February 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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Imprint
Content, concept, and layout:
Quaesta Capital AG, Pfäffikon, and Wellershoff & Partners Ltd., Zürich
Editorial deadline: February 15, 2016
FX Monthly is published monthly in English and German.

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Quaesta Capital Insight

The real meaning of "Best execution" in currency transactions

Without ever defining just what that ideal might be, many words have flowed about the concept of "Best execution" for a currency transaction. Does best execution mean best price for a currency market investor? Is it also the "best" price if the investor only deals with a single counterparty? Even more fundamentally, what does the term "currency market" really mean in this context?

With an average daily trading volume of about 5 300 billion US dollars, the currency market is the world's largest financial market.[1] But it would be a fallacy to assume that all market participants enjoy equal and absolute price transparency and thus benefit equally from the best possible transaction prices. It is in this context that assessing "best execution" for currency transactions must be approached. Currency transactions involve more than just the pricing agreed between two counterparties. Only an appropriate infrastructure allows optimum transaction execution, and even the best infrastructure has to be augmented by efficient risk management.

Infrastructure

To simplify operational processes, currency transactions are often carried out through a single counterparty, usually the house or custodian bank. The lack of competition implicit in this arrangement and the fact that the transaction is carried out through a single counterparty may lead to unfavourable exchange rates for the investor. We think investors should strive for market access that enables them to trade over several counterparties. Only then can they expect independent and transparent transaction execution. A low-cost, efficient trading infrastructure lets the investor benefit from a market where several commercial banks compete, thus bringing the trading price closer to the market price. Various structures, such as *FX Prime Brokerage*, support trading across multiple banks.

The potential advantages from accessing more than one trading partner and thus profiting from better conditions have to be weighed against any possible increase in expenses that this approach may entail. Once all options have been subjected to a strict cost-benefit analysis, the best trading structure for the individual client can be determined and implemented. We recommend investors make this one-time effort to assure the optimum handling of all their currency transactions.

Transaction execution

For many people, optimised transaction execution is synonymous with "best execution" because this is when fees are set. But MiFID, the EU's Markets in Financial Instruments Directive, defines best execution as follows: "Under MiFID Article 21, a firm must

1 Bank for International Settlements 2013, Triennial Central Bank Survey Foreign Exchange

take all reasonable steps to obtain the best possible result, taking into account price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of the order." This clearly shows that achieving the best price is only part of "best execution". Other factors must also be taken into consideration. For example, the liquidity of a currency pair is most relevant to pricing, because the lower the pair's liquidity and the greater the amount traded, the wider the spread grows between selling and buying. It takes a lot of know-how to master this degree of complexity and to implement the various "best execution" factors holistically.

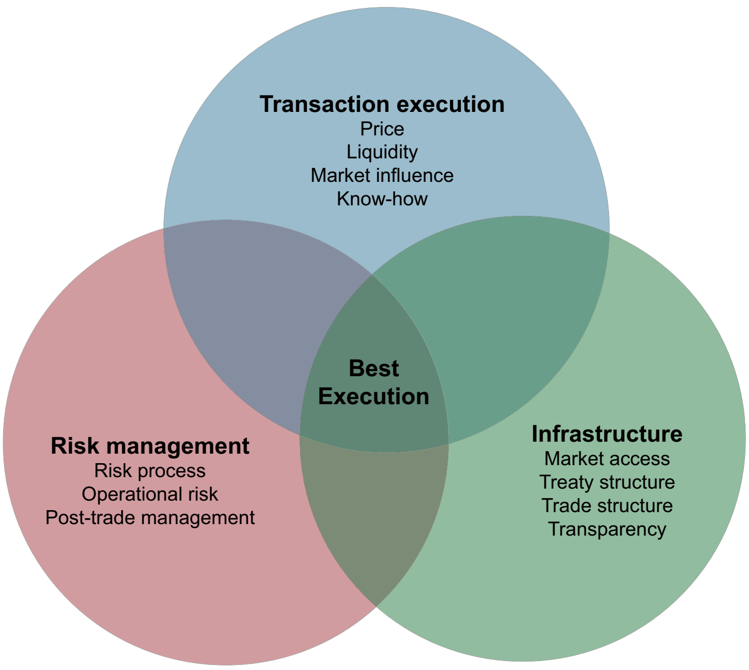
Risk management

In the context of currency transactions, risk management is one dimension that is often overlooked by investors. Executing currency transactions not only entails pricing risks; it also involves significant operational risks. Every effort to execute the transaction at the best price can be nullified by an operational error. Thus, it's essential that appropriate risk management procedures are defined and implemented. Risk management begins before the execution – starting with the application of the four-eyes principle to spot possible errors right away. And risk management is also part of "post-trade management," assessing, for example, such factors as the balance of an investor's transactions with the respective commercial banks.

The bottom line

The optimal execution of currency transactions can only be assessed in terms of the three dimensions we've touched upon here – infrastructure, execution, and risk management. The right infrastructure facilitates optimal execution – and then only if efficient risk management procedures are consistently applied.

The dimensions of "Best execution" for currency transactions



Source: Quaesta Capital

The macro perspective

The US is suddenly staring at a recession

How quickly things can change. It was only in December that the Fed finally dared to raise its key interest rate and here we are today contemplating the prospect of recession in the US. Interestingly, it turns out the rate hike removed one of the US dollar's most persuasive market arguments in recent months, the expectation of a divergent US monetary policy.

