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FX MONTHLY

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

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QCAM Currency Asset Management AG
Guthirtstrasse 4
6300 Zug
Switzerland

Wellershoff & Partners Ltd.
Zürichbergstrasse 38
8044 Zürich
Switzerland

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Contents

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Option strategies in low volatility markets

Harald Hild, Portfolio Manager “v-Pro“ FX-Strategy
QCAM Currency Asset Management AG

Shorting options contains dynamic risks and is therefore not suitable for all investors. In times when investors are looking for smart instruments which avoid the drawbacks of simple calls and puts, this article covers Double-No-Touch (DNT, also known as Range Option), a currency option strategy that is ideal in a low volatility market environment.

Thanks to ultra-loose central bank monetary policies around the world, many equity indices are trading at record levels. US equities, the DAX and even the UK's FTSE index just to name a few have reached all-time highs in recent weeks. This has been accompanied by low asset price volatility, i.e. hedging an equity exposure is relatively cheap. In short: a dream for equity investors.

Challenging times for FX investors

Meanwhile for FX Investors the current low volatility environment is more challenging. Except for the euro, which has experienced a relief-rally following Macron's win at the French presidential elections in May, currency markets have remained rather quiet over recent months. Seasonal effects such as the summer holidays, but also little momentum in the fixed income-space, have led to depressed volatility in currency markets. In retrospect one of the most profitable trades would have been selling options and receiving premiums.

Not managing risks is not an option

Receiving option premiums is a great thing – until we look at risk management. Shorting Puts and Calls carry the risk of potentially making considerable losses if there are sudden and large moves in the underlying currency. As result of this, many investors and money managers refrain from selling plain vanilla options. One of the most impressive examples is probably the move of the Swiss franc in January 2015, when the currency swiftly soared some 20 percent within a few hours. The value of 1-month at-the-money put options gained value by approximately 100 times. Selling options without an exposure in the underlying currency hence implies taking huge negative event risk.

Profiting from the low volatility environment

So which are the smart ways to profit during a low volatility environment in currency markets, but without any potential headache? Most importantly it depends on an investor's view of the directional trend (or even no trend at all) in a currency pair. Instead of selling options to receive a premium upfront we would typically recommend

BUYING an option structure which earns time decay and gains in value as long as the currency remains in the investor's desired direction. This could be done via a variety of call and put spreads but also calendar spreads.

Straightforward strategy: Double-No-Touch or Range Option

A Double-No-Touch or Range Option is a very straightforward instrument which performs well if your currency pair of choice trades range-bound for some time. Its characteristics are:

- Receive a pre-defined payout if the price of the underlying currency-pair does not reach one of two predetermined barrier levels
- Short volatility
- Limited potential loss (premium paid = maximum loss)
- Can be sold during the lifetime
- Disadvantage: The instrument is eliminated and worthless if one of the barrier gets hit

Let's take the USDCHF exchange rate as an example to show how this strategy works:

- Receive 1 Mio CHF if USDCHF remains within a range of 0.9450 and 1.0050 at any time during the next 3 months
- The premium for this option is 29 percent, i.e. 290 000 CHF

Bottom line

A Double-No-Touch can be an ideal instrument to take advantage of low volatility. The major pro is that it is easy to handle during the lifetime of the option and that the potential risk is limited. The major con is that the DNT expires and that the premium is lost if one of the barriers is hit during the lifetime.

FX Monthly will cover further option strategies in future editions. The team of QCAM Currency Asset Management invites you to discuss your currency option implementation needs.

USDCHF DNT within 0.9450 and 1.0050

Source: Bloomberg, QCAM Currency Asset Management

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The macro perspective

Near-term growth signals remain supportive

While recent economic indicators suggest the global economic expansion will pick up pace over the next few quarters, questions about the longevity of the current business cycle, especially in the US, are being heard more often lately. But business cycles, we would point out, do not automatically die of old age.

Australia has just celebrated 104 consecutive quarters – 26 years! – of recession-free growth. This shows that recessions, which are usually defined as at least two consecutive quarters of negative growth, are not an inescapable economic fate, even in our modern era. The "lucky country," as Australia is sometimes called, has been able to generate consistent economic growth over the past quarter of a century despite tumultuous external developments. Australia's growth record has also been spared from a typical homegrown cause of recessions – death by central bank intervention, intended to slay the beast of inflation. The monetary authorities in Australia have evidently also been lucky.

The US business cycle revisited

The example of Australia is worth bearing in mind as attention turns more frequently to the topic of the unusual longevity of the economic expansion in the United States.

In the US, the latest confidence indicators have again provided food for thought. The purchasing managers index for the manufacturing sector has reached a new high of 60.8 points. Seen against the backdrop of rising corporate earnings, this suggests that demand for investment goods is likely to improve in the US over the coming months. At the same time, however, there has been a slight decline in consumer confidence. And in this connection it is worth noting that the US household savings rate has fallen to below 4 percent in recent years, a historically low level last seen prior to the financial crisis. Low savings, we would point out, reduce the US business cycle's capacity to absorb unexpected shocks. And the recent hurricanes in the US serve as a reminder that turbulence can come from anywhere.

Despite this backdrop, forward-looking indicators are firmly pointing to an acceleration in US economic growth in the winter quarters. The impact of the recent hurricanes could temporarily distort the short-term data, however.

Near-term uptick in inflation and interest rates

On the inflation front, the signs have grown stronger that an increase in the headline rate in the US will emerge in the coming months, rising from the current 2.2 percent to perhaps 2.5 percent by year-end. A higher oil price, the further depreciation of the US dollar and the still good employment picture, suggest a pick-up in US inflation in the months ahead. This development in turn increases the probability that the Fed will raise US interest rates for a third time in the remaining months of this year. Just a few months ago, market participants were only expecting two rate hikes in 2017. The data, however, still suggests a slow increase in the core rate of inflation, which is what the Fed pays particularly close attention to. Core inflation has stagnated at 1.7 percent over the past four months.

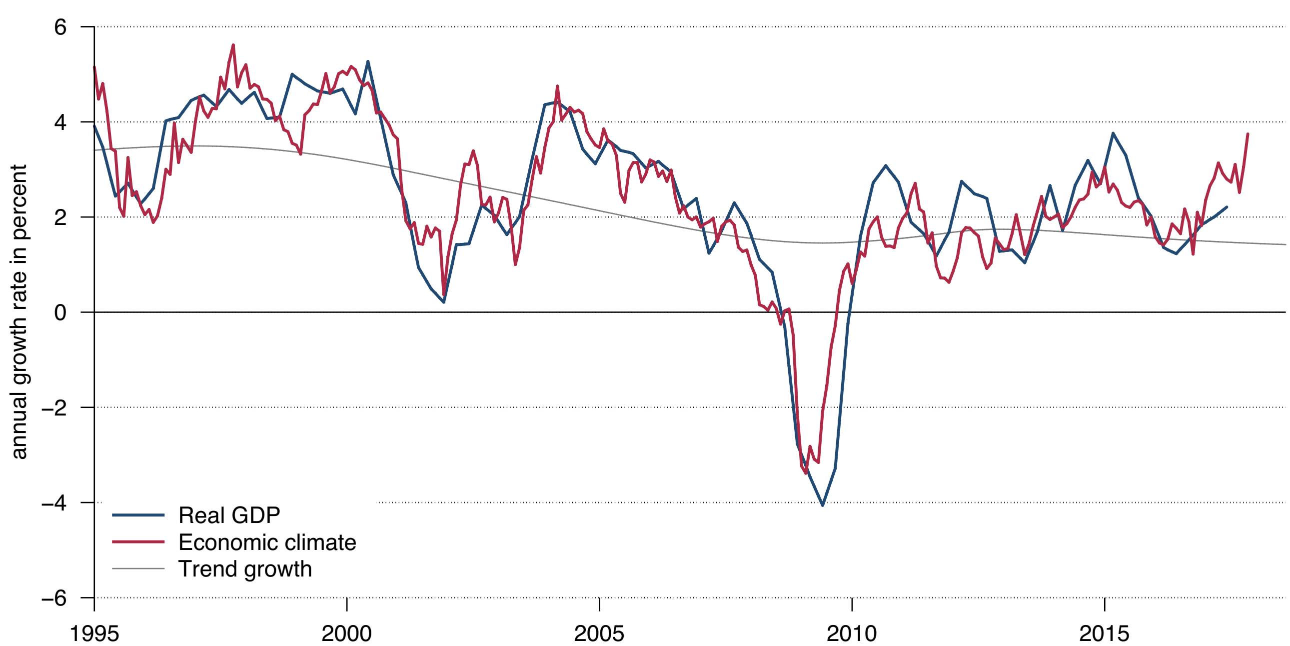
Europe still catching up

In the Eurozone, recent currency moves should have a dampening effect on inflation. That leaves the European Central Bank with enough room to maneuver in terms of adjusting its bond-purchasing program. A first step would, again, be to adjust the monthly rate at which assets are bought, leaving the ECB still far away from actually decreasing its balance sheet. At the same time, Eurozone growth indicators yet again continue to trend upward. This means that, via domestic demand and the aggregate demand from various member countries, the upswing continues to be broadly supportive for the region as a whole.

China policy expectations

According to the latest data, Wellershoff & Partners' independent *GDP Growth Stat for China* indicates China's year-over-year GDP growth rate was around 6.5 percent in the third quarter. That rate matches the growth target set by Chinese authorities, with the official announcement of the rate due on October 19. Meanwhile, for the first time since May 2016, the People's Bank of China slightly eased the minimum reserve requirements for banks. On the whole, though, we find China's credit policy continues to be rather restrictive.

US growth outlook remains positive



Source: Thomson Reuters Datastream, Wellershoff & Partners

FX market talk

The euro continues gaining altitude

The US dollar has enjoyed a bit of a lift lately but over the course of the year it remains one of the big losers. Meanwhile, the euro's high-altitude flight continues. The exciting opportunities in emerging market currencies should only be explored via broadly diversified investment vehicles.

