QCAM
Currency
Asset
Management

APRIL 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: April 9, 2018
FX Monthly is published monthly in English and German.

Contents

QCAM® Currency Asset Management

QCAM Insight

The evolution of electronic currency trading

Andy Schümperli, Institutional Sales
QCAM Currency Asset Management AG

Since the establishment of electronic trading platforms the times in which currency trades were transacted by phone belong to the past. Today the majority of currency trading is performed online. This essay describes the fast evolution of the platforms since the turn of the millennium, the reasons for this development and explains why the expertise of FX-specialists still is indispensable.

For many years, global currency trading was handled entirely by telephone but in the early years of the 21st century, the triumphal march of electronic trading platforms had begun. The main reasons for introducing so-called single-bank trading platforms were increased efficiency and reduced operational risks. With rising volumes and a shortage of qualified staff, smaller amounts – less than a million US dollars – could no longer be transacted by telephone. In addition, automation brought benefits to clients, who could now hedge their FX risk with a mouse click, leaving more time for other tasks.

Increasing anonymization of trades

Over time, the big banks decided to serve only larger customers by telephone and to work with the rest purely "electronically." In the course of the technological development of the trading platforms, "Voice Desks" became smaller and smaller, as they were unable to handle the increasingly complex products that were emerging, such as foreign exchange options. As a result, global daily FX trading volumes have steadily increased over the years – up from USD 1.7 trillion in 2001 to USD 5 trillion in 2010. A peak of USD 6.5 trillion was reached in 2016. In the course of this shift to electronic trading, many medium-sized banks tried to gain a foothold in global e-trading by launching their own platforms.

As FX became a purely volume-driven OTC (over-the-counter) business that relies on substantial technology investments, only the largest global players have been able to build out their businesses to achieve economies of scale. The remaining smaller banks with FX liquidity on offer all receive their prices from the big banks, so they operate according to a pure agency model.

The creation and evolution of multi-bank (best execution) platforms

Pioneers of multibank trading platforms at the turn of the millennium include FXall, 360T and FX Connect. These platforms have since witnessed tremendous development.

These companies, which began with different strategies, now offer all the usual FX products and they constantly expand and develop their platforms. Their success depends, on the one hand, on the fact that they have enough liquidity providers for a given product on the platform, and on the other, that they have the necessary STP (Straight Through Processing) interfaces with the common TMS * and OMS * providers. The integration of customers' commercial banks on the respective platform is equally important. For institutional clients with larger FX volumes, a prime brokerage solution, which QCAM also offers to its clients, is the ideal solution.

Exponential growth, expanding services

Since the financial crisis, the traded volumes on the so-called multi-dealer platforms have at least tripled. It is now estimated that approximately two-thirds of the daily traded global volumes are traded via best execution platforms. Asset managers as a segment have long recognized the merits of these platforms. Among their indispensable advantages, besides cost-savings from lower (aggregated) prices, they offer more efficient handling of the portfolio to be hedged, increased transparency and reduced operational risks. Not least, various scandals (price-fixing, LIBOR-meddling) plus the pressure of regulators applying MiFID II rules, have led many customers to switch from telephone and single-bank trading to multi-bank solutions. In the past two to three years, the demand for transaction cost analyses has also risen sharply, which is another argument in favor of multi-bank platforms. Today, clients demand assurance that their FX transactions are always executed at the best possible price.

Multibank trading with QCAM

As an independent currency and asset management specialist that values transparency and integrity, QCAM works exclusively with leading, regulated, best-execution providers. We provide our customers with absolute transparency, exemplified by our easy-to-understand reporting. Among other points, the reports routinely present the cost-savings we have realized for our clients. In our multi-bank trading approach, we combine the benefits of electronic trading with the expertise and know-how of our FX experts. We consider this combination the basis for a long-term successful cooperation.

*(*Treasury Management Systems and Order Management Systems.)*

QCAM®
Currency
Asset
Management

The macro perspective

The boom defies financial markets

The uncertainty that has been so evident on stock markets in recent weeks has so far not been reflected in any leading economic indicators. Inflation continues its slow rise. The normalization of monetary policy, in our view, is set to continue.

The current situation on equity markets is anything but reassuring. Some significant losses in the first quarter have already led one or another observer to express the belief that the market is a step ahead of the economic cycle, implying a looming threat to further economic development. Of course, financial market prices reflect the future expectations of market participants. However, these not only relate to the question of growth, but also to the expected development of interest rates and ultimately of valuation levels and corporate profits.

As such, historically, the stock market has been a notoriously unreliable short-term economic indicator. No less than an authority than Paul Samuelson, the co-founder of modern macroeconomics, mockingly summed it up this way: "The stock market has predicted nine out of the last five recessions."

Leading indictors still strong

In fact, key leading indicators still suggest that global economic growth should accelerate in the current and the coming quarters. For example, sentiment indices for companies, while having declined slightly in recent weeks, have done so from very high levels. At the same time we are seeing that corporate profits have reaccelerated. Such a combination of optimism and bubbling profits in the past has yielded an increase in investment activity and thus in overall economic growth.

Likewise, looking at consumer demand, there are few signs that the strong growth momentum of recent quarters will run out of steam anytime soon. Viewed historically, consumer sentiment is very high at the moment. Labor markets, too, continue to exhibit strength, and wage growth is also beginning to pick up the pace.

The only shadows darkening the overall cheer at the moment stem from two observations about the US economy. Yes, income growth rates are rising in the US, but private consumption has continued to rise even faster. This has only been possible thanks to yet a further decline in the savings rate. Americans are now saving, or indeed not saving, at levels close to those very low rates last seen just before the onset of the financial crisis. Equally worrying is the finding that the Trump administration's tax reforms are beginning to hurt segments of the middle class. The reduced deductibility of mortgage interest payments from personal income and the revised federal tax rates are beginning to raise questions about the further positive development of the US real estate market.

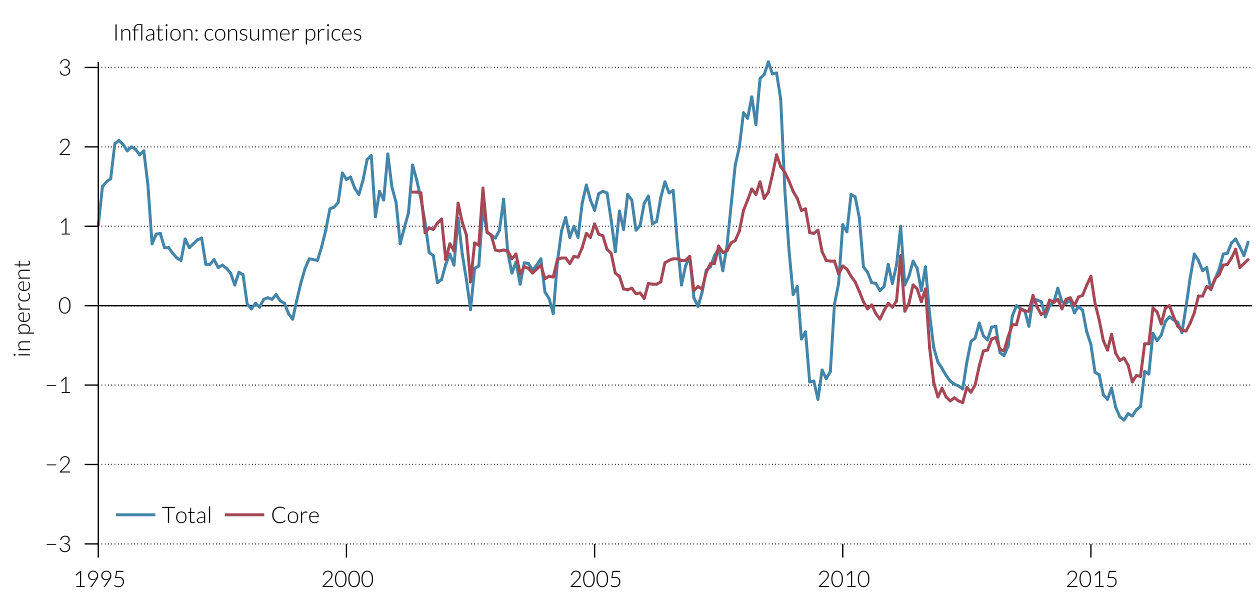
Inflation's slow-motion ascent

Given the overall upbeat outlook for growth, inflation expectations remain unchanged. With above-trend growth likely to continue, core inflation rates in Europe and the US should continue their very slow ascent. In fact, at 1.0 in Europe and 1.9 percent in the US, we are already close to the target values of the respective central banks. Thus nothing seems to stand in the way of further normalization of monetary policy. However, we note, normalization appears to be advancing just as slowly as inflation these days.

Two major central banks whose currencies have depreciated recently each face major challenges. Although the Bank of England, soon two years after the shock devaluation following the Brexit referendum, will soon have to reckon with slowly falling inflation in import prices, another rate hike seems likely in the coming weeks. And as things now stand, the Swiss National Bank would actually be required to act on rates. However, rising inflation rates are leading to ever lower real interest rates, which are currently at historically low levels.

It is striking that although the SNB is expressing its concern about the further rise in property prices and the renewed high level of building activity, the bank still adheres to its financial crisis-tinged rhetoric. As a result, the likelihood of the interest rate turnaround that we had anticipated from the SNB is dwindling. Looking to the medium term, however, the SNB's situation will not grow any easier. At the still-valid key interest rate of -0.75 percent, a further lowering of interest rates does not seem possible, in our view. And in a recession, if inflation rates again were to fall and real interest rates were to rise, a contractionary monetary policy seems both inevitable and ill-timed.

Swiss inflation on a slow, yet steady rise



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

FX market talk

EM currencies in the spotlight

Given their higher yields, emerging markets currencies are typically strongly impacted by risk-on/risk-off trades, which can move their exchange rates well out of their PPP fair-value ranges. The recent developments in the ZAR, TRY, BRL and RUB are perfect examples of this.