There hasn't been much to cheer about in the economic news so far this year, and the US in particular has been a steady source of disappointment. January's manufacturers survey was once again anaemic. And the service sector, long a bright spot in gloom, now also shows clear signs of weakening. Add the dismal estimates of fourth-quarter US GDP growth, coming in at a measly 0.2 percent, and the picture darkens even further. This fourth-quarter slowdown in GDP was, in the negative sense, broadly supported. For instance, fourth-quarter consumption contributed just half as much to growth as it had in the two previous quarters. The biggest worry right now, however, comes from another source: flagging corporate investment, which we regard as a key driver of the business cycle. In the fourth quarter of 2015, US corporate investment declined for the first time in fully three years.

Clouded investment horizon

Was the marked investment weakness in the fourth quarter of 2015 an outlier or a sign of gathering gloom on the horizon? Look at Wellershoff & Partners' early warning indicator for investment activity and talk of an exception is unwarranted. The indicator clearly signals a troubled first half of 2016 due to falling corporate profits, shrinking capacity utilisation and glum business conditions. The net effect: not just a further slowing of investment but compared to a year ago an actual decline in corporate investment. This alone should sound the alarms!

Recessions and falling investment rates

Every recession since 1950 has featured falling corporate investment rates. The two times investment shrank without a recession – in 1967 and 1986/7 – it was private consumption that saved the economy from actually contracting. The 1980s episode offers some close parallels to today's situation. Then as now, crude oil prices had collapsed. And dreadful as that was for the energy sector, it delivered an enormous windfall into the wallets of private consumers. Today, a bullish American consumer may once again help the US economy dodge a recessionary bullet. But it's going to be a close call either way.

Elevated recession probability

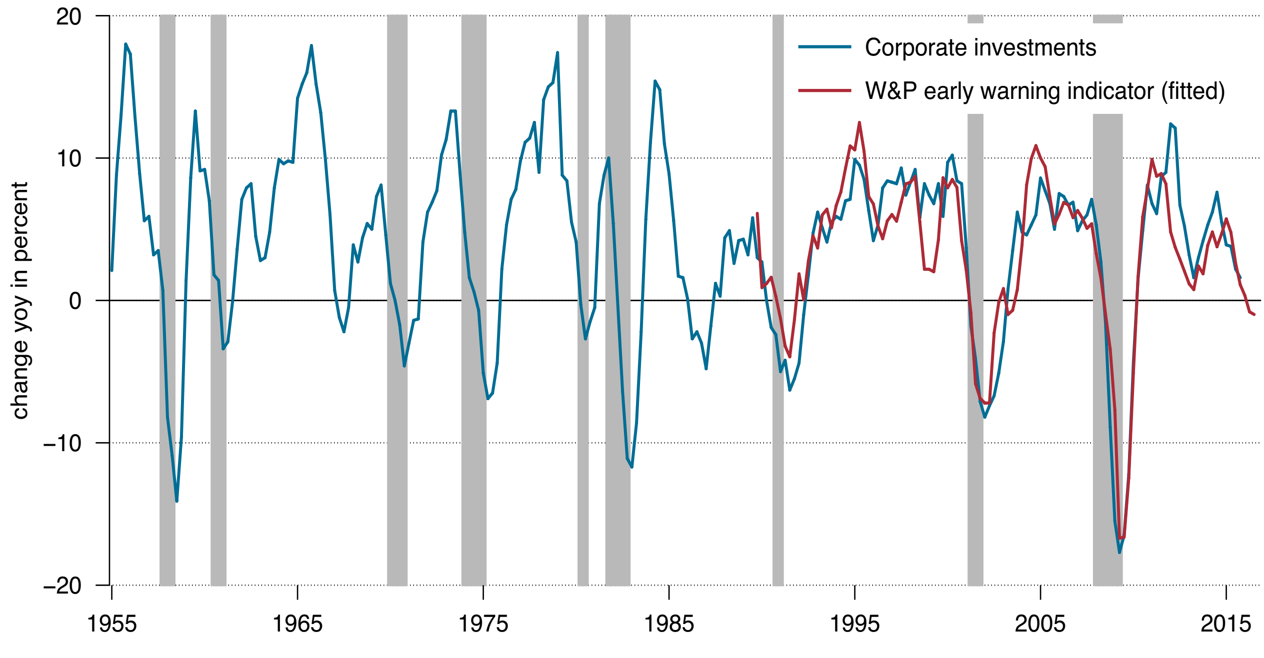
To see just how close a call it might be, we find a so-called probit model is a useful tool. It allows us to express the probability of a given event – in this case a US recession – as a number. The model, calibrated to capture the "profile" of similar historical events, has proven itself to be reliable. Additionally, on the current edge, Wellershoff & Partners' early warning indicators will be built in to quickly assess the latest available information and use it as a forward-looking tool.

The results are alarming. Looking only at the sagging investment component, we get a recession probability of almost 80 percent. Factor in the economy's expected support from private consumption and recession's probability sharply decreases. But it still remains over 30 percent. This is twice as high as was recorded in 1986/7, strongly suggesting that despite consumers spending more thanks to the very low oil prices, we are probably in for some tense times ahead.

