MARCH 2019

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: March 8, 2019
FX Monthly is published monthly in English and German.

FX Monthly
March 2019

Contents

QCAM
Currency
Asset
Management

QCAM Insight

What the Fed's policy shift means for the dollar

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

The minutes of the latest FOMC meeting confirm that the Fed is turning dovish. So far, this shift has not had a big impact on the general direction of the USD. But that might change if the Fed adopts a new approach to inflation targeting.

The minutes of the FOMC's January meeting confirm the Fed's new dovish tone. Recession is still a low-probability scenario for 2019, but the latest round of economic data has economists lowering their growth forecasts. Most likely, the release of the FOMC's own forecasts later this month will also feature reduced growth expectations. Against this backdrop and given the prevailing uncertainties, we think the Fed's policy shift seems justified.

Interestingly, the minutes reveal that several FOMC members still thought that rate hikes may be appropriate later this year, while a clear majority favored finishing the balance sheet adjustment by the end of this year. We find the overall dovish shift positive for carry trades in high-yielding emerging markets currencies, as it reduces the interest rate risk on the funding side. However, we note this is not automatically translating into USD weakness against other major currencies since the dollar itself is a high-yielding currency among the majors. The latest FOMC minutes clearly show that the Fed is still some distance from cutting interest rates, while other major central banks have become more dovish as well.

The Fed may change its inflation target

The Fed's dovish shift certainly qualifies as what Jerome Powell called prudent policy risk management in times of increased uncertainty. However, it may also be a sign of an underlying gradual adjustment in the Fed's policy reaction function, in particular tolerating more inflation overshoots. This may not just be a matter of convenience and give the Fed more flexibility in reactions to changes in the growth environment; it could also help anchor inflation expectations in the market over the medium to long term.

Inflation expectations in the market have been procyclical, typically moving up and down with economic activity and interest rates. As the next easing cycle is likely to push interest rates again toward the zero bound, the Fed may not be able to lower nominal rates enough to offset the effect of falling inflation expectations on real interest rates. Targeting stable inflation over a longer time period, say, a moving average, would create more policy flexibility, help anchor the market's inflation expectations and, thus, make interest rate policy more effective at the zero bound.

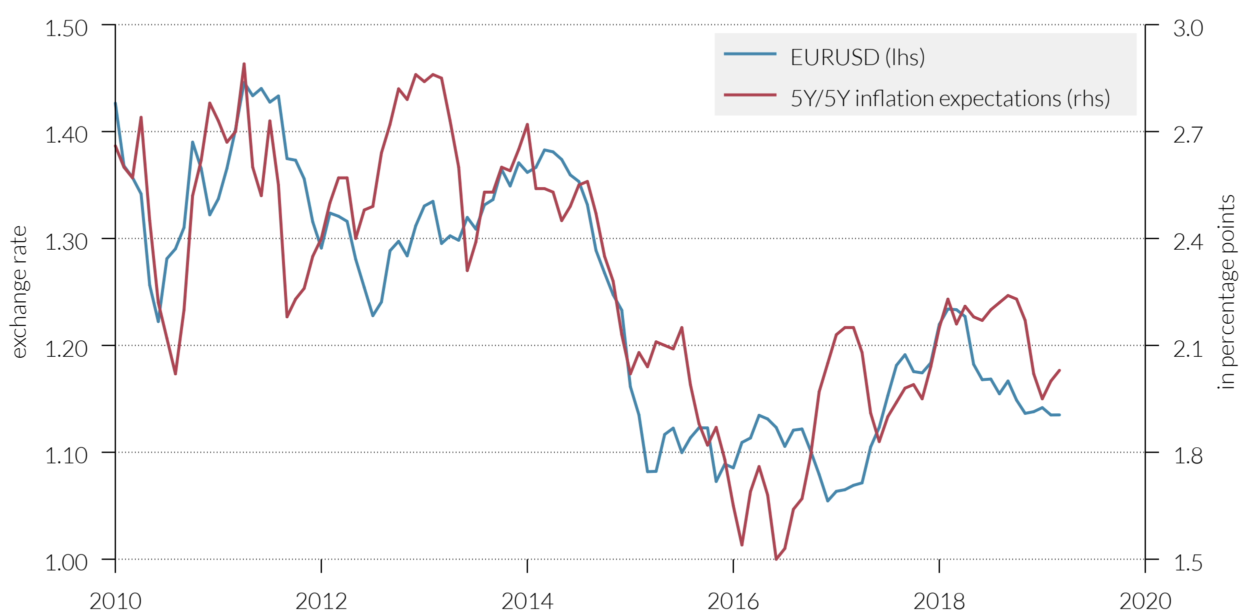
Possible USD impact

Whether, if at all, and how the Fed will change its inflation objective will become clearer at its June conference on strategies, tools and communication. So, what would be the impact on the USD if there were a change towards some sort of average inflation target, where undershoots would be offset by overshoots and vice versa? There are two possible effects on the USD exchange rate: first, a possible lasting trend effect and second a one-off adjustment effect.

An impact of the policy shift on the USD trend would only occur if the Fed were to actually deliver higher trend inflation over the business cycle. This would become visible in the purchasing power parity rate and, over time, have a depreciating effect on the actual exchange rate. We would not expect such an outcome, but slippage is clearly a risk.

In our opinion, a one-off adjustment is the more likely outcome, as market inflation expectations would probably have to rise 25 to 50 basis points to be consistent with a long-term inflation target. Based on the relationship between the USD exchange rate and market inflation expectations, we estimate, all else being equal, that this one-off shift could depreciate the USD index between 4 to 8 percent and 5 to 10 percent versus the EUR. In practice, however, the effect may be smaller or even zero, as other central banks may be compelled to adopt a similar approach. Furthermore, if the result is a more effective policy, the USD may even get a credibility bonus.

EURUSD and US market inflation expectations



Source: St. Louis Federal Reserve, QCAM Currency Asset Management

The macro perspective

Strong exports lift the Swiss economy

Even though global growth has slowed, the risk of recession remains low. Switzerland's strong foreign trade performance defied the flagging worldwide trend. But domestically the Swiss economy is showing some signs of weakness. Nonetheless, low interest rates and a remarkably strong labor market continue to provide support.

The latest data paint an unmistakable picture of slowing growth for the global economy. The high rates of growth seen in 2017 and early 2018 can no longer be expected in the industrialized countries, though we do hasten to add that no economic collapse is in sight. In China, on the one hand, the authorities do not want to reverse their efforts of recent years to foster financial stability in order to combat weak growth. But the verdict is still out on the effectiveness of these measures. At the same time, central banks around the world are reacting cautiously to declining inflation and growth prospects. We think monetary policy will therefore continue to be supportive.

The impacts of China and Germany on Switzerland

What are the consequences of the global economy's recent sluggish performance for Switzerland? The Swiss economy had a mixed year in 2018. After performing exceptionally well at the beginning of the year, overall growth posted a negative value for the second half of the year. For the entire year 2018, growth still managed to reach 2.5 percent, well above trend. However, annual growth rates are clearly declining owing to the recent weak quarters (see chart).

What is causing this slump? Some argue that China's weakness is one factor. For Switzerland, exports to China account for around 1.75 percent of total GDP. Nominal export growth to China in 2018 was around 7 percent. In 2017, exports to China grew by about 16 percent. That said, excluding imports and assuming constant export prices, this decline in export growth led to only a miniscule slowdown in GDP growth of less than 0.2 percentage points. China's growth slowdown is surely not without consequences for Switzerland, but Chinese woes alone cannot explain the marked decline in Switzerland's growth rate in the second half of last year. China's growth rates would have to slide far more to have much economic impact on Switzerland, which at the same time would surely intensify uncertainty among businesses and consumers globally. Despite our skepticism about the effectiveness of the measures taken by the Chinese authorities, we do not deem such a scenario likely for the near future.

On the other hand, the weakness of Switzerland's neighboring countries, Germany in particular, deserves serious scrutiny. Their influence on Swiss industry has been plainly visible lately, especially in the third quarter of 2018. In contrast to its German peers, after signs of weakness in the third quarter, Switzerland's manufacturing sector recovered relatively briskly in the fourth quarter. Goods exports also managed to increase vigorously towards the end of last year. The positive trend in exports is mainly attributable to Switzerland's chemical and pharmaceutical industries, which once again posted gratifying growth figures.

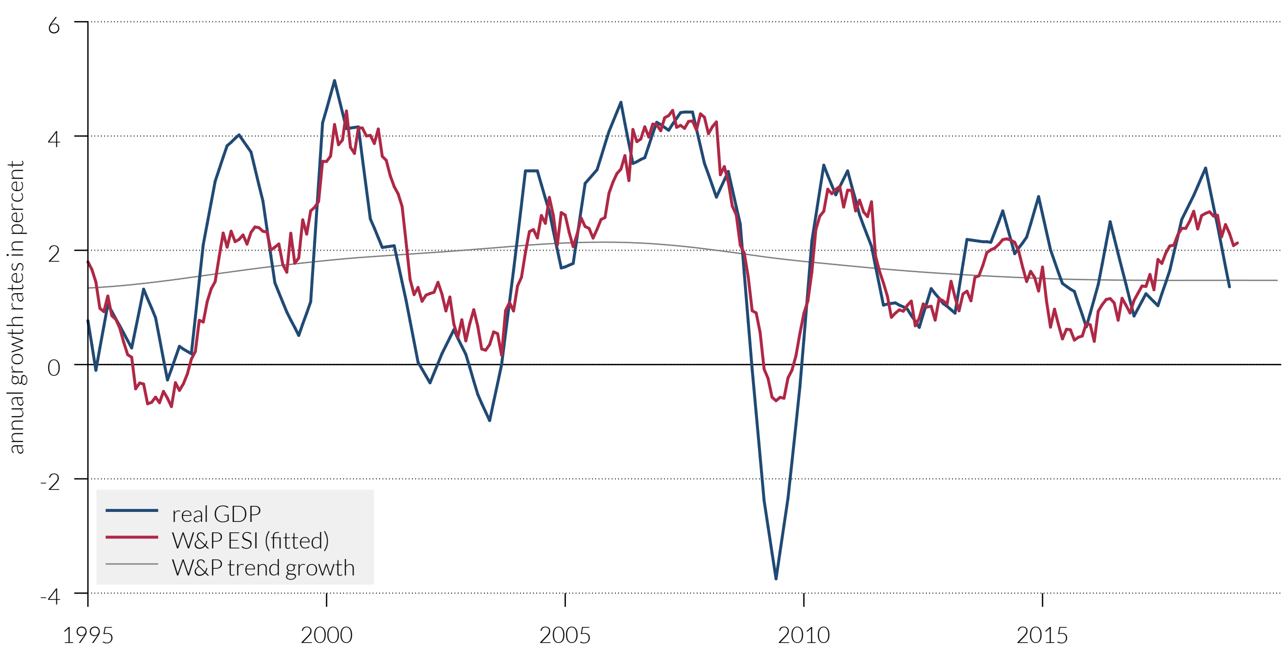
Weak domestic economy

The Swiss economy's weakness in the fourth quarter was not due to foreign trade, but rather to domestic developments. Investment in capital equipment was disappointing, although it was influenced by traditionally volatile R&D developments. In addition, construction investment remained anemic despite the still low interest rates. Consumption was also subdued despite the hearty labor market. Finally, imports were low in the fourth quarter, also suggesting a rather weak domestic demand trend.