The chart on the next page shows just how dramatically a currency can deviate from its PPP fair value. It also shows that these sharp departures from PPP generally don't last very long. At some point, something must give – either spot begins to head back towards fair-value territory, or PPP starts moving in the direction of spot. Notice, too, how rapid the moves can be. The South African rand, for example, was unusually cheap for a while, with a long list of economic and political problems weighing it down. But the unexpected announcement that the country would get a new president after the incumbent resigned seems to have reignited investors' animal spirits, with the result that the rand is now no longer cheap. In fact, it has moved into the expensive range of its PPP value. We estimate the PPP of USDZAR at 12.67, with the fair-value range at 11.43 to 13.92.

While such shifts in momentum often result in a temporary overshoot in the exchange rate, it is well worth recalling that South Africa's export sector (which has the authorities' ear) tends to prefer a cheaper rand. There is also a noisy lobby in South Africa calling for the central bank to err on the side of lower rates. This suggests that the longer-term trend will continue to be a weaker rand relative to a basket of the majors.

Turkish lira now very cheap

The current PPP picture of the Turkish lira looks very different from that of the South African rand. While we estimate USDTRY's PPP at 3.02 with a fair-value range of 3.31 to 2.74, the spot rate of USDTRY pierced the 4.00 threshold in late March. At that point the gap between spot and PPP was 25 percent. It is rare for such large deviations to last for long because they can result in physical arbitrage: people simply fly in and buy up ultra-cheap products.

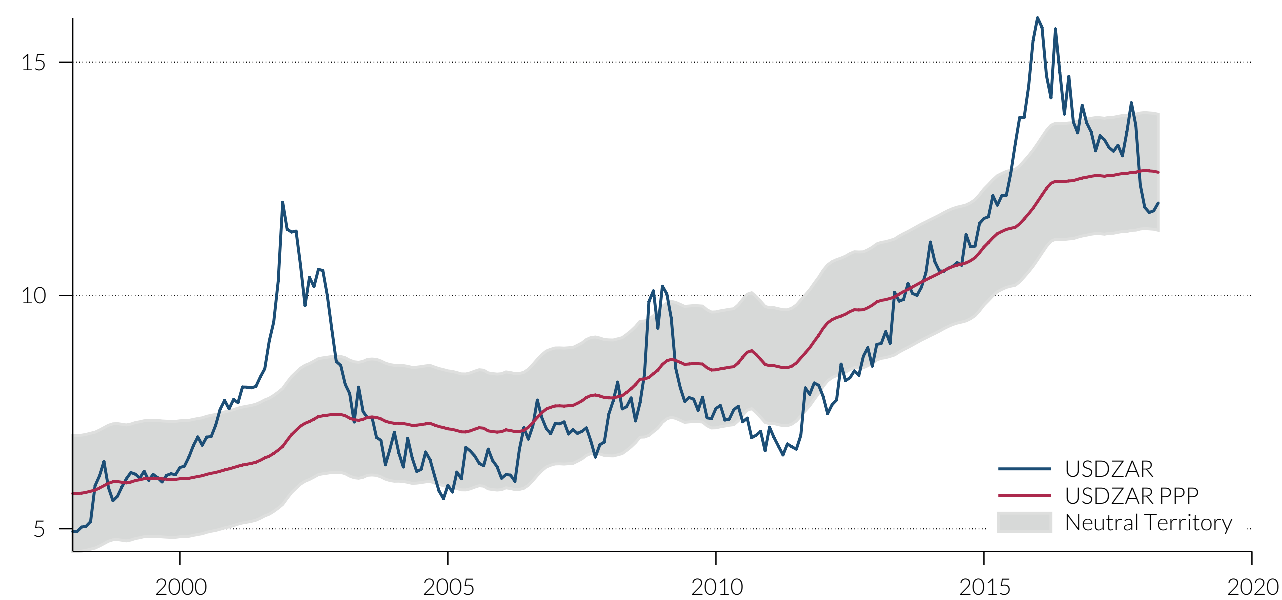
Whenever a currency sells off to the extent that the TRY has done, it always raises questions about whether PPP might not move in the direction of spot instead of the other way round. This is an especially relevant question in the case of the Turkish lira, given that annualized producer price inflation is currently running around ten percentage points higher in Turkey than in the US. That's a big differential, and it does point to a weakening TRY in PPP terms. But a slippage of about ten percentage points a year (or about 0.8 percentage points per month) will not quickly close a gap of 25 percentage points. And, when we take into consideration that the three-month money market rate in Turkey is 13.4 percent compared to just above 2 percent in the US, a shorter-term investment into a Turkish lira that has moved so far out of its fair-value range currently looks attractive.

Lower conviction on BRL and RUB

We estimate the PPP of USDBRL at 2.76, with a fair-value range of 2.23 to 3.29. In recent months USDBRL spot has been hovering within the upper (that is, cheaper) range of our fair-value estimate. A marked decline in inflation over the past year has allowed Brazil's central bank to cut its policy rate from a peak above 14 percent to below 7 percent. This, in turn, should help support the economic recovery after a deep recession. From a PPP perspective, there is potential for the BRL to get stronger.

The Russian rouble is cheap from a PPP perspective. Our PPP estimate for USDRUB is 43, with a fair-range estimate of 34 to 52. While the rouble has clawed back quite a bit of its losses from the low point of 82 to the USD in 2016, souring international relations and ongoing sanctions would make a call solely based on PPP unwise at this point. Thus, while the rouble is clearly cheap relative to the US dollar, the authorities need to keep scooping up foreign exchange reserves for a rainy day whenever they can. Those interventions would tend to weaken the rouble. We would not expect the Russian authorities to permit the rouble to get too strong under the current circumstances. But if relations with the West were to improve and if oil and gas prices were to strengthen, then the RUB would have the potential, from a PPP perspective, to appreciate.

The South African rand swings to the expensive side of fair value



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

Economic activity

The global economic boom of recent months has now surfaced in the GDP figures for the industrialized countries, with growth rates for some countries well above potential growth. In the fourth quarter of 2017, US GDP grew in by 2.5 percent compared to the same quarter the previous year. Private consumption once again was a major driver of this expansion. The Japanese economy also recorded solid growth of 1.6 percent in the final quarter of 2017. Fueled by favorable financing conditions in Japan, and by high export demand, business investment, in particular, developed well. And private consumption rebounded noticeably toward the end of last year, after contacting again in the third quarter of 2017.

In March, for the third consecutive month, our early warning indicators for the Eurozone declined slightly. However, the European economy continues to edge upwards. Supported by attractive financing conditions, domestic demand, in particular, is expected to develop vigorously in the coming months. And due to the ongoing global boom, further positive growth impulses from foreign trade are also to be expected.

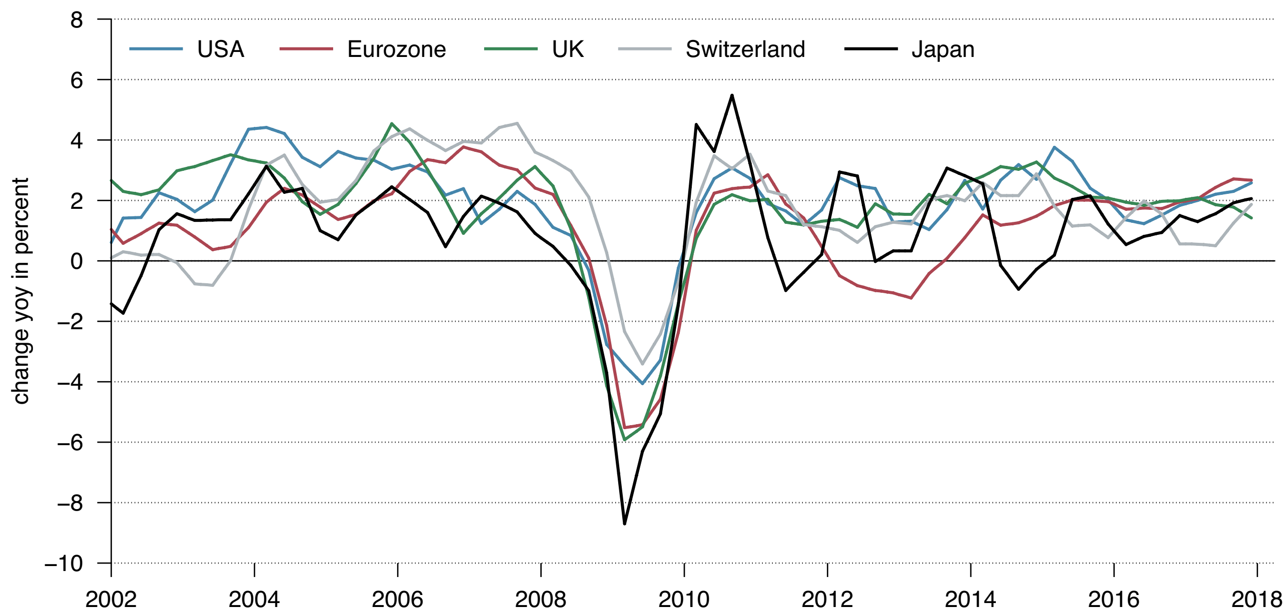
Growth overview

	Trend growth[1]	Real GDP growth[2]				W&P economic sentiment indicators[3]			
		Q2/2017	Q3/2017	Q4/2017	Q1/2018	12/2017	1/2018	2/2018	3/2018
United States	1.7	2.2	2.3	2.6	–	3.6	4.0	4.3	4.0
Eurozone	1.0	2.4	2.7	2.7	–	3.6	3.6	3.5	3.2
Germany	1.4	2.3	2.7	2.9	–	4.1	4.2	3.9	3.5
France	0.7	1.9	2.3	2.5	–	2.7	2.6	2.3	2.3
Italy	0.2	1.6	1.7	1.6	–	2.0	1.8	2.0	1.7
Spain	1.6	3.1	3.1	3.1	–	3.0	3.1	3.0	2.9
United Kingdom	1.8	1.9	1.8	1.4	–	3.1	3.0	2.8	2.3
Switzerland	1.5	0.5	1.3	1.9	–	2.4	2.4	2.7	2.7
Japan	0.4	1.6	1.9	2.1	–	2.9	2.9	2.8	2.9
Canada	1.6	3.7	3.0	2.9	–	1.6	2.0	1.9	1.8
Australia	2.4	2.0	2.9	2.4	–	3.0	3.1	3.1	3.3
Brazil	1.4	0.8	1.5	2.2	–	1.6	0.9	2.0	2.1
Russia	0.1	2.5	2.2	0.9	–	1.8	1.9	0.1	0.5
India	7.7	5.7	6.5	7.2	–	7.0	6.7	6.7	6.5
China	7.4	6.9	6.8	6.8	–	7.4	7.4	7.4	7.1
Advanced economies[4]	1.4	2.1	2.3	2.4	–	3.7	3.9	4.0	3.8
Emerging economies[4]	6.0	5.3	5.7	5.5	–	5.8	5.7	5.6	5.2
World economy[4]	3.5	3.7	4.1	4.0	–	4.9	4.9	4.9	4.6