What this means for the dollar

With all this in mind and with the oil price still dropping, keeping a lid on inflation, futures markets have now scaled back their interest rate expectations dramatically. Thus, the long dominant market narrative of divergent monetary policies has lost its traction. The US dollar has already shed considerable value thus far in February. And in most currency pairs we think the dollar still has a long way to fall before it reaches levels approaching purchasing power parity.

All of the last recessions have featured falling corporate investment rates



Source: FRED, Thomson Reuters Datastream, Wellershoff & Partners

FX market talk

Rising after a rate cut, the yen sends a signal

The yen has strengthened recently despite the Bank of Japan's latest interest rate cut. The influence that the BoJ's expansionary monetary policy might exert on the real economy has long been debated. In any case, it now appears that the exchange rate isn't reacting as the bank intended. We think that disconnect should give pause to other central banks.

At the end of January the Bank of Japan introduced its first-ever negative interest rate, charging 0.1 percent on newly formed bank reserves that exceed required levels. And the BoJ itself is making sure that bank reserves will grow: its very expansive asset-purchasing program continues to pump seven trillion yen, around sixty billion Swiss francs, into Japan's financial system every month.

Real economy unmoved by the rate cut

The BoJ's explanations for cutting interest rates below zero were complex but they basically echoed the reasoning of other expansionary central banks, and the culprit is oil. The argument goes like this: "The oil price collapse is preventing the economy from reaching its inflation target. Without new monetary measures, long-term inflation expectations threaten to sink out of sight. Therefore, we must cut now." And at the same time, penalizing banks for parking their excessive reserves at the central bank should encourage them to lend more, which would boost economic growth.

Indeed, after the BoJ's move, interest rates on 10-year Japanese government bonds slid into negative territory for the first time in history. But the rate cut appears unlikely to produce any noteworthy positive ripples in the real economy. After notching up record profits over the past two years most notably thanks to a weaker yen, Japanese companies currently enjoy quite a comfortable liquidity cushion. But they still remain hesitant to invest domestically. This reluctance is probably also fed by their concerns about the government's far-reaching, oft announced but not yet implemented labour market reforms.

We think it's safe to assume that the BoJ's rate cut was intended, not least, to keep the yen low versus the currencies of Japan's most important trading partners. A weaker currency may have been the idea but the desired results did not follow.

Oops, the yen strengthened instead

Shortly after the BoJ's rate cut, the yen briefly sagged but has since been gaining steadily in value. On a trade-weighted basis, Japan's currency has appreciated around 4 percent since the interest rate cut in late January. Make that an almost 5 percent jump in Japan's most important currency pairing, USDJPY. As for the rate cut, it seems the market was unmoved by yet another expansionary measure in an already very expansive monetary environment. This non-response from the market brings valuation models like purchasing power parity to the fore. The yen's valuation versus purchasing power parity has been developing along the expected lines to date. Nevertheless, we find Japan's currency still remains more than 15 percent overvalued against the US dollar and more than 25 percent overvalued versus the Swiss franc.

