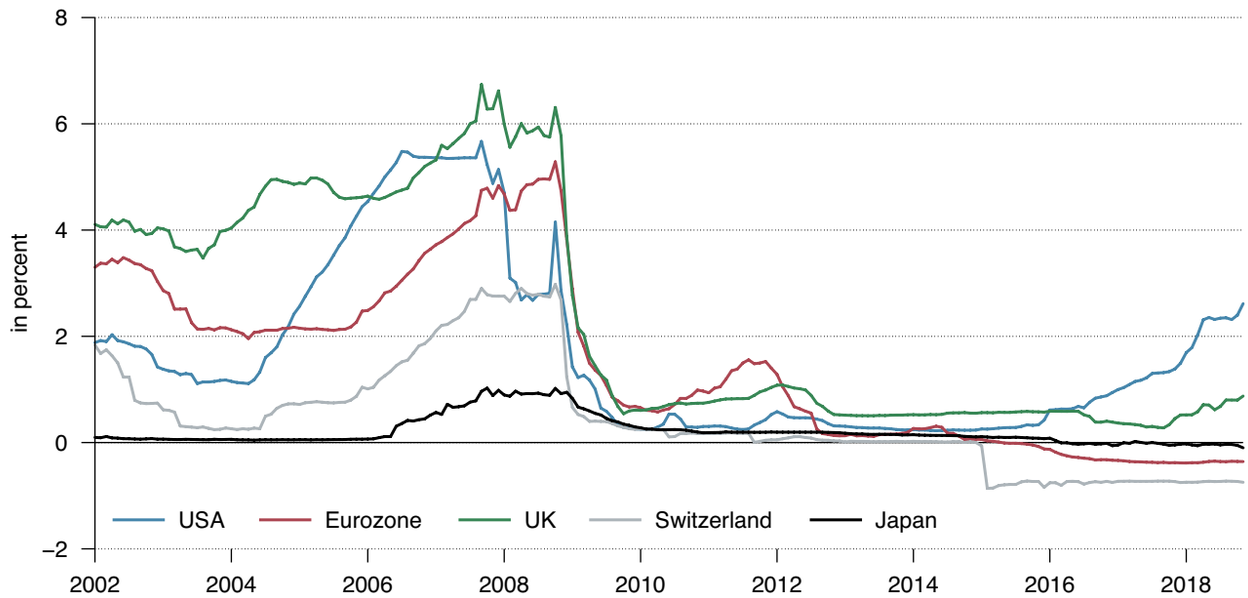
[1] The gap in interest rates between the second currency and the first one, in percentage points; e.g. US dollar minus euro for EURUSD.