The dollar's temporary upswing

After most of this year witnessed strong shifts in the currency markets, we have experienced a bit of a breather over the past few weeks. In particular, the US dollar was lately able to regain some of its lost altitude. But the dollar remains the major currency that lost the most in value over the course of the year. On average, the greenback saw a sharp drop of more than 6 percent versus the other G10 currencies. In particular, the dollar's performance gave the lie to those analysts who, in view of the prospect of rising US interest rates, had predicted it would only get stronger. This once again exposes the shaky empirical foundation of the idea of interest rate parity. These figures, we note, take into account the dollar's most recent counter-movements. Compared to the euro, the US dollar recovered by 2.5 percent in recent weeks. However, at around 1.18 USD for one euro, the exchange rate is still more than 10 percent above the level seen at the beginning of the year.

The high-flying euro

This year, the euro has risen strongly, catching many analysts by surprise. Here, obviously, many market observers were overly influenced by the momentous political events that filled the early months of the calendar. But as soon as these hurdles were passed, the euro began its ascent, a flight path that had already been evident in earlier purchasing power parity estimates. Since the beginning of the year, the euro has risen in value by an average of almost 6 percent against the other G10 currencies. The euro's value gain has been particularly pronounced against the US dollar and the Swiss franc.

As we go to press, the euro-franc exchange rate had risen by more than 7 percent above its level at the end of 2016. Given the euro's still considerable mispricing, we are confident that the gap with our estimated purchasing power parity level of 1.23 will continue to be reduced in the coming months. In the meantime, the threshold of 1.16 francs per euro has already been crossed.

Opportunities and risks in emerging markets

A glance at the most important currency pairs continues to show significant mispricings that investors can potentially benefit from. From the Swiss franc perspective, the euro, the Scandinavian currencies and many emerging market currencies remain interesting.

Regarding emerging market currencies, we encourage interested investors to look at broadly diversified currency baskets. In recent weeks and months, the Turkish lira has provided ample evidence of the risks of non-diversified investments. Lately, hardly a day passes without some aspect of Turkish politics appearing in the headlines. After a lot of political porcelain was smashed between the

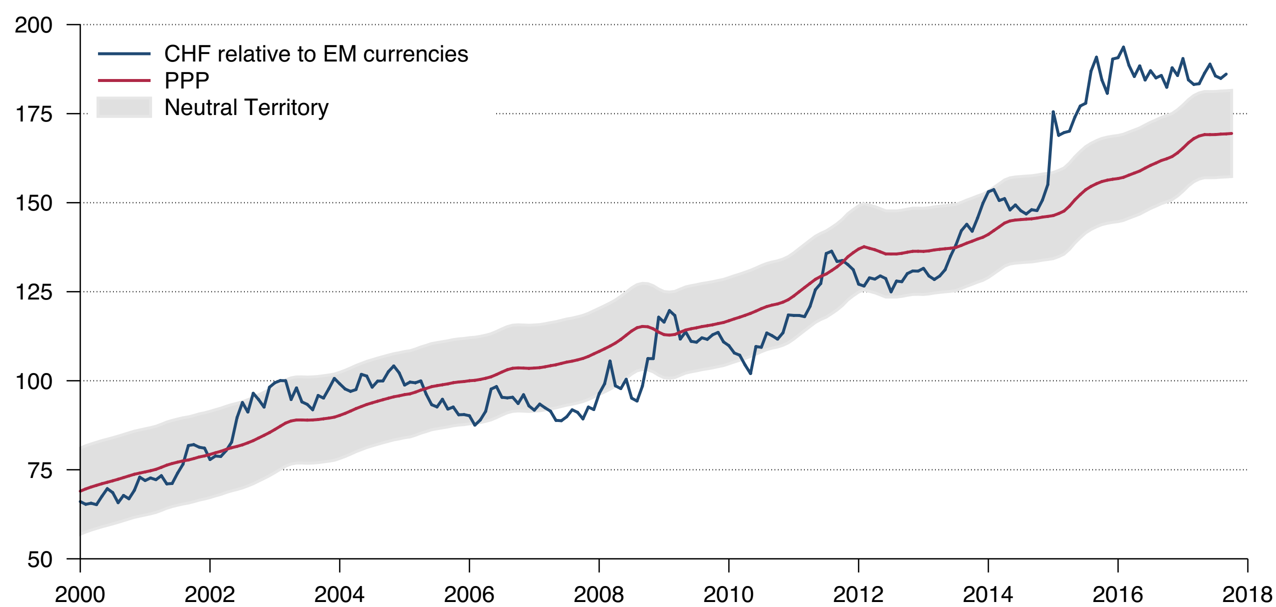
European Union and Turkey earlier in the year, the simmering visa dispute with the United States has taken center stage. The Turkish military incursion into Syria has also not gone unnoticed.

Taking the Turkish lira as a mood barometer, the market's judgment about these developments can be quickly inferred. Over the past four weeks alone, Turkey's currency has lost 8.5 percent against the US dollar and 6.5 percent against the euro. Since the beginning of the year, the Turkish lira has shed fully 14 percent in value against the euro. Interestingly, however, the lira has lost less than 3 percent against the US dollar.

Diversification is a necessity

In the face of such sharp movements, which are neither predictable nor really allow much time to react, the question arises as to how investors can best position themselves. Our recommendation has always been to invest in broadly diversified investment vehicles across several countries. The Turkish lira, we note, accounts for only 1 percent of the MSCI Emerging Markets Index.

Emerging market currencies with the greatest mispricings



Source: Thomson Reuters Datastream, Wellershoff & Partners

Economic activity

Despite high UK inflation in recent months, the mood of British consumers has remained astoundingly upbeat. That also goes for the retail sales figures. One reason for this can be found in a major revision of the official data, which shows that the finances of British households are in much better shape than previously assumed. The savings rate for the first quarter of 2017 was recently revised dramatically upward, from 1.7 percent to 3.8 percent, and for the second quarter even up to 5.9 percent. Less positive news comes from industry, however, where the upbeat mood of the first half of the year could not quite follow through in the economic data.

In the United States, consumers as well as industrial companies are still very optimistic. The ISM Manufacturing Index climbed to 60.8 points in September, its highest level since May 2004. The related services sector index also firmly surpassed expectations. Against this backdrop, we think the significance of the first decline in employment since 2010 that was posted in September should not be overestimated. This development is mainly due to the two major hurricanes – Harvey and Irma – that struck the US mainland.

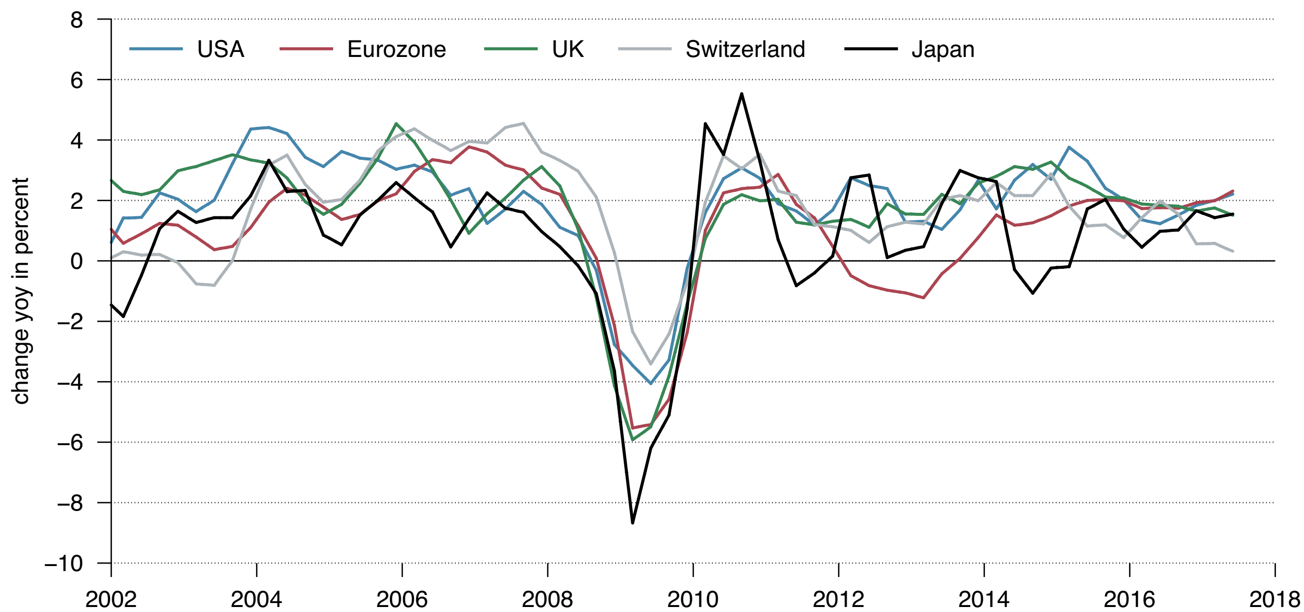
Growth overview

	Trend growth[1]	Real GDP growth[2]				W&P economic sentiment indicators[3]			
		Q4/2016	Q1/2017	Q2/2017	Q3/2017	6/2017	7/2017	8/2017	9/2017
United States	1.7	1.8	2.0	2.2	–	3.1	2.5	3.1	3.7
Eurozone	1.0	1.9	2.0	2.3	–	2.6	2.7	2.8	2.9
Germany	1.4	1.9	1.9	2.1	–	3.3	3.4	3.3	3.4
France	0.7	1.2	1.1	1.8	–	1.7	1.7	1.9	1.9
Italy	0.2	1.0	1.3	1.5	–	0.9	0.8	1.4	1.7
Spain	1.6	3.0	3.0	3.1	–	2.4	2.2	2.5	2.6
United Kingdom	1.8	1.6	1.8	1.5	–	2.5	3.0	2.5	2.4
Switzerland	1.5	0.6	0.6	0.3	–	2.1	1.9	2.1	2.4
Japan	0.4	1.7	1.4	1.5	–	2.4	2.5	2.5	2.6
Canada	1.6	2.0	2.3	3.7	–	1.6	1.4	1.2	1.1
Australia	2.4	2.4	1.8	1.8	–	2.5	2.5	2.6	2.5
Brazil	1.4	-2.4	-0.4	0.2	–	1.8	1.5	2.0	2.0
Russia	0.1	0.3	0.5	2.5	–	0.6	2.8	1.8	2.1
India	7.7	7.0	6.1	5.7	–	7.2	6.8	7.2	7.2
China	7.4	6.8	6.9	6.9	–	6.7	6.9	7.1	6.8
Advanced economies[4]	1.4	1.8	2.2	2.0	–	3.1	2.8	3.1	3.6
Emerging economies[4]	6.0	5.0	5.1	5.3	–	5.1	5.0	5.5	5.3
World economy[4]	3.5	3.5	3.7	3.7	–	4.1	3.9	4.3	4.5