Outlook remains positive

Contrary to the global trend, foreign trade remains the driving force for the Swiss economy, due largely to the less economically sensitive chemical and pharmaceutical sectors. Switzerland's domestic economy should also face no further negative surprises, in our view. Given that inflationary pressures should remain low for the time being, monetary policy will continue to be supportive, even if it cannot be ruled out that, due to the incidental costs of its negative interest rates, the SNB might hike interest rates before the ECB does. So, while quarterly growth rates should be moderately positive, year-over-year rates will continue to decline after the negative overall growth posted in the second half of 2018. For the moment, this should not be an issue, however.

Swiss economic outlook remains positive



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

FX market talk

The strong and the weak in emerging market FX

Emerging market currencies generally remain cheap relative to the US dollar. Despite some recent strengthening, our valuation measures indicate further appreciation potential for EM currencies against the US dollar, but less so against the euro and the Swiss franc. But there are big differences in the fundamentals of the various EM currencies.

The emerging market currency universe is highly diverse. Its constituents present very different fundamentals in key areas such as central bank independence, inflation targets, the level of nominal and real interest rates, balance of payments status for surplus and deficit countries, and energy self-sufficiency—that is, are they net energy importers or exporters? Using these criteria, among others, we are able to broadly separate the "strong" from the "weak" and infer how these currencies are likely to respond to global risk-on/risk-off shifts.

Regular readers will know that we apply a valuation tool based on purchasing power parity, which provides us with a useful lens to assess the probability that a currency has or does not have appreciation potential relative to one of the majors. Here, we assess two "planets" in the EM currency universe, the Chinese renminbi and the Turkish lira.

Renminbi: close to trade-weighted fair value

In the "strong versus weak" paradigm, for many years the Chinese renminbi has displayed a characteristic which is the rarest of the rare in emerging market currencies: a lower producer price inflation rate than that of the US. Between 2010 and 2019, the US producer price index rose by 15.9 percent, compared to only 6.5 percent for China. If we know only this bit of history, economic theory would help us to guess that the currency with the lower inflation rate probably appreciated against the one with higher inflation over that same period. And this is precisely what happened. USDCNY started out at 6.83 in January 2010 and traded at around 6.73 at the beginning of March 2019. Even at 6.73, CNY was on the cheap side relative to the US dollar. Our purchasing power parity calculations for USDCNY showed a mid-level neutral rate of 6.34 at the end of February 2019, with a fair-valuation range of 6.13 to 6.55. To state it differently, the renminbi still has some room to appreciate against the USD, but not much.

On a trade-weighted basis, when we include the currencies of China's main trading partners, including the very undervalued Japanese yen and a swathe of undervalued emerging market currencies, the CNY looks like it should weaken, but again not by much (see the chart).

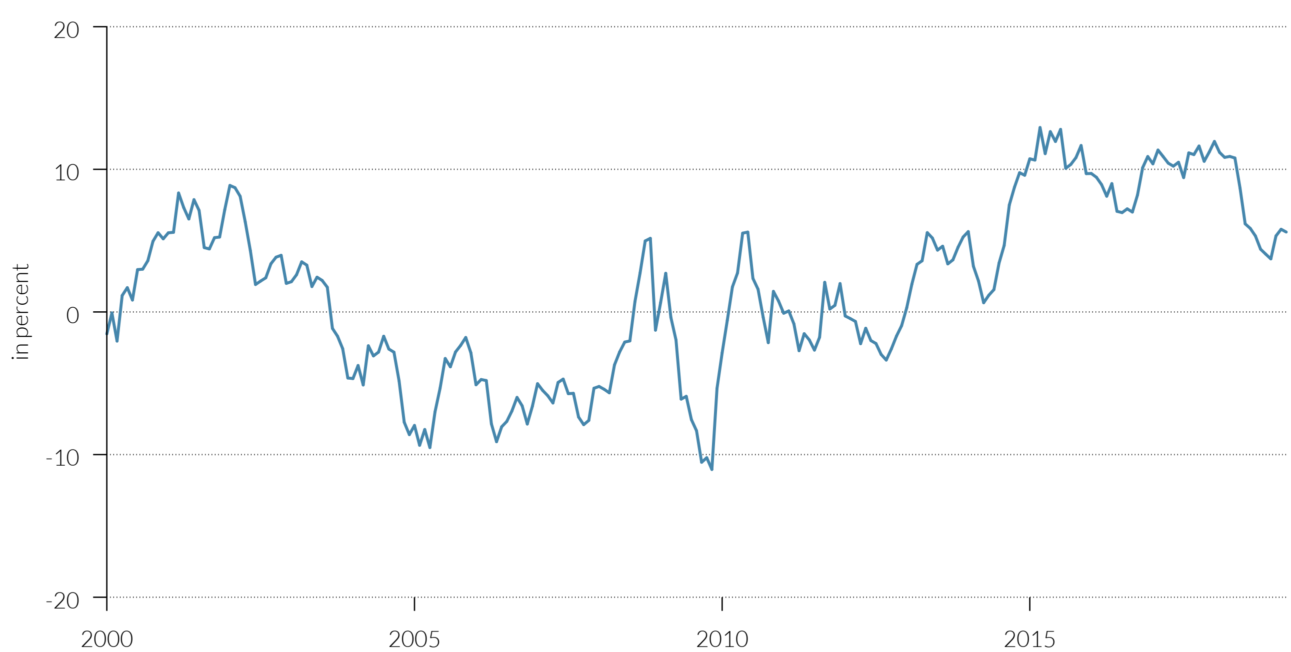
From this we can conclude that the renminbi is broadly fairly valued in purchasing power parity terms. Only if domestic or external shocks were to drive the CNY off its trade-weighted path, as occurred after the dot-com bubble and the 2008 global financial crisis, or around 2015, when China saw very large capital outflows, would higher-conviction trading opportunities emerge using this tool.

One additional aspect is worth noting from the chart: Over the past two decades, China has used capital controls to limit extreme deviations from the currency's trade-weighted fair value to ±10 percent. Now that China is promising to "open the door wider" to foreign trade and investment, it is likely that the CNY's trading ranges will begin to widen from what investors have long been used to. The announcement in March that MSCI was bringing forward the inclusion of more Chinese A-shares into its global equity index highlights how difficult it would be to close that door again. Subjecting foreign investors to capital controls during periods of capital outflows would risk China's desire for greater integration into global capital markets. That would be a high price for China to pay.

Turkish lira: cheap but not cheerful

A remarkable reversal of the current account situation from an extremely dangerous deficit, as much as 8 percent of GDP, to a small surplus has helped rescue the Turkish lira from its extremely weak levels. But we think this current account surplus is not sustainable. In addition to its currency account, an extremely high deposit rate of 24 percent on the lira has helped to stem the switch to dollars, but this, we feel, is also unsustainable. The main risks are the balance sheets of some companies, which would be severely damaged by any significant further knock to the currency. Even though, in PPP terms, the lira is now cheap against the USD, the EUR and the CHF, it remains vulnerable and, we think, will tend to weaken if global risk aversion increases.

Chinese renminbi on the strong side of its trade-weighted fair value



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM® Currency Asset Management

Economic activity

The longest-ever US government shutdown ended and the growth figures are now in for the fourth quarter of 2018. In sum, the US economy lost momentum toward the end of last year but actually held up better than expected. In particular, December's sharp decline in retail sales cast doubt on the state of US households' demand. Atlanta's Federal Reserve Bank cited the weak retail sales when it lowered its growth estimate for the fourth quarter by more than 1 percentage point. In fact, demand weakness only materialized to a limited extent in the latest growth figures, from December. Although private consumption no longer matched the strong levels of previous quarters, it nevertheless expanded robustly, by 2.8 percent.

After contracting in the third quarter, the Swiss economy recovered in the final quarter of last year. This resurgence was surprising. Despite flagging global momentum, Swiss exports grew strongly, by 6.2 percent quarter-over-quarter. In contrast, imports and private consumption fell short of expectations, which points to waning domestic demand in the final quarter.