Interest rate differentials

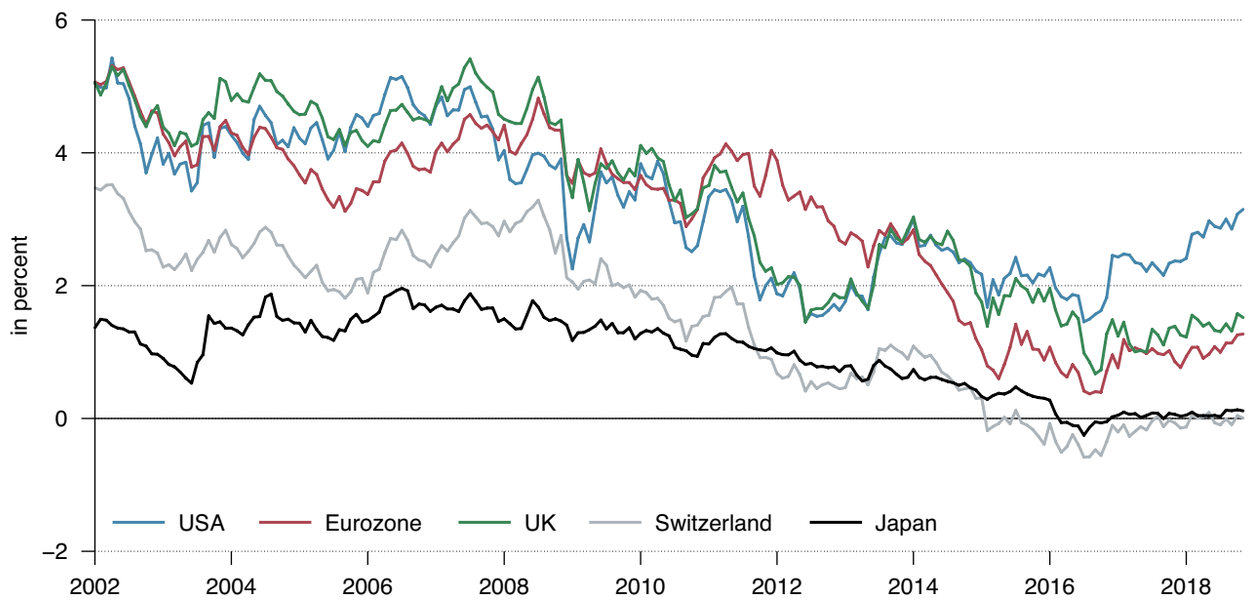


Source: Thomson Reuters Datastream, Wellershoff & Partners

3-month Libor



10-year government bond yields



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

FX markets

Despite heightened uncertainty on the financial markets, the Swiss franc has developed relatively poorly over the past month. The traditionally "safe-haven" advantage of the Swiss currency seems to have failed to materialize for once. At 3.5 percent, the franc's losses relative to the Japanese yen were relatively clear. After all, the Swiss currency lost 2.5 percent against the US dollar. The franc lost a little ground against the euro, only gaining against the Canadian dollar and the Norwegian krone.

Since the beginning of the trade dispute between the US and China, the development of the Chinese renminbi has been closely monitored on international currency markets. So far this year, the Chinese currency has depreciated by around 7 percent against the US dollar. The Trump administration has already accused China of using the exchange rate as a tool against American trade barriers. In the meantime, however, the Chinese government seems to have largely renounced any artificial devaluation. Rather, the cause of the weaker renminbi is likely related to other issues, such as the slower rate of Chinese growth or the rising US interest rates.