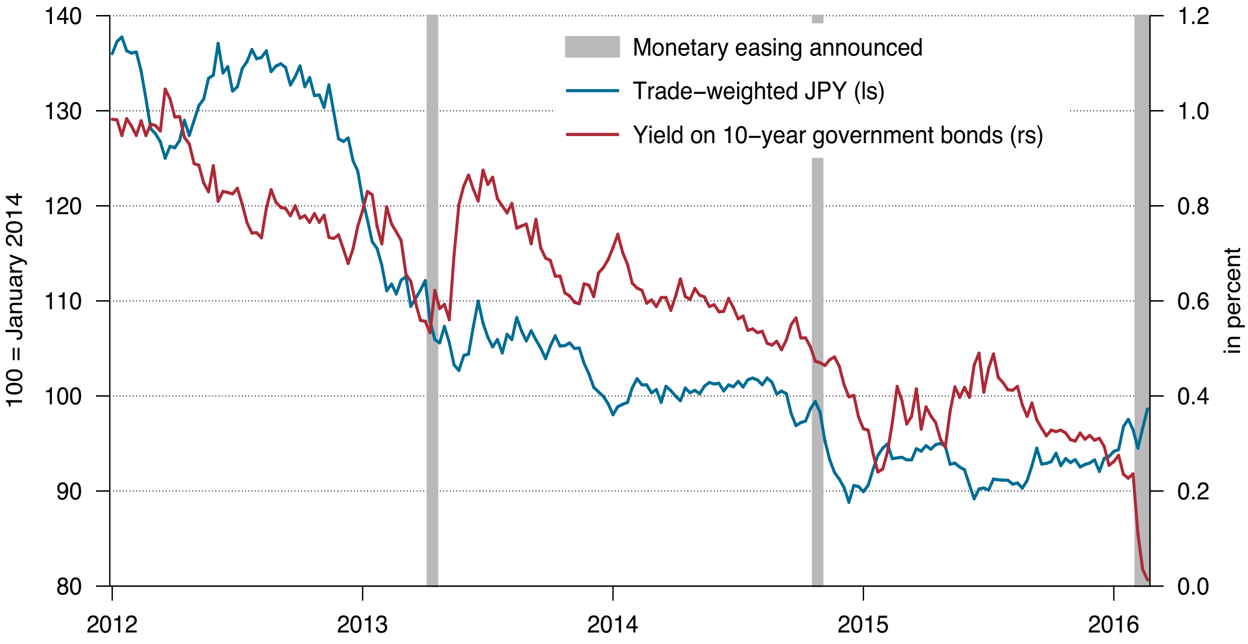
A signal for central banks

The yen's surge despite fresh expansionary measures from the Bank of Japan offers some important insights to other central banks. For one, monetary policy measures are increasingly irrelevant, not only but also for currency markets. In fact, these intended remedies can produce undesirable reactions if market expectations go unmet. Just ask the European Central Bank. Despite trimming interest rates and extending its expansionary asset purchases, the ECB currently presides over a euro that trades at a higher price than when rates were cut. And we can only speculate as to how this fact might influence the future policies of expansive central banks. If marginal monetary easing measures don't feed through to the currency, does that argue for the end of such measures or for introducing more drastic ones? That's a key question for the ECB's monetary policymakers and for charting the BoJ's future interest rate course.

A valuation imbalance with possibilities

One thing is certain: the yen's substantial overvaluation is set to persist for some time. In our view, for investors with an appropriate risk budget and a somewhat longer than usual time horizon, Japan's currency presents some interesting opportunities.

Tracking the effects of the Bank of Japan's monetary easing measures



Source: Thomson Reuters Datastream, Wellershoff & Partners

Economic activity

Compared to a year earlier, the US economy grew by 1.8 percent in the fourth quarter of 2015. Looking at the growth rate in the third quarter of 2015, the slowdown is obvious. What's particularly worrying is the recent slippage in corporate investment. History records that falling levels of US corporate investment preceded all US-recessions since 1950. Wellershoff & Partners` research indicates that this risk scenario is increasingly taking shape right now. We can only hope that the bump in real income coming from low oil prices lifts the spirits and the spending of US consumers enough to keep a recession at bay.

A different picture is coming from the Eurozone. The Eurozone is doing quite all right, thank you, and even starting to look like a pillar of the global economy.

Meanwhile, according to the latest official data, China's GDP growth slackened in the fourth quarter of 2015 to a mere 6.2 percent year-over-year, a slow pace last seen in 2009. Concerns about China's anaemic economic growth are not going away.