Growth overview

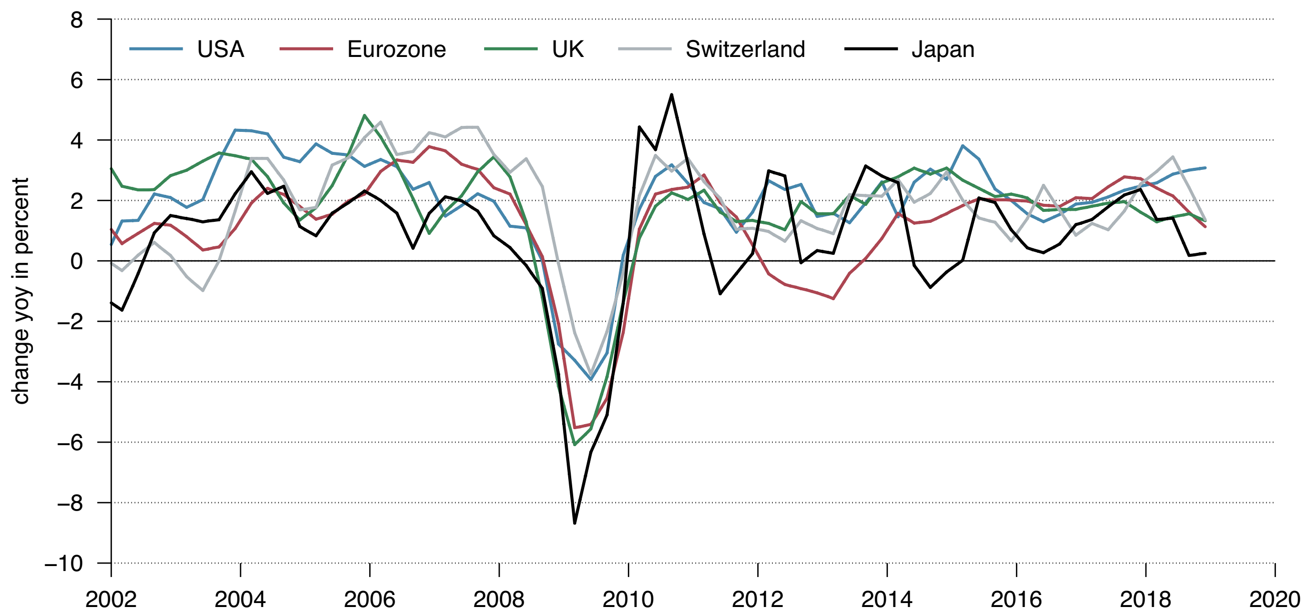
	Trend growth[1]	Real GDP growth[2]				W&P economic sentiment indicators[3]			
		Q1/2018	Q2/2018	Q3/2018	Q4/2018	11/2018	12/2018	1/2019	2/2019
United States	1.7	2.6	2.9	3.0	3.1	3.9	3.1	3.1	3.3
Eurozone	1.0	2.4	2.1	1.6	1.1	2.7	2.4	2.3	2.3
Germany	1.4	2.0	2.0	1.2	0.6	3.3	2.9	2.8	2.8
France	0.7	2.2	1.7	1.3	0.9	1.7	1.4	1.5	1.4
Italy	0.2	1.4	1.1	0.6	0.0	1.1	1.0	0.8	0.6
Spain	1.6	2.8	2.5	2.4	2.4	2.7	2.3	2.3	2.3
United Kingdom	1.8	1.3	1.5	1.6	1.3	2.3	2.3	2.1	1.6
Switzerland	1.5	3.0	3.4	2.4	1.4	2.5	2.3	2.1	2.1
Japan	0.4	1.4	1.4	0.2	0.3	2.5	2.5	2.4	2.4
Canada	1.6	2.2	1.7	1.9	1.6	1.8	0.6	0.9	1.0
Australia	2.4	3.1	3.1	2.7	2.3	2.9	2.8	2.7	2.6
Brazil	1.4	1.2	0.9	1.3	1.1	2.8	3.2	3.1	–
Russia	0.1	1.3	1.9	1.5	–	2.4	1.6	0.8	0.1
India	7.7	7.7	8.0	7.0	6.6	7.0	6.9	6.9	6.9
China	7.4	6.8	6.7	6.5	6.4	6.5	6.2	5.5	6.3
Advanced economies[4]	1.4	2.3	2.5	2.1	2.0	3.4	2.9	2.8	2.8
Emerging economies[4]	6.0	5.7	5.6	5.2	4.8	5.0	4.8	4.5	5.0
World economy[4]	3.5	4.0	4.1	3.7	3.5	4.3	3.9	3.6	4.0

[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.

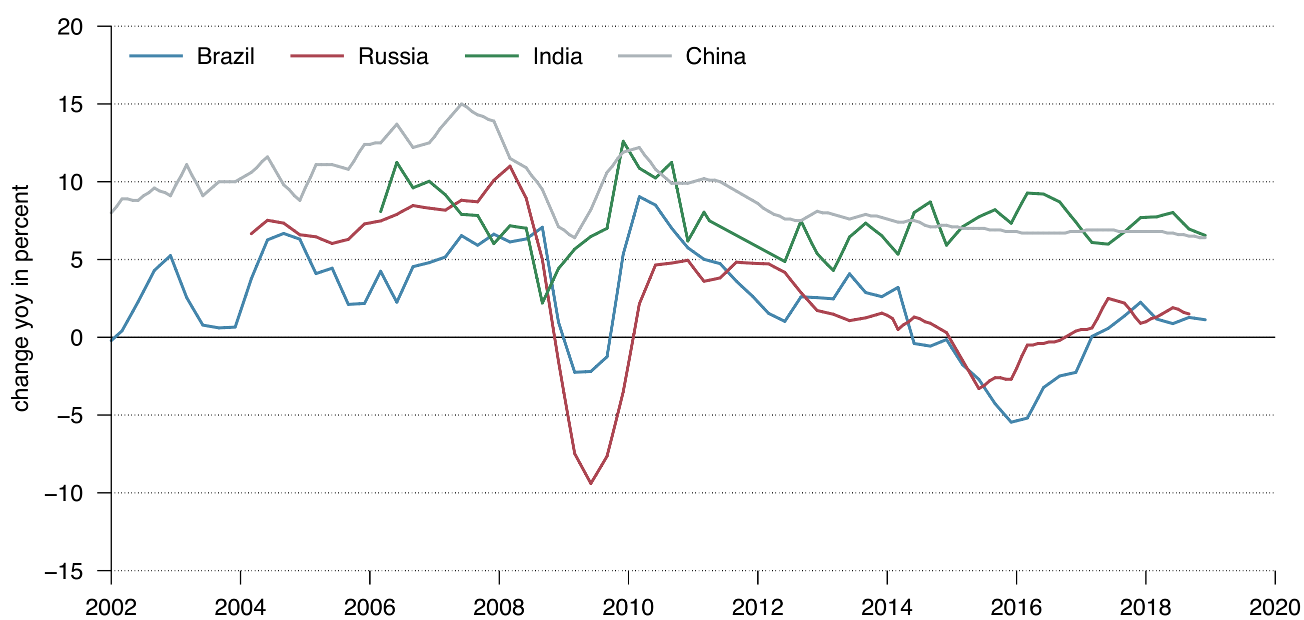
Source: European Commission, Penn World Table, Thomson Reuters Datastream, Wellershoff & Partners

Currency Asset Management

Economic growth in advanced economies



Economic growth in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

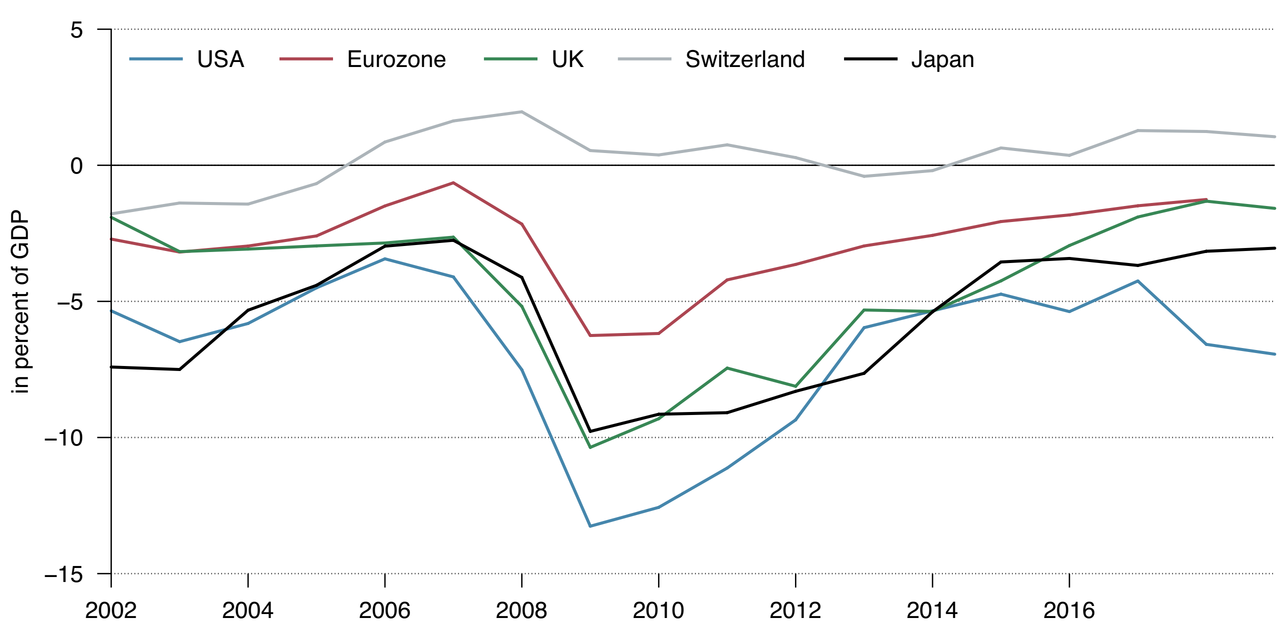
Economic indicators

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	24.0	24.4	-2.3	-2.9	105.4	109.9	-5.3	-6.9	4.9	3.8
Eurozone	16.1	15.9	3.8	–	109.2	–	-1.8	–	10.0	7.8
Germany	4.7	4.7	8.1	7.2	75.6	65.8	1.0	1.1	6.0	5.0
France	3.3	3.2	-0.6	-0.2	123.2	125.5	-3.3	-2.9	9.5	8.5
Italy	2.5	2.4	2.3	2.5	156.6	152.7	-2.5	-2.5	11.6	10.6
Spain	1.7	1.7	1.5	1.0	116.1	113.1	-4.3	-1.8	19.7	14.1
United Kingdom	3.6	3.2	-4.4	-3.3	114.3	114.6	-3.2	-1.6	4.9	2.8
Switzerland	0.9	0.8	10.0	10.7	42.0	39.0	0.7	1.0	3.1	2.7
Japan	6.1	5.9	3.0	2.6	221.6	227.9	-3.8	-3.0	3.1	2.5
Canada	2.1	2.1	-3.0	-2.5	88.7	84.7	-0.7	-1.1	6.6	5.8
Australia	1.7	1.7	-3.3	-3.1	38.8	40.7	-2.3	-1.1	5.7	5.0
China	14.8	16.1	1.8	0.7	44.4	53.9	-3.1	-4.4	4.0	–
Brazil	2.5	2.2	-2.1	-1.6	77.1	90.5	-8.2	-8.0	10.3	12.0
India	3.0	3.4	-1.6	-2.5	69.6	68.1	-7.1	-6.5	–	–
Russia	2.0	1.9	3.6	5.2	15.9	15.4	-1.6	1.8	5.3	4.9