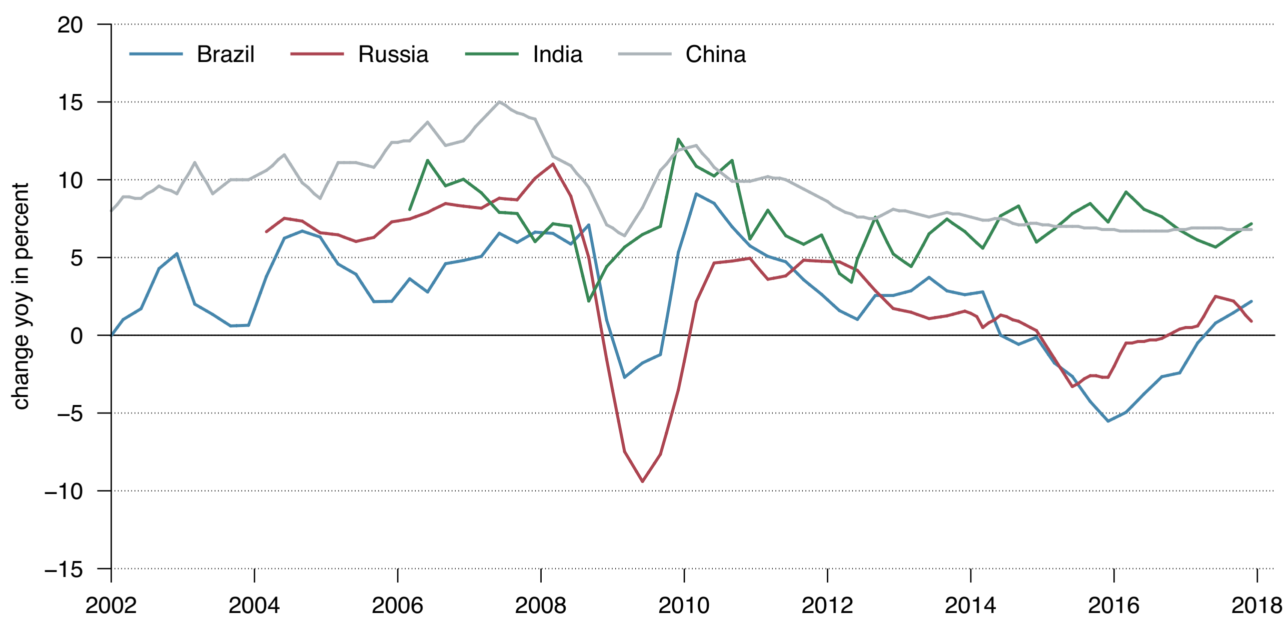
[1] Current year-on-year trend growth rate of real GDP, in percent, according to the proprietary trend growth model of Wellershoff & Partners.
[2] Year-on-year growth rate, in percent.
[3] Wellershoff & Partners economic sentiment indicators are based on consumer and business surveys and have up to 6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

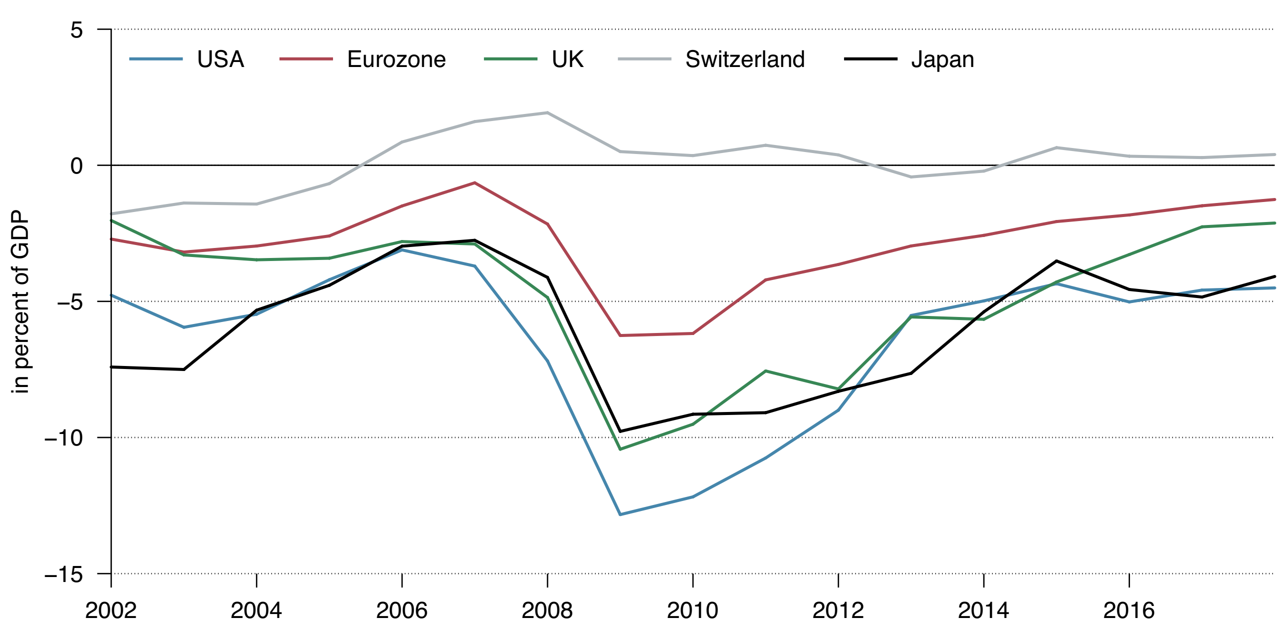
Economic indicators

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	23.9	-2.3	-2.6	105.4	106.1	-4.9	-4.5	5.6	4.1
Eurozone	16.3	16.0	3.6	4.0	108.9	107.1	-2.2	-1.3	10.7	8.5
Germany	4.7	4.7	7.8	8.0	78.8	69.1	0.5	1.5	6.4	5.3
France	3.4	3.3	-1.0	-1.7	119.7	124.6	-3.6	-2.8	9.8	8.6
Italy	2.6	2.4	2.0	2.9	155.4	155.2	-2.6	-1.6	11.9	11.0
Spain	1.7	1.7	1.4	1.6	114.8	116.0	-5.2	-2.4	21.9	16.1
United Kingdom	3.6	3.2	-5.3	-4.4	113.8	120.3	-4.2	-2.1	5.4	2.4
Switzerland	0.9	0.8	10.2	10.7	44.8	43.6	0.1	0.4	3.2	2.9
Japan	6.3	6.0	2.5	3.9	215.6	223.3	-5.2	-4.1	3.4	2.5
Canada	2.2	2.1	-3.1	-2.9	88.9	87.7	-1.3	-1.8	6.8	5.8
Australia	1.8	1.8	-3.0	-2.4	37.1	42.3	-2.6	-1.8	5.8	5.6
China	14.2	15.5	1.9	1.2	42.0	50.8	-2.4	-3.7	4.0	–
Brazil	2.8	2.6	-2.7	-1.8	71.3	87.7	-7.4	-9.3	9.3	12.6
India	2.8	3.1	-1.2	-1.5	69.0	67.1	-6.8	-6.2	–	–
Russia	2.2	1.8	2.8	3.2	15.5	17.7	-2.3	-1.5	5.4	5.0

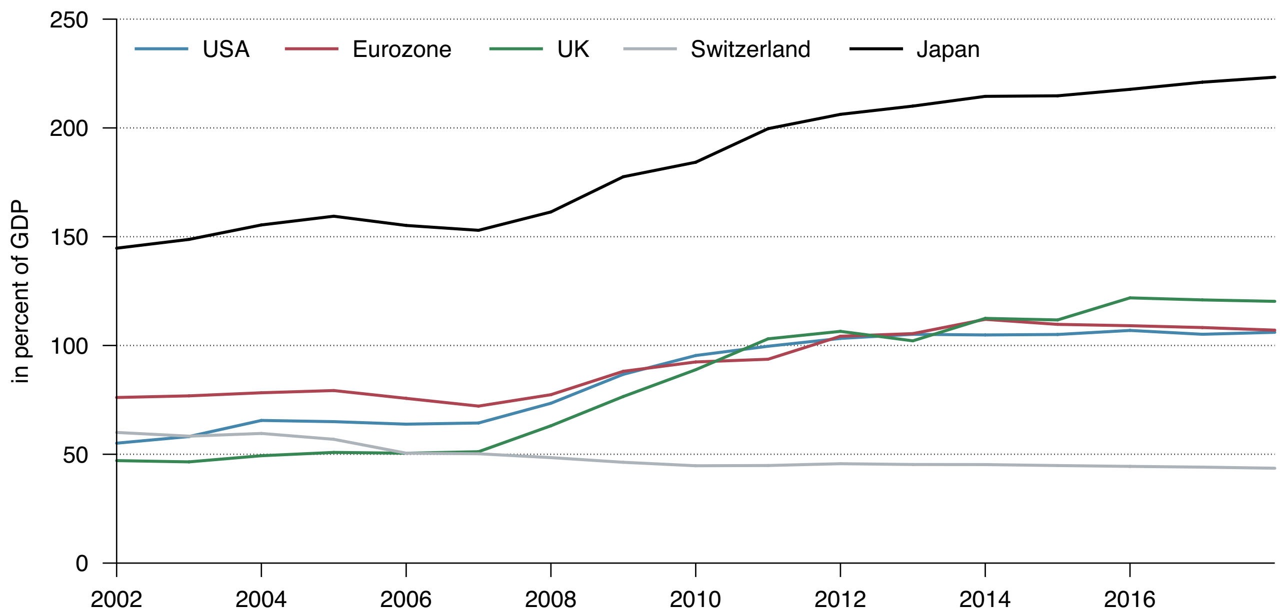
[1] In percent; calculations based on market exchange rates. [2] In percent of nominal GDP. [3] In percent.