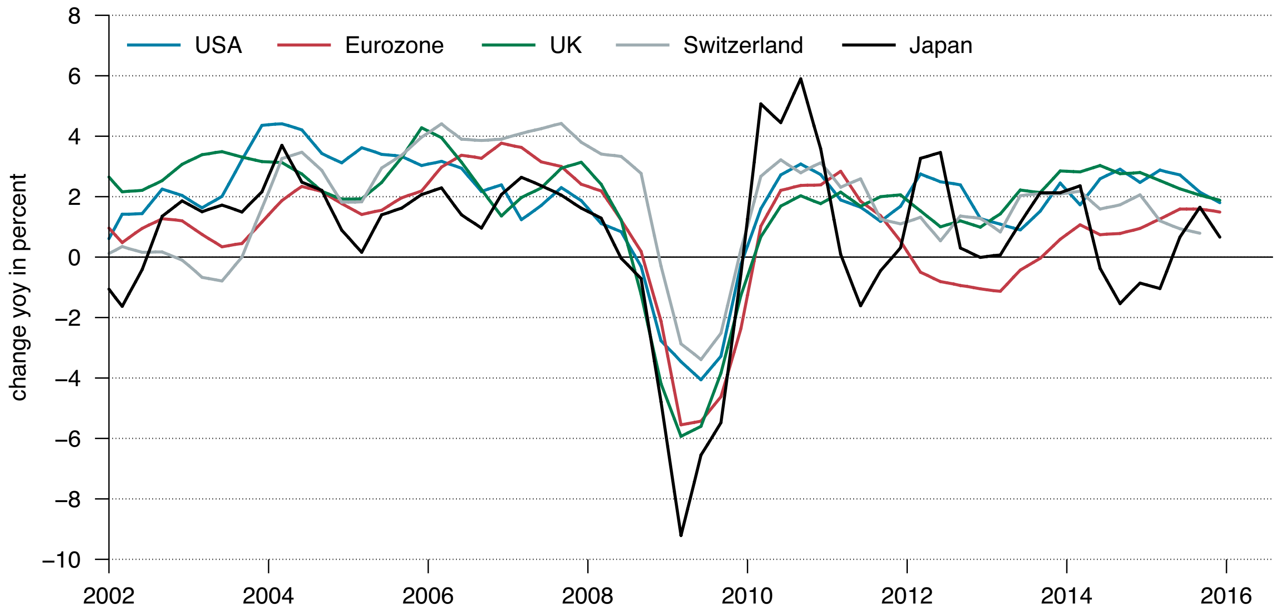
Growth overview

	Trend growth[1]	Real GDP growth[2]				W&P economic sentiment indicators[3]			
		Q1/2015	Q2/2015	Q3/2015	Q4/2015	10/2015	11/2015	12/2015	1/2016
United States	1.7	2.9	2.7	2.2	1.8	2.8	2.4	2.3	2.0
Eurozone	1.0	1.3	1.6	1.6	1.5	2.4	2.4	2.5	2.2
Germany	1.4	1.1	1.6	1.7	1.4	2.7	2.6	2.6	2.2
France	0.7	0.9	1.1	1.1	1.3	1.9	1.7	1.7	1.8
Italy	0.2	0.1	0.5	0.8	1.0	2.3	2.2	2.2	1.9
Spain	1.6	2.7	3.2	3.4	3.5	3.8	3.9	4.7	3.7
United Kingdom	1.8	2.5	2.3	2.0	1.9	3.1	2.9	3.3	2.8
Switzerland	1.5	1.2	0.9	0.8	–	0.7	0.5	0.7	0.6
Japan	0.4	-1.0	0.7	1.6	0.7	2.1	2.2	2.2	2.2
Canada	1.6	2.1	1.1	1.2	–	1.3	1.1	0.7	0.4
Australia	2.4	2.1	1.9	2.5	–	3.4	3.3	3.2	3.2
Brazil	1.4	-2.1	-2.9	-4.4	–	-0.9	-1.0	0.0	1.0
Russia	0.1	-2.2	-4.6	-4.1	–	2.0	1.9	0.3	1.6
India	7.7	7.5	7.6	7.7	7.3	6.0	5.8	5.2	6.2
China	7.4	7.0	7.0	6.9	6.8	7.6	7.8	7.5	7.6
Advanced economies[4]	1.4	1.9	2.1	2.0	1.7	2.8	2.5	2.6	2.3
Emerging economies[4]	6.0	4.8	4.6	4.6	4.5	4.2	4.3	4.0	4.4
World economy[4]	3.5	3.3	3.4	3.3	3.1	3.2	3.2	3.1	3.1

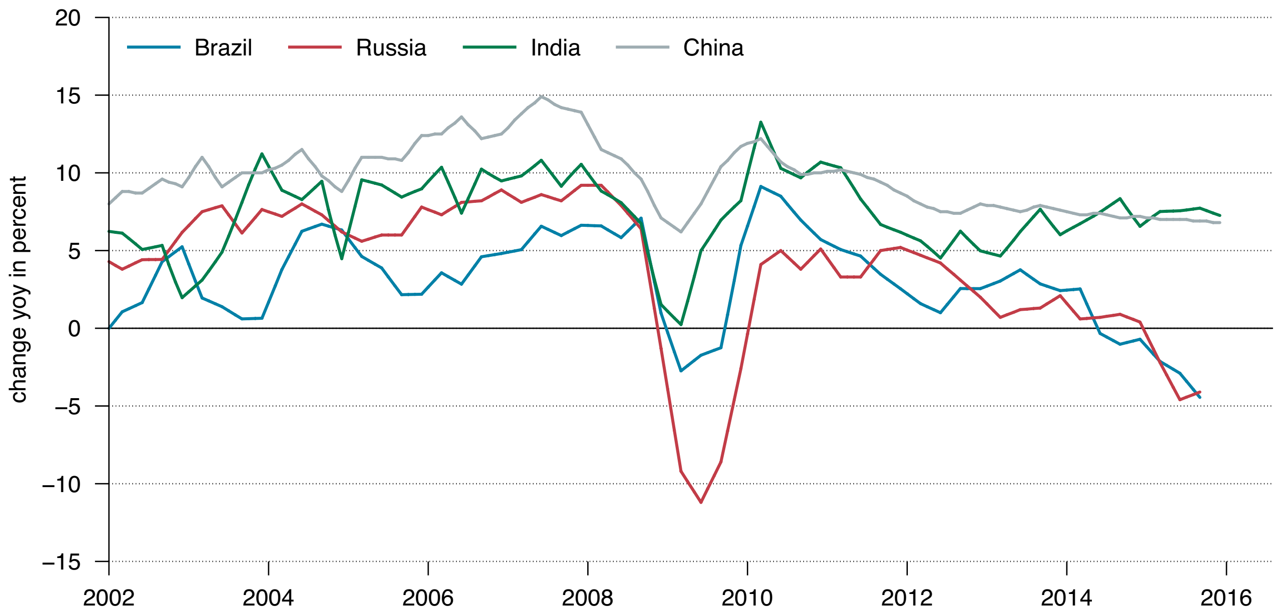
[1] Current year-on-year trend growth rate of real GDP, in percent, according to the proprietary trend growth model of Wellershoff & Partners.
[2] Year-on-year growth rate, in percent.
[3] Wellershoff & Partners economic sentiment indicators are based on consumer and business surveys and have up to 6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