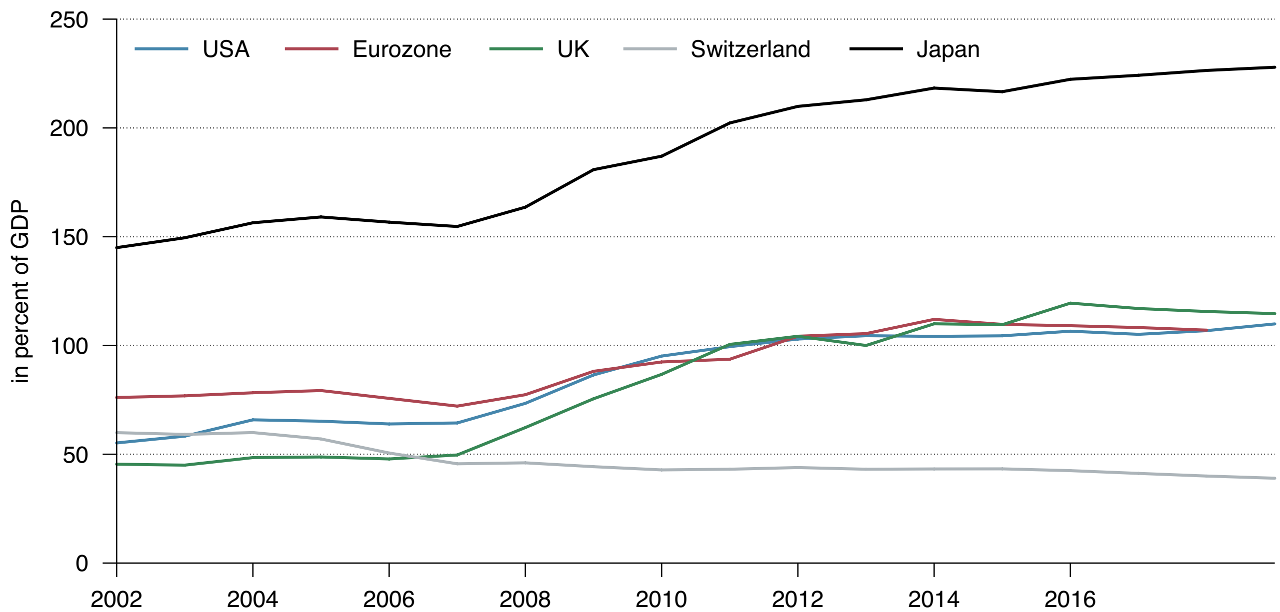
[1] In percent; calculations based on market exchange rates. [2] In percent of nominal GDP. [3] In percent.

Budget deficits in advanced economies

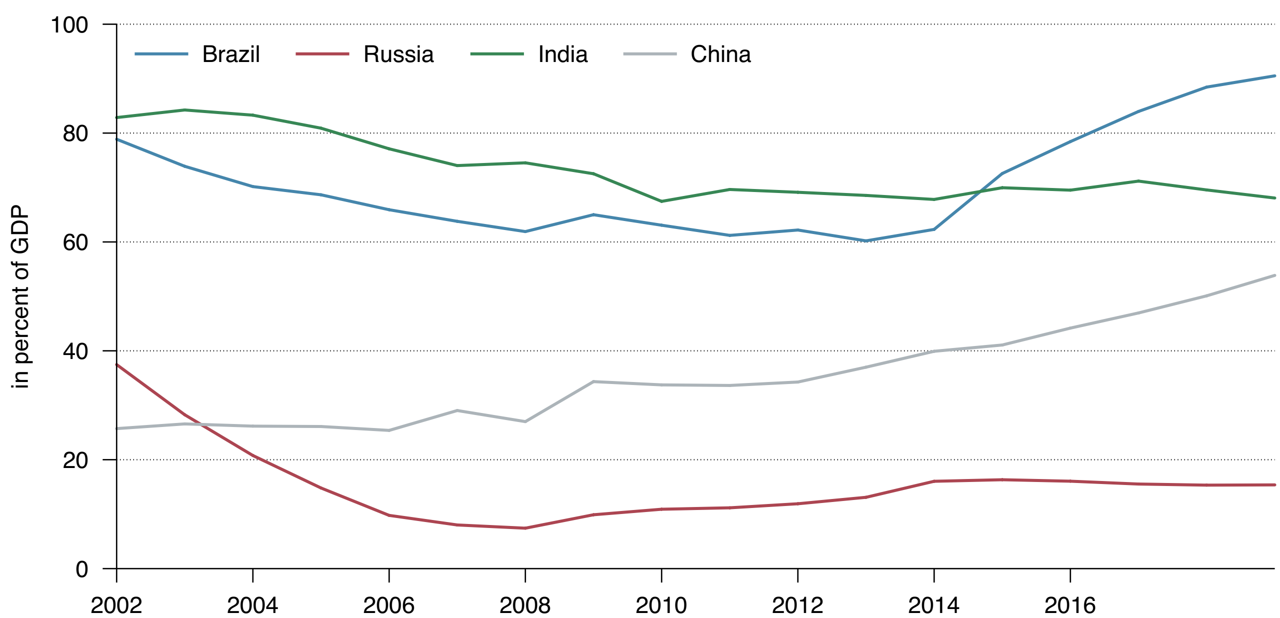


Source: Thomson Reuters Datastream, Wellershoff & Partners

Public debt in advanced economies



Public debt in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

Inflation

Now well into the first quarter of the year, we see no surprises on the inflation front in the advanced economies. In the US, inflation is now below the core rate. In the Eurozone, consumer price inflation stabilized at 1.5 percent after declining significantly in February. At its March meeting the European Central Bank once again decided to renew its expiring cheap long-term loans to European banks and to put off the first possible date of an interest rate hike until next year. The central bankers are hoping to see more robust growth rates and a gradual convergence of inflation momentum to the targeted 2-percent mark.

Prolonging ultra-expansionary monetary policy in the Eurozone does not make it any easier for the Swiss National Bank to end its negative interest rate. On the inflation side, pressure on the SNB remains low. Inflation edged up 0.6 percent in February. Core inflation was again slightly lower, at 0.4 percent. Meanwhile, Switzerland seems to have passed its peak in terms of economic activity. If the guardians of the franc want to gain an interest-rate cushion before the next downturn, they will have to hurry.

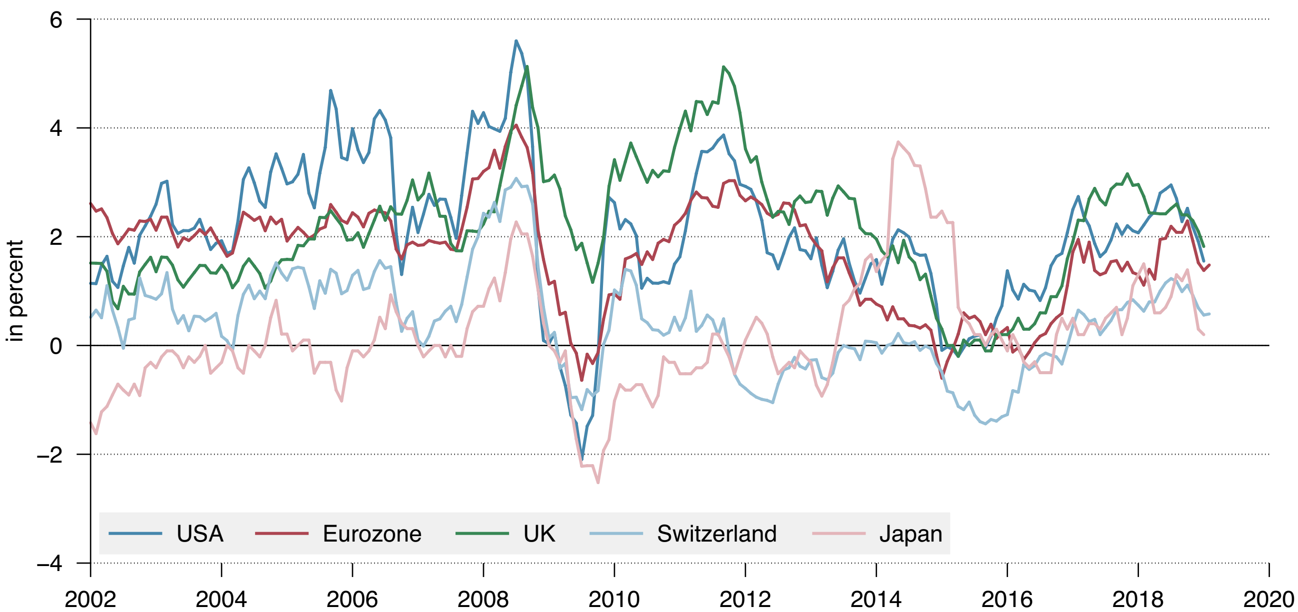
Inflation overview

	Ø 10 years[1]	Inflation[2]				Core inflation[3]			
		11/2018	12/2018	1/2019	2/2019	11/2018	12/2018	1/2019	2/2019
United States	1.6	2.2	1.9	1.6	–	2.2	2.2	2.2	–
Eurozone	1.3	1.9	1.5	1.4	1.5	0.9	0.9	1.1	1.0
Germany	1.2	2.1	1.6	1.4	1.6	1.4	1.3	1.3	–
France	1.0	1.9	1.6	1.2	1.3	0.7	0.7	0.7	–
Italy	1.2	1.6	1.1	0.9	1.1	0.7	0.6	0.5	0.5
Spain	1.1	1.7	1.2	1.0	1.1	0.9	0.9	0.8	–
United Kingdom	2.2	2.3	2.1	1.8	–	1.8	1.9	1.9	–
Switzerland	-0.1	0.9	0.7	0.6	0.6	0.2	0.3	0.5	0.4
Japan	0.3	0.9	0.3	0.2	–	0.3	0.3	0.4	–
Canada	1.6	1.7	2.0	1.4	–	1.5	1.7	1.5	–
Australia	2.1	1.8	1.8	–	–	1.5	1.6	–	–
Brazil	5.9	4.1	3.8	3.8	–	3.2	3.3	3.7	–
Russia	7.4	3.8	4.3	5.0	5.2	3.4	3.7	4.1	4.4
India	7.2	2.3	2.1	2.0	–	–	–	–	–
China	2.3	2.2	1.9	1.7	1.5	1.8	1.8	1.9	1.8
Advanced economies[4]	1.4	1.9	1.6	1.3	1.4	1.5	1.5	1.6	1.5
Emerging economies[4]	4.4	2.5	2.3	2.3	2.2	2.1	2.2	2.4	2.3
World economy[4]	2.7	2.2	2.0	1.8	1.8	1.6	1.6	1.7	1.7