FX overview

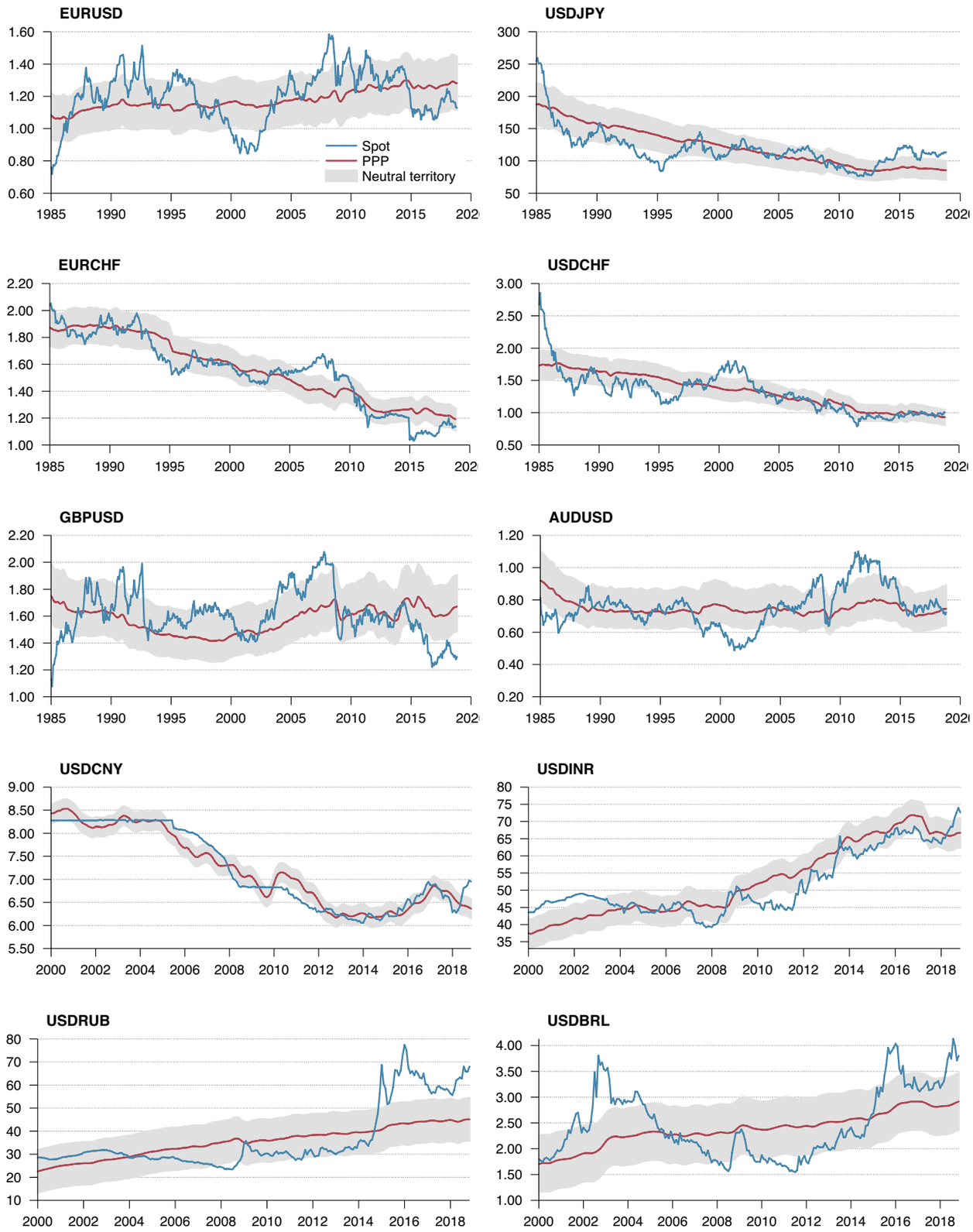
	Current exchange rate	Performance[1]				Purchasing Power Parity[2]		
		YTD	3 months	1 year	5 years	PPP	Neutral territory	Deviation[3]
EURUSD	1.128	-6.1	-0.3	-3.3	-15.8	1.28	1.11 - 1.45	-12.0
USDJPY	113.9	1.1	3.1	0.4	14.6	85.5	70.5 - 100.5	33.2
GBPUSD	1.300	-3.9	2.6	-0.9	-18.7	1.67	1.49 - 1.91	-22.2
EURCHF	1.138	-2.7	1.2	-2.0	-7.6	1.19	1.11 - 1.28	-4.5
USDCHF	1.009	3.5	1.5	1.3	9.8	0.93	0.81 - 1.05	8.5
GBPCHF	1.311	-0.5	4.1	0.5	-10.8	1.55	1.34 - 1.77	-15.6
CHFJPY	112.9	-2.3	1.6	-1.0	4.4	91.9	77.7 - 106.2	22.8
AUDUSD	0.721	-7.8	-0.2	-5.6	-22.5	0.75	0.64 - 0.89	-3.4
USDCAD	1.324	5.7	0.6	4.1	26.4	1.19	1.09 - 1.29	11.5
USDSEK	9.064	10.7	-1.7	8.0	35.5	7.44	6.43 - 8.45	21.8
USDRUB	68.1	18.2	0.9	14.5	107.5	45.1	35.9 - 54.4	50.7
USDBRL	3.802	14.6	-3.1	15.7	63.5	2.91	2.36 - 3.46	30.5
USDCNY	6.953	6.8	0.7	4.7	14.1	6.37	6.16 - 6.57	9.2
USDTRY	5.508	45.3	-8.9	42.1	168.6	3.90	3.55 - 4.26	41.1
USDINR	72.66	13.8	4.0	11.1	14.5	66.7	62.4 - 71	8.9