Budget deficits in advanced economies

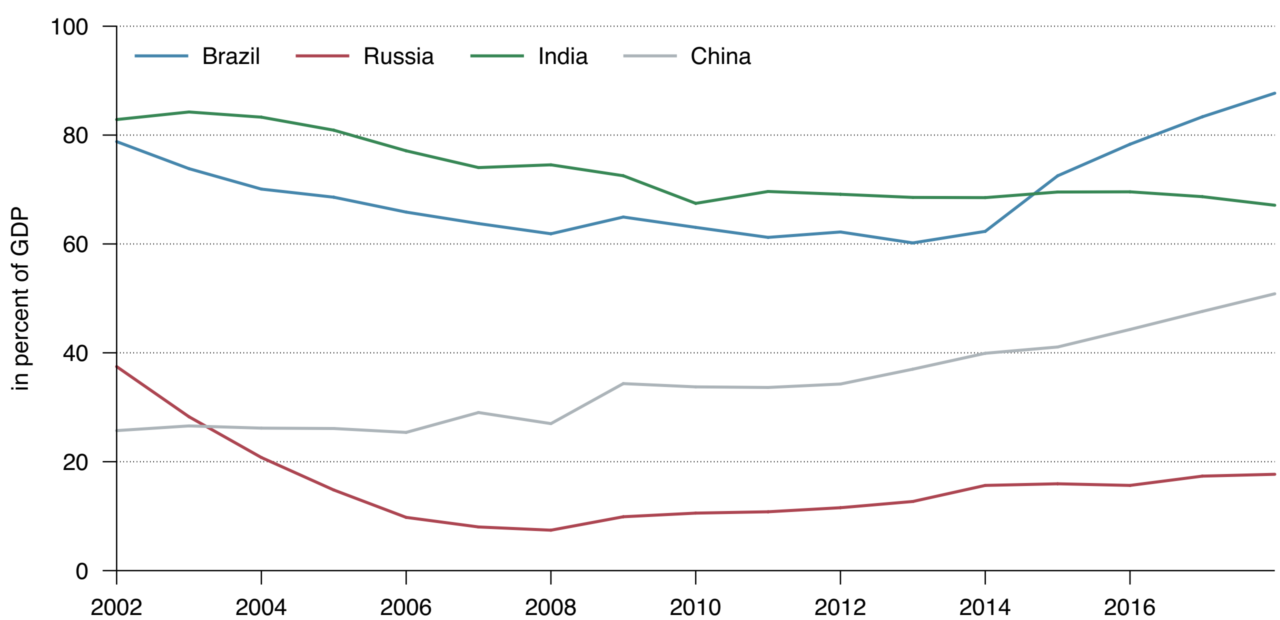


Source: Thomson Reuters Datastream, Wellershoff & Partners

Public debt in advanced economies



Public debt in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

Inflation

In the US, inflation is gradually approaching the Fed's target. Consumer prices rose by 2.2 percent year-over-year in February. The core rate came to 1.8 percent. Against the backdrop of gradually rising inflation and production capacities that are now well-utilized, the US central bank is likely to further normalize its monetary policy in the current year. For example, at its March meeting the Fed raised the target range for its key interest rate to 1.5 to 1.75 percent. By the end of the year, the markets are expecting two more interest rate hikes from the Fed.

In Japan, inflation momentum remains subdued, especially considering the price evolution in energy and unprocessed foods. Despite its considerable efforts, it appears the Japanese government will be unable to achieve its 3 percent wage growth target for the current year in the negotiations between companies and unions. In particular, large Japanese companies fear losing international competitiveness if they were to grant large wage concessions. Wage growth in small and medium-sized Japanese enterprises has been slightly higher than in large concerns. With the labor market now tight, the SMEs are forced to grant more wage increases in order to retain their employees.

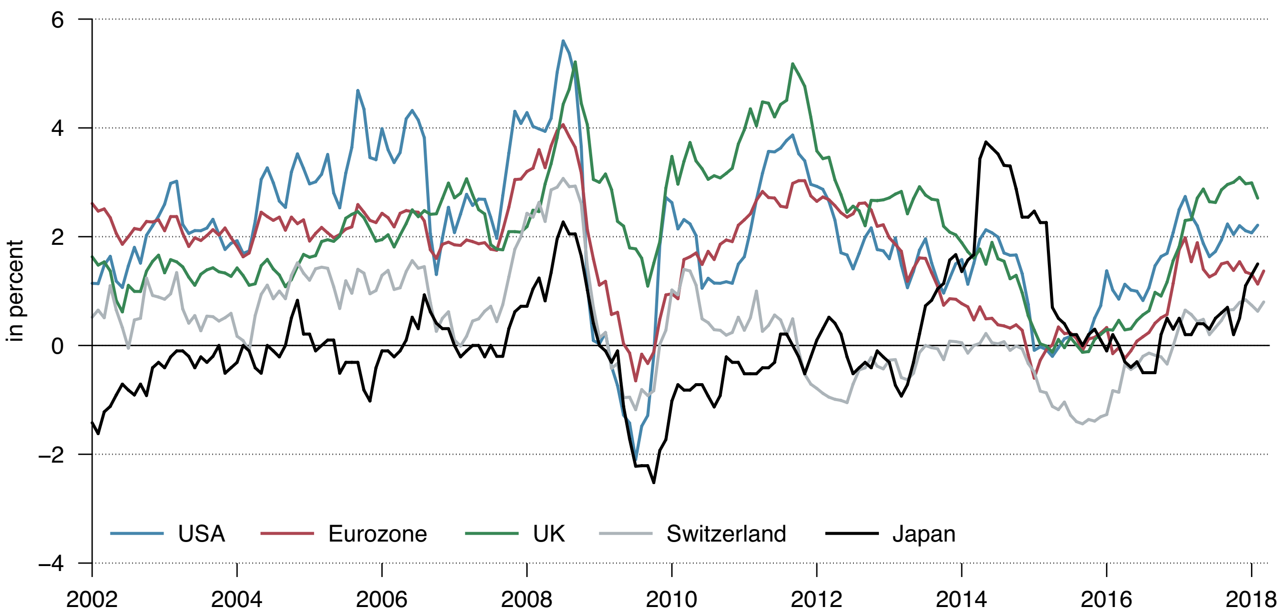
Inflation overview

	Ø 10 years[1]	Inflation[2]				Core inflation[3]			
		12/2017	1/2018	2/2018	3/2018	12/2017	1/2018	2/2018	3/2018
United States	1.6	2.1	2.1	2.2	–	1.8	1.8	1.8	–
Eurozone	1.3	1.4	1.3	1.1	1.4	0.9	1.0	1.0	1.0
Germany	1.3	1.6	1.6	1.4	1.6	1.6	1.6	1.5	1.8
France	1.1	1.2	1.3	1.2	1.5	–	–	–	–
Italy	1.4	0.9	0.9	0.5	0.9	0.4	0.6	0.6	0.9
Spain	1.3	1.1	0.6	1.1	1.2	0.8	0.8	1.1	–
United Kingdom	2.4	3.0	3.0	2.7	–	2.5	2.7	2.4	–
Switzerland	0.0	0.8	0.7	0.6	0.8	0.7	0.5	0.5	0.6
Japan	0.3	1.1	1.3	1.5	–	0.4	0.4	0.5	–
Canada	1.6	1.9	1.7	2.2	–	1.2	1.2	1.5	–
Australia	2.4	1.9	–	–	–	1.9	–	–	–
Brazil	6.1	3.0	2.9	2.8	–	3.8	3.4	3.2	–
Russia	8.4	2.5	2.2	2.2	2.3	2.1	1.9	1.9	1.8
India	7.7	5.2	5.1	4.4	–	–	–	–	–
China	-0.4	-0.3	-1.0	2.1	1.5	2.2	1.9	2.5	–
Advanced economies[4]	1.4	1.8	1.8	1.8	1.9	1.4	1.4	1.4	1.5
Emerging economies[4]	3.2	1.6	1.1	2.7	2.7	2.4	2.1	2.5	2.5
World economy[4]	2.2	1.7	1.5	2.3	2.3	1.6	1.5	1.7	1.7