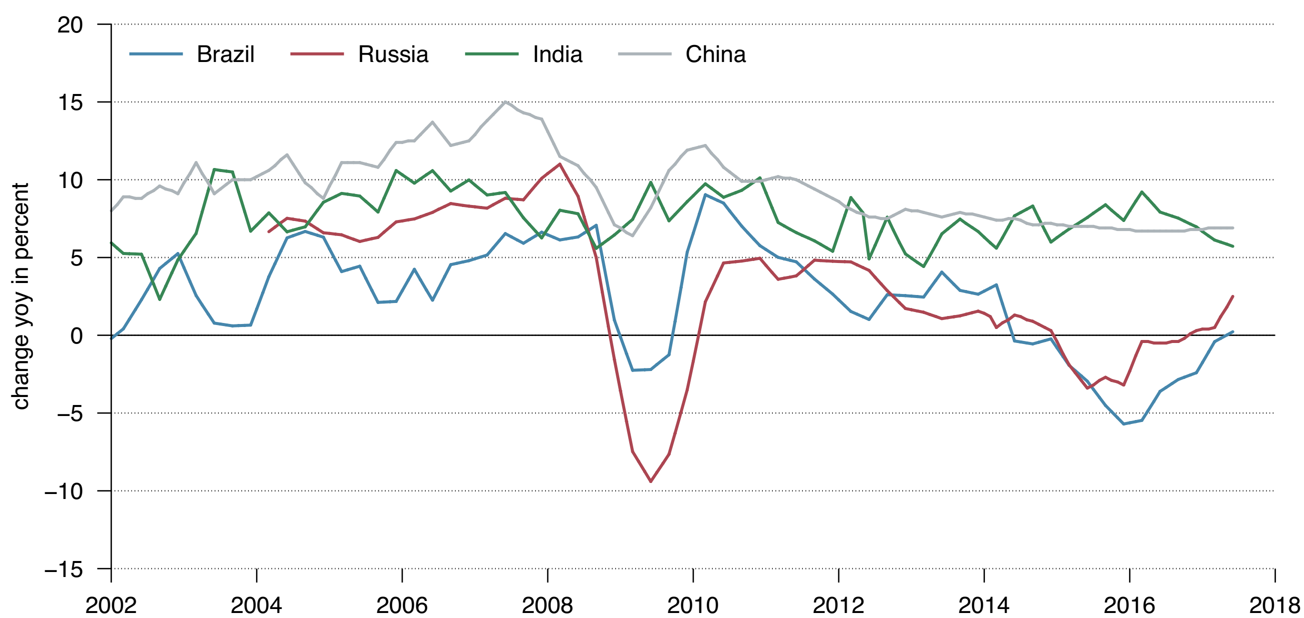
[1] Current year-on-year trend growth rate of real GDP, in percent, according to the proprietary trend growth model of Wellershoff & Partners.
[2] Year-on-year growth rate, in percent.
[3] Wellershoff & Partners economic sentiment indicators are based on consumer and business surveys and have up to 6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

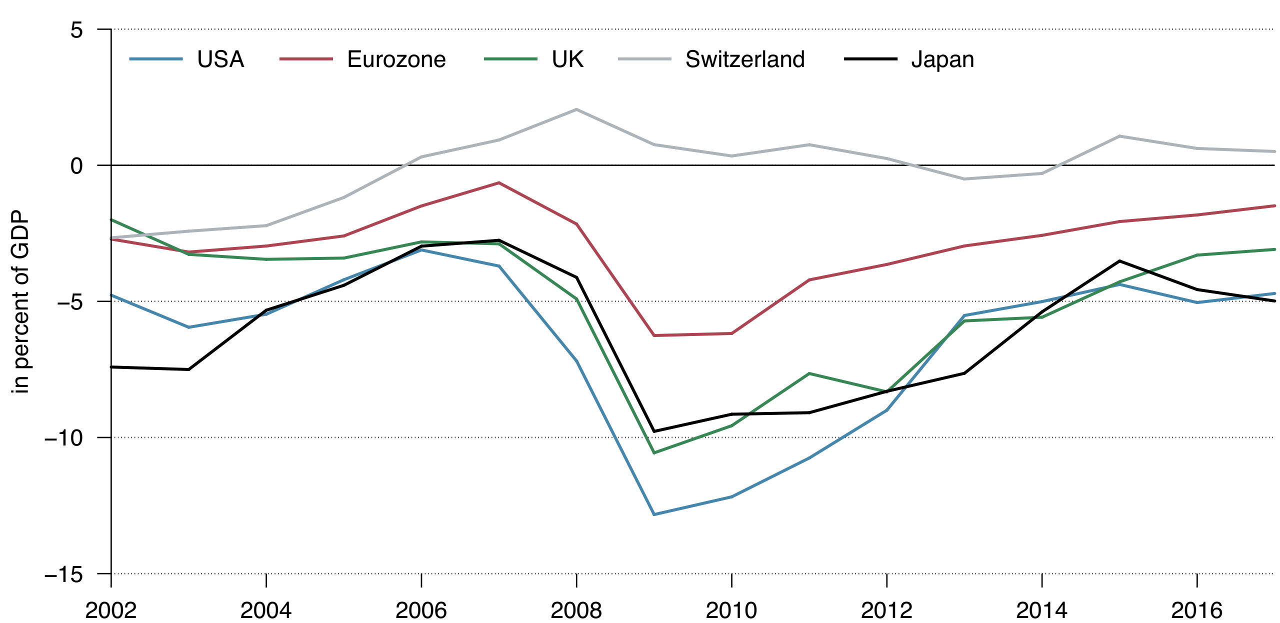
Economic indicators

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	23.0	24.4	-2.5	-2.4	105.2	107.8	-5.8	-4.7	6.4	4.2
Eurozone	16.6	15.8	3.2	4.0	108.1	108.3	-2.6	-1.5	11.2	9.1
Germany	4.8	4.6	7.7	7.5	82.1	73.5	0.3	0.7	6.6	5.6
France	3.5	3.2	-0.9	-1.2	117.2	124.9	-4.0	-3.0	9.8	9.2
Italy	2.6	2.4	1.3	2.1	152.0	157.4	-2.8	-2.1	11.8	11.2
Spain	1.7	1.6	1.1	2.1	110.2	116.9	-6.6	-3.1	23.4	17.1
United Kingdom	3.7	3.2	-4.3	-3.9	111.9	122.9	-5.4	-3.1	6.1	4.3
Switzerland	0.9	0.9	10.6	11.3	45.4	44.1	0.2	0.5	3.1	3.0
Japan	6.7	6.2	1.9	3.7	214.1	225.9	-5.9	-5.0	3.7	2.8
Canada	2.3	2.1	-3.2	-3.4	88.0	89.6	-1.4	-2.2	7.0	6.2
Australia	1.8	1.8	-3.5	-1.6	34.3	41.9	-2.9	-2.2	5.7	5.6
China	13.5	15.1	2.1	1.4	39.3	47.6	-1.7	-3.7	4.1	4.0
Brazil	2.9	2.6	-3.0	-1.4	67.1	83.4	-6.0	-9.2	8.4	12.6
India	2.7	3.1	-1.9	-1.4	69.1	68.7	-7.1	-6.4	–	–
Russia	2.4	1.9	2.9	2.8	14.3	17.4	-1.8	-2.1	5.4	4.9

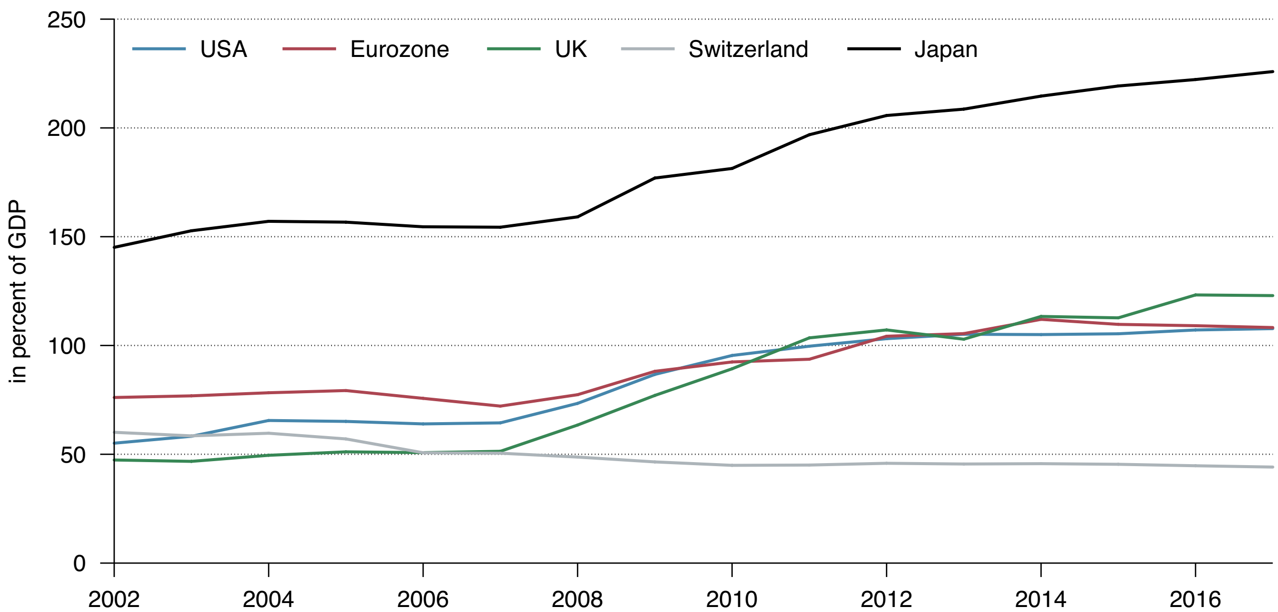
[1] In percent; calculations based on market exchange rates. [2] In percent of nominal GDP. [3] In percent.