[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: Thomson Reuters Datastream, Wellershoff & Partners



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

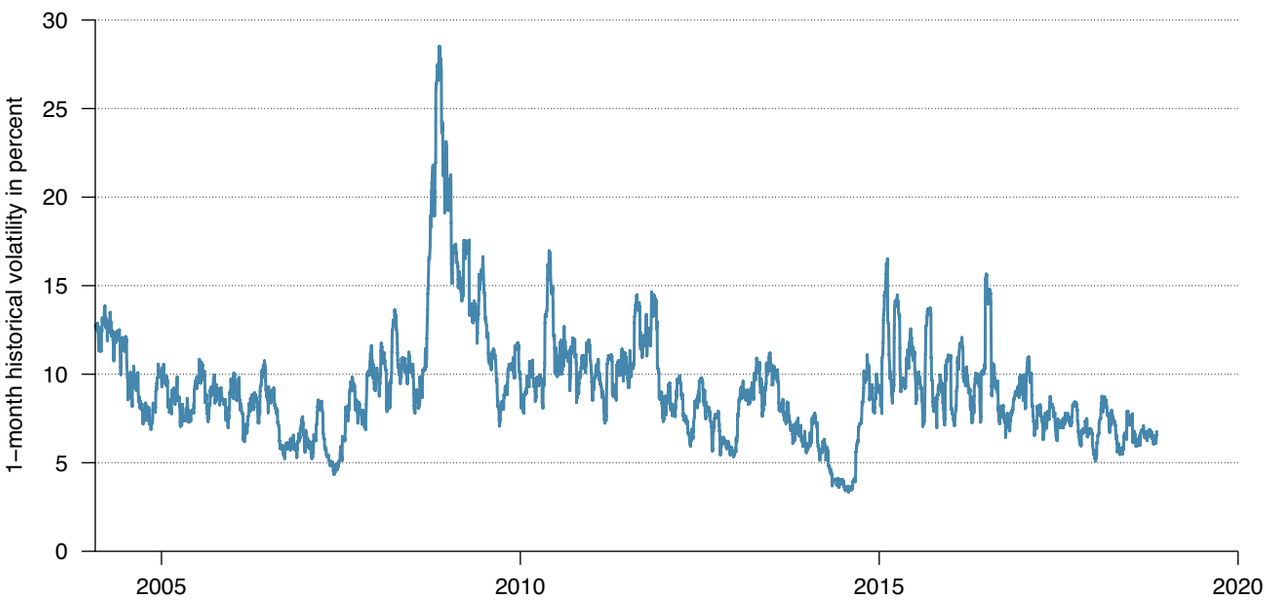
FX volatility

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	1.128	6.7	7.8	8.4	10.2	7.0	7.9	8.6	10.6
USDJPY	113.9	5.6	7.1	9.2	10.5	6.7	8.1	9.7	11.2
GBPUSD	1.300	8.0	11.4	8.6	9.8	7.8	10.2	9.0	10.3
EURCHF	1.138	5.3	5.5	5.8	6.5	5.3	6.1	6.4	7.0
USDCHF	1.009	5.7	6.8	8.5	10.1	6.5	7.4	9.0	10.6
GBPCHF	1.311	7.5	10.4	8.8	9.9	7.3	9.5	9.2	10.5
CHFJPY	112.9	6.3	7.3	9.1	11.3	6.6	7.9	9.8	12.0
AUDUSD	0.721	8.3	8.9	9.8	11.9	8.2	9.5	10.4	12.5
USDCAD	1.324	6.5	6.8	7.9	9.4	7.2	7.4	8.2	9.9
USDSEK	9.064	8.9	9.6	9.7	12.2	9.3	9.9	10.1	12.5
USDRUB	68.1	11.7	14.2	16.8	14.8	12.7	14.3	17.0	15.8
USDBRL	3.802	19.0	14.6	15.6	15.5	14.6	14.8	15.8	16.1
USDCNY	6.953	3.8	6.0	4.1	3.3	4.2	6.4	5.0	4.7
USDTRY	5.508	30.5	20.1	13.9	13.4	27.1	21.6	14.8	14.5
USDINR	72.66	7.5	7.8	7.1	9.1	5.6	8.0	8.3	10.2