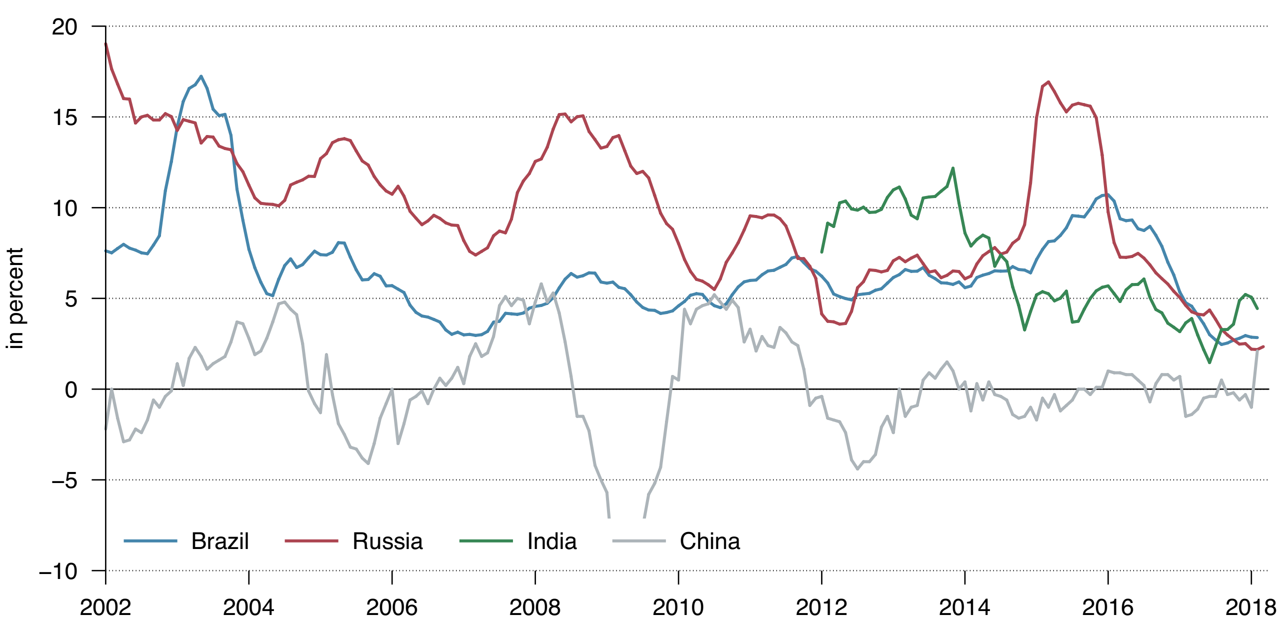
[1] Average annual consumer price inflation, in percent.
[2] Year-on-year change of the consumer price index (CPI), in percent.
[3] Core inflation is a measure of inflation that excludes certain items that can experience volatile price movements, such as energy and certain food items; year-on-year change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

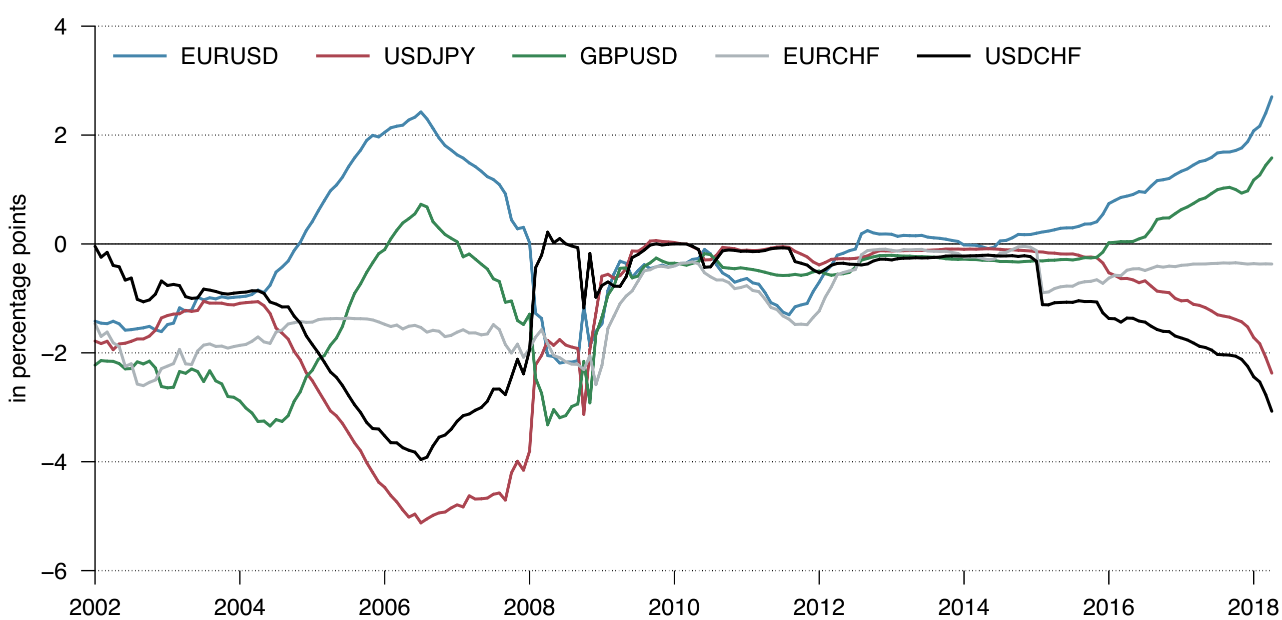
Interest rates

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	1.231	2.69	1.48	0.75	0.05	2.95	1.89	1.01	0.22
USDJPY	107.0	-2.37	-1.15	-0.60	-0.51	-2.59	-1.66	-0.90	-0.78
GBPUSD	1.413	1.58	0.82	0.15	-0.30	1.67	1.09	0.23	-0.27
EURCHF	1.179	-0.38	-0.41	-0.39	-0.65	-0.28	-0.42	-0.40	-0.74
USDCHF	0.958	-3.07	-1.89	-1.13	-0.70	-3.23	-2.30	-1.41	-0.96
GBPCHF	1.353	-1.49	-1.07	-0.98	-1.00	-1.56	-1.21	-1.18	-1.22
CHFJPY	111.8	0.70	0.74	0.54	0.19	0.64	0.64	0.51	0.18
AUDUSD	0.769	0.84	-0.33	-1.34	-2.37	1.15	0.31	-0.82	-1.80
USDCAD	1.273	-0.60	-0.21	0.47	0.50	-0.60	-0.58	0.22	0.26
USDSEK	8.371	-2.76	-1.61	-0.68	0.23	-2.93	-1.99	-0.85	0.05
USDRUB	60.3	4.16	8.79	9.25	8.28	3.54	7.65	8.66	8.24
USDBRL	3.388	4.88	9.54	11.34	10.32	3.59	7.66	10.14	9.79
USDCNY	6.311	1.99	3.13	3.46	3.08	1.90	2.40	3.02	2.70
USDTRY	4.064	11.81	11.40	10.09	9.70	12.53	11.16	9.95	9.84
USDINR	65.01	7.47	7.47	8.65	7.79	4.47	4.58	6.48	5.91

[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.

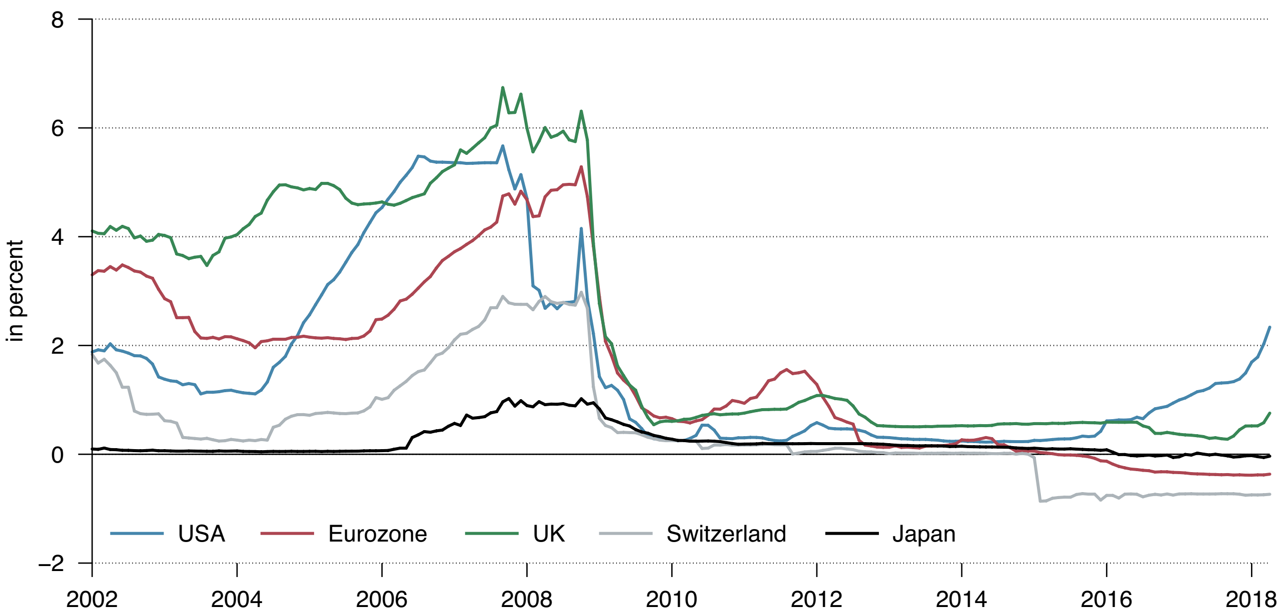
Interest rate differentials



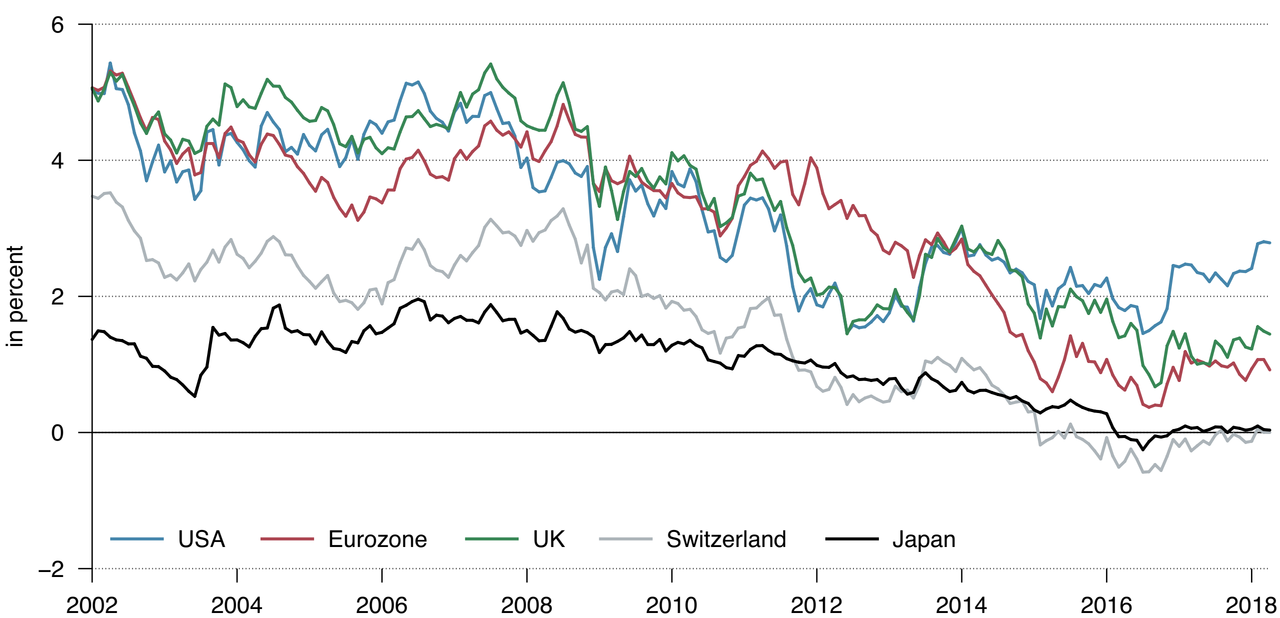
Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