Budget deficits in advanced economies

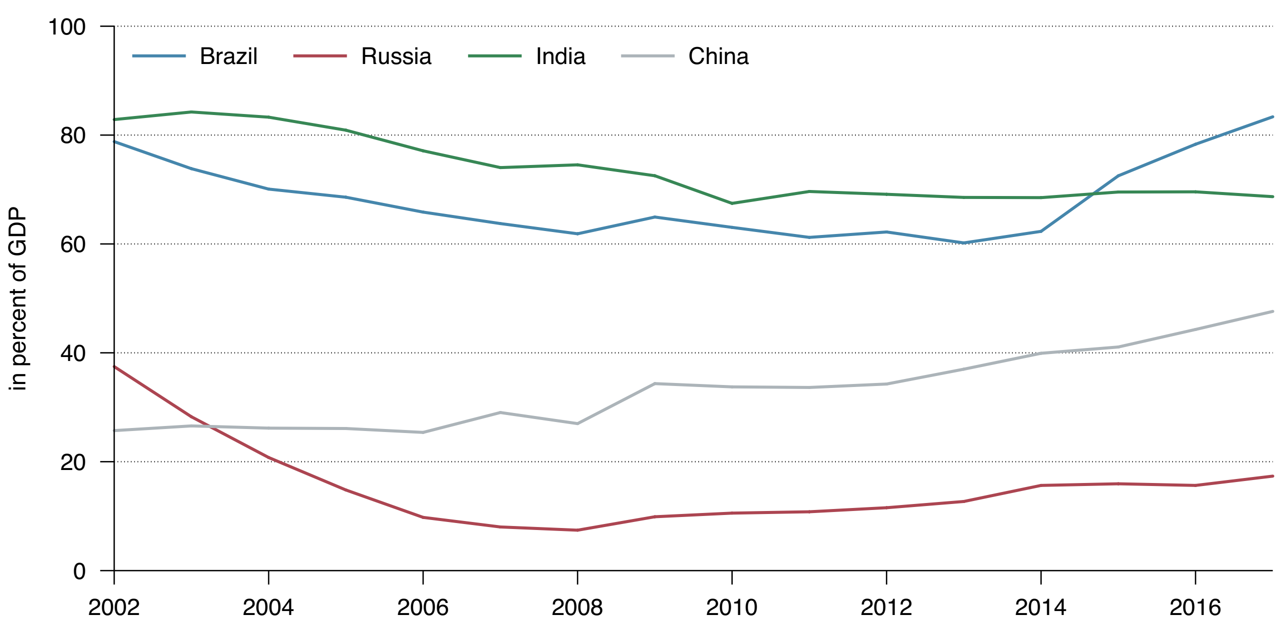


Source: Thomson Reuters Datastream, Wellershoff & Partners

Public debt in advanced economies



Public debt in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

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Inflation

Inflation in Switzerland managed to gain a little momentum in September, climbing from an annual rate of 0.5 percent to 0.6 percent. That is the biggest increase in the inflation rate since March 2011. Sharp increases in prices were evident above all in clothing and food. And the core inflation rate, which excludes food prices, also showed some increased dynamism and recently reached 0.5 percent.

Inflation rates in the Eurozone as a whole and in its two most important national economies – France and Germany – were nearly unchanged in September. Thus, the large gap between the inflation rates of France and Germany also persists. France registered an annual rate of 1.0 percent, while Germany held true to its annual inflation rate of 1.8 percent. In aggregate for the month, consumer prices in the Eurozone climbed by 1.5 percent compared to September a year ago. The core inflation rate, however, declined slightly, to 1.1 percent.

Russia reported its lowest inflation since the demise of the Soviet Union. Consumer prices grew at a mere 3.0 percent compared to the previous month. This enabled the Russian central bank to cut its benchmark interest rate for the fifth time this year.

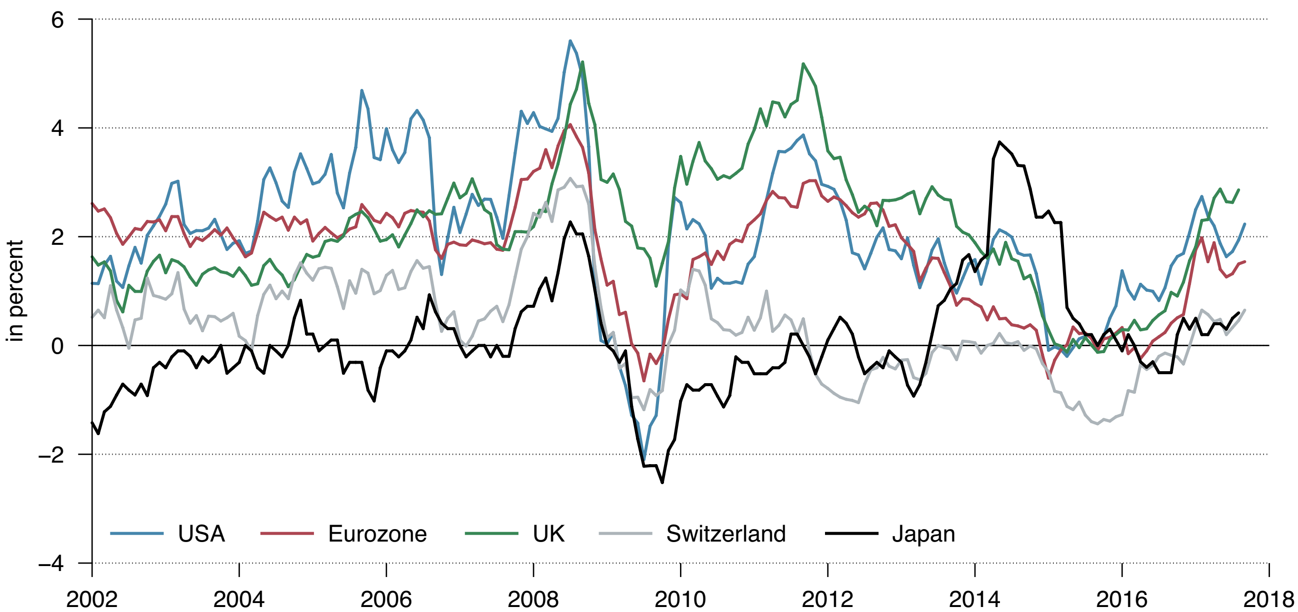
Inflation overview

	Ø 10 years[1]	Inflation[2]				Core inflation[3]			
		6/2017	7/2017	8/2017	9/2017	6/2017	7/2017	8/2017	9/2017
United States	1.7	1.6	1.7	1.9	2.2	1.7	1.7	1.7	1.7
Eurozone	1.4	1.3	1.3	1.5	1.5	1.1	1.2	1.2	1.1
Germany	1.3	1.6	1.7	1.8	1.8	1.6	1.8	1.7	1.8
France	1.1	0.7	0.7	0.9	1.0	–	–	–	–
Italy	1.4	1.2	1.1	1.2	1.1	0.9	0.8	1.0	0.7
Spain	1.4	1.5	1.5	1.6	1.8	1.2	1.4	1.2	1.2
United Kingdom	2.3	2.6	2.6	2.9	3.0	2.4	2.4	2.7	2.7
Switzerland	0.1	0.2	0.3	0.5	0.6	0.2	0.3	0.4	0.5
Japan	0.3	0.3	0.5	0.6	–	0.0	0.1	0.2	–
Canada	1.6	1.0	1.2	1.4	–	0.9	0.9	0.9	–
Australia	2.4	1.9	–	–	–	1.5	–	–	–
Brazil	6.2	3.0	2.7	2.5	2.5	4.2	4.2	3.9	3.8
Russia	8.9	4.4	3.8	3.3	3.0	3.5	3.3	3.0	2.8
India	7.7	1.5	2.4	3.3	3.3	–	–	–	–
China	-0.1	-0.4	-0.4	0.5	1.5	2.2	2.1	2.2	2.3
Advanced economies[4]	1.5	1.4	1.5	1.7	1.8	1.3	1.3	1.4	1.4
Emerging economies[4]	3.4	0.8	0.9	1.6	1.1	2.6	2.5	2.5	2.5
World economy[4]	2.4	1.1	1.2	1.7	1.5	1.7	1.6	1.6	1.7