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

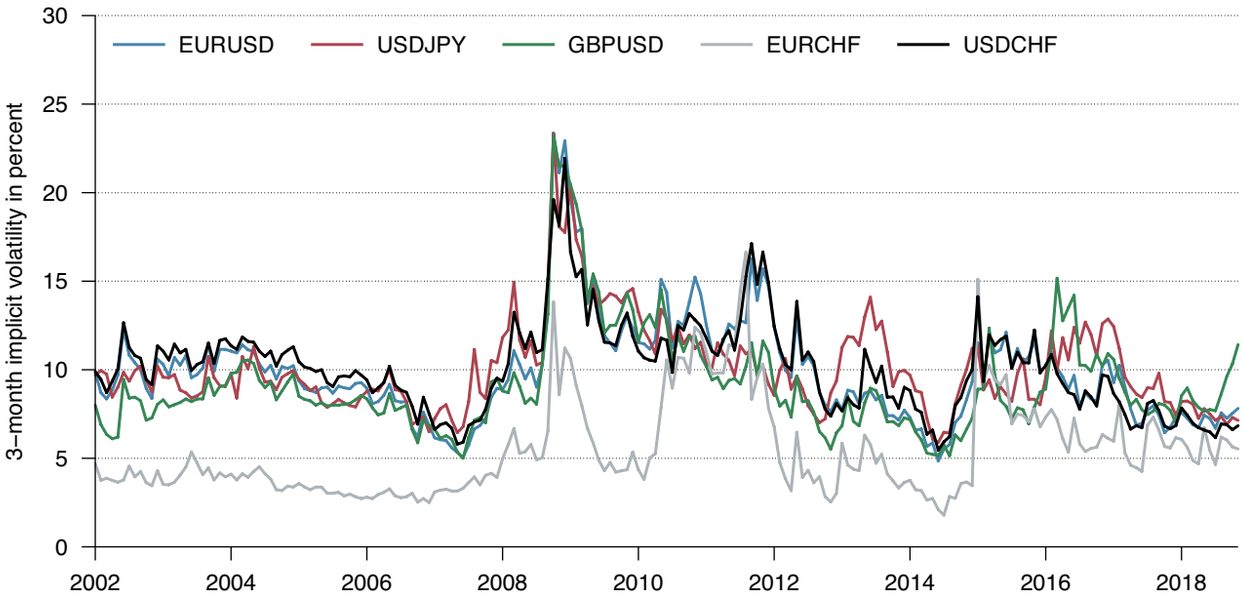
QCAM volatility indicator[3]



