January 2016

FX Monthly

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

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January 2016

Contents

Quaesta Capital Insight

The SNB taught us to expect the unexpected

Cengiz Temel
Head of FX Services and Partner at Quaesta Capital

On January 15, 2015, the Swiss National Bank abandoned its minimum exchange rate for the euro. What sort of a working day was it for you?
This was a day that not just I will never forget. It was clear the SNB wasn't going to defend the minimum exchange rate forever, but the decision really was completely unexpected. After all, just a few days earlier, the SNB's board had reiterated its commitment to the minimum exchange rate. The 15th began quietly enough but the announcement quickly spread panic in the market. Throughout the day jitters were fanned by the market's increasing illiquidity and the utter uncertainty about just how low the EURCHF exchange rate would ultimately go. We informed our clients fast and fully, and decided case by case whether any action was needed or not. In the end, we're pleased to say, our customers made it through this eventful day in good shape.

And now, a year later, how has the situation developed? Are you ready to make any predictions about the future?
The Swiss franc's dramatic appreciation, reaching 30 percent at one point, was clearly not going to last. Today, we're seeing EURCHF in the range of 1.09 and USDCHF around 1.00. Looking at trade-neutral EURCHF exchange rates, we think the franc is still considerably overvalued versus the euro. In the second half of January 2015, the EURCHF exchange rate averaged 1.01, fully 20 percent below the trade-neutral rate of 1.25 per euro. That's the biggest recorded deviation since 1985! Today, that deviation has subsided to around 12 percent, which is still quite substantial. We believe the Swiss franc will continue to weaken in the months ahead.

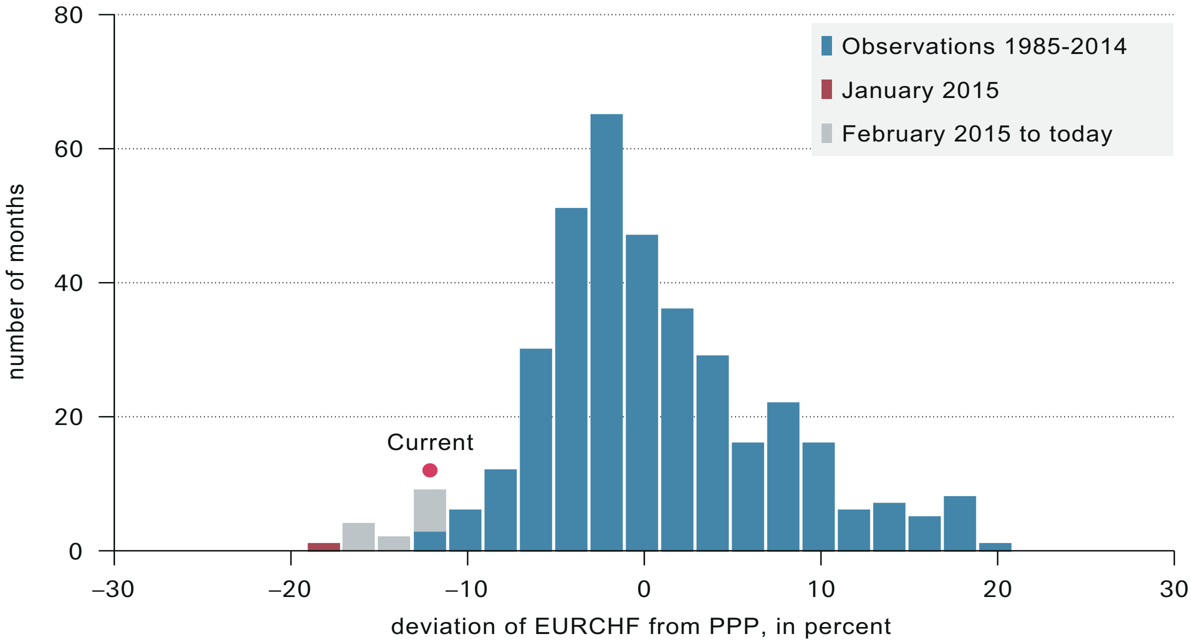
So what were the consequences of the end of the minimum exchange rate era for your clients?
As I said, our clients got through the 15th of January 2015 in good shape. This is because we had adequately hedged their currency risks beforehand. But certainly that day was a wake-up call for everyone that the management of currency risk needs constant, rigorous attention. What is more, after the abolition of the minimum exchange rate and the introduction of negative interest rates in Switzerland, the annual hedging costs for USDCHF have increased substantially. And we expect a greater volatility on the currency market because of the divergent monetary policies of the world's big central banks.

What options do investors have to deal with these developments?
Individual investors must decide whether they prefer to forego some potential return due to higher hedging costs, or take on currency risk that basically isn't compensated by any risk premium. Currency risk management offers three possibilities: no hedging whatsoever, passive partial or total hedging of currency risk exposure, or an active hedging strategy aimed at reducing currency risk while still generating some additional returns.

Which form of hedging would you recommend today?
We recommend investors who implement a passive currency risk strategy not to hedge their entire currency risk exposure. We advise them to retain some portion of currency risk, according to their individual risk capacity. This will allow them to benefit from the depreciation of the Swiss franc that we expect in 2016. We also recommend using a dynamic strategy related to hedging frequency to reduce overall hedging costs. For investors with a higher risk capacity, we recommend using a dynamic hedging strategy. In this approach, the hedge ratio is based on the overlay manager's assessments and the investor's requirements.

What was your biggest takeaway from January 15, 2015? Was there something you learned that day?
That day very clearly demonstrated what risk and risk management mean when confronted with a high level of uncertainty. In short, on January 15, 2015, the SNB taught us a familiar but nonetheless essential lesson: "Expect the unexpected."

Historical deviations of the euro-franc exchange rate from purchasing power parity



Source: Thomson Reuters Datatstream, Wellershoff & Partners

The macro perspective

PBoC pulls trigger; shoots self in foot

With its current exchange rate policy, China's central bank has not only riled domestic and global financial markets. It has also managed to worryingly increase capital outflows, thereby weakening the foundation of its exchange rate regime. So what's the benefit of a devaluation in real terms of 4 to 5 percent? Nothing at all, we say: its costs exceed its benefits many times over.

With its rate hike in December, its first since 2006, the Federal Reserve finally signaled the long-anticipated normalization of US monetary policy. In so doing, the Fed, for the first time in quite a while, departed from the policy path it had shared with its industrialized peers. But divergence has not just been a theme in matters of monetary policy. At the end of last year, the contrast in cyclical trends for industrialized and emerging economies also sharpened further. What's more, the growing divide between the manufacturing and the service sectors also widened even more.

Is the US economy losing its mojo?

With a further decline in the ISM Manufacturing Index in December, now at 48.2 points, the US has become the latest victim of the global industrial recession. This contraction has been evident in emerging economies for several quarters. Nevertheless, the US economy did manage to create a remarkable number of new jobs lately – adding 292 000 new jobs in December alone. This shows just how unimportant the manufacturing sector has become in the US. The service sector in America now employs around ten times the number of people as the industrial sector. Companies in the service sector continue to signal improving business trends, confirming the robust albeit slightly flagging positive momentum of the US-economy.

Europe's glow looks convincing

So far, the Eurozone seems to be the only region to be spared from the difficulties in the global workshop. In December, besides reflecting the further improvement of the general economy, European factories clearly signaled signs of brightening prospects for industry. All together, the economic indicators are sunny for the Eurozone, it must be said. And that includes some former "problem children" like Spain. Some readers may be surprised to learn that Spain has actually been growing faster than the US in recent months. Europe, it seems, has not grown weary from reform, as some observers have suggested on occasion.

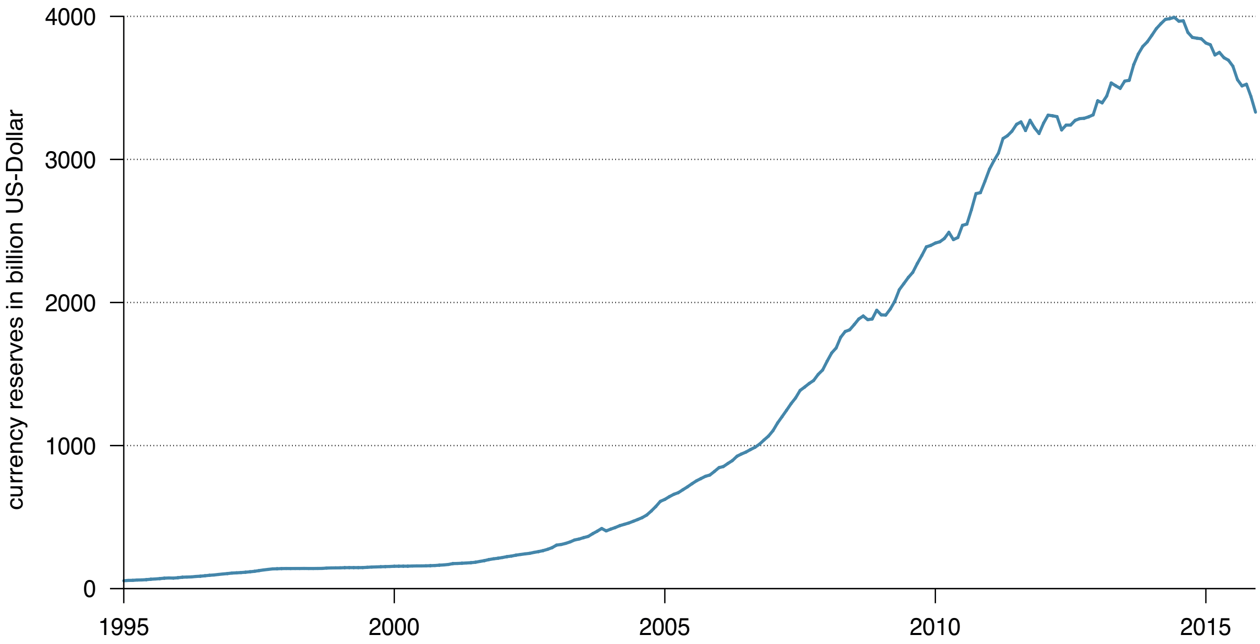
Resignation reigns in emerging markets

The situation looks very different in the emerging economies. At year-end the relevant indicators were tipping downward. The fragile hopes for a turnaround in Russia were crushed once again by renewed PMI weakness. Meanwhile in Brazil, stabilization, albeit at a dismally low level, is a hollow triumph these days. India's industrial sector, a bulwark until only recently, appears to have thrown in the towel at the end of last year. But after plunging in the first half of last year, China's construction sector at least managed to stabilize by year's end. All said, growth is markedly lower than the Chinese authorities would like to see, but at any rate the tailspin was stopped.