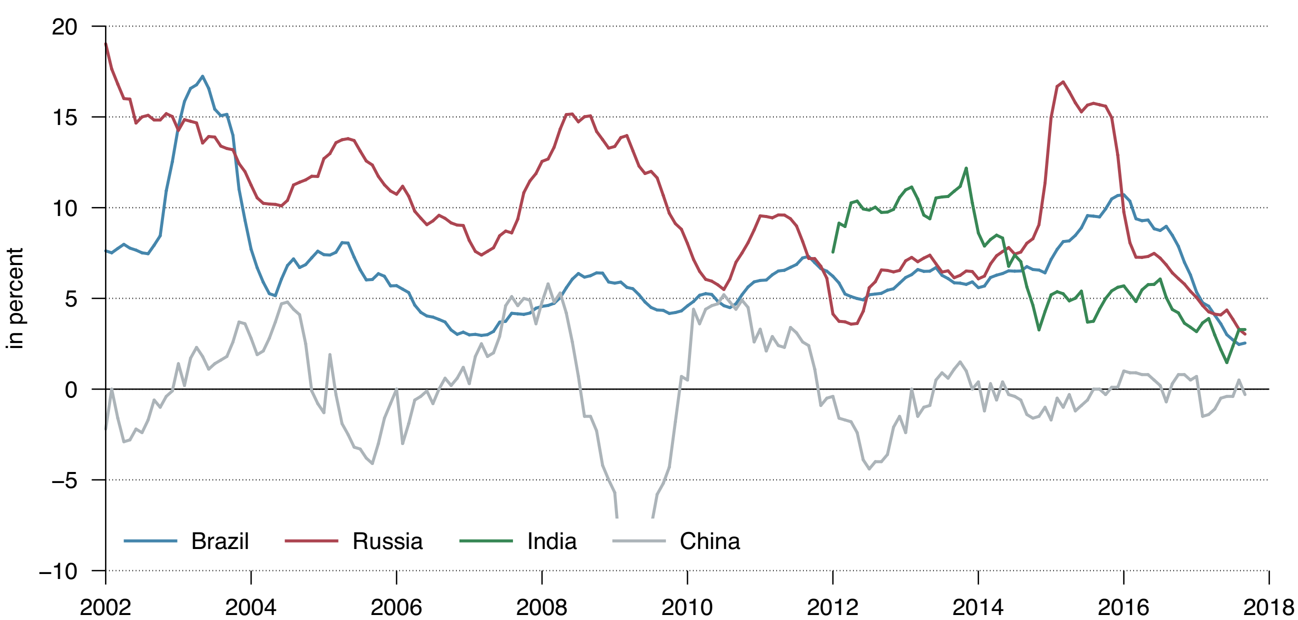
1 Average annual consumer price inflation, in percent.
2 Year-on-year change of the consumer price index (CPI), in percent.
3 Core inflation is a measure of inflation that excludes certain items that can experience volatile price movements, such as energy and certain food items; year-on-year change of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

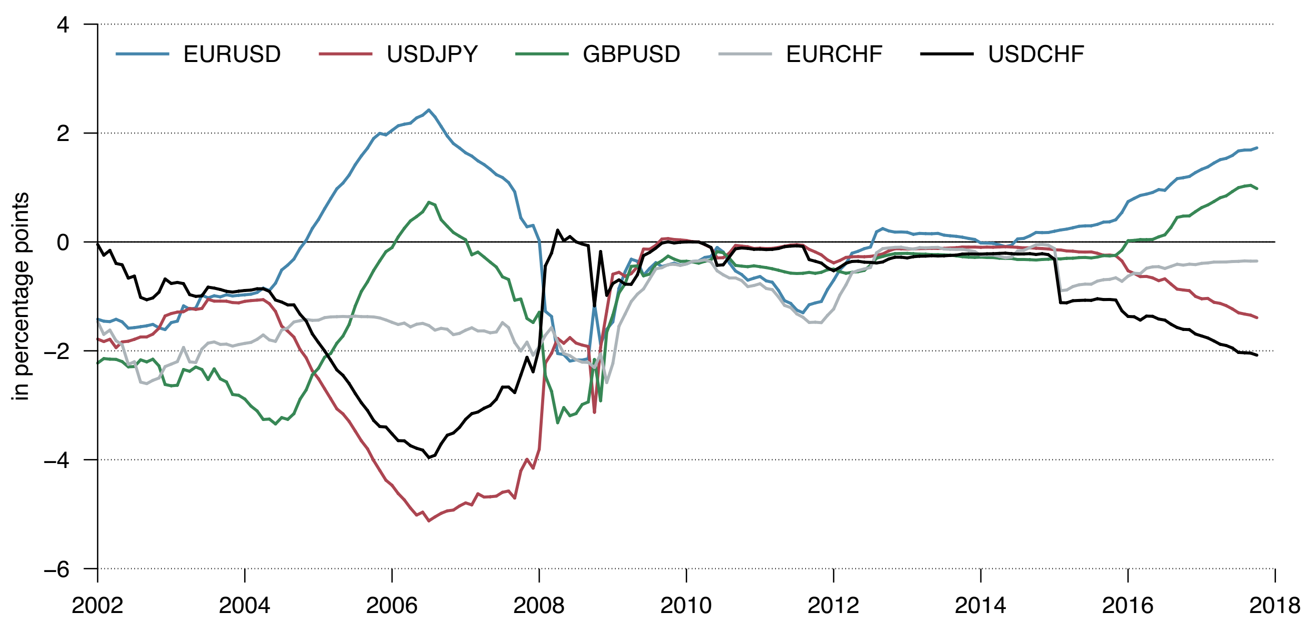
Interest rates

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	1.184	1.75	1.17	0.56	-0.08	2.08	1.69	0.81	0.06
USDJPY	111.9	-1.39	-0.89	-0.44	-0.57	-1.71	-1.48	-0.73	-0.80
GBPUSD	1.331	0.98	0.48	0.02	-0.46	1.07	0.79	0.08	-0.44
EURCHF	1.153	-0.33	-0.44	-0.36	-0.72	-0.25	-0.38	-0.40	-0.80
USDCHF	0.974	-2.08	-1.61	-0.92	-0.64	-2.32	-2.07	-1.20	-0.86
GBPCHF	1.296	-1.10	-1.13	-0.91	-1.10	-1.26	-1.28	-1.12	-1.30
CHFJPY	114.9	0.69	0.72	0.49	0.07	0.62	0.59	0.47	0.06
AUDUSD	0.789	-0.15	-0.59	-1.62	-2.53	0.22	0.14	-1.07	-2.01
USDCAD	1.248	0.07	0.02	0.58	0.52	0.04	-0.44	0.32	0.30
USDSEK	8.100	-1.93	-1.51	-0.37	0.36	-2.08	-1.82	-0.54	0.22
USDRUB	57.2	6.40	9.22	9.38	8.20	5.79	8.36	8.80	8.26
USDBRL	3.157	6.45	12.62	10.90	10.18	5.26	10.70	10.34	10.13
USDCNY	6.587	3.01	1.92	3.52	2.96	2.59	1.44	3.13	2.62
USDTRY	3.636	11.84	8.13	9.44	9.72	11.52	7.89	9.30	9.89
USDINR	64.91	7.47	7.47	8.65	7.60	4.44	4.96	6.55	5.82

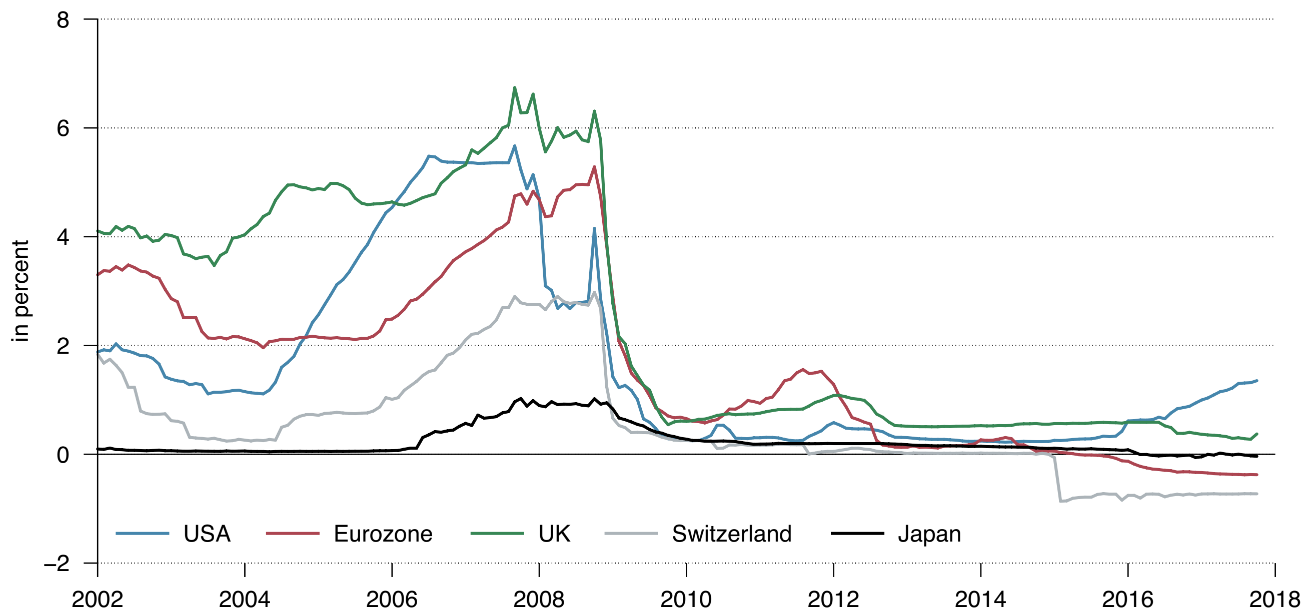
[1] The gap in interest rates between the second currency and the first one, in percentage points; e.g. US dollar minus euro for EURUSD.