3-month Libor



10-year government bond yields



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

FX markets

The Japanese yen has continued on its appreciation trend since the beginning of the year, with several factors responsible for the yen's current strength. For one thing, many market participants now believe that the Bank of Japan's monetary policy has reached its maximum level of expansion, and that interest rates will rise accordingly in the medium to long term. On the other hand, investors increasingly worried about a trade war between China and the US are also moving into yen, as it is considered a relative safe-haven currency. According to our PPP estimate, the yen remains deeply undervalued, despite its current upward trend.

Among currencies, the British pound was the biggest winner in March. Sterling particularly benefited from growing market expectations for UK interest rates to be adjusted at the Bank of England's upcoming May meeting. Beyond that, the pound may also have been buoyed by the British government's successful negotiations with the EU for a transitional period after the official Brexit date of March 2019.

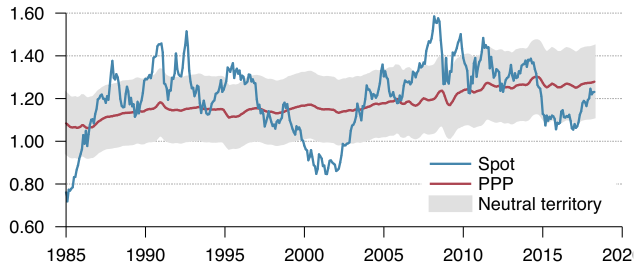
FX overview

	Current exchange rate	Performance[1]				Purchasing Power Parity[2]		
		YTD	3 months	1 year	5 years	PPP	Neutral territory	Deviation[3]
EURUSD	1.231	2.5	3.2	16.0	-5.7	1.28	1.11 - 1.45	-3.7
USDJPY	107.0	-5.0	-4.8	-3.3	8.1	86.5	71.6 - 101.4	23.7
GBPUSD	1.413	4.4	4.5	14.0	-7.6	1.60	1.44 - 1.82	-12.0
EURCHF	1.179	0.8	0.6	10.3	-3.3	1.22	1.13 - 1.3	-3.2
USDCHF	0.958	-1.7	-2.6	-4.9	2.5	0.95	0.83 - 1.07	0.6
GBPCHF	1.353	2.6	1.8	8.4	-5.3	1.53	1.32 - 1.74	-11.5
CHFJPY	111.8	-3.3	-2.3	1.6	5.4	90.9	76.9 - 104.9	23.0
AUDUSD	0.769	-1.7	-1.7	2.4	-26.6	0.73	0.63 - 0.87	5.3
USDCAD	1.273	1.6	2.2	-4.9	25.3	1.20	1.1 - 1.3	6.2
USDSEK	8.371	2.2	1.6	-7.5	30.6	7.31	6.33 - 8.3	14.4
USDRUB	60.3	4.7	5.6	5.6	93.4	42.9	34 - 51.7	40.6
USDBRL	3.388	2.1	4.4	8.3	70.8	2.77	2.23 - 3.3	22.5
USDCNY	6.311	-3.1	-3.2	-8.5	1.7	6.49	6.3 - 6.69	-2.8
USDTRY	4.064	7.2	7.9	8.9	127.9	3.07	2.78 - 3.35	32.5
USDINR	65.01	1.8	2.1	1.2	19.0	–	–	–

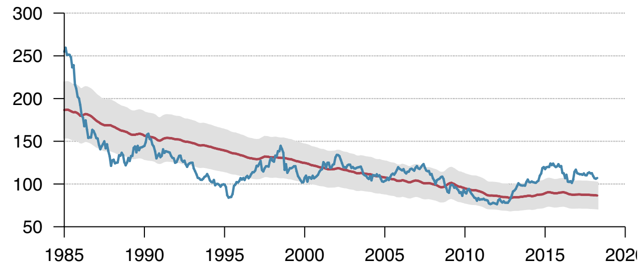
[1] Performance over the respective period of time, in percent.
[2] Purchasing power parity (PPP) is estimated based on the relative development of inflation rates in two currency markets; the neutral territory is determined by +/- 1 standard deviation of the historical variation around the PPP value.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

Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

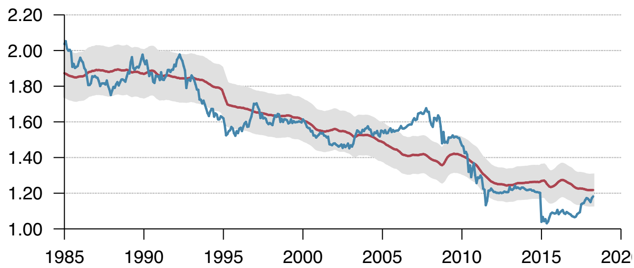
EURUSD



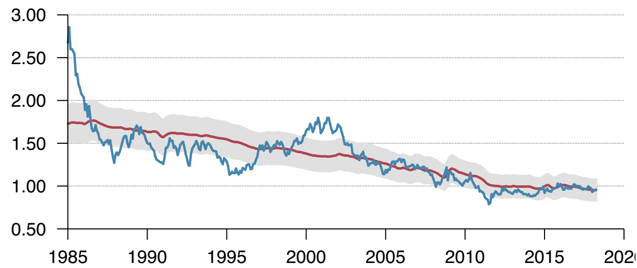
USDJPY



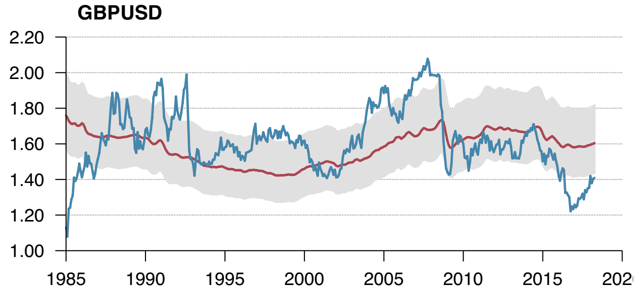
EURCHF



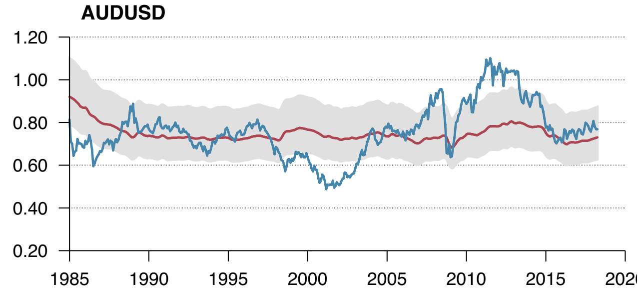
USDCHF



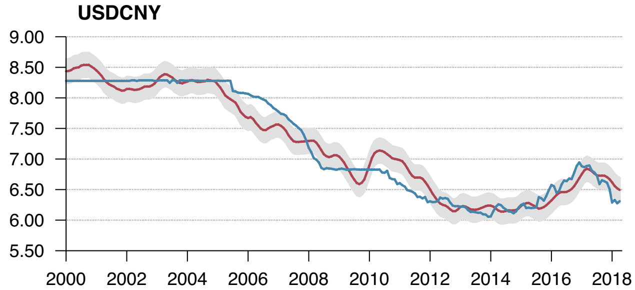
GBPUSD



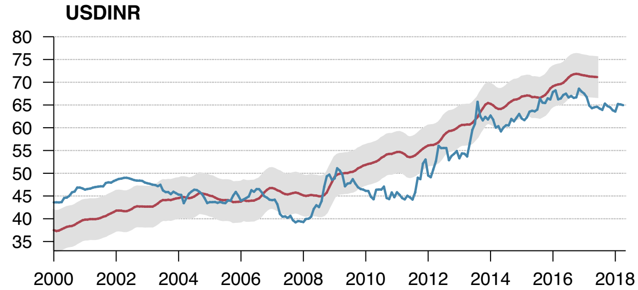
AUDUSD



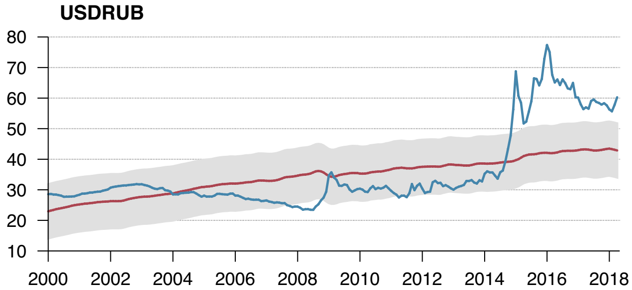
USDCNY



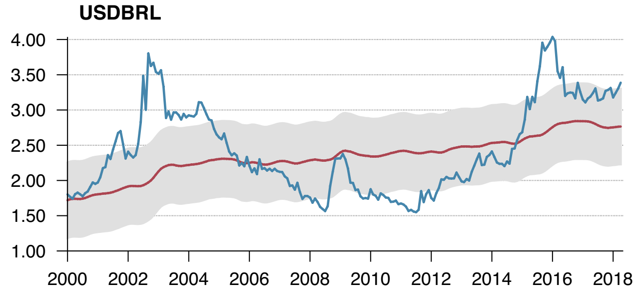
USDINR



USDRUB



USDBRL



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

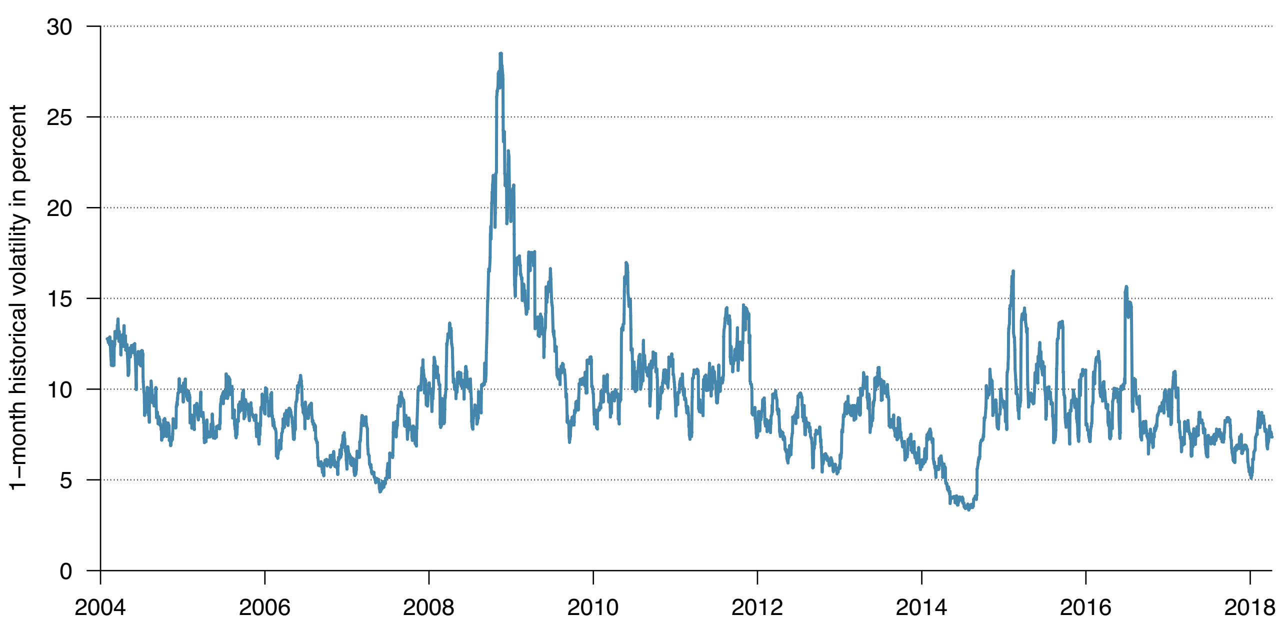
FX volatility

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	1.231	6.4	8.5	10.5	7.0	7.1	8.8	10.9	10.9
USDJPY	107.0	7.6	9.8	10.9	7.8	8.3	10.1	11.4	11.4
GBPUSD	1.413	7.5	8.5	9.9	7.9	8.3	8.9	10.5	10.5
EURCHF	1.179	4.5	5.8	6.5	5.5	5.4	6.4	7.0	7.0
USDCHF	0.958	6.6	8.8	10.5	7.3	7.6	9.3	10.9	10.9
GBPCHF	1.353	6.6	8.8	10.2	8.2	7.9	9.2	10.7	10.7
CHFJPY	111.8	6.6	9.6	11.6	7.3	7.5	10.3	12.1	12.2
AUDUSD	0.769	7.9	10.0	12.3	8.1	8.7	10.5	12.8	12.8
USDCAD	1.273	7.3	7.9	9.7	7.5	7.5	8.2	10.1	10.1
USDSEK	8.371	8.0	9.8	12.4	8.7	8.6	10.3	12.7	12.8
USDRUB	60.3	11.6	16.3	14.6	10.0	11.8	16.5	15.7	15.6
USDBRL	3.388	12.0	15.1	15.5	13.2	13.1	15.5	16.1	16.1
USDCNY	6.311	5.0	3.7	3.3	3.4	5.5	4.6	4.8	4.8
USDTRY	4.064	12.0	12.4	13.1	10.4	13.7	13.6	14.3	14.4
USDINR	65.01	5.0	7.7	9.4	3.9	6.2	8.9	10.5	10.5

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

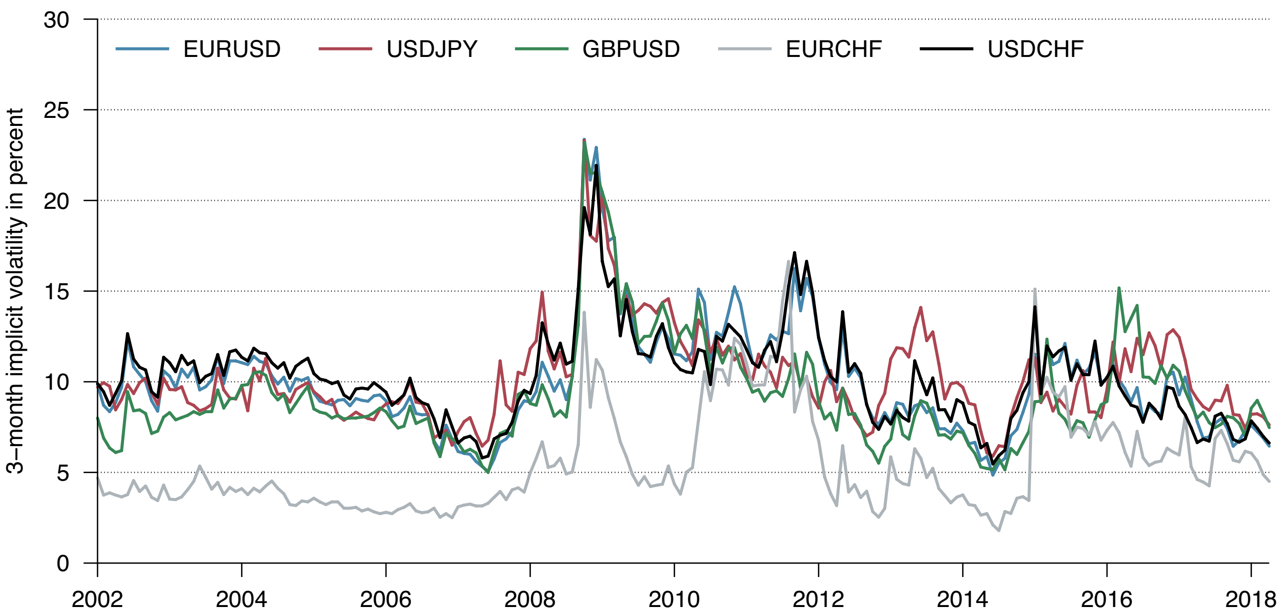
QCAM volatility indicator[3]



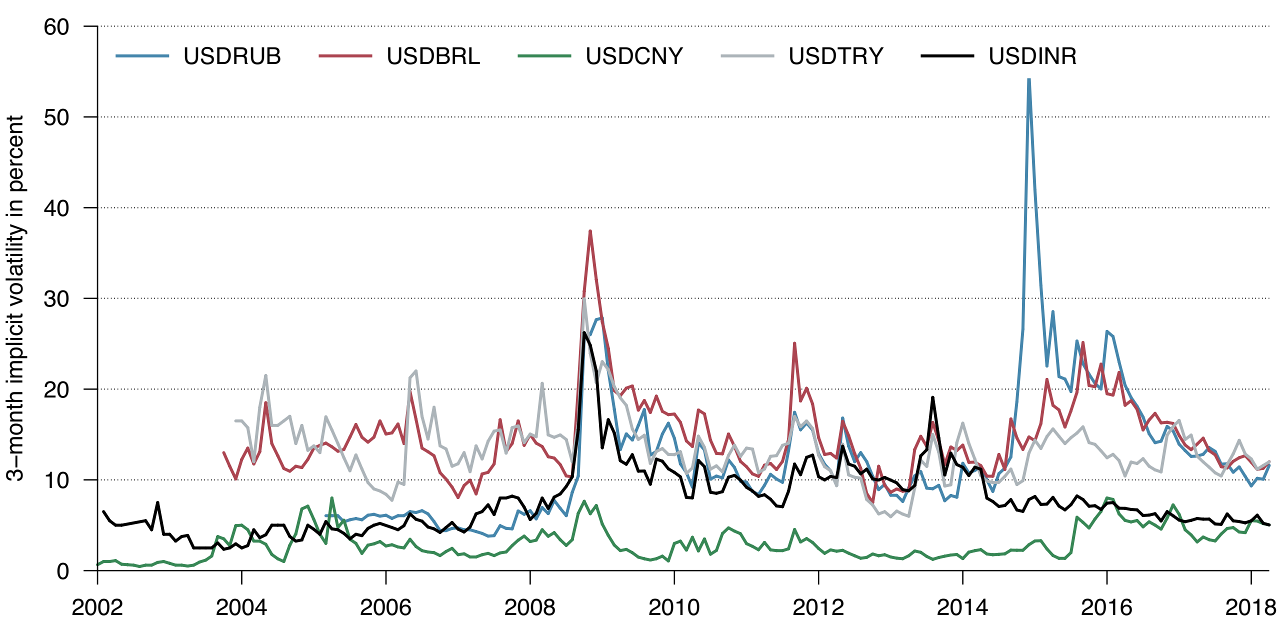
[3] The QCAM volatility indicator measures general volatility in global FX markets; the indicator is based on historical volatility of the main exchange rates, which are weighted by trading volume.