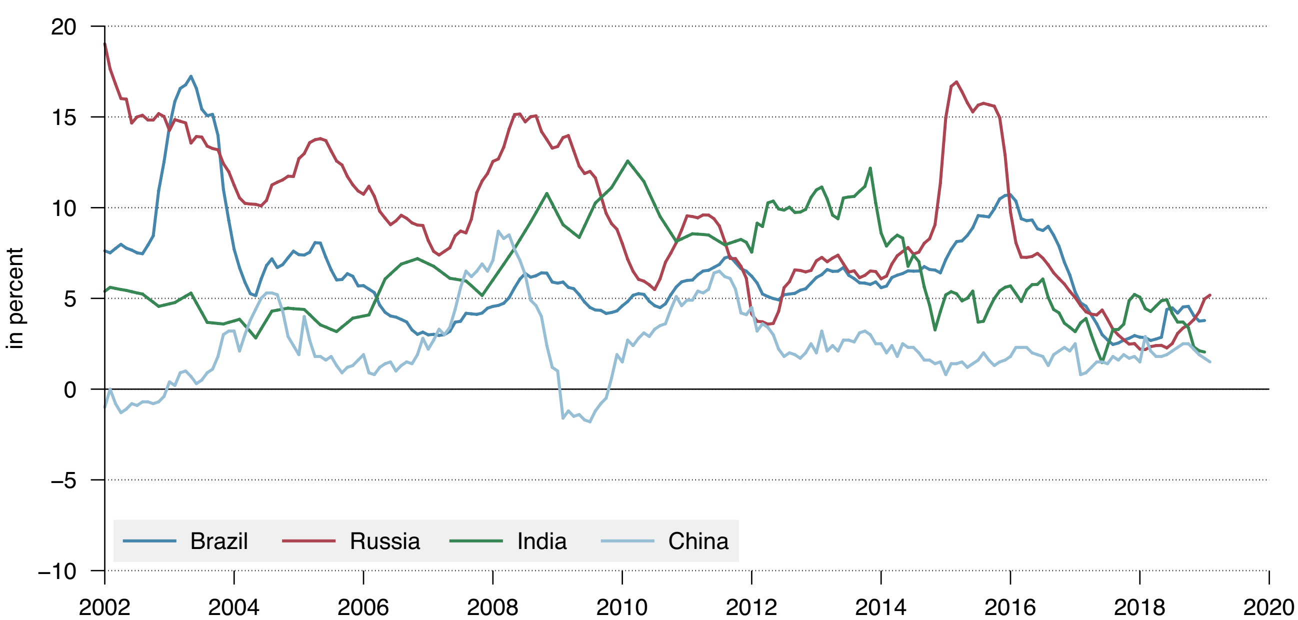
[1] Average annual consumer price inflation, in percent.
[2] Year-on-year change of the consumer price index (CPI), in percent.
[3] Core inflation is a measure of inflation that excludes certain items that can experience volatile price movements, such as energy and certain food items; year-on-year change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

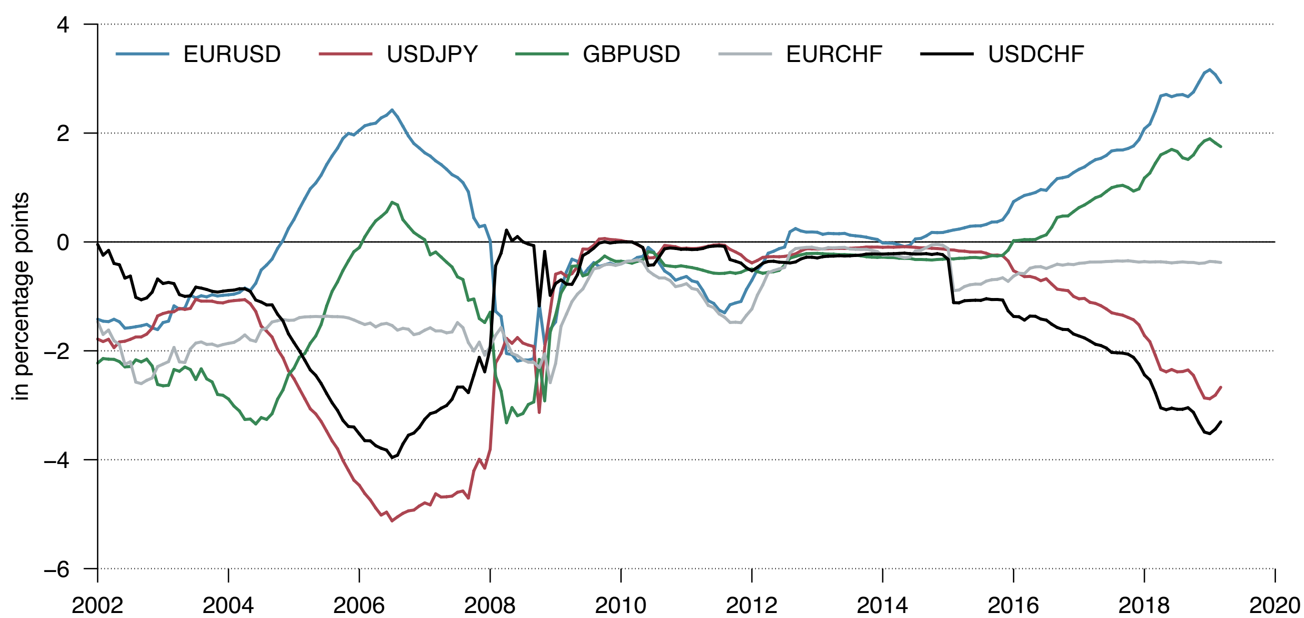
Interest rates

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	1.123	2.93	2.46	1.26	0.47	3.02	2.79	1.55	0.64
USDJPY	111.1	-2.67	-2.15	-1.05	-0.60	-2.76	-2.43	-1.37	-0.87
GBPUSD	1.302	1.75	1.49	0.51	0.06	1.75	1.63	0.62	0.09
EURCHF	1.132	-0.37	-0.37	-0.43	-0.49	-0.35	-0.28	-0.42	-0.59
USDCHF	1.008	-3.30	-2.83	-1.69	-0.96	-3.37	-3.07	-1.97	-1.23
GBPCHF	1.312	-1.55	-1.34	-1.17	-0.90	-1.63	-1.45	-1.35	-1.14
CHFJPY	110.3	0.63	0.69	0.64	0.37	0.62	0.64	0.60	0.37
AUDUSD	0.704	1.14	0.59	-0.73	-2.00	1.56	0.98	-0.22	-1.46
USDCAD	1.344	-0.55	-0.40	0.19	0.45	-0.55	-0.50	-0.05	0.22
USDSEK	9.454	-2.72	-2.54	-1.34	-0.17	-2.58	-2.79	-1.54	-0.35
USDRUB	66.5	5.20	4.06	8.80	7.70	5.09	3.66	8.27	7.37
USDBRL	3.860	13.54	13.54	11.93	9.83	3.88	3.87	9.22	9.20
USDCNY	6.727	0.16	2.65	2.77	3.06	0.19	2.20	2.45	2.68
USDTRY	5.442	21.37	11.87	12.33	10.14	20.78	12.42	12.26	10.23
USDINR	70.13	7.47	7.47	8.34	7.86	3.69	4.47	5.97	5.98

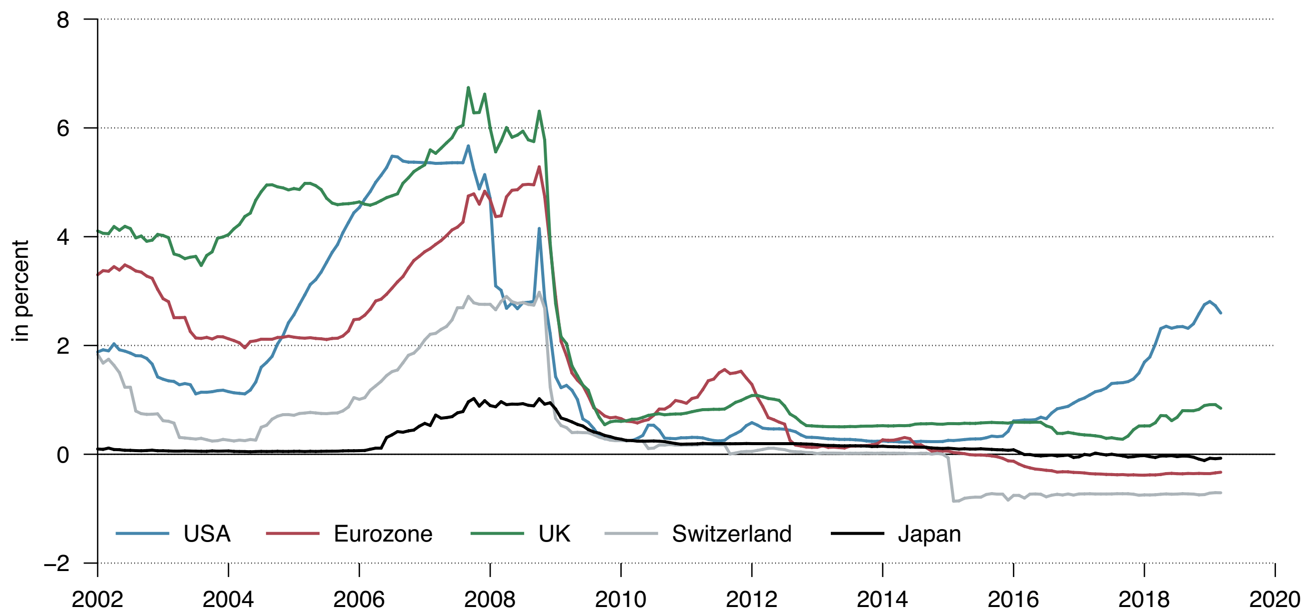
[1] The gap in interest rates between the second currency and the first one, in percentage points; e.g. US dollar minus euro for EURUSD.