Interest rate differentials

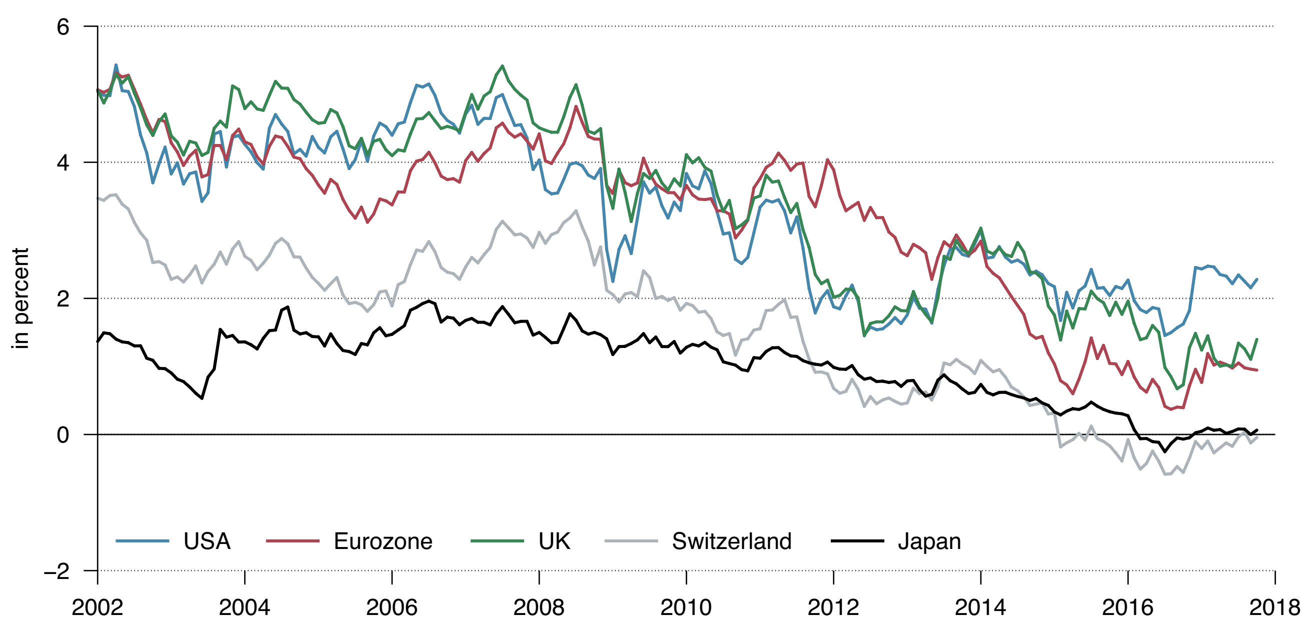


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

3-month Libor



10-year government bond yields



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

FX markets

In September things were looking good for the British pound. Driven by the expectation that the Bank of England would raise interest rates later this year, sterling traded for nearly USD 1.36. However, the British currency remains strongly driven by politics and is highly sensitive to any signs that Brexit could fail – meaning a no-deal scenario. In this context – the botched speech by Prime Minister Theresa May at the Conservative party congress, which sparked renewed speculation about her resignation, is just one example – the pound reacted quite sharply in the course of October, recording close to 1.33 US dollars as we closed this issue of FX Monthly.

After retail sales in Australia retreated for the second month in a row in August, the last hopes for an interest rate hike in the near future by the Australian central bank were snuffed out. The Australian dollar reacted immediately, depreciating against the US dollar after the publication of the retail data. Due to weak wage growth and high energy costs, we think it has not be become any easier for Australian consumers to increase their consumption in the coming months.

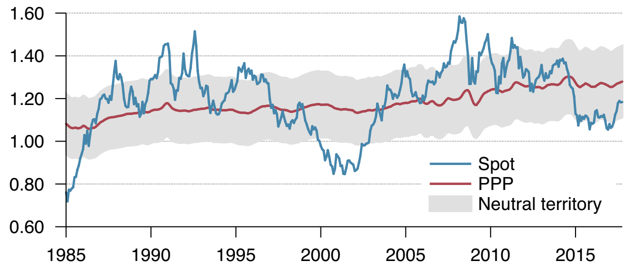
FX overview

	Current exchange rate	Performance[1]				Purchasing Power Parity[2]		
		YTD	3 months	1 year	5 years	PPP	Neutral territory	Deviation[3]
EURUSD	1.184	12.2	3.4	7.3	-8.7	1.28	1.11 - 1.45	-7.5
USDJPY	111.9	-4.0	-0.6	8.2	42.8	85.5	70.9 - 100.1	31.0
GBPUSD	1.331	7.7	1.7	9.1	-17.3	1.60	1.43 - 1.81	-16.8
EURCHF	1.153	7.6	4.4	5.8	-4.6	1.23	1.14 - 1.31	-6.0
USDCHF	0.974	-4.1	0.9	-1.4	4.5	0.96	0.84 - 1.08	1.6
GBPCHF	1.296	3.2	2.6	7.6	-13.6	1.53	1.32 - 1.74	-15.4
CHFJPY	114.9	0.1	-1.5	9.7	36.7	89.1	75.5 - 102.8	28.8
AUDUSD	0.789	8.9	1.0	4.5	-22.9	0.73	0.63 - 0.87	8.1
USDCAD	1.248	-6.9	-1.5	-5.7	27.5	1.21	1.11 - 1.31	3.2
USDSEK	8.100	-10.8	-2.8	-8.1	21.2	7.39	6.44 - 8.34	9.7
USDRUB	57.2	-6.3	-3.5	-9.7	84.4	41.9	33.2 - 50.5	36.6
USDBRL	3.157	-3.0	-1.1	-1.9	54.6	2.71	2.18 - 3.25	16.3
USDCNY	6.587	-5.2	-2.9	-2.1	5.1	6.73	6.54 - 6.93	-2.2
USDTRY	3.636	3.4	2.7	17.6	101.1	2.85	2.59 - 3.12	27.5
USDINR	64.91	-4.4	0.7	-3.0	22.7	69.8	65.5 - 74.1	-7.0

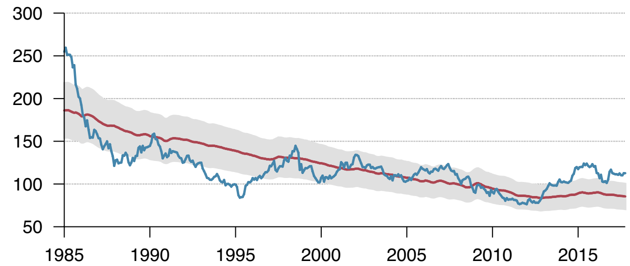
[1] Performance over the respective period of time, in percent.
[2] Purchasing power parity (PPP) is estimated based on the relative development of inflation rates in two currency markets; the neutral territory is determined by +/- 1 standard deviation of the historical variation around the PPP value.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

Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

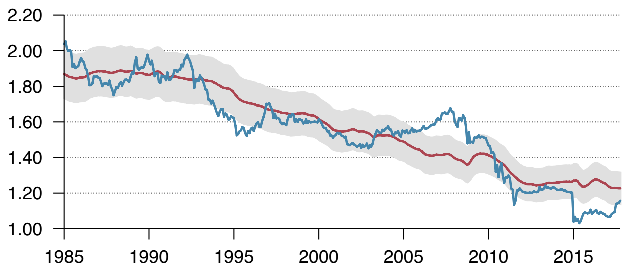
EURUSD



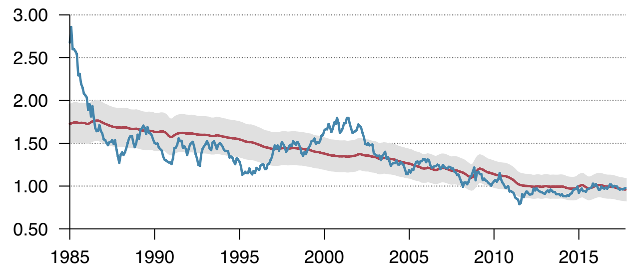
USDJPY



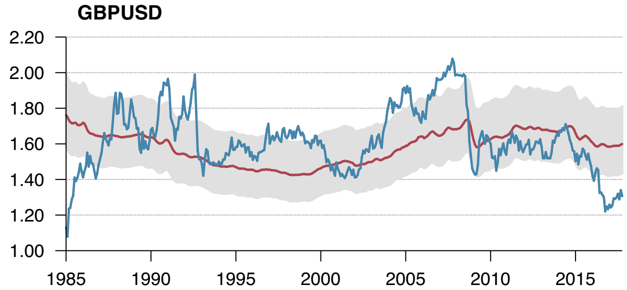
EURCHF



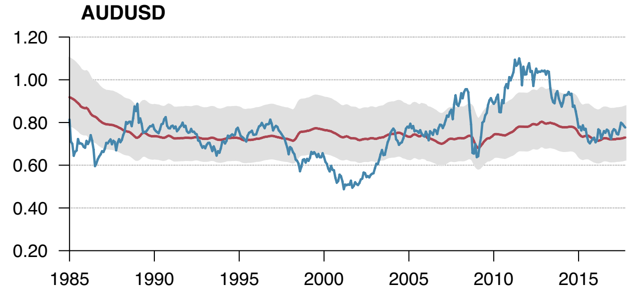
USDCHF



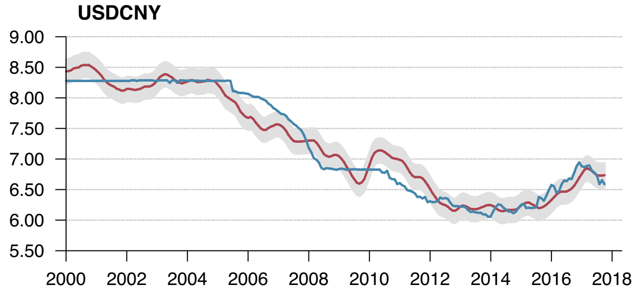
GBPUSD



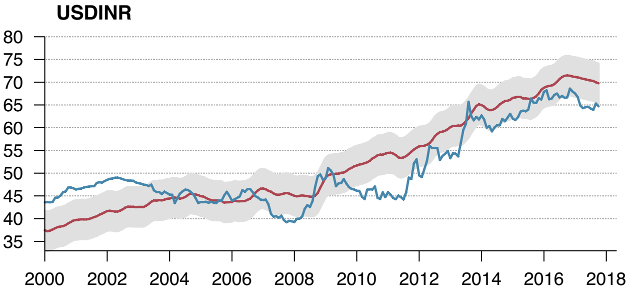
AUDUSD



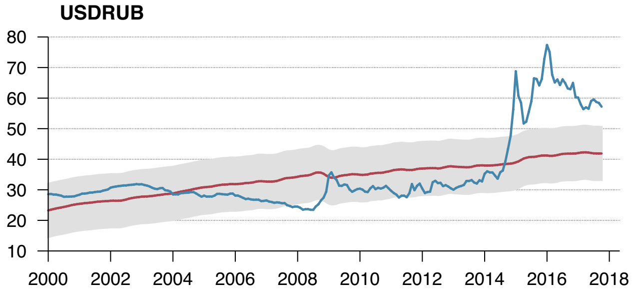
USDCNY



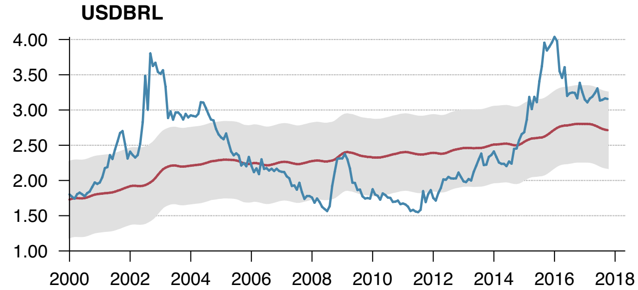
USDINR



USDRUB



USDBRL



Source: Thomson Reuters Datastream, Wellershoff & Partners

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	1.184	7.0	7.0	8.6	10.6	7.3	7.8	8.9	10.9
USDJPY	111.9	7.1	8.6	10.0	11.0	9.1	9.5	10.3	11.4
GBPUSD	1.331	7.9	8.5	8.4	10.0	8.6	8.8	8.8	10.5
EURCHF	1.153	6.4	6.0	5.6	6.5	4.6	6.5	6.3	6.9
USDCHF	0.974	7.5	7.1	8.9	10.6	6.9	8.1	9.4	10.9
GBPCHF	1.296	9.0	8.2	8.7	10.3	8.5	8.7	9.1	10.7
CHFJPY	114.9	6.1	7.3	10.1	11.7	7.2	8.5	10.7	12.2
AUDUSD	0.789	7.3	8.0	10.0	12.5	8.0	9.1	10.6	12.9
USDCAD	1.248	7.1	7.1	7.8	9.9	7.0	7.7	8.2	10.3
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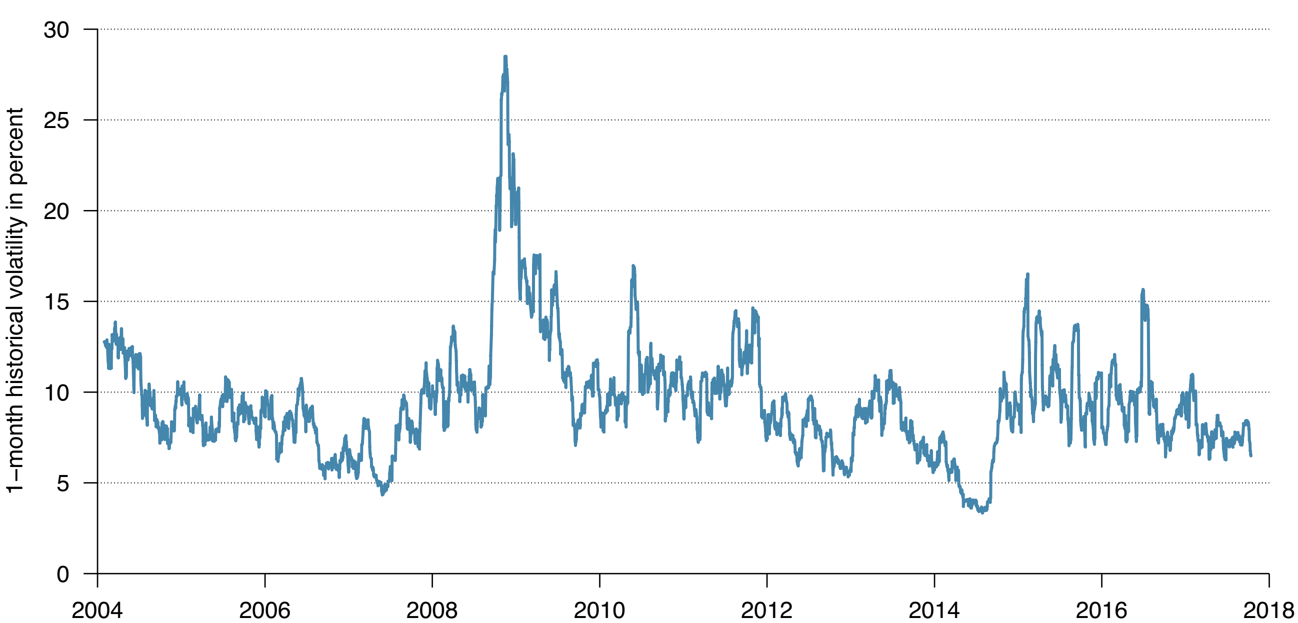
USDRUB	57.2	9.1	11.1	16.1	14.4	12.9	12.8	16.4	15.5
USDBRL	3.157	8.1	11.6	14.8	15.6	14.1	14.6	15.2	16.1
USDCNY	6.587	3.9	5.1	3.4	3.2	3.0	5.4	4.3	4.8
USDTRY	3.636	10.1	12.4	11.8	13.2	13.1	13.9	13.1	14.5
USDINR	64.91	3.7	5.5	8.2	9.5	3.8	6.9	9.3	10.5

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

QCAM volatility indicator[3]

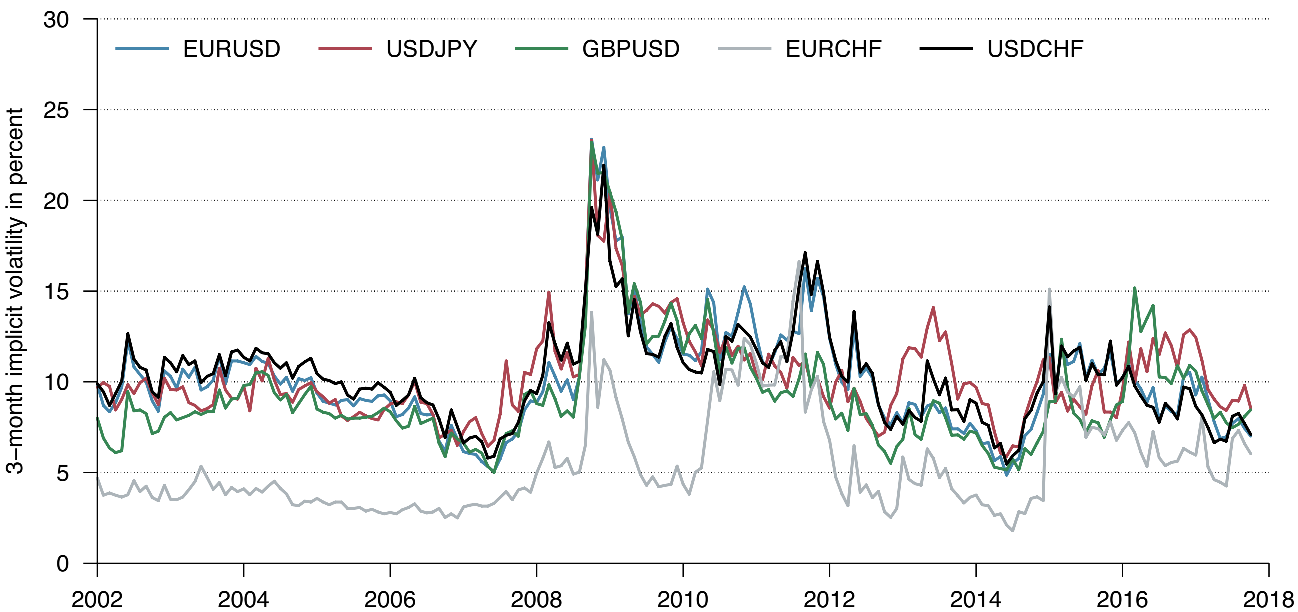


[3] The QCAM volatility indicator measures general volatility in global FX markets; the indicator is based on historical volatility of the main exchange rates, which are weighted by trading volume.

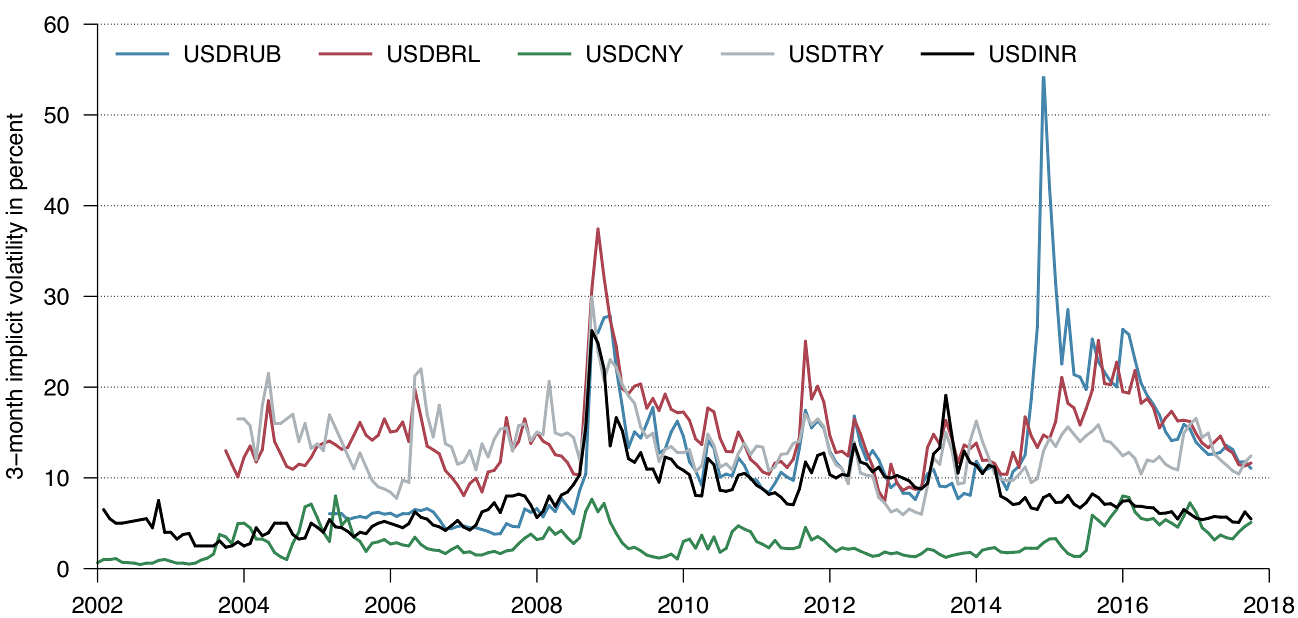
Source: Bloomberg, Thomson Reuters Datastream, QCAM Currency Asset Management, Wellershoff & Partners