China's central bank shoots itself in the foot

By itself, the renewed worry about China's economic outlook cannot explain the massive losses on Chinese and global financial markets that soured the start of the New Year. Enter the People's Bank of China: Its decision to further devalue the renminbi versus the US dollar surely deserves some credit, or rather blame, here too. The move was all the more surprising given that China, once again, has been combating record-high capital outflows. With its stop-and-go exchange rate antics, the PBoC probably only poured fuel on that fire. In November and December of 2015 the central bank's foreign exchange reserves fell by an eye-watering 200 billion US dollars. And even if China still sits on FX reserves of (take a breath) 3 300 billion dollars, the PBoC's current exchange rate policy can only be maintained if the hemorrhaging capital outflows can be stopped. The worry is, that may not happen very soon.

PBoC currency reserves



Source: Thomson Reuters Datastream, Wellershoff & Partners

FX market talk

Why the Swiss franc should weaken in 2016

A year ago, when it abruptly abandoned its minimum exchange rate versus the euro, the Swiss National Bank delivered a bombshell. The Swiss franc immediately soared in value, albeit weakening somewhat over the remainder of 2015. We think the franc's slackening trend is likely to continue in the months ahead.

At 10:30am on January 15, 2015, in one of those where-were-you-when moments, the Swiss National Bank announced it would no longer defend the franc's 1.20 minimum exchange rate against the euro. Within seconds, the euro-franc exchange rate plummeted downward. Computer systems were overwhelmed and trading soon screeched to a halt. When trading resumed, the EURCHF exchange rate hovered around parity – a tectonic one-day shift.

Off-the-charts exchange rate shock

This new reality took hold over the following days and for the second half of January 2015 the exchange rate averaged a mere 1.01 francs per euro. At that level the exchange rate occupied a range fully 20 percent below the level indicated by purchasing power parity, a measure of a trade-neutral exchange rate. As the figure in the first article shows, this was the greatest single deviation in the thirty years our dataset covers.

How long do exchange rate deviations last?

Purchasing power parity (PPP) can provide useful orientation, as history amply demonstrates, especially in times of elevated uncertainty. The figure on page 16, which tracks the exchange rates of several currency pairs compared to our PPP estimates for them, makes this clear. Over time, exchange rates eventually return to PPP levels. That said, there certainly are times when an exchange rate varies considerably from PPP-indicated levels.

We wanted to know how long these divergences usually last, so we subjected them to a variety of quantitative analyses. For the euro-franc exchange rate our findings indicate that about 30 percent of a significant deviation is usually corrected after a year, 60 percent after two years and 82 percent after three. Taking the second half of January 2015 as our starting point, this would imply that the franc, by today, would have depreciated to yield a EURCHF exchange rate level of 1.09. Indeed, as we went to press the rate was 1.095. Thus, if the historical pattern holds in the second year following the end of the SNB's minimum rate policy, we may well see the exchange rate reach 1.15 to 1.20 francs per euro.

The capital account and the Swiss franc

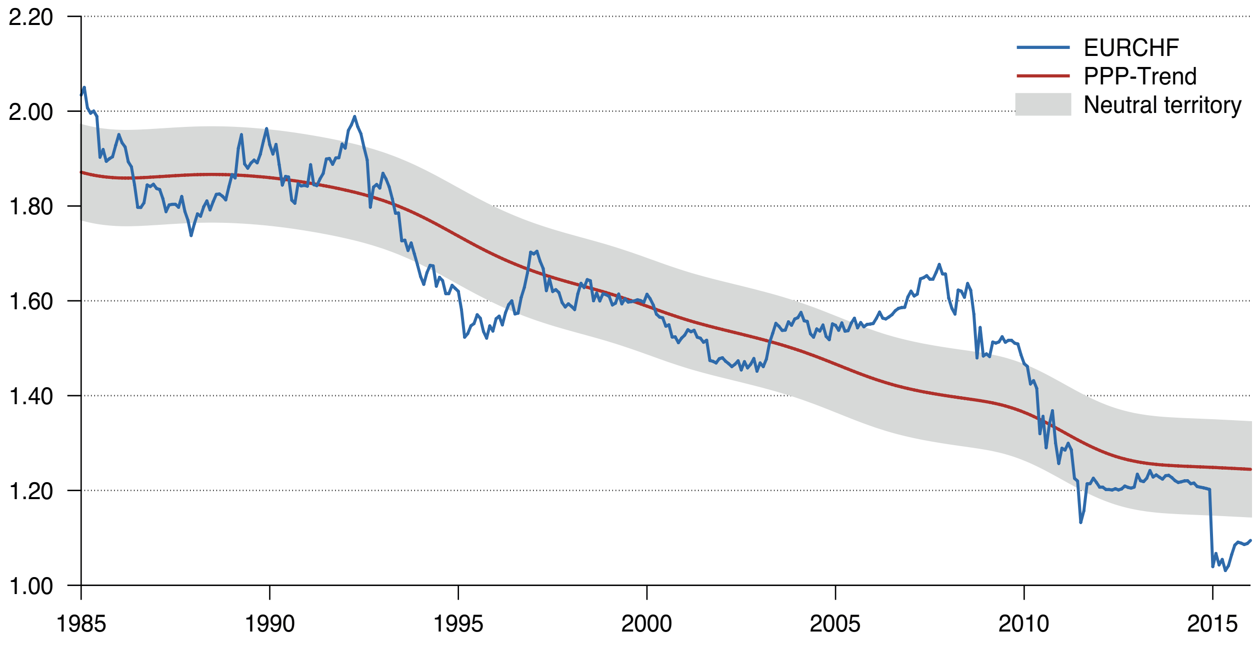
Aside from just the analysis of the purchasing power parity, the most recently published data on Switzerland's capital account also indicates that the Swiss franc will weaken in the coming months. The data on the movement of capital of companies and investors domiciled in Switzerland show that, on balance, capital exports increased significantly in the first three quarters of 2015.

This contrasts sharply with recent years, when, almost in step with the Eurozone crisis in 2011, Swiss portfolio investors basically withdrew from foreign investments. And then, in 2012, as the Eurozone slid into recession, direct Swiss investment in plants and equipment and other assets also came to a virtual standstill. All in all, the revival in capital exports in 2015 indicates that Swiss companies and investors are returning to their old investment behavior prior to the Eurozone crisis. Given the ongoing economic recovery in the Eurozone and the near-silence about a breakup of the common currency, we think that Swiss companies and investors will continue to invest in the Eurozone in 2016. This will have the side effect of lowering overall demand for francs and thus abetting the currency's further depreciation.

Recommendations

To sum up, we see far more reasons to expect the Swiss franc to devalue versus the euro than to appreciate. We therefore recommend exporters to hedge their future euro revenues at current levels only if their risk tolerance is low. Importers, however, would do well to secure their costs at the current exchange rate. And for Swiss investors, our recommendation is clear: building up foreign currency assets in their portfolio is an interesting option, in light of the still-high valuation of the franc at present.

EURCHF purchasing power parity



Source: Thomson Reuters Datastream, Wellershoff & Partners

Economic activity

The New Year began with a bang, or rather a very loud thud, on financial markets, as volatility prevailed and prices plummeted. There were several reasons for these market jitters. For one, there were renewed worries about China's economic outlook. Then oil prices slid to levels last seen in late 2008. And in the US, the ISM Manufacturing Index read a mere 48.2, well below its historical average of 53.

Is the global economy running out of steam? Several factors paint a different picture. First, the significance of a further decline in the ISM index in the US should not be overstated. The US labor market managed to create 292 000 new jobs in December 2015. And let's remember that the already good job creation in November was corrected, adding a further 41 000 to the total. Not at last, our economic climate indicator signals continued robust above-trend growth for the US.

The Eurozone also offers some welcome good news, with all member states embarked on a positive growth trend. Spain, in particular, looks poised for quite a robust growth development.