Interest rate differentials

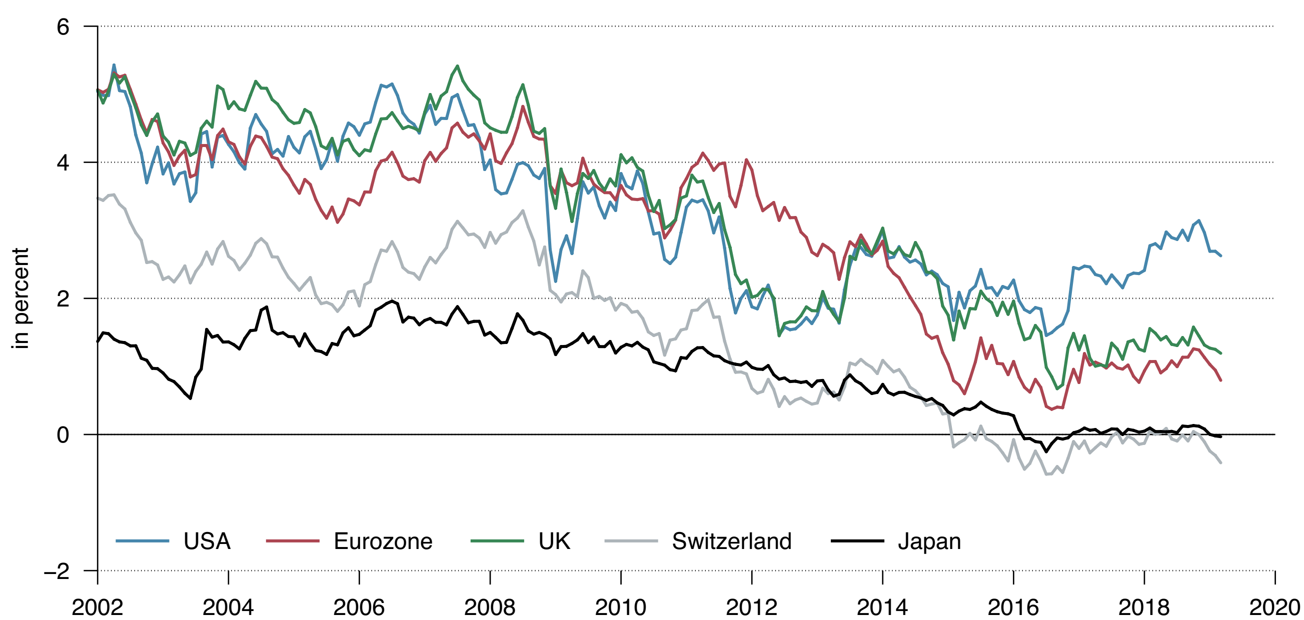


Source: Thomson Reuters Datastream, Wellershoff & Partners

3-month Libor



10-year government bond yields



Source: Thomson Reuters Datastream, Wellershoff & Partners

FX markets

In the wake of the robust developments on the stock markets in January, volatility on the currency markets remained low. The British pound can be counted among the big winners in the past month. Despite the persistent uncertainty associated with Brexit, Britain's currency appreciated noticeably at the beginning of the year. It was was up just over 3 percent versus the euro. At the end of January, the pound also enjoyed a growth spurt against the US dollar, gaining around 3.8 percent. In view of our PPP estimates, Sterling still remains undervalued despite its recent gains.

On a trade-weighted basis, the Swiss franc again weakened slightly at the beginning of the year. According to our PPP estimate, the Swiss currency is still a bit overvalued, by just over 3 percent. Over the past month, the franc has depreciated significantly against the Australian dollar, declining 4.5 percent. Depreciating by approximately 4 percent, the franc also posted a notable loss against the British pound. By contrast, against the US dollar and the euro the franc's declines were modest. Compared to both of these major currencies, our PPP estimates continue to signal that the Swiss franc is close to its fair valuation.

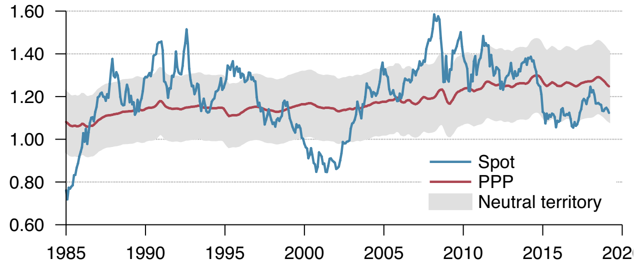
FX overview

	Current exchange rate	Performance[1]				Purchasing Power Parity[2]		
		YTD	3 months	1 year	5 years	PPP	Neutral territory	Deviation[3]
EURUSD	1.123	-1.7	-1.4	-8.9	-19.0	1.25	1.09 - 1.41	-10.0
USDJPY	111.1	1.3	-1.4	4.8	7.6	87.5	72.2 - 102.8	27.0
GBPUSD	1.302	2.2	2.0	-5.9	-22.2	1.57	1.4 - 1.78	-17.0
EURCHF	1.132	0.5	0.2	-3.2	-7.1	1.18	1.1 - 1.26	-3.9
USDCHF	1.008	2.2	1.6	6.2	14.6	0.94	0.83 - 1.06	6.7
GBPCHF	1.312	4.5	3.7	0.0	-10.8	1.48	1.28 - 1.68	-11.4
CHFJPY	110.3	-0.9	-2.9	-1.4	-6.2	92.7	78.4 - 106.9	-16.0
AUDUSD	0.704	0.0	-2.5	-9.5	-22.5	0.69	0.59 - 0.85	1.7
USDCAD	1.344	-1.6	1.1	3.8	21.4	1.21	1.11 - 1.31	11.0
USDSEK	9.454	6.6	4.8	14.3	47.9	7.65	6.6 - 8.7	23.6
USDRUB	66.5	-4.2	0.4	16.5	82.3	46.1	36.6 - 55.5	44.2
USDBRL	3.860	-0.4	-0.1	18.2	64.9	2.97	2.41 - 3.52	30.0
USDCNY	6.727	-2.0	-2.2	6.2	9.8	6.34	6.13 - 6.55	6.1
USDTRY	5.442	2.3	2.9	42.3	146.8	3.97	3.59 - 4.35	37.1
USDINR	70.13	0.5	-0.9	7.8	14.8	68.8	64.6 - 73.1	1.9

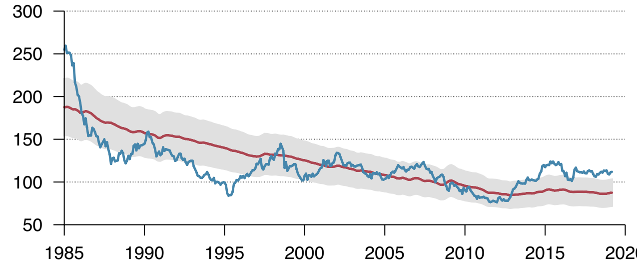
[1] Performance over the respective period of time, in percent.
[2] Purchasing power parity (PPP) is estimated based on the relative development of inflation rates in two currency markets; the neutral territory is determined by ± 1 standard deviation of the historical variation around the PPP value.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