QCAM Currency Asset Management

Implicit volatility



Implicit volatility



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

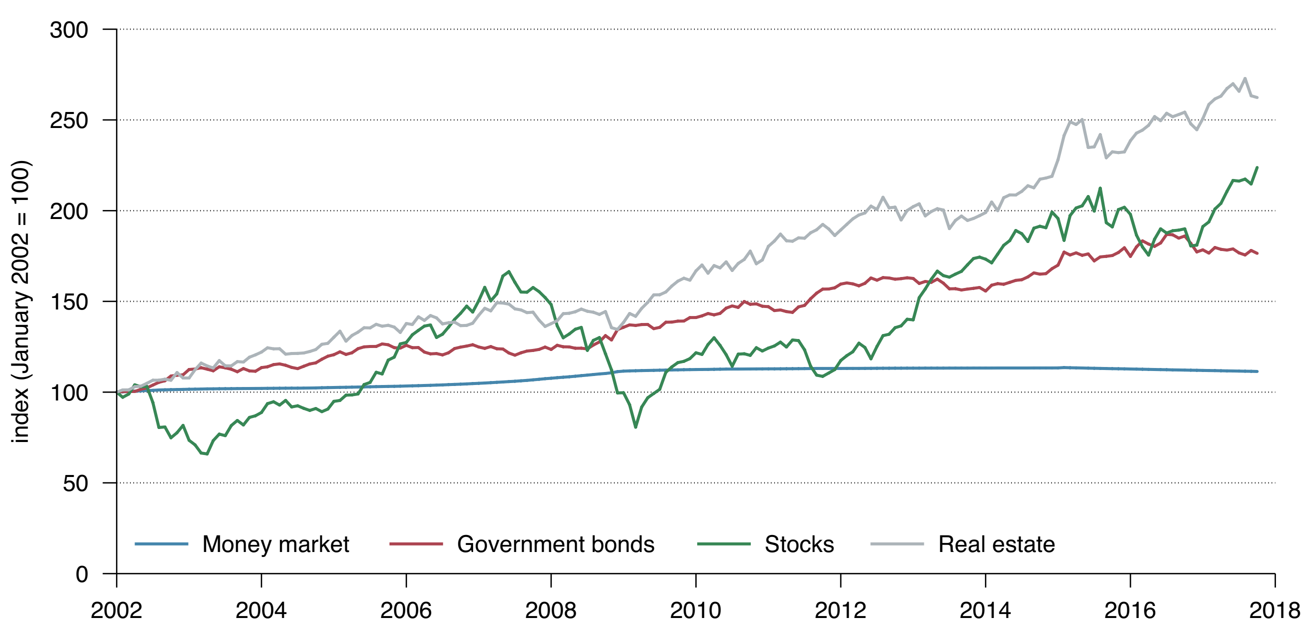
Financial markets

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	-0.5	-0.2	-0.7	-1.6	-0.5	-0.2	-0.7	-1.6
Swiss government bonds	-1.1	0.5	-4.2	8.7	-1.1	0.5	-4.2	8.7
Swiss corporate bonds	0.0	0.5	-1.8	9.2	0.0	0.5	-1.8	9.2
Swiss equities (SMI)	17.0	3.2	20.2	64.1	17.0	3.2	20.2	64.1
European equities (Stoxx600)	11.5	1.6	20.5	71.6	19.8	6.0	27.8	63.7
UK equities (Ftse100)	9.1	3.3	12.5	56.9	13.3	6.7	21.1	36.0
Japanese equities (Topix)	14.7	6.0	30.0	163.1	15.0	7.8	19.0	92.6
US equities (S&P 500)	15.9	4.3	22.2	98.7	11.2	5.0	20.4	107.7
Emerging markets equities	33.4	8.2	29.7	29.6	28.0	8.8	27.8	35.5
Global equities (MSCI World)	18.2	4.7	23.0	76.3	13.4	5.3	21.2	84.4
Swiss real estate	4.6	-3.1	4.2	32.6	4.6	-3.1	4.2	32.6
Global real estate	8.2	3.2	7.6	44.8	3.8	3.9	6.0	51.4
Commodities	-1.9	3.9	-0.4	-41.5	-5.8	4.5	-1.9	-38.9
Brent oil	0.8	17.4	10.4	-50.1	-3.3	18.1	8.8	-47.8
Gold	12.3	5.9	3.3	-26.3	7.8	6.5	1.8	-23.0

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

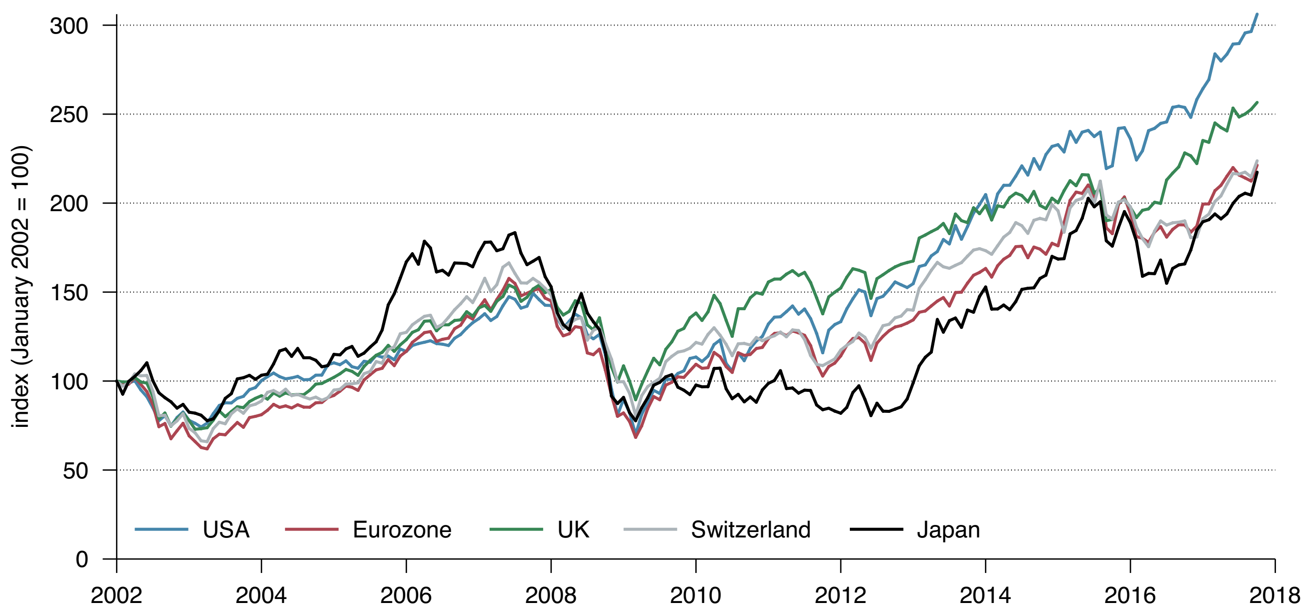
Performance of selected Swiss asset classes



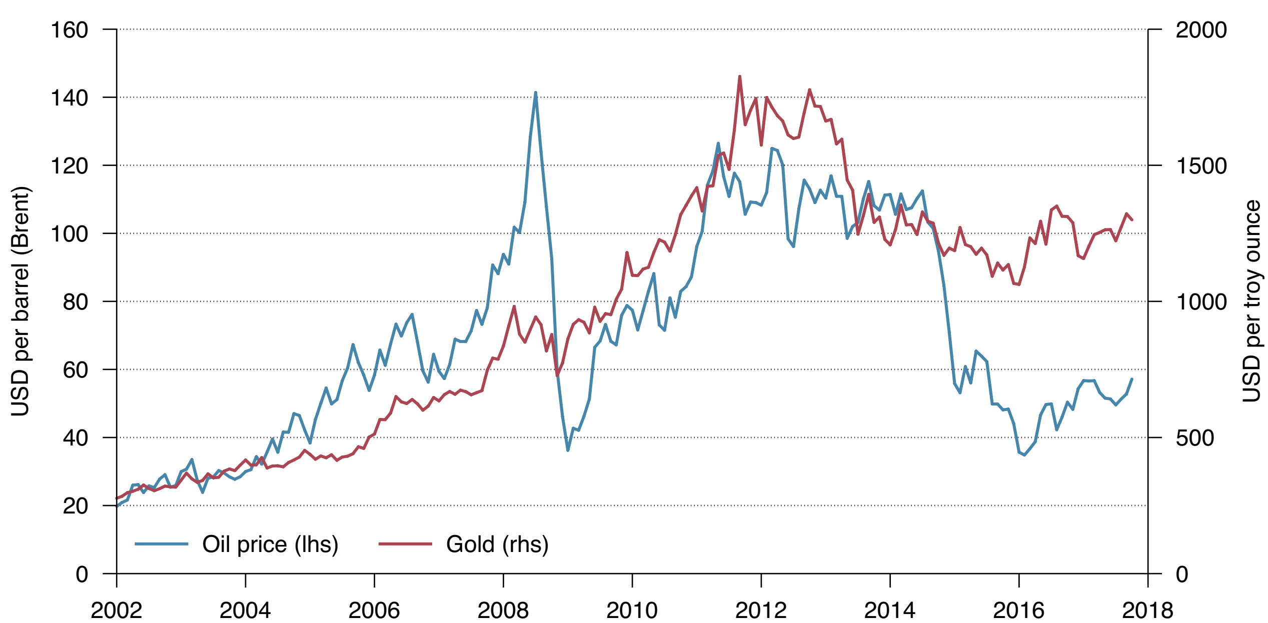
Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

QCAM® Currency Asset Management

Performance of selected equity markets (in local currency)



Performance of selected commodity prices



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

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Asset
Management

Number of the month

300 years

Take the last three digits of your phone number and add 200 to it. Now, answer the question: Did Attila the Hun sweep through Europe before or after the year that the new number denotes? People with a higher number tend to date Atilla's incursion more than 300 years later than those with a lower number. Experiments like this by Nobel laureate Richard H. Thaler impressively refute the hypothesis of rational decision-making.