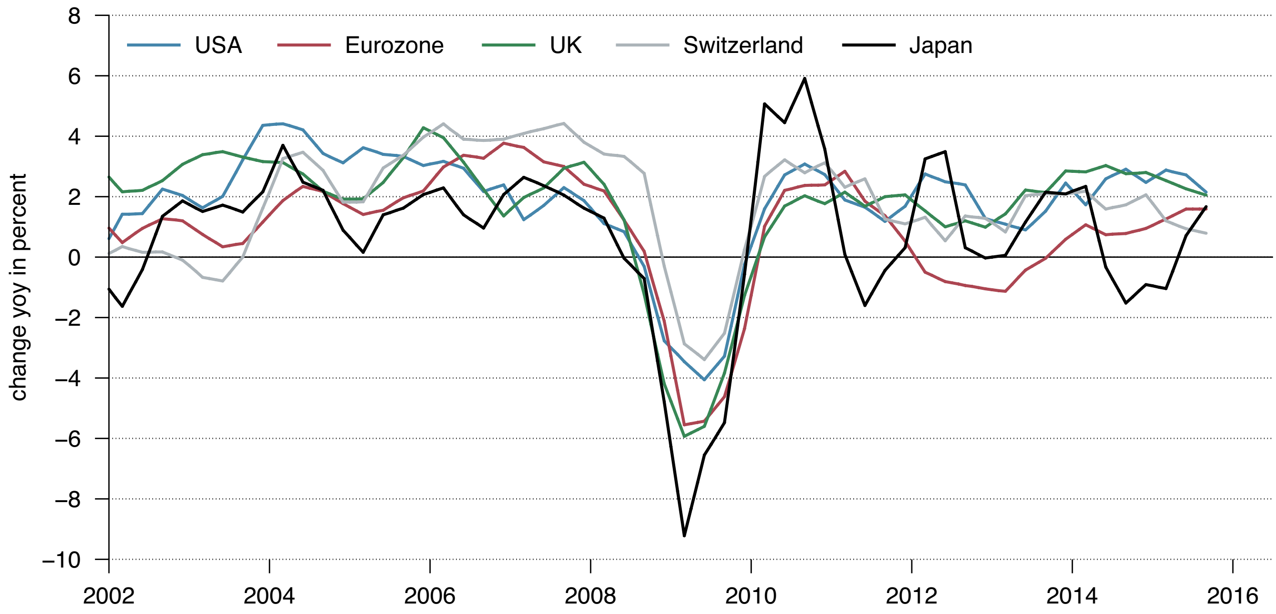
Growth overview

	Trend growth[1]	Real GDP growth[2]				W&P economic sentiment indicators[3]			
		Q1/2015	Q2/2015	Q3/2015	Q4/2015	9/2015	10/2015	11/2015	12/2015
United States	1.7	2.9	2.7	2.2	–	2.7	3.0	2.3	2.3
Eurozone	1.0	1.3	1.6	1.6	–	2.3	2.4	2.4	2.6
Germany	1.4	1.1	1.6	1.7	–	2.8	2.7	2.7	2.7
France	0.7	0.9	1.0	1.1	–	1.5	1.9	1.7	1.7
Italy	0.2	0.1	0.6	0.8	–	2.2	2.4	2.2	2.3
Spain	1.6	2.7	3.2	3.4	–	4.0	3.9	3.9	4.8
United Kingdom	1.8	2.5	2.3	2.0	–	3.4	3.1	2.9	3.4
Switzerland	1.5	1.2	0.9	0.8	–	0.8	0.6	0.5	0.7
Japan	0.4	-1.0	0.7	1.7	–	2.1	2.2	2.2	2.3
Canada	1.6	2.1	1.1	1.2	–	1.2	1.3	1.1	0.7
Australia	2.4	2.1	1.9	2.5	–	3.5	3.4	3.3	3.2
Brazil	1.4	-2.1	-2.9	-4.4	–	0.8	-0.9	-1.0	0.0
Russia	0.1	-2.2	-4.6	-4.1	–	0.8	2.0	1.9	0.3
India	7.7	7.5	7.0	7.4	–	6.1	5.9	5.7	5.1
China	7.4	7.0	7.0	6.9	–	6.9	7.6	7.8	7.5
Advanced economies[4]	1.4	1.9	2.1	2.0	–	2.7	2.9	2.5	2.6
Emerging economies[4]	6.0	4.8	4.5	4.5	–	3.8	4.2	4.2	4.0
World economy[4]	3.5	3.3	3.3	3.3	–	3.0	3.2	3.2	3.1

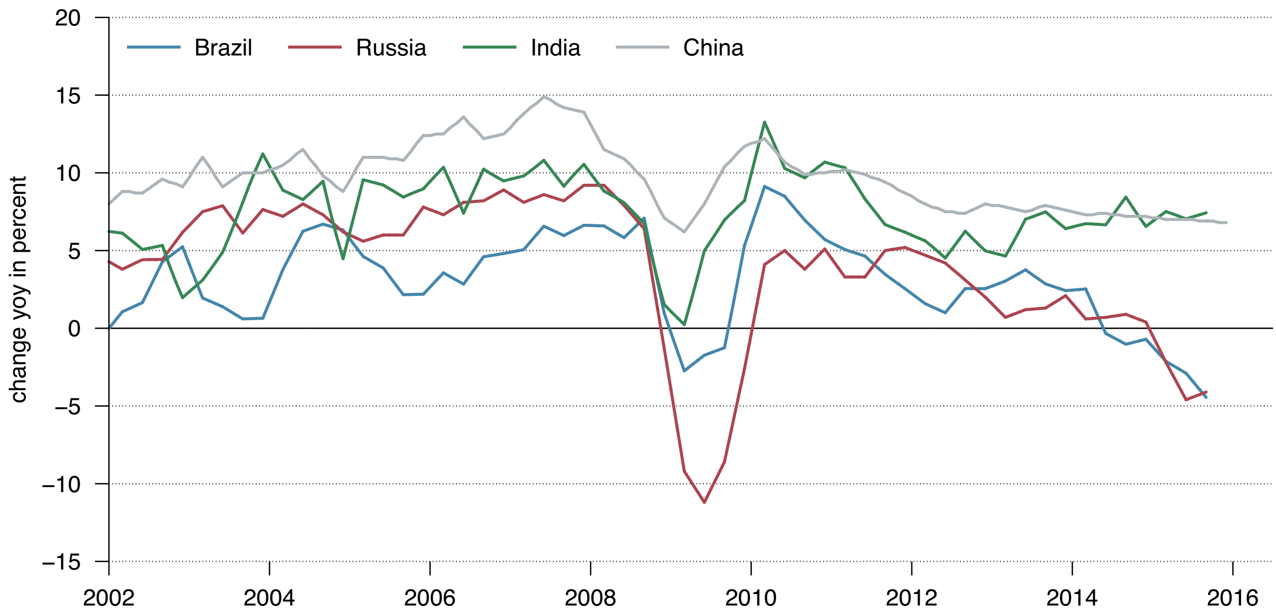
[1] Current year-on-year trend growth rate of real GDP, in percent, according to the proprietary trend growth model of Wellershoff & Partners.
[2] Year-on-year growth rate, in percent.
[3] Wellershoff & Partners economic sentiment indicators are based on consumer and business surveys and have up to 6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

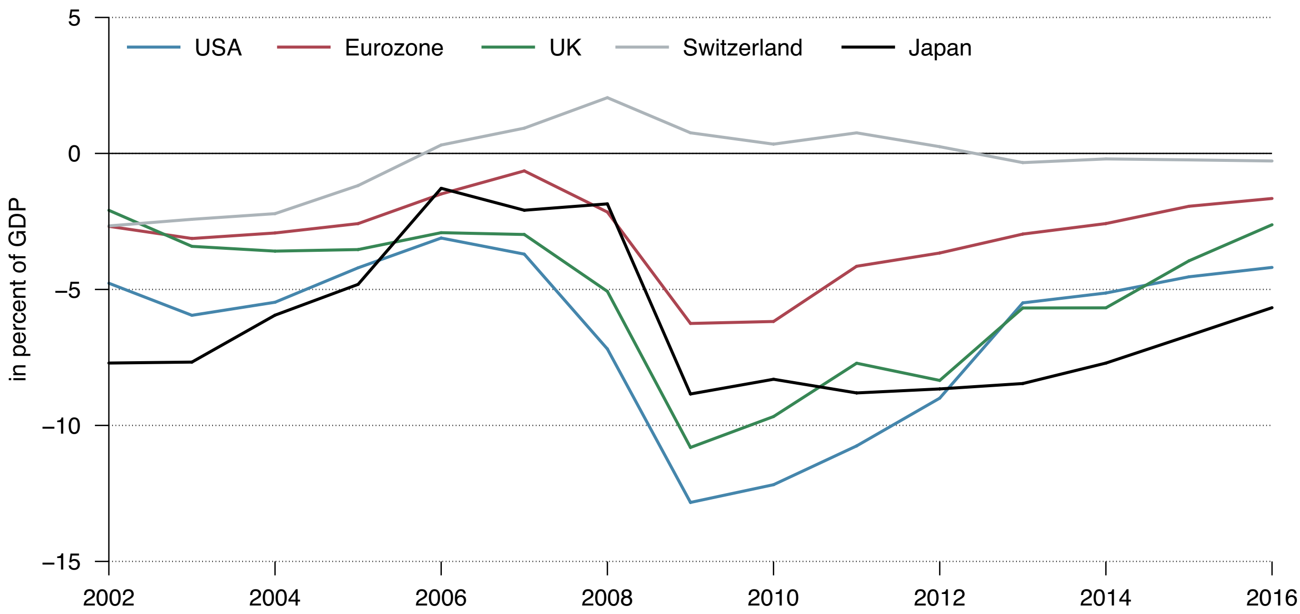
Economic indicators

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	22.5	24.5	-2.6	-2.8	110.7	111.4	-7.0	-4.2	7.2	5.0
Eurozone	17.3	15.6	2.6	3.7	105.1	110.2	-3.1	-1.7	11.3	10.5
Germany	4.9	4.5	7.0	8.0	82.4	75.0	0.0	0.6	6.8	6.3
France	3.7	3.3	-0.7	0.2	112.1	121.3	-4.3	-3.4	9.5	10.2
Italy	2.8	2.4	0.2	1.3	144.4	159.9	-3.0	-2.2	11.0	11.7
Spain	1.8	1.7	0.1	1.3	102.0	118.7	-7.4	-2.9	24.2	21.4
United Kingdom	3.7	4.0	-3.7	-3.4	111.5	115.5	-6.3	-2.6	4.2	2.3
Switzerland	0.9	0.9	9.2	9.9	45.9	46.6	0.0	-0.3	3.1	3.7
Japan	6.9	5.5	1.6	2.9	220.1	232.4	-8.1	-5.7	4.1	3.3
Canada	2.4	2.1	-2.8	-2.3	87.9	89.4	-2.6	-1.3	7.1	7.1
Australia	1.9	1.6	-3.5	-4.1	30.6	37.3	-3.2	-1.8	5.6	5.8
China	12.7	16.1	2.2	2.8	39.3	46.0	-0.7	-2.3	4.1	–
Brazil	3.1	2.2	-3.7	-3.8	64.4	74.5	-4.4	-7.2	5.4	7.5
India	2.6	3.1	-2.7	-1.6	66.5	63.9	-7.5	-7.0	–	–
Russia	2.4	1.5	3.7	5.4	15.3	21.0	-1.2	-3.9	5.7	5.8