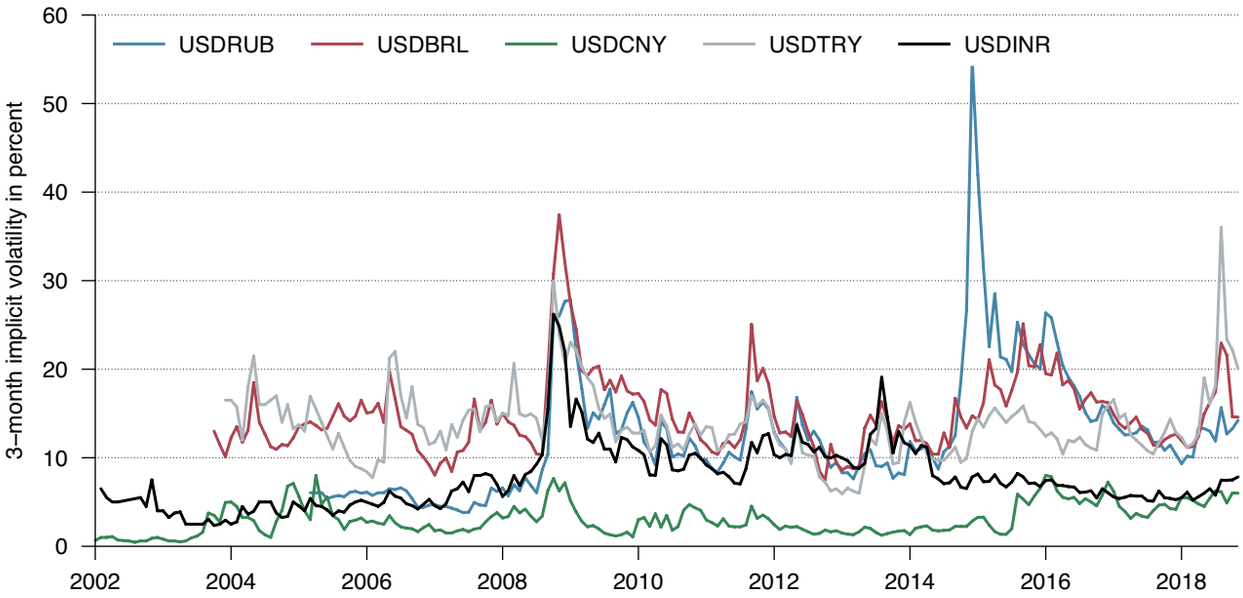
[3] The QCAM volatility indicator measures general volatility in global FX markets; the indicator is based on historical volatility of the main exchange rates, which are weighted by trading volume.