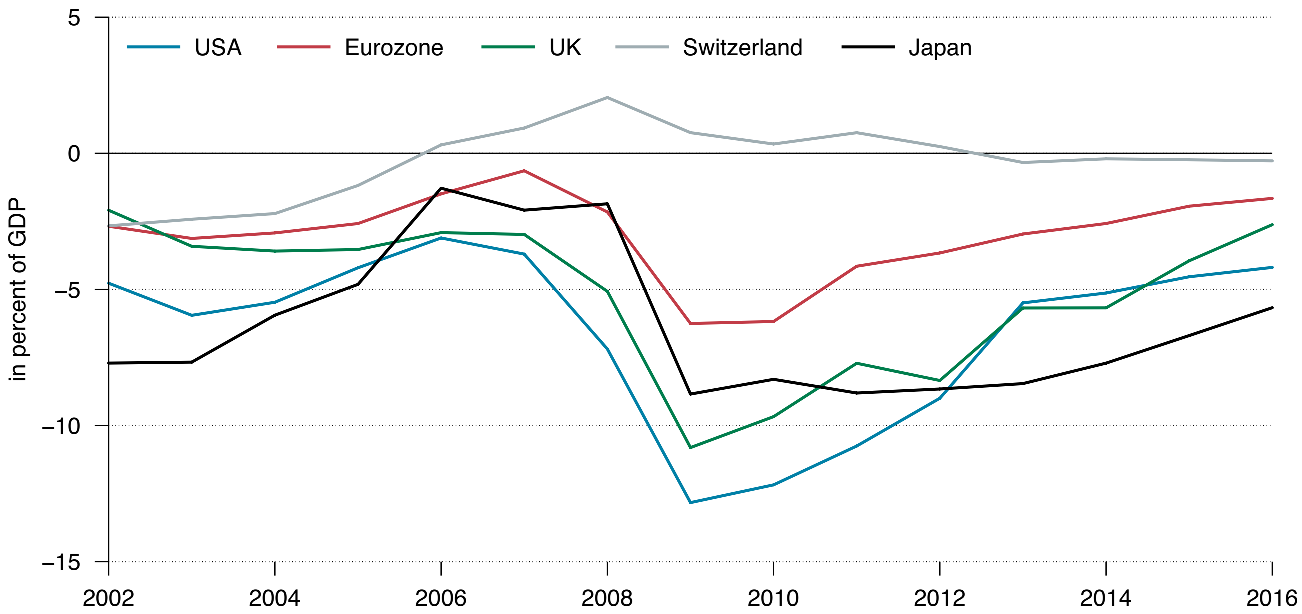
Economic indicators

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	4.9
Eurozone	17.3	15.6	2.6	3.7	105.1	110.2	-3.1	-1.7	11.2	10.4
Germany	4.9	4.5	7.0	8.0	82.4	75.0	0.0	0.6	6.8	6.2
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	11.2	11.4
Spain	1.8	1.7	0.1	1.3	102.0	118.7	-7.4	-2.9	23.8	20.8
United Kingdom	3.7	4.0	-3.7	-3.4	111.5	115.5	-6.3	-2.6	3.8	2.3
Switzerland	0.9	0.9	9.2	9.9	45.9	46.6	0.0	-0.3	3.1	3.8
Japan	6.9	5.5	1.6	2.9	220.1	232.4	-8.1	-5.7	4.0	3.3
Canada	2.4	2.1	-2.8	-2.3	87.9	89.4	-2.6	-1.3	7.1	7.2
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	5.7	6.9
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

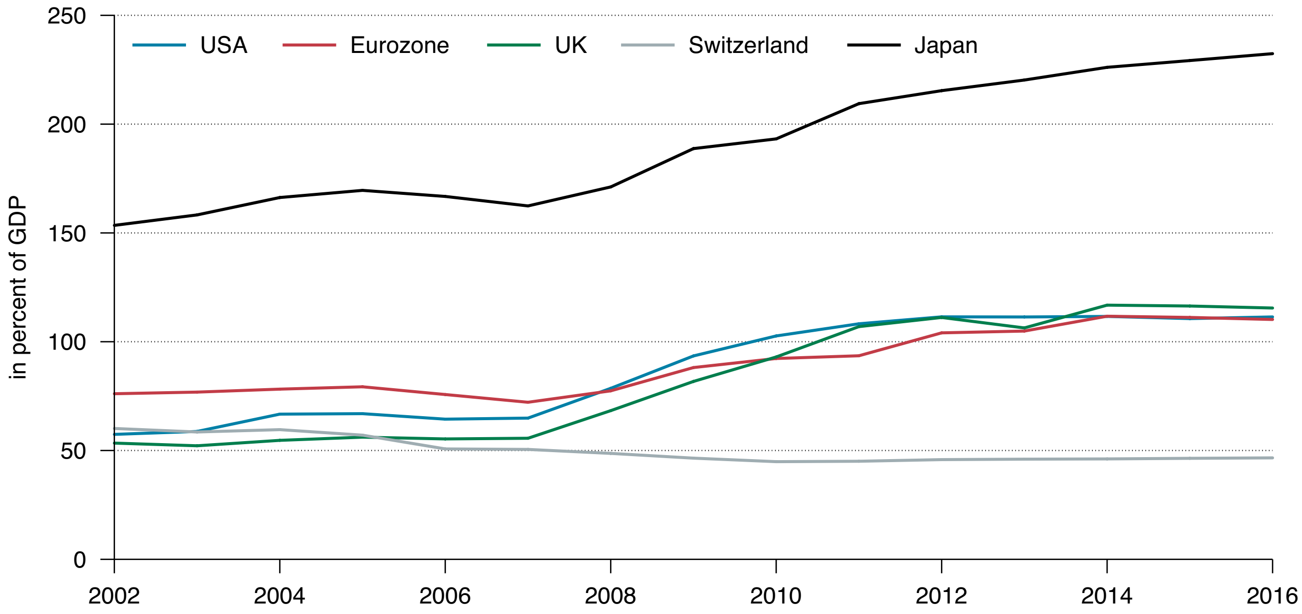
[1] In percent; calculations based on market exchange rates. [2] In percent of nominal GDP. [3] In percent.