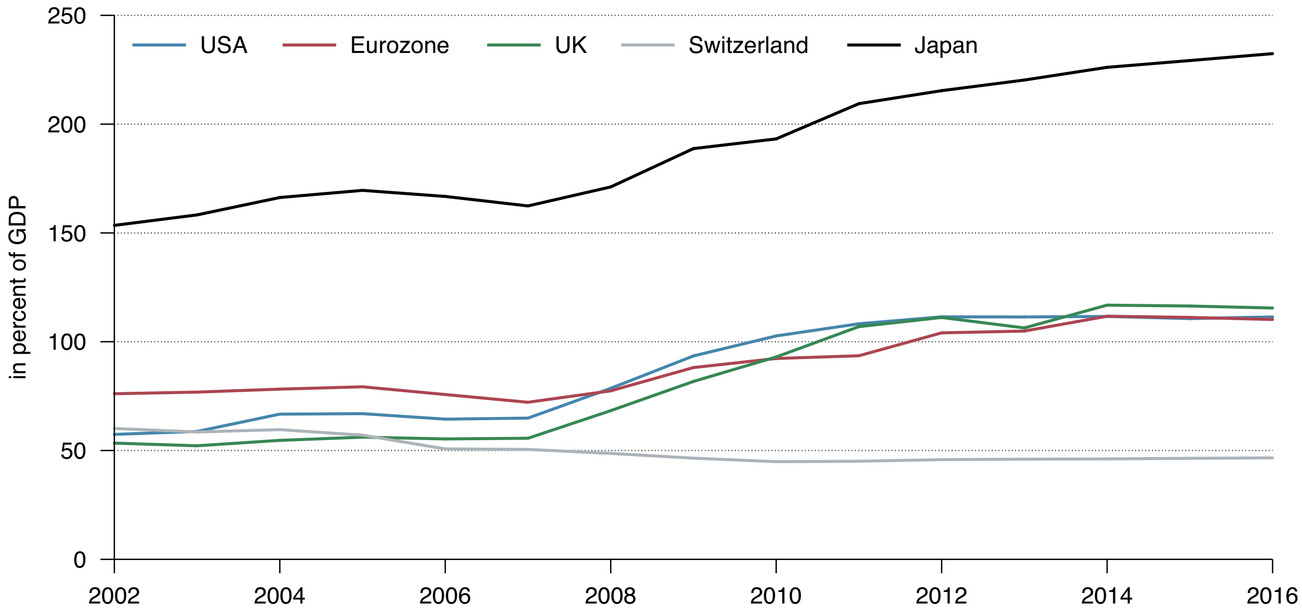
[1] In percent; calculations based on market exchange rates. [2] In percent of nominal GDP. [3] In percent.

Budget deficits in advanced economies

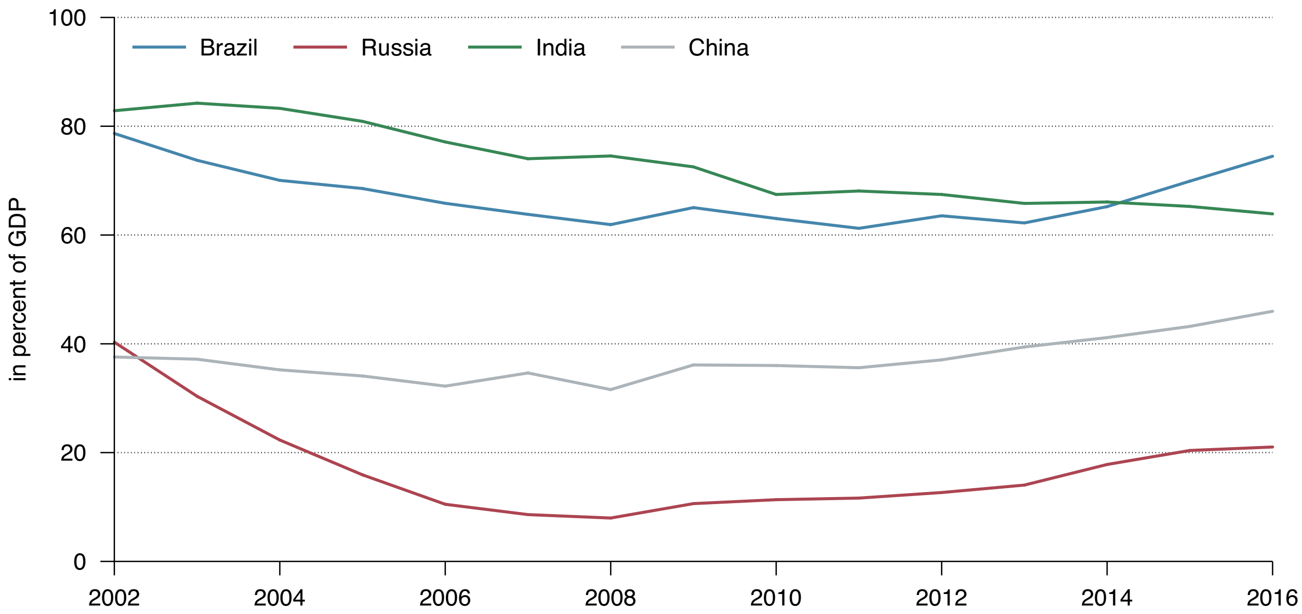


Source: Thomson Reuters Datastream, Wellershoff & Partners

Public debt in advanced economies



Public debt in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

Inflation

Estimates of the impact of the energy component on overall inflation must be corrected downwards again. The reason: a further drop in oil prices to below 30 US dollars per barrel. Nevertheless, over the next two months, we expect a year-over-year increase in the overall inflation rate to around 1 percent in the US, assuming, of course, that oil prices remain at their current (low) levels.

November's data indicates the US headline inflation rate increased to 0.4 percent year-over-year, while the core inflation rate grew by a tenth of a percentage point, to 2 percent, thus reaching the level targeted by the Fed. But overshooting the Fed's target remains a risk, since the strong US dollar weighs on import prices and thus, for now, has a distorting effect on core inflation data.

In the Eurozone headline inflation stabilized in December at 0.2 percent year-over-year, while core inflation held at 0.9 percent for that period. Estimates of crude oil's base effect suggest that the Eurozone's headline inflation again risks slipping into negative territory by the middle of this year.

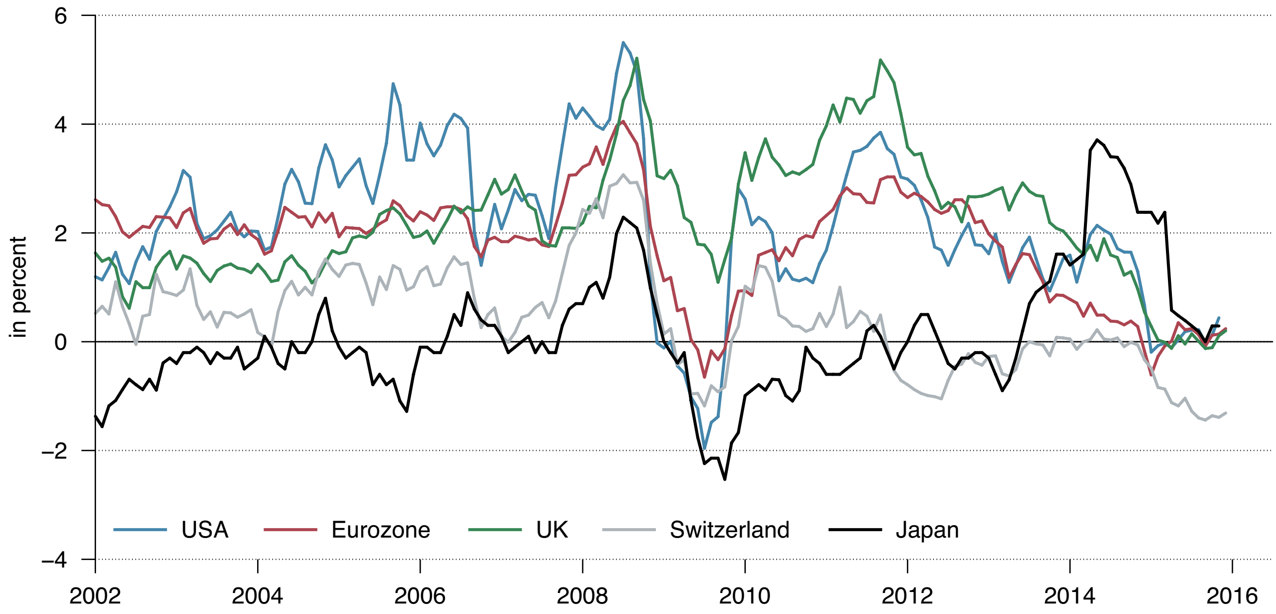
Inflation overview

	Ø 10 years[1]	Inflation[2]				Core inflation[3]			
		9/2015	10/2015	11/2015	12/2015	9/2015	10/2015	11/2015	12/2015
United States	2.0	0.0	0.1	0.4	–	1.9	1.9	2.0	–
Eurozone	1.7	-0.1	0.1	0.1	0.2	0.9	1.1	0.9	0.9
Germany	1.5	0.0	0.3	0.3	0.4	1.2	1.4	1.3	1.2
France	1.3	0.0	0.1	0.0	0.2	0.6	0.7	0.7	0.8
Italy	1.7	0.2	0.3	0.1	0.1	0.9	0.9	0.7	0.6
Spain	1.8	-0.9	-0.7	-0.3	0.0	0.8	0.9	1.0	0.9
United Kingdom	2.5	-0.1	-0.1	0.1	0.2	1.0	1.1	1.2	1.4
Switzerland	0.3	-1.4	-1.4	-1.4	-1.3	-0.7	-0.8	-1.0	-0.9
Japan	0.3	0.0	0.3	0.3	–	0.9	0.8	0.9	–
Canada	1.7	1.0	1.0	1.4	–	2.1	2.1	2.0	–
Australia	2.7	1.5	–	–	–	2.1	–	–	–
Brazil	5.7	9.5	9.9	10.5	10.7	9.1	9.2	9.4	9.4
Russia	9.5	15.7	15.6	15.0	12.9	16.6	16.4	15.9	13.7
India	8.1	4.4	5.0	5.4	5.6	–	–	–	–
China	2.9	1.6	1.3	1.5	1.6	1.6	1.5	1.5	1.5
Advanced economies[4]	1.7	0.0	0.2	0.4	0.4	1.4	1.5	1.5	1.5
Emerging economies[4]	5.2	4.4	4.4	4.6	4.5	4.5	4.4	4.3	4.0
World economy[4]	3.2	2.1	2.1	2.3	2.3	2.4	2.4	2.4	2.3