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

Implicit volatility



Implicit volatility



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

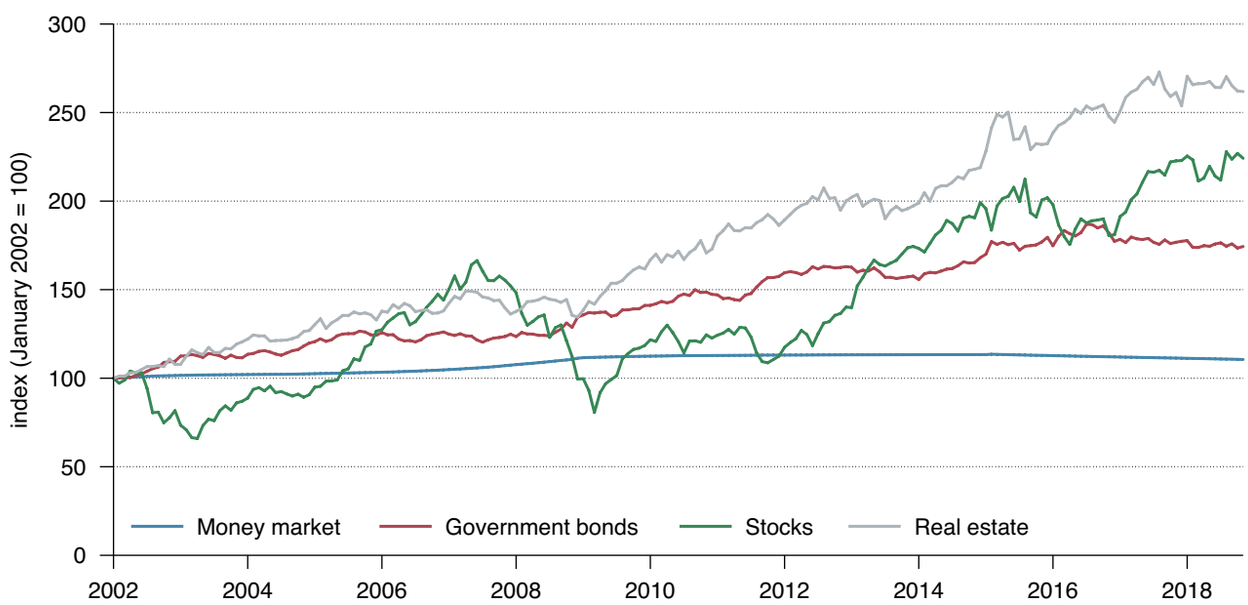
Financial markets

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	-0.6	-0.2	-0.7	-2.4	-0.6	-0.2	-0.7	-2.4
Swiss government bonds	-1.9	-1.2	-1.3	11.0	-1.9	-1.2	-1.3	11.0
Swiss corporate bonds	-1.2	-0.7	-1.0	9.4	-1.2	-0.7	-1.0	9.4
Swiss equities (SMI)	-0.6	1.1	1.8	27.8	-0.6	1.1	1.8	27.8
European equities (Stoxx600)	-3.3	-3.7	-2.4	33.3	-6.0	-2.5	-4.3	23.1
UK equities (Ftse100)	-4.8	-5.2	-0.9	28.0	-5.3	-1.3	-0.5	13.9
Japanese equities (Topix)	-8.1	-2.7	-6.2	49.1	-5.9	-4.3	-5.3	44.1
US equities (S&P 500)	3.5	-3.0	7.4	68.4	0.0	-4.4	5.9	52.9
Emerging markets equities	-14.5	-5.1	-11.6	11.5	-17.4	-6.5	-12.8	1.2
Global equities (MSCI World)	-1.5	-3.7	2.0	42.3	-4.9	-5.1	0.6	29.1
Swiss real estate	-3.2	-2.3	2.5	33.1	-3.2	-2.3	2.5	33.1
Global real estate	-0.1	-0.5	1.6	32.7	-3.5	-2.0	0.3	20.4
Commodities	-6.5	0.3	-5.5	-33.1	-9.7	-1.1	-6.7	-39.3
Brent oil	0.4	-5.0	5.3	-38.5	-3.0	-6.4	3.9	-44.2
Gold	-7.6	2.1	-5.8	-6.6	-10.8	0.6	-7.1	-15.3

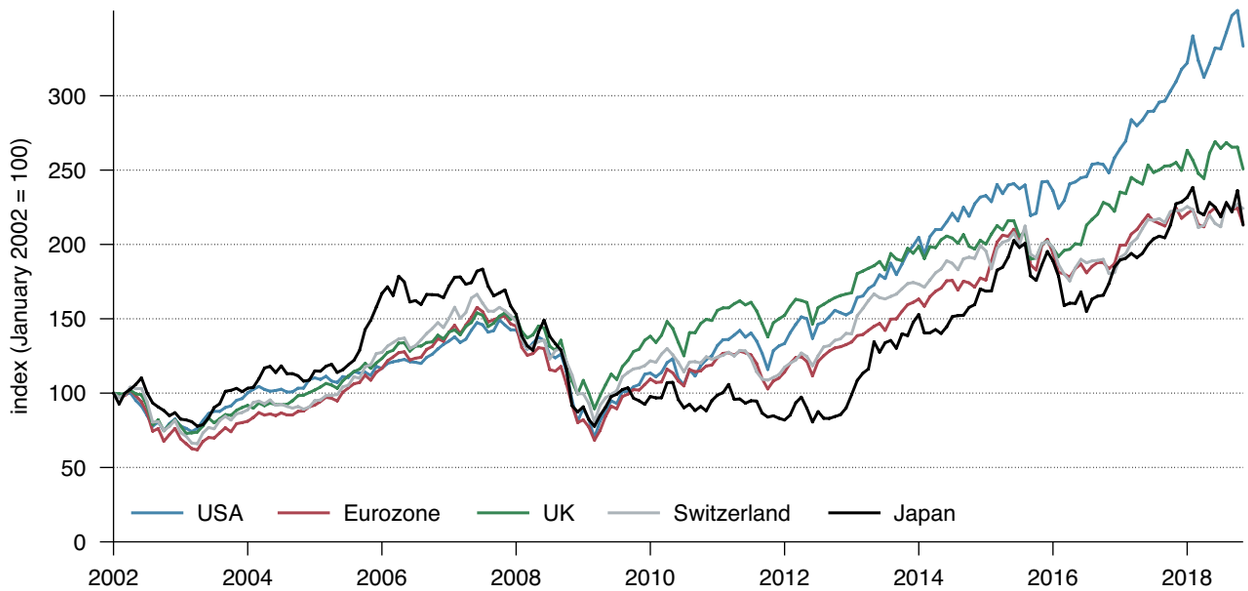
[1] Performance over the respective period of time, in percent.