Source: Thomson Reuters Datastream, Wellershoff & Partners

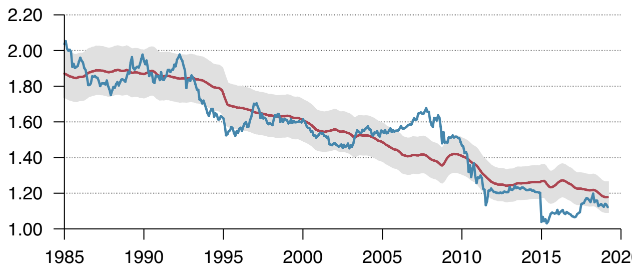
EURUSD



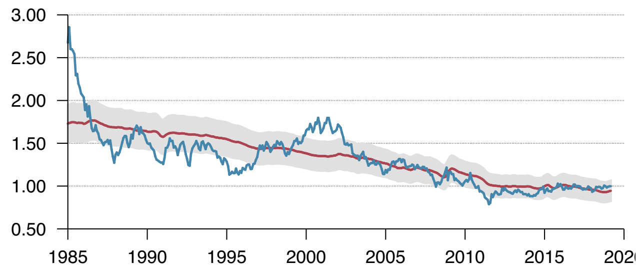
USDJPY



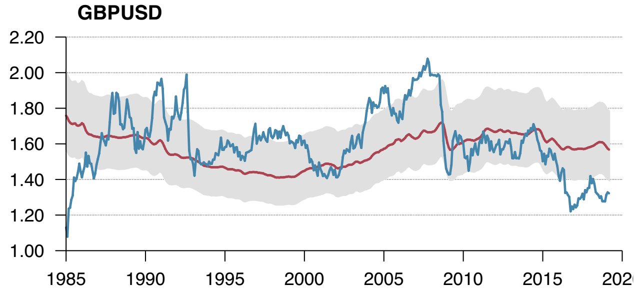
EURCHF



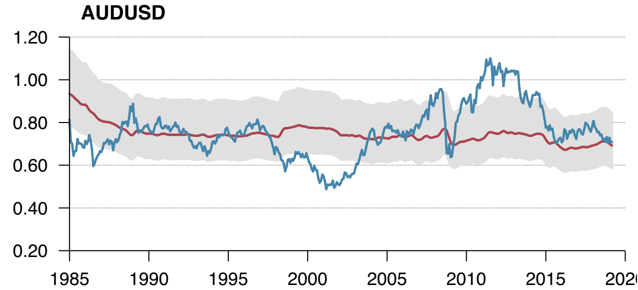
USDCHF



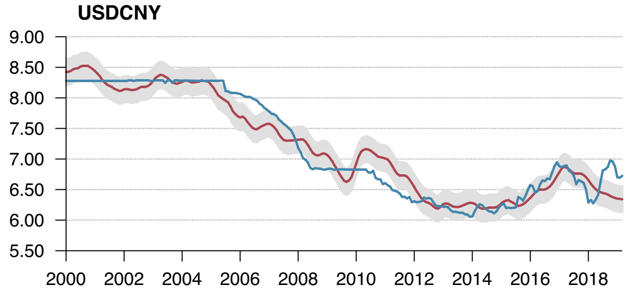
GBPUSD



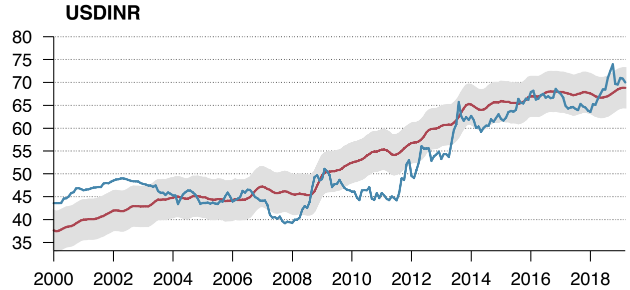
AUDUSD



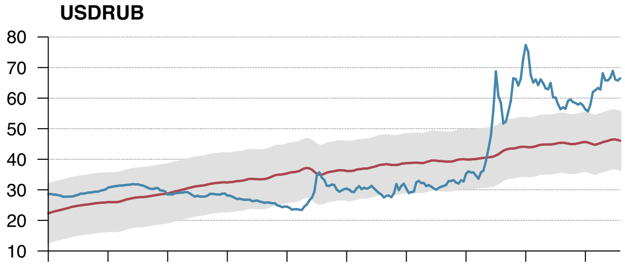
USDCNY



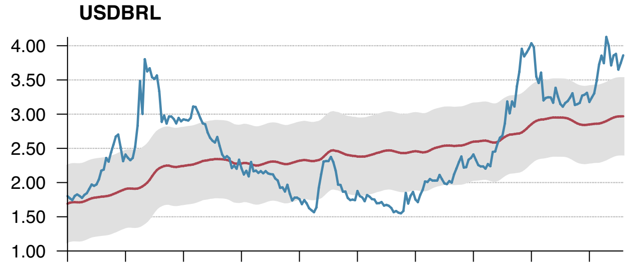
USDINR



USDRUB



USDBRL



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

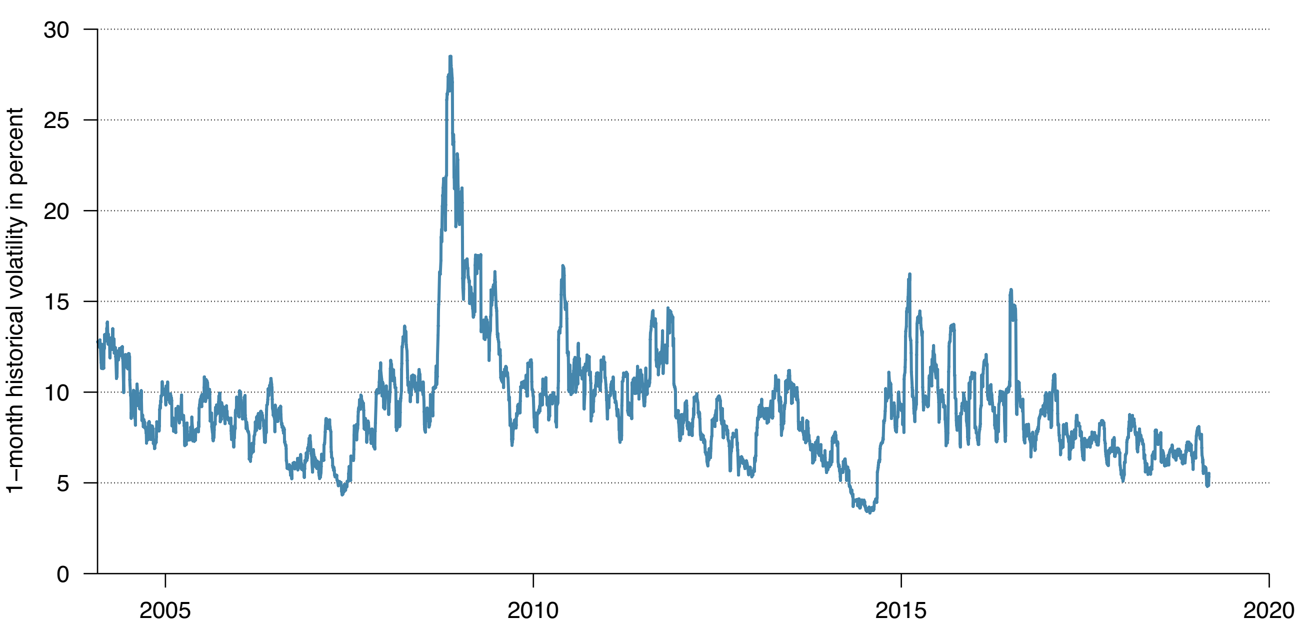
FX volatility

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	1.123	6.1	6.1	8.4	9.8	6.8	7.0	8.6	10.3
USDJPY	111.1	7.3	6.1	9.1	10.2	6.4	7.3	9.5	10.9
GBPUSD	1.302	8.7	10.7	8.9	9.5	8.1	9.7	9.2	10.1
EURCHF	1.132	4.6	4.5	5.9	6.3	5.0	5.3	6.5	6.9
USDCHF	1.008	6.0	5.7	8.4	9.8	6.0	6.8	8.9	10.3
GBPCHF	1.312	8.4	10.2	9.1	9.6	7.5	9.3	9.4	10.2
CHFJPY	110.3	7.5	6.0	9.0	10.8	6.6	7.1	9.7	11.6
AUDUSD	0.704	8.9	8.4	9.7	11.4	8.5	9.1	10.3	12.1
USDCAD	1.344	5.9	6.0	7.9	9.0	6.8	6.8	8.2	9.5
USDSEK	9.454	9.0	8.1	9.7	11.7	9.3	8.9	10.1	12.2
USDRUB	66.5	9.7	11.2	17.1	14.4	13.0	12.7	17.2	15.3
USDBRL	3.860	12.4	13.5	15.7	14.9	15.2	14.3	15.9	15.6
USDCNY	6.727	3.8	4.8	4.4	3.3	4.2	5.5	5.2	4.5
USDTRY	5.442	16.1	16.0	14.2	13.2	28.1	17.9	15.2	14.4
USDINR	70.13	6.3	8.0	6.8	8.8	6.4	7.4	8.0	9.8

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

QCAM volatility indicator[3]

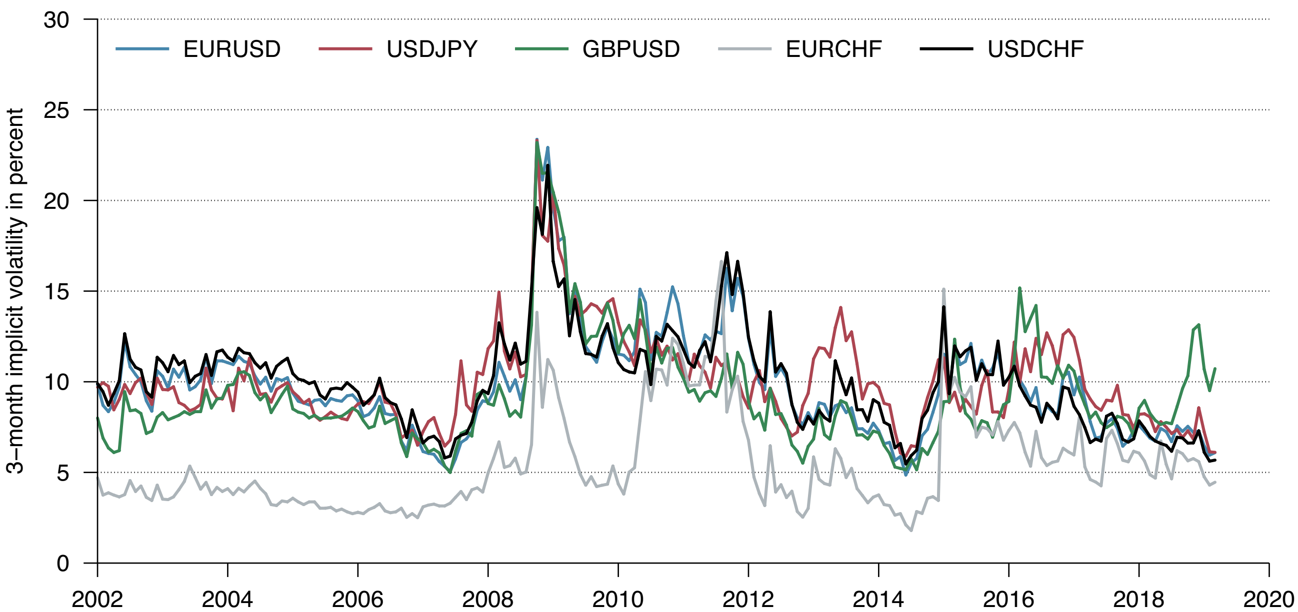


[3] The QCAM volatility indicator measures general volatility in global FX markets; the indicator is based on historical volatility of the main exchange rates, which are weighted by trading volume.

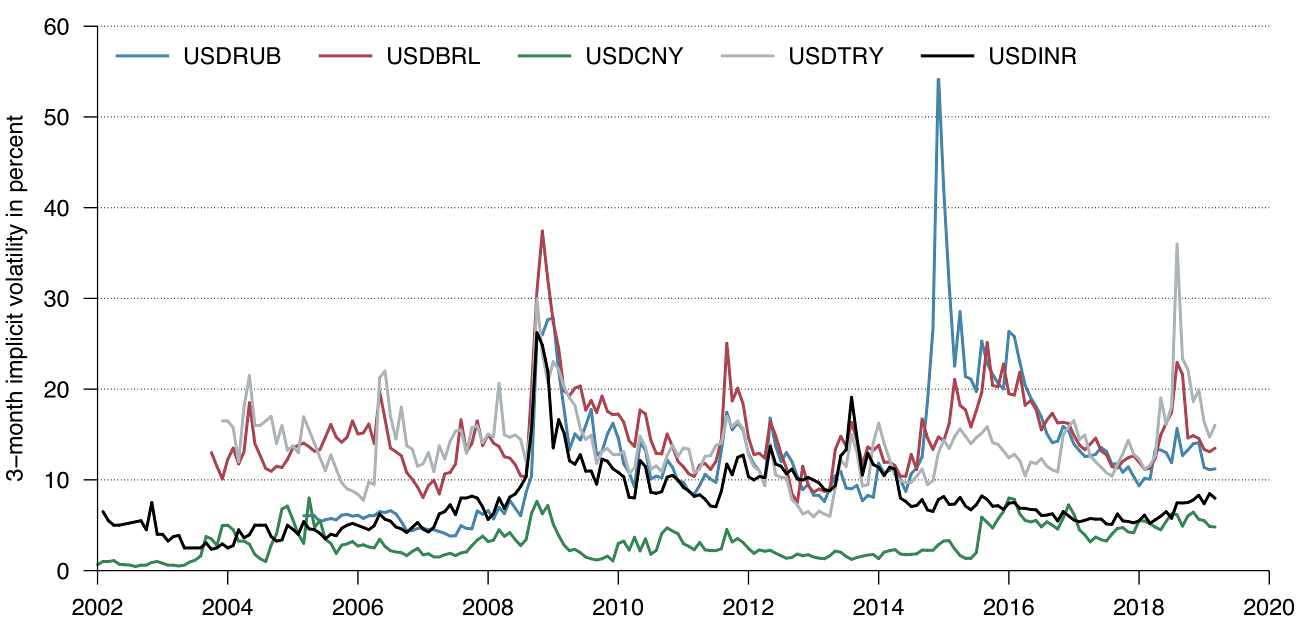
Source: Thomson Reuters Datastream, QCAM Currency Asset Management, Wellershoff & Partners