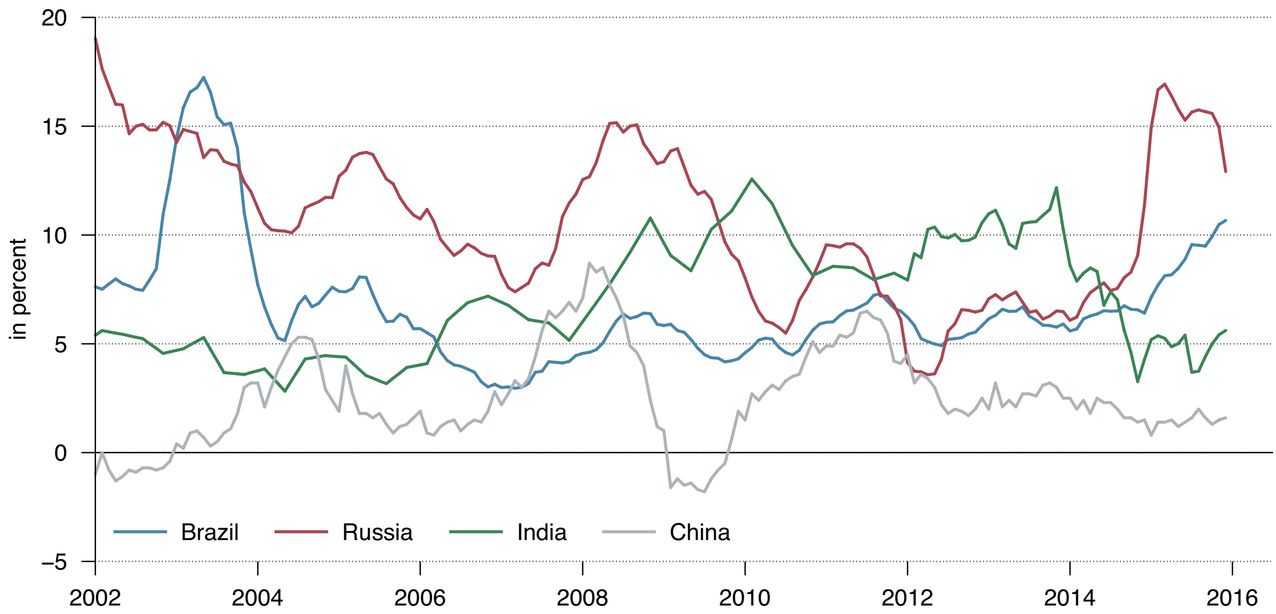
1 Average annual consumer price inflation, in percent.
2 Year-on-year change of the consumer price index (CPI), in percent.
3 Core inflation is a measure of inflation that excludes certain items that can experience volatile price movements, such as energy and certain food items; year-on-year change of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

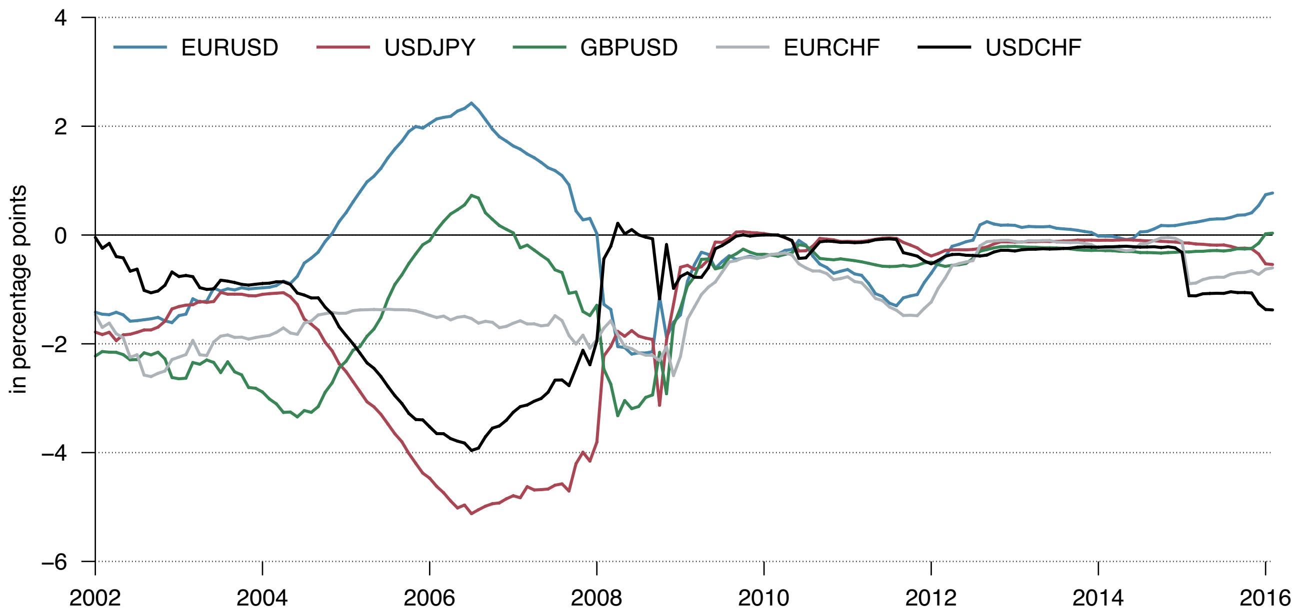
Interest rates

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	1.088	0.72	0.27	-0.09	0.00	1.08	0.37	-0.02	0.02
USDJPY	117.4	-0.54	-0.16	-0.17	-1.23	-0.92	-0.35	-0.36	-1.35
GBPUSD	1.427	0.03	-0.31	-0.34	-0.56	0.11	-0.35	-0.44	-0.61
EURCHF	1.095	-0.65	-0.55	-0.52	-0.92	-0.68	-0.69	-0.68	-1.00
USDCHF	1.007	-1.37	-0.82	-0.44	-0.92	-1.75	-1.06	-0.66	-1.02
GBPCHF	1.437	-1.34	-1.12	-0.78	-1.48	-1.64	-1.41	-1.10	-1.63
CHFJPY	116.6	0.84	0.66	0.27	-0.31	0.83	0.71	0.30	-0.33
AUDUSD	0.688	-1.31	-2.17	-2.70	-2.57	-0.63	-1.65	-2.09	-2.20
USDCAD	1.452	0.20	1.04	0.89	0.36	-0.19	0.84	0.68	0.20
USDSEK	8.589	-0.92	-0.14	0.79	0.23	-1.21	-0.20	0.65	0.20
USDRUB	79.13	10.43	20.44	8.11	6.60	10.30	18.84	7.86	7.11
USDBRL	4.031	14.18	12.02	10.27	9.58	14.46	12.05	10.14	9.53
USDCNY	6.579	2.39	4.64	4.19	2.44	2.15	4.14	3.81	2.22
USDTRY	3.032	10.96	8.72	8.67	9.83	10.44	8.05	8.57	10.14
USDINR	67.68	7.47	8.28	8.85	6.76	5.95	6.64	6.26	4.26

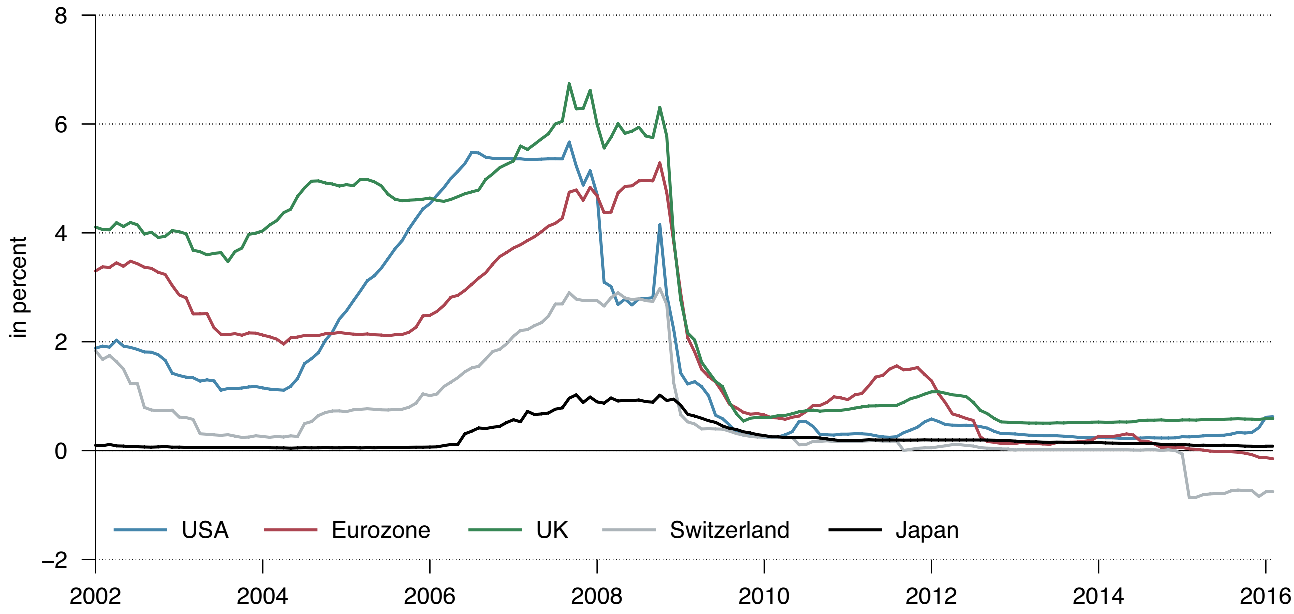
[1] The gap in interest rates between the second currency and the first one, in percentage points; e.g. US dollar minus euro for EURUSD.