Performance of selected Swiss asset classes

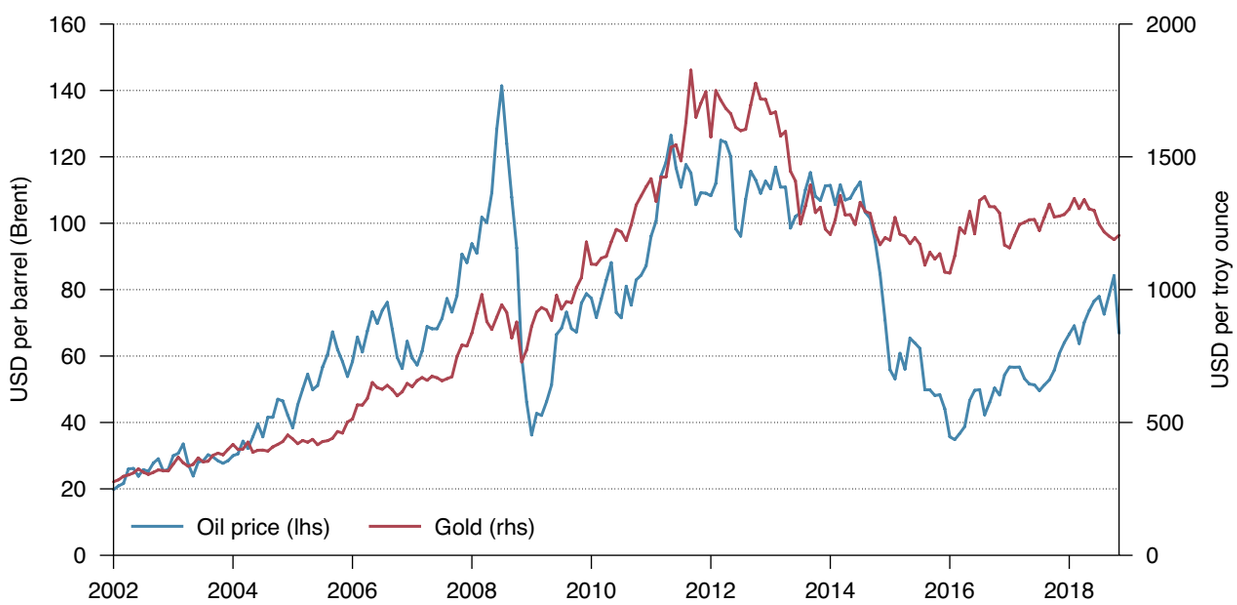


Source: Thomson Reuters Datastream, Wellershoff & Partners

Performance of selected equity markets (in local currency)



Performance of selected commodity prices



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

Number of the month

2.4 percent

Italy's planned state budget deficit for 2019 is 2.4 percent of GDP. The previous Italian government promised to reduce its deficit, and the European Commission has rejected Italy's new budget. The EU is clearly in a bind here. If it imposes this penalty, the mood in Italy will turn even more against the EU. If it refrains from sanctions, there is a risk that other countries will no longer feel compelled to comply with the EU's Stability and Growth Pact.