Budget deficits in advanced economies

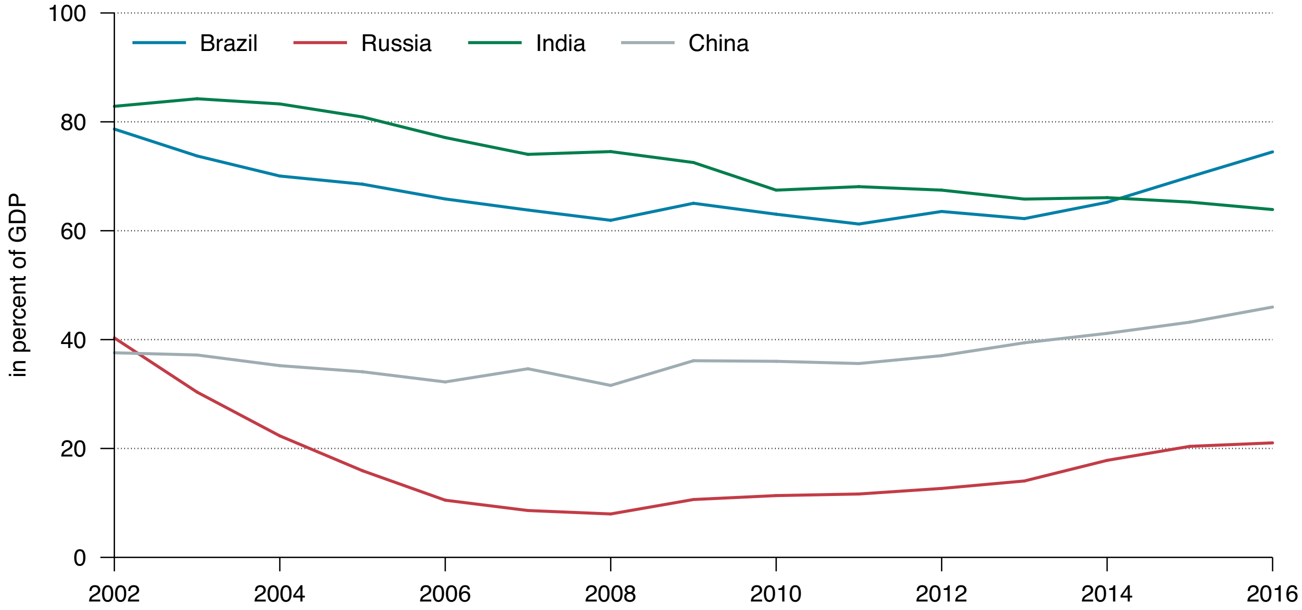


Source: Thomson Reuters Datastream, Wellershoff & Partners

Public debt in advanced economies



Public debt in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

Inflation

Headline inflation in the US rose 0.7 percentage points in December 2015 compared to a year earlier. That represents a 0.3 percentage point increase from November of last year. Our estimates of crude oil's base effect indicate that consumer prices may be expected to tend higher in January. But come February's data, given unchanged crude oil prices, we expect to see that headline inflation has receded. Meanwhile, core inflation rose 2.1 percent year-over-year in December 2015, which represents a 0.1 percentage point increase from November. This marks the first time in almost four years that the Fed's targeted inflation rate of 2 percent has been surpassed.

In the Eurozone, overall inflation rose from 0.2 to 0.4 percent from a year earlier. But from February on, we also expect overall EU inflation to retreat. Meanwhile, the 0.1 percentage points rise in core inflation, to 1 percent, should silence any talk of impending deflation.

Russia reported a significant reduction in overall as well as core inflation in January, returning to an average rate of 9.5 percent.