QCAM®
Currency
Asset
Management

Implicit volatility



Implicit volatility



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

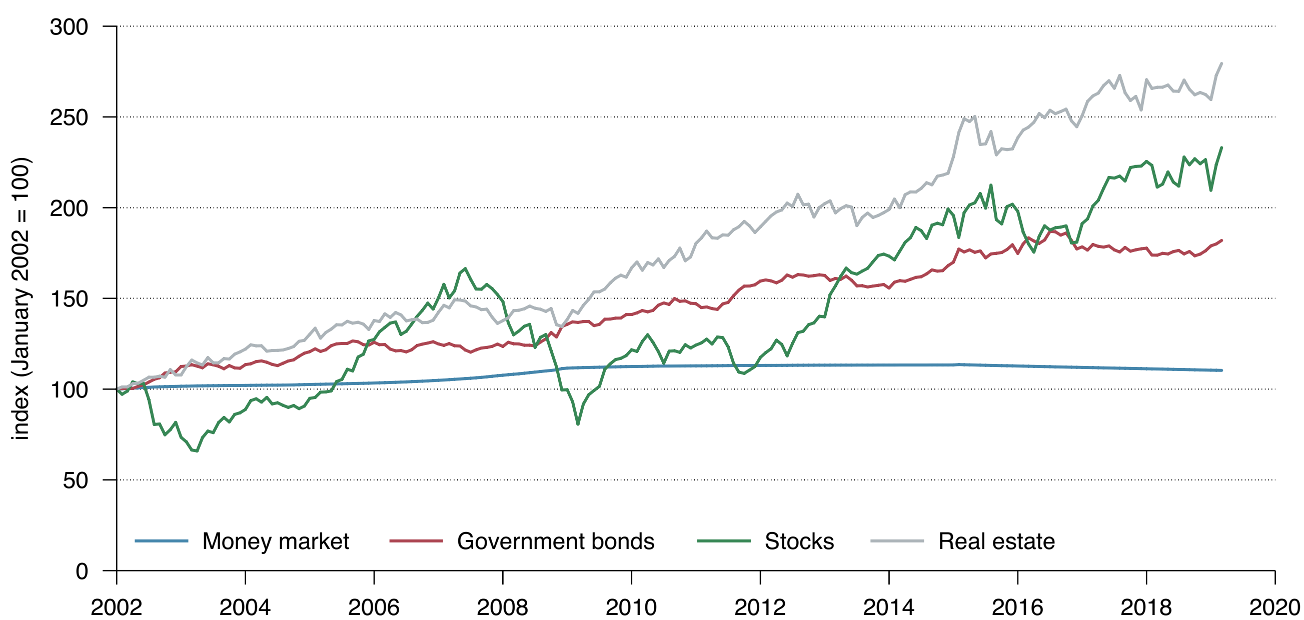
Financial markets

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	-0.1	-0.2	-0.7	-2.6	-0.1	-0.2	-0.7	-2.6
Swiss government bonds	1.7	2.9	4.8	14.8	1.7	2.9	4.8	14.8
Swiss corporate bonds	1.2	1.9	2.4	10.9	1.2	1.9	2.4	10.9
Swiss equities (SMI)	11.2	7.2	8.3	30.1	11.2	7.2	8.3	30.1
European equities (Stoxx600)	10.3	8.0	2.0	31.4	10.9	8.2	-1.3	22.1
UK equities (Ftse100)	6.6	6.0	2.9	28.9	11.4	9.9	2.9	15.0
Japanese equities (Topix)	5.3	-2.8	-6.0	41.1	6.3	0.2	-4.7	50.3
US equities (S&P 500)	9.9	4.7	2.2	61.9	7.5	3.1	-3.8	41.2
Emerging markets equities	6.9	5.5	-11.3	22.2	4.6	3.9	-16.5	6.6
Global equities (MSCI World)	9.4	5.0	-1.0	38.3	7.0	3.3	-6.8	20.7
Swiss real estate	7.7	7.5	5.8	39.3	7.7	7.5	5.8	39.3
Global real estate	10.3	3.6	11.5	37.1	8.0	2.0	5.0	19.6
Commodities	4.9	-3.6	-8.1	-40.9	2.6	-5.1	-13.5	-48.4
Brent oil	23.8	4.5	2.7	-39.6	21.1	2.9	-3.3	-47.3
Gold	1.3	4.2	-1.8	-2.8	-0.9	2.6	-7.5	-15.2

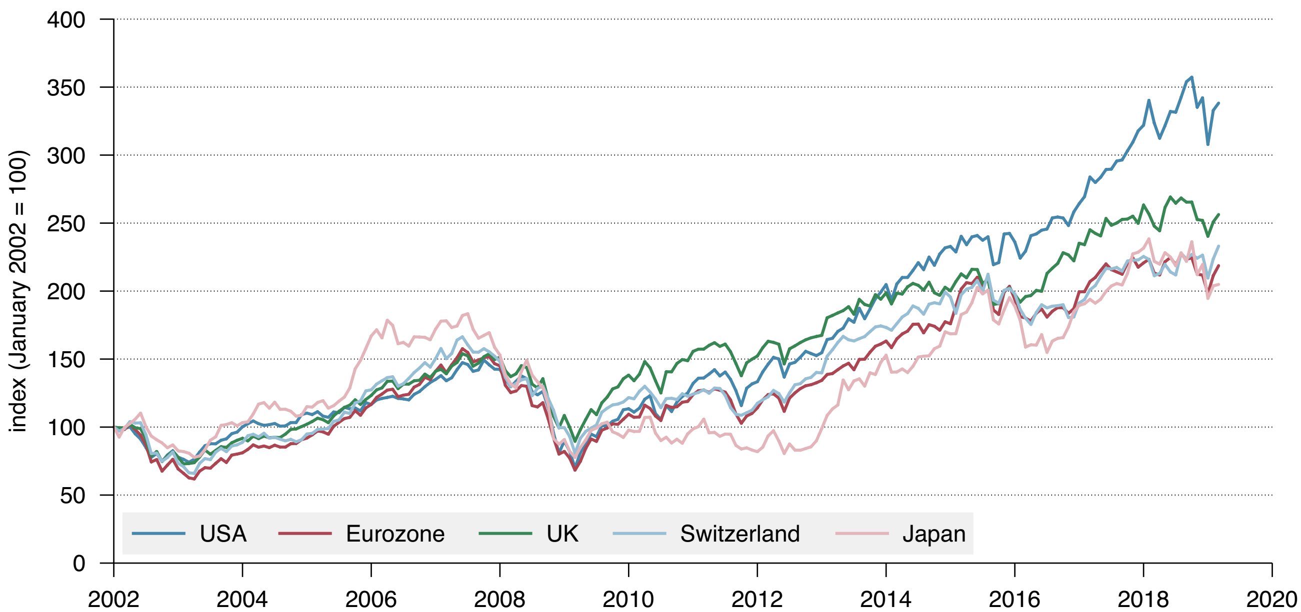
[1] Performance over the respective period of time, in percent.

Performance of selected Swiss asset classes

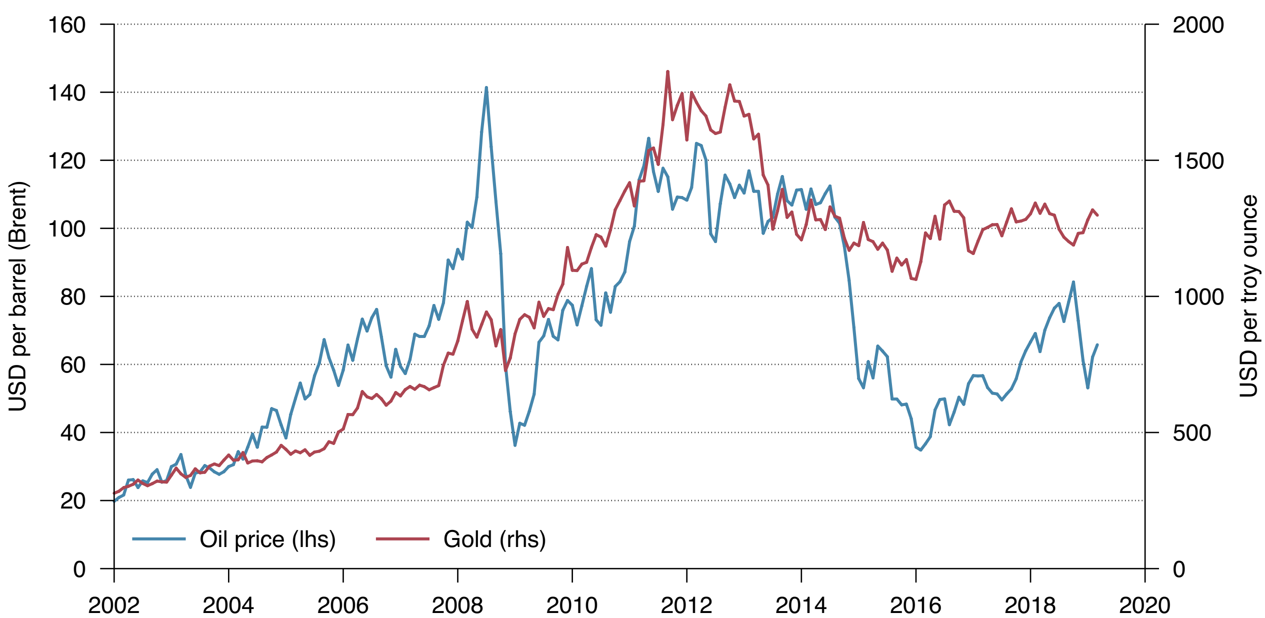


Source: Thomson Reuters Datastream, Wellershoff & Partners

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

2.3 percent

The Russian economy surprised to the upside in 2018. Expanding by 2.3 percent, Russia's GDP exceeded 2-percent growth for the first time since 2012. President Putin immediately took advantage of this good news to announce a series of new social benefits in his state-of-the-nation address. Whether he can restore the crumbling confidence of the Russian population, however, remains to be seen.