Interest rate differentials

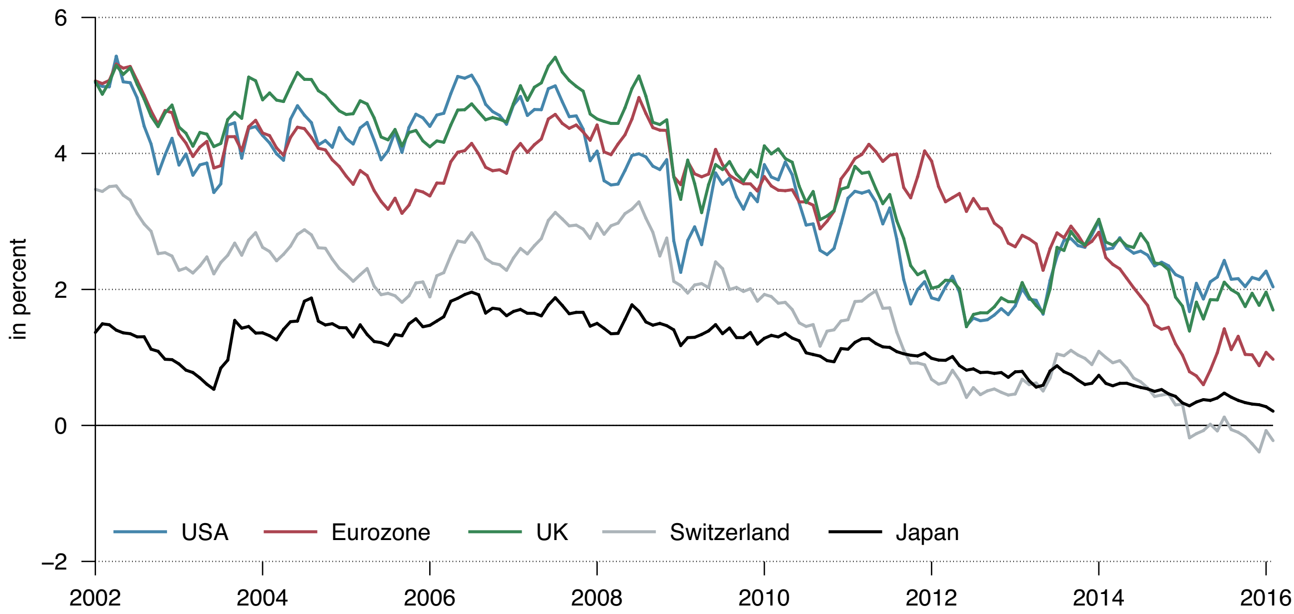


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

3-month Libor



10-year government bond yields



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

FX markets

On December 16, 2015, the US Federal Reserve raised its key interest rate by 25 basis points. Nevertheless, the trade-weighted US dollar barely increased in value. Shortly after the Fed's announcement, the dollar appreciated by almost one percent, only to shed that gain the following week. This shows once again that the importance of interest rate differentials for assessing future exchange rate movements should not be overestimated.

We calculate that twelve of the 15 currency pairs currently have broken out of the neutral range band of purchasing power parity. In particular, the US dollar remains highly valued, in fact overvalued in nine of eleven currency pairs. The euro and the British pound have the greatest potential for appreciation against the US dollar, according to purchasing power parity. We're currently keeping a watchful eye on the Japanese yen, which looks particularly attractive from USD and CHF points of view, both in terms of valuation and momentum.

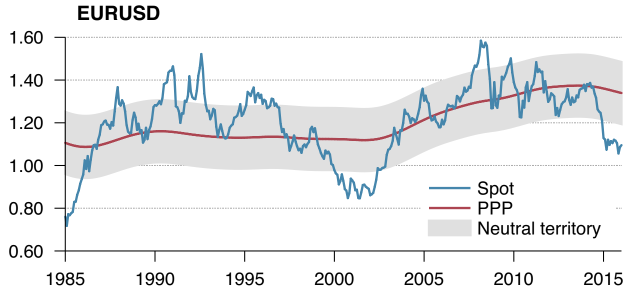
The development of the Russian ruble is also worth tracking right now. The ruble has devalued a further 25 percent since mid-October versus the US dollar and now registers a deviation to purchasing power parity of more than an astonishing 100 percent.

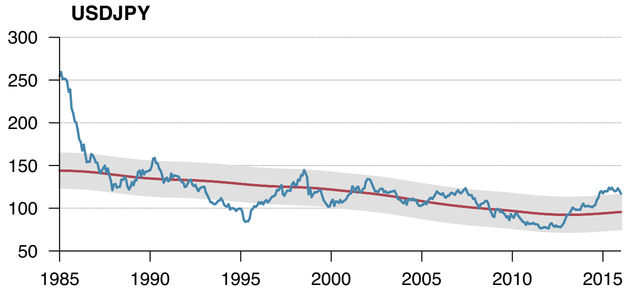
FX overview

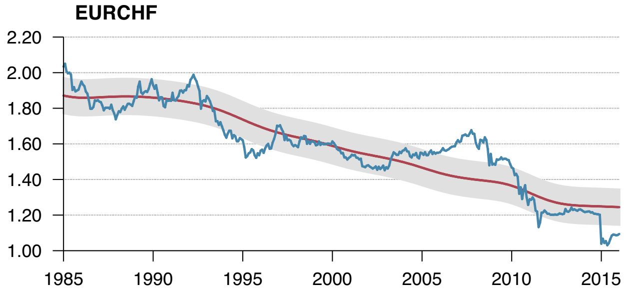
	Current exchange rate	Performance[1]				Purchasing Power Parity[2]		
		YTD	3 months	1 year	5 years	PPP	Neutral territory	Deviation[3]
EURUSD	1.088	0.1	-4.1	-5.4	-18.8	1.34	1.19 - 1.48	-18.8
USDJPY	117.4	-2.4	-2.1	-0.2	42.0	95.60	75.80 - 115.50	22.8
GBPUSD	1.427	-3.2	-7.7	-5.6	-10.7	1.64	1.48 - 1.80	-13.2
EURCHF	1.095	0.7	1.1	11.6	-15.0	1.24	1.15 - 1.34	-12.0
USDCHF	1.007	0.5	5.5	18.0	4.6	0.96	0.77 - 1.16	4.7
GBPCHF	1.437	-2.6	-2.6	11.4	-6.6	1.62	1.34 - 1.89	-11.1
CHFJPY	116.6	-3.0	-7.2	-15.4	35.7	90.90	78.50 - 103.3	28.3
AUDUSD	0.688	-5.5	-5.3	-16.1	-31.0	0.72	0.60 - 0.85	-4.9
USDCAD	1.452	4.5	12.1	21.3	46.3	1.14	1.07 - 1.22	27.2
USDSEK	8.589	1.9	3.4	5.4	28.9	6.84	5.95 - 7.73	25.6
USDRUB	79.13	8.3	27.8	21.6	164.7	36.60	30.10 - 43.10	116.1
USDBRL	4.031	1.9	4.1	53.5	140.8	2.78	2.27 - 3.28	45.1
USDCNY	6.579	1.3	3.6	6.0	-0.1	6.28	6.07 - 6.49	4.7
USDTRY	3.032	3.9	4.6	29.9	97.3	2.19	1.94 - 2.45	38.2
USDINR	67.68	2.3	4.1	9.2	49.1	62.40	59.20 - 65.60	8.5

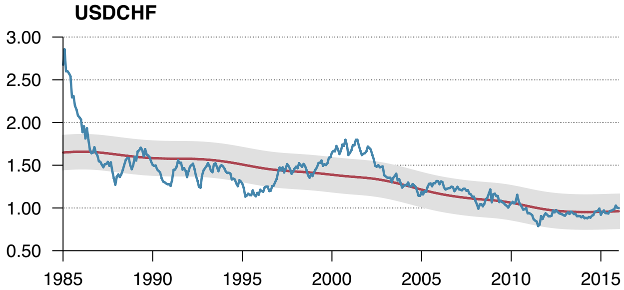
1 Performance over the respective period of time, in percent.
2 Purchasing power parity (PPP) is estimated based on the relative development of inflation rates in two currency markets; the neutral territory is determined by +/- 1 standard deviation of the historical variation around the PPP value.
3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

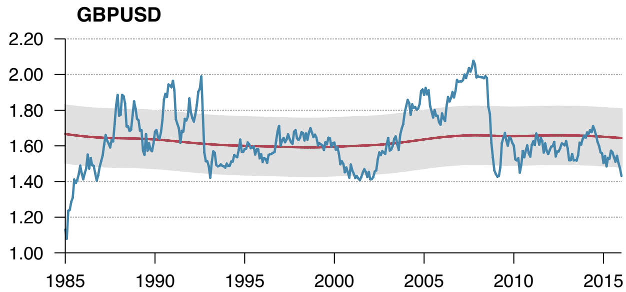
Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