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

Implicit volatility



Implicit volatility



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
Management

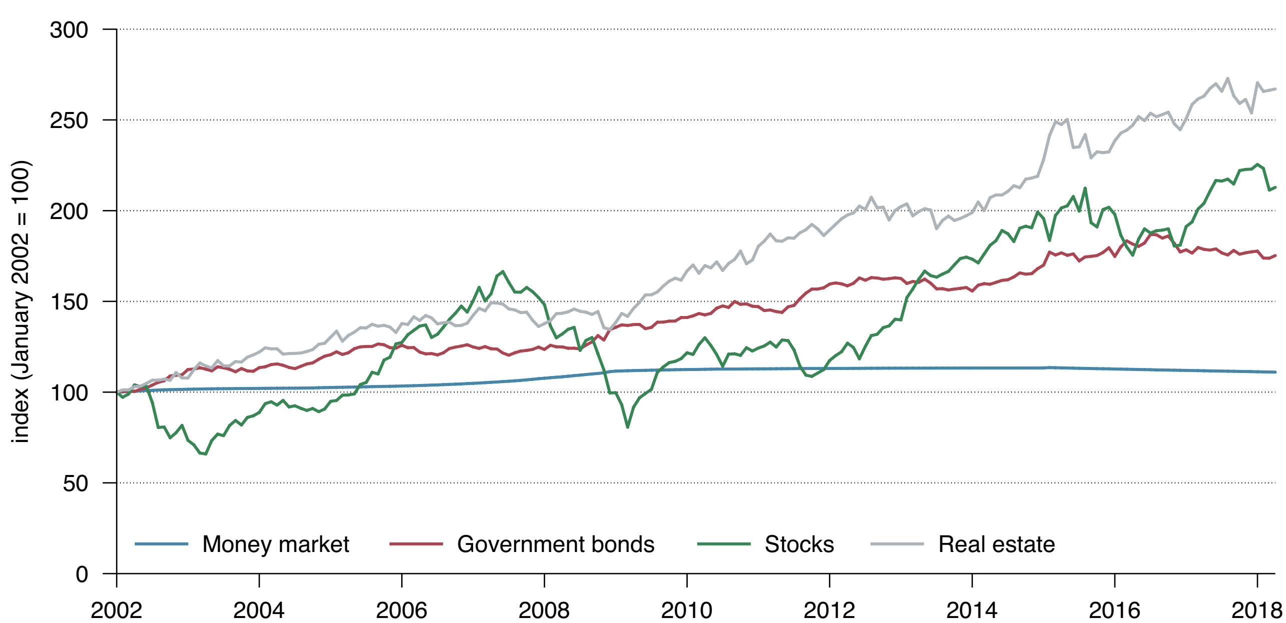
Financial markets

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	-0.2	-0.2	-0.7	-2.0	-0.2	-0.2	-0.7	-2.0
Swiss government bonds	-1.4	-1.5	-2.3	8.9	-1.4	-1.5	-2.3	8.9
Swiss corporate bonds	-0.4	-0.4	-0.9	9.3	-0.4	-0.4	-0.9	9.3
Swiss equities (SMI)	-5.6	-7.9	4.1	31.5	-5.6	-7.9	4.1	31.5
European equities (Stoxx600)	-2.7	-5.4	1.6	51.1	-1.9	-4.9	11.9	46.0
UK equities (Ftse100)	-5.3	-5.8	1.8	36.0	-2.7	-4.1	10.2	29.1
Japanese equities (Topix)	-4.1	-7.8	18.3	70.4	-0.9	-5.1	16.6	63.0
US equities (S&P 500)	-1.7	-4.6	13.1	82.6	-3.3	-6.8	7.9	88.2
Emerging markets equities	0.8	-3.1	24.1	30.2	-0.8	-5.4	18.4	34.2
Global equities (MSCI World)	-1.3	-4.0	14.4	60.9	-2.9	-6.3	9.1	65.8
Swiss real estate	-1.3	-1.9	1.5	32.3	-1.3	-1.9	1.5	32.3
Global real estate	-4.3	-3.6	2.0	19.7	-5.9	-5.8	-2.7	23.4
Commodities	-0.2	-0.1	2.5	-34.8	-1.8	-2.4	-2.2	-32.8
Brent oil	3.1	0.5	24.4	-35.1	1.4	-1.9	18.7	-33.1
Gold	2.3	1.7	5.4	-15.0	0.7	-0.7	0.5	-12.4

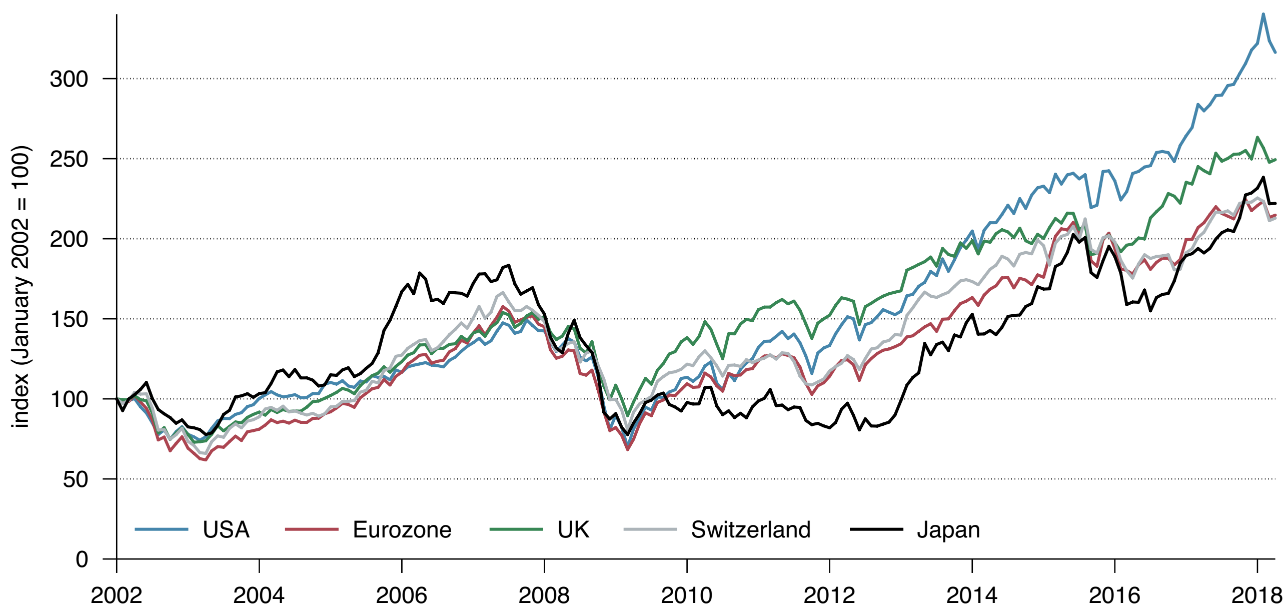
[1] Performance over the respective period of time, in percent.

Performance of selected Swiss asset classes

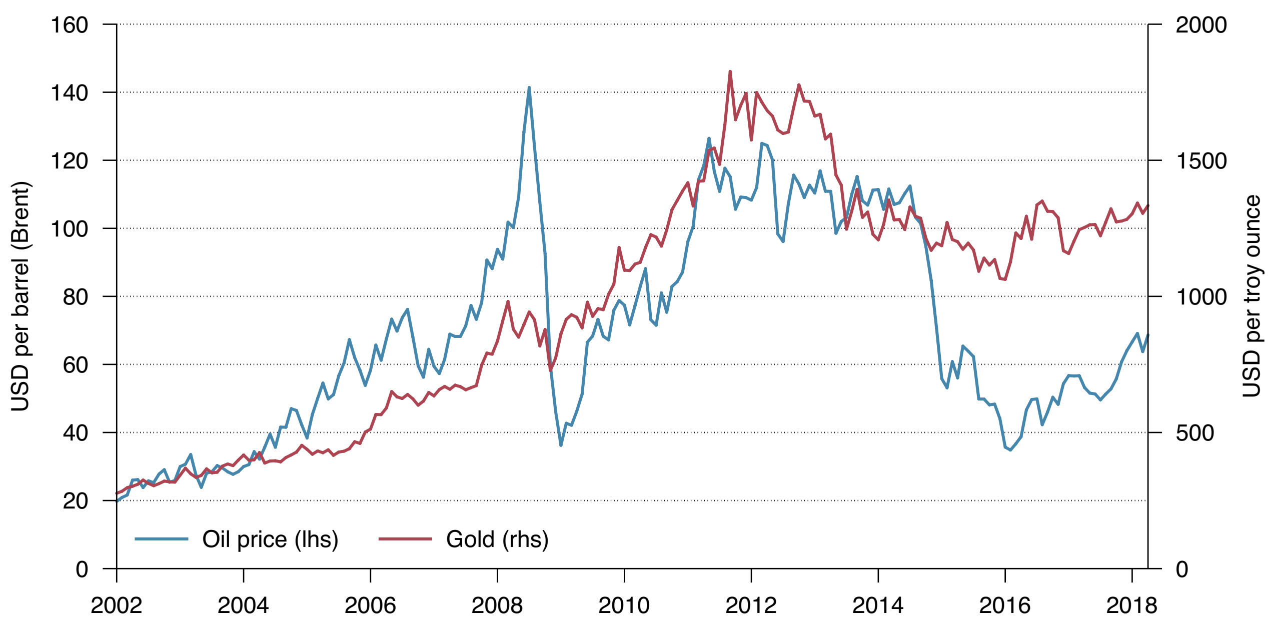


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

Performance of selected equity markets (in local currency)



Performance of selected commodity prices



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

QCAM® Currency Asset Management

Number of the month

2.2 percent

The consumer price index in the US rose by 2.2 percent in February compared to the same month a year ago. In response, the Fed raised the fed funds rate by 25 basis points on March 22, to 1.5 to 1.75 percent. Financial market participants look for two or three further rate hikes of this size this year. This expectation is also reflected in the comments of new Fed Chair Jerome Powell, who warned against an overheating economy.