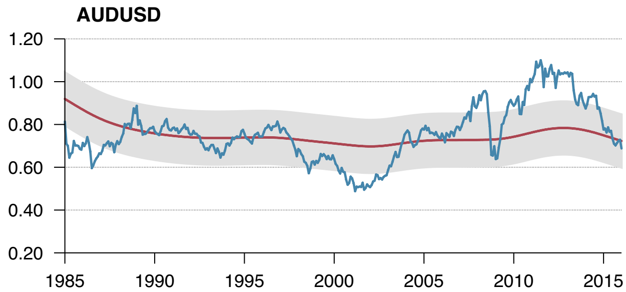


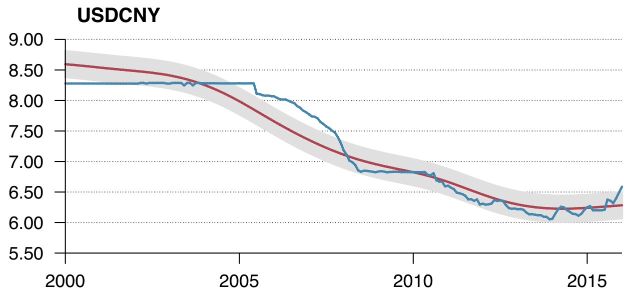


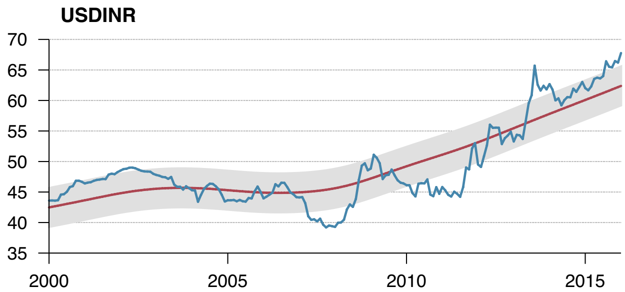


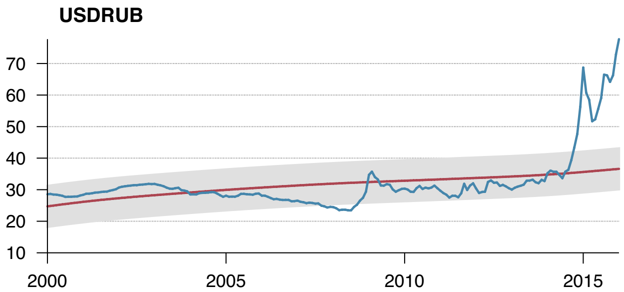


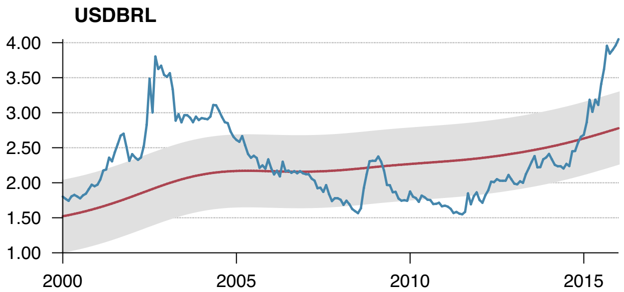












Source: Thomson Reuters Datastream, Wellershoff & Partners

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	1.088	10.3	9.9	9.7	10.3	11.9	10.1	10.3	10.7
USDJPY	117.4	7.6	9.3	9.6	10.6	8.5	9.4	10.6	11.0
GBPUSD	1.427	7.1	8.5	8.0	9.4	8.2	10.2	8.9	9.9
EURCHF	1.095	5.9	6.5	6.4	6.0	9.0	7.6	7.3	6.2
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GBPCHF	1.437	9.1	9.8	8.9	9.6	11.1	10.7	9.6	10.1
CHFJPY	116.6	8.5	9.5	11.0	11.2	11.2	10.7	11.8	11.7
AUDUSD	0.688	11.3	12.5	11.0	12.2	12.9	12.6	11.8	12.5
USDCAD	1.452	8.2	10.7	8.1	9.7	9.6	10.4	8.7	10.0
USDSEK	8.589	10.3	10.6	11.5	12.5	13.0	11.4	12.1	12.7
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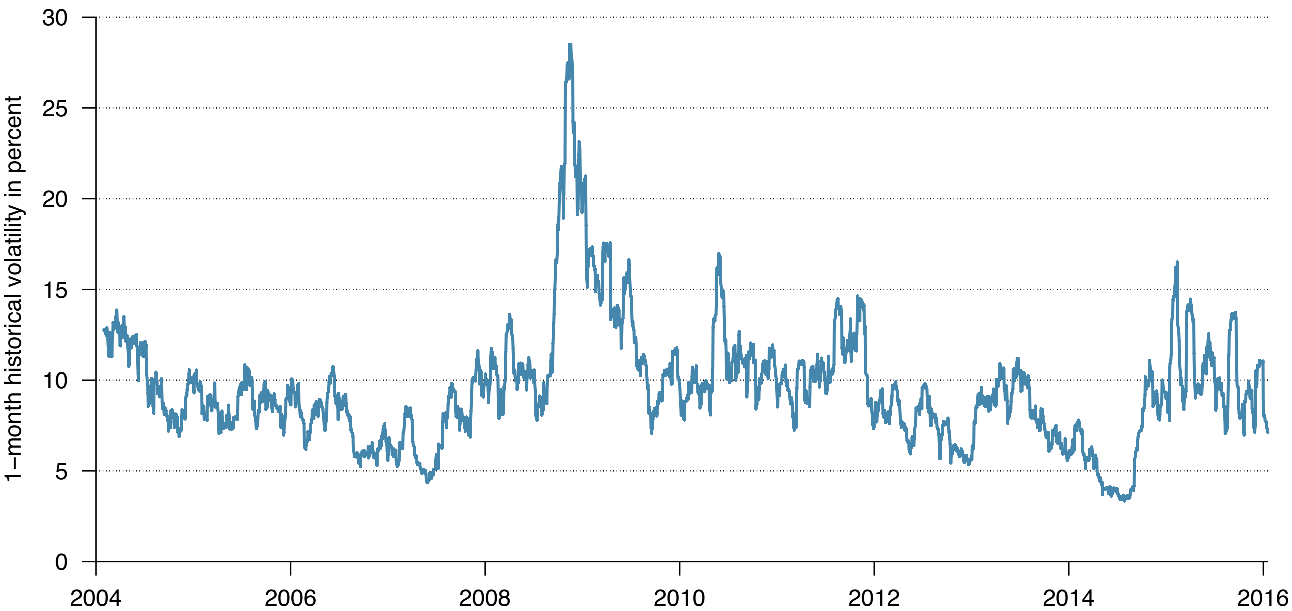
USDBRL	4.031	18.2	19.4	14.1	15.0	19.8	19.8	14.9	15.6
USDCNY	6.579	2.3	8.1	2.4	2.7	3.2	9.0	3.3	4.2
USDTRY	3.032	12.9	13.9	11.8	13.4	13.8	15.2	13.1	14.7
USDINR	67.68	4.4	7.4	9.6	9.5	4.7	9.0	10.6	10.2

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

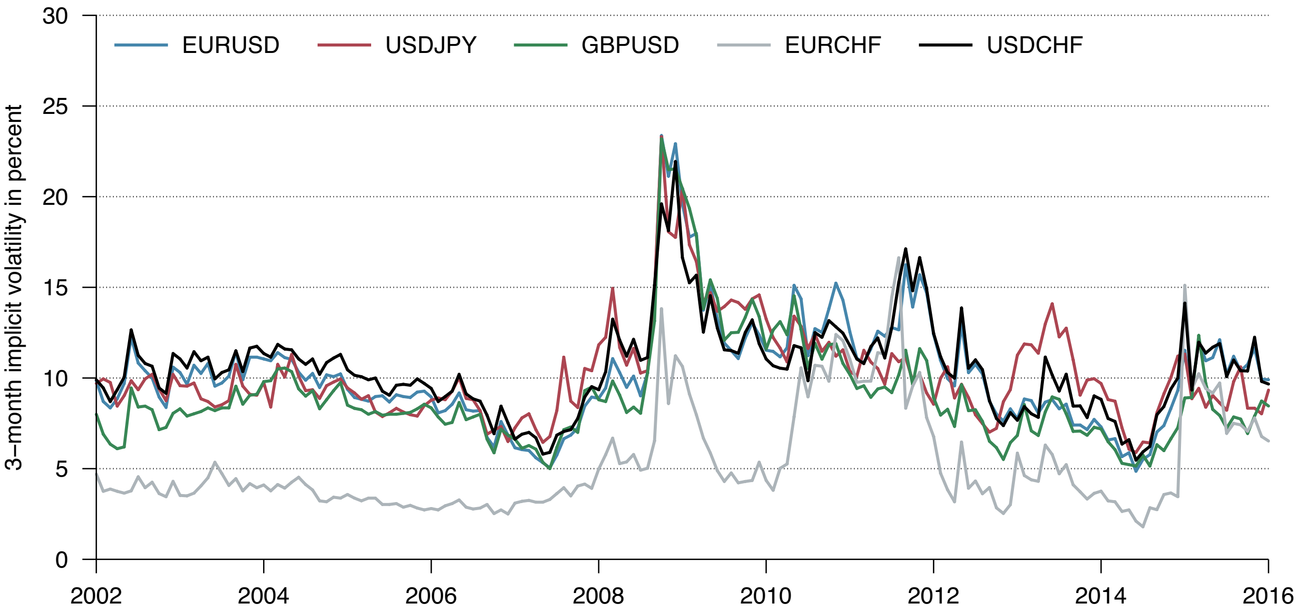
Quaesta Capital volatility indicator[3]



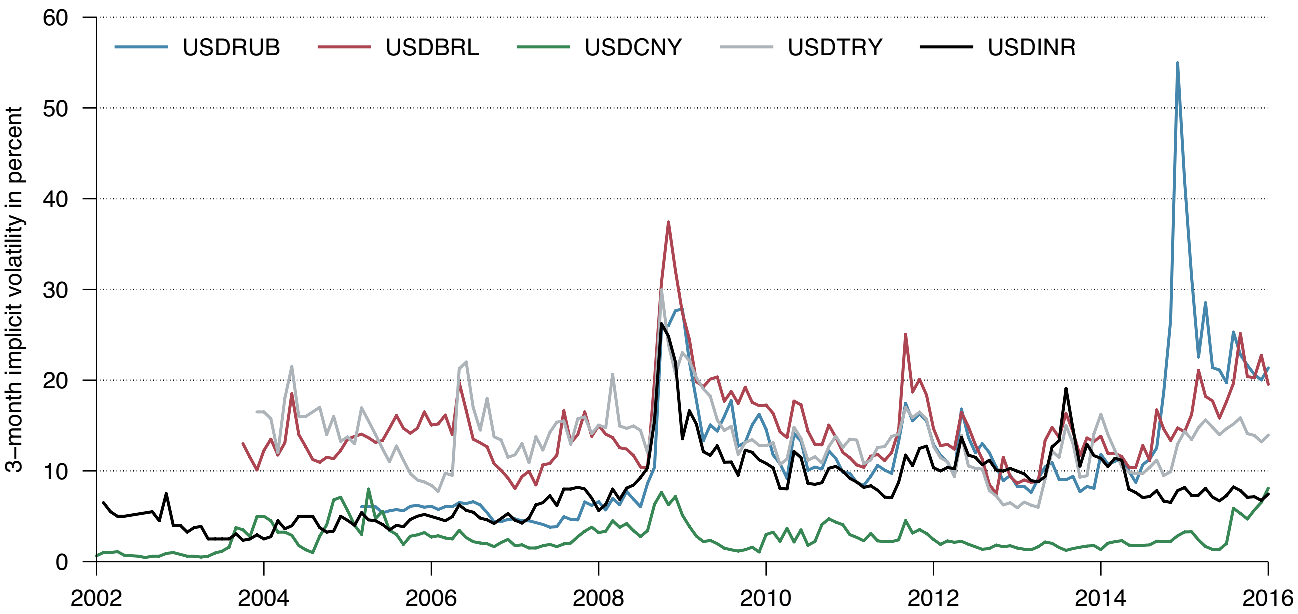
[3] Quaesta Capital's volatility indicator measures general volatility in global FX markets; the indicator is based on historical volatility of the main exchange rates, which are weighted by trading volume.

Source: Bloomberg, Quaesta Capital, Thomson Reuters Datastream, Wellershoff & Partners

Implied volatility



Implied volatility



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

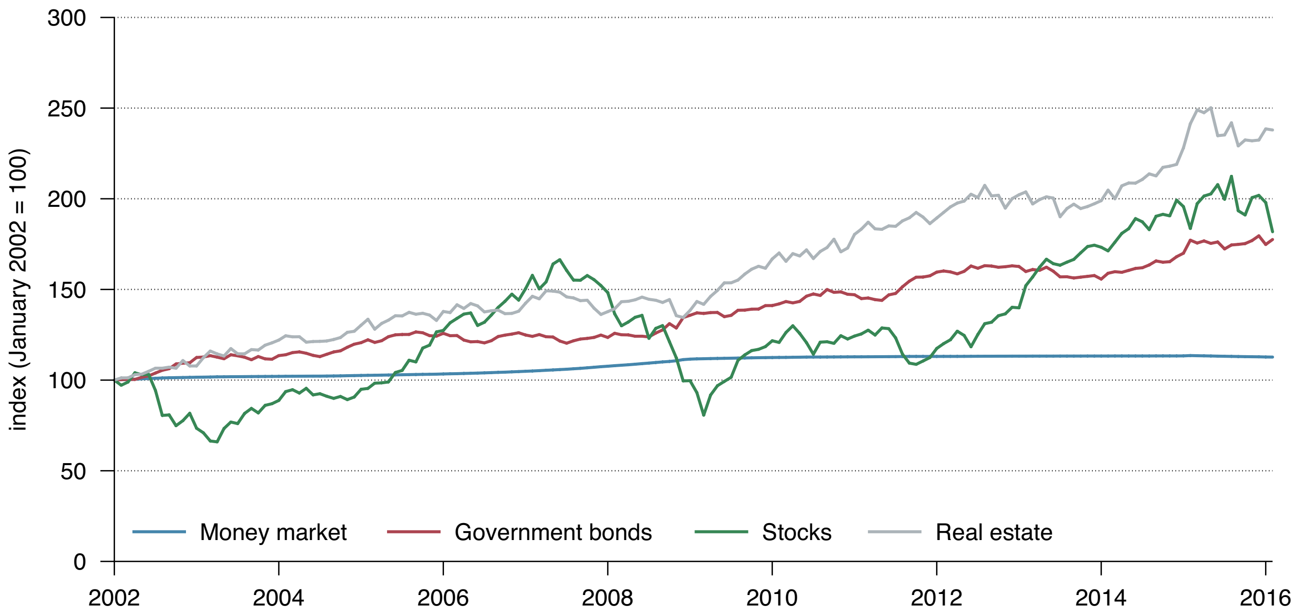
Financial markets

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	0.0	-0.2	-0.6	-0.1	0.0	-0.2	-0.6	-0.1
Swiss government bonds	1.6	0.8	0.8	22.0	1.6	0.8	0.8	22.0
Swiss corporate bonds	1.2	0.6	0.4	19.3	1.2	0.6	0.4	19.3
Swiss equities (SMI)	-8.2	-6.4	5.7	44.8	-8.2	-6.4	5.7	44.8
Eurozone equities (Stoxx600)	-10.1	-9.1	-3.8	38.3	-9.0	-7.8	3.7	17.5
UK equities (Ftse100)	-7.4	-8.3	-8.5	15.9	-9.4	-10.6	-1.1	8.7
Japanese equities (Topix)	-10.3	-7.3	3.7	64.7	-6.6	-0.2	18.6	21.1
US equities (S&P 500)	-7.9	-6.9	-4.9	63.1	-6.6	-1.7	9.6	71.1
Emerging markets equities	-11.4	-18.3	-24.5	-30.2	-10.1	-13.7	-12.9	-26.7
Global equities (MSCI World)	-8.9	-9.3	-7.4	32.0	-7.6	-4.2	6.8	38.5
Swiss real estate	-0.3	1.6	2.7	29.6	-0.3	1.6	2.7	29.6
Global real estate	-6.5	-7.6	-10.5	38.7	-5.2	-2.5	3.1	45.5
Commodities	-6.5	-17.3	-28.9	-54.6	-5.1	-12.6	-18.0	-52.4
Brent oil	-18.8	-39.5	-39.8	-70.8	-17.7	-36.1	-30.6	-69.3
Gold	2.5	-7.5	-14.5	-20.6	4.0	-2.4	-1.5	-16.7

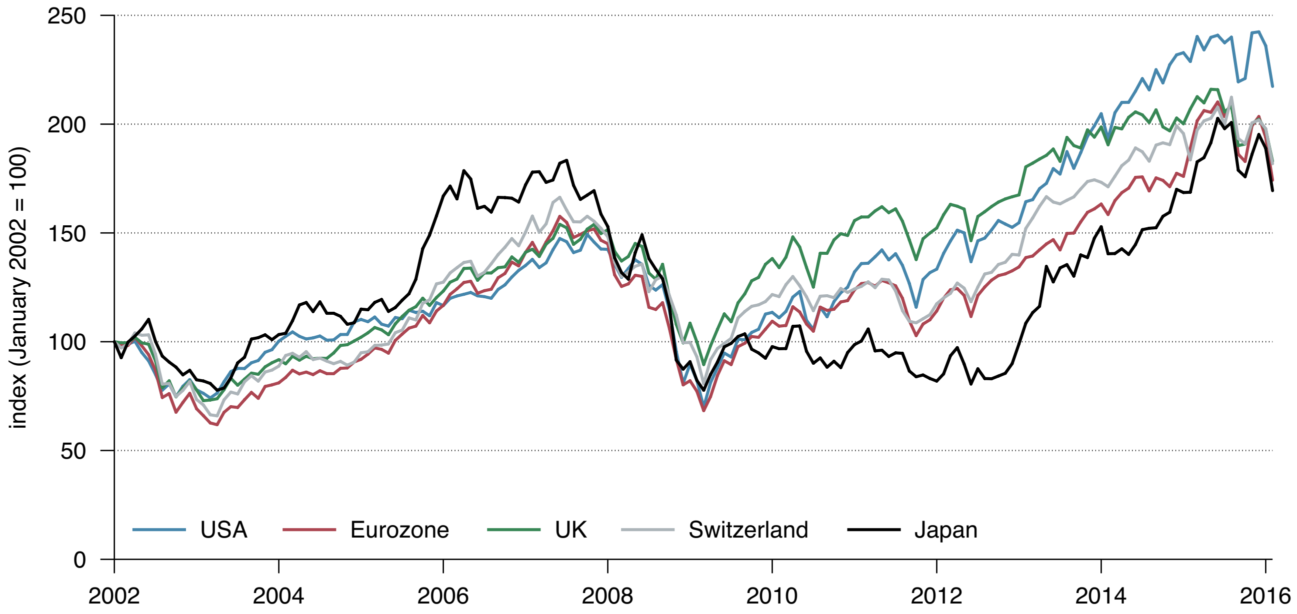
[1] Performance over the respective period of time, in percent.

Performance of selected Swiss asset classes

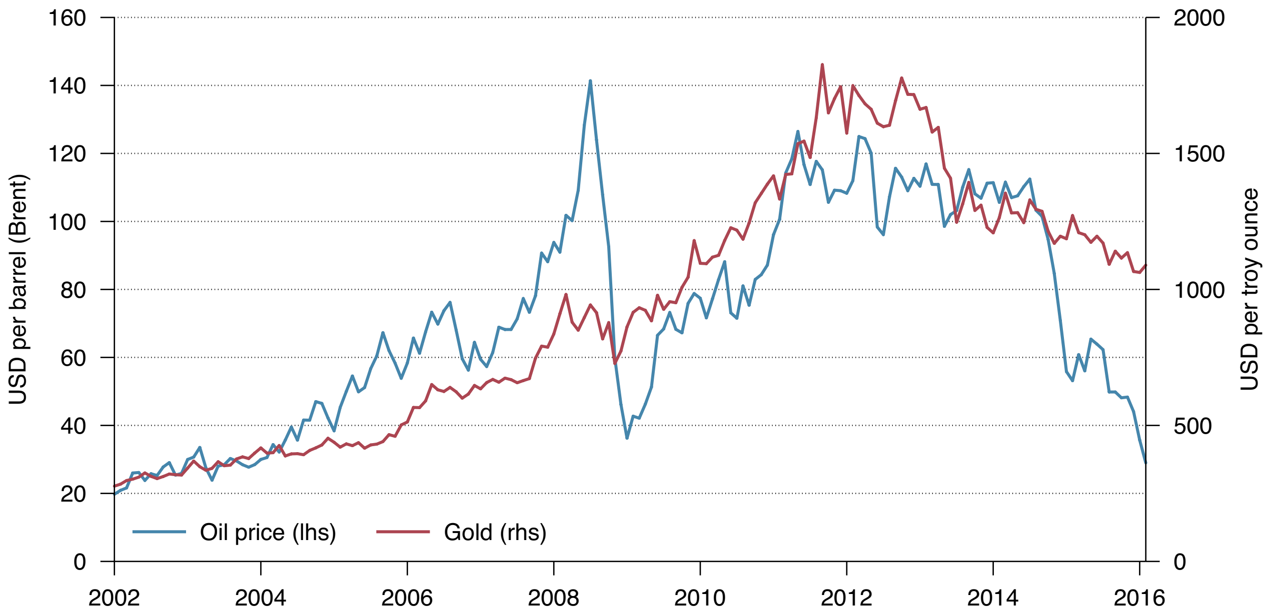


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

Performance of selected equity markets (in local currency)



Performance of selected commodity prices



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

Number of the month

1.09248 EURCHF

On January 15, 2016, the EURCHF exchange rate closed at 1.09248. Exactly one year earlier, on the day the Swiss National Bank abandoned its defense of the EURCHF minimum exchange rate, the exchange rate ended the day's trading at 0.97554. Given the franc's still substantial deviation from the 1.25 EURCHF level indicated by a purchasing power parity comparison, we think the chances look good that Bloomberg will report an even higher rate on January 15, 2017.