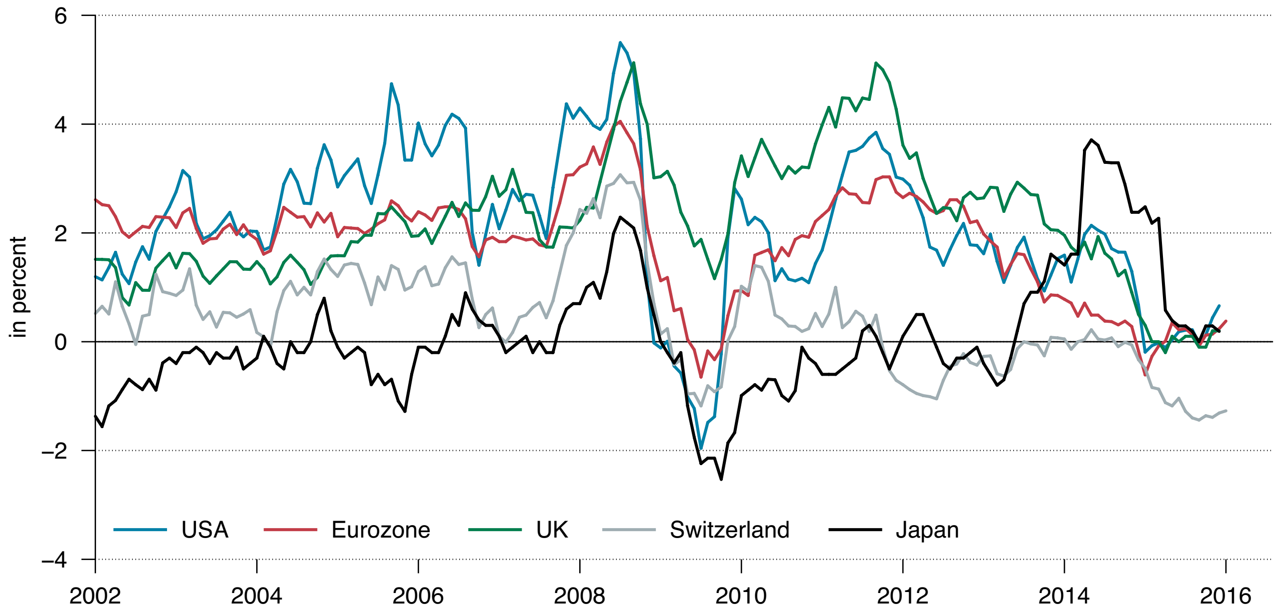
Inflation overview

	Ø 10 years[1]	Inflation[2]				Core inflation[3]			
		10/2015	11/2015	12/2015	1/2016	10/2015	11/2015	12/2015	1/2016
United States	2.0	0.1	0.4	0.7	–	1.9	2.0	2.1	–
Eurozone	1.6	0.1	0.1	0.2	0.4	1.1	0.9	0.9	1.0
Germany	1.5	0.2	0.3	0.5	0.6	1.3	1.2	1.2	1.3
France	1.3	0.1	0.0	0.2	–	0.7	0.7	0.8	–
Italy	1.7	0.3	0.1	0.1	0.3	0.9	0.7	0.6	0.8
Spain	1.8	-0.7	-0.3	0.0	-0.3	0.9	1.0	0.9	0.9
United Kingdom	2.5	-0.1	0.2	0.2	–	1.1	1.3	1.4	–
Switzerland	0.2	-1.4	-1.4	-1.3	-1.3	-0.8	-1.0	-0.9	-0.9
Japan	0.3	0.3	0.3	0.2	–	0.8	0.8	0.8	–
Canada	1.7	1.0	1.4	1.6	–	2.1	2.0	1.9	–
Australia	2.7	1.6	1.6	1.7	–	2.1	2.1	2.2	–
Brazil	5.7	9.9	10.5	10.7	10.7	9.2	9.4	9.4	9.2
Russia	9.5	15.6	15.0	12.9	9.8	16.4	15.9	13.7	10.7
India	8.1	5.0	5.4	5.6	5.7	–	–	–	–
China	2.9	1.3	1.5	1.6	–	1.5	1.5	1.5	–
Advanced economies[4]	1.7	0.2	0.4	0.5	0.5	1.5	1.5	1.5	1.5
Emerging economies[4]	5.2	4.4	4.6	4.5	4.2	4.4	4.3	4.0	3.6
World economy[4]	3.2	2.1	2.3	2.4	2.3	2.4	2.3	2.3	2.1

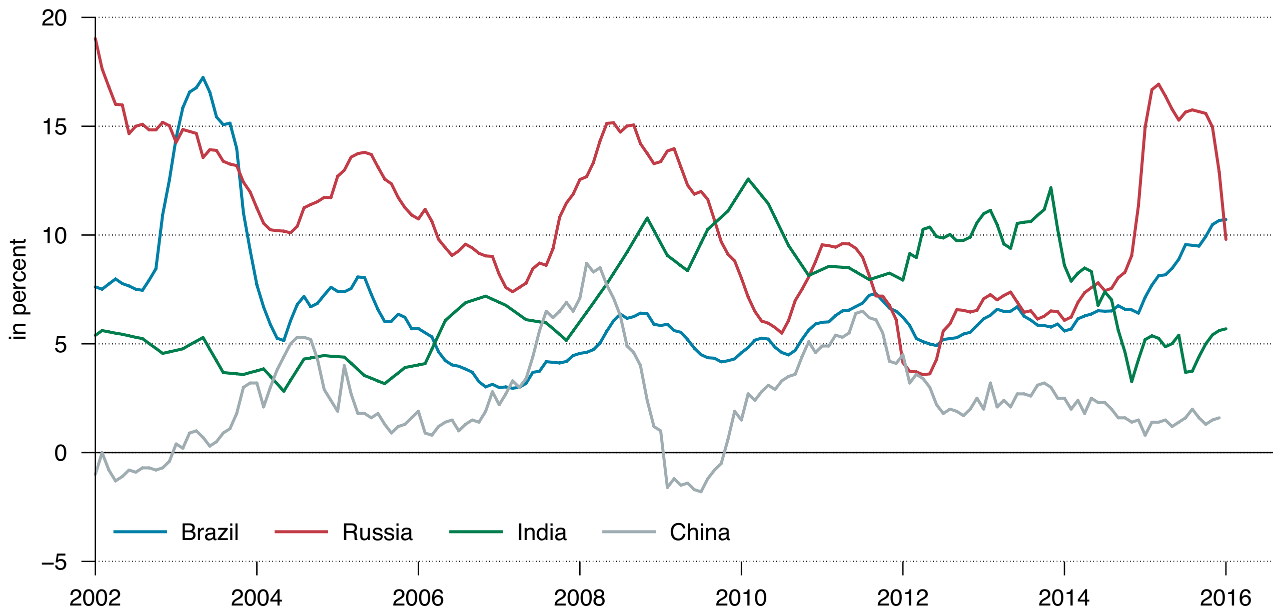
1 Average annual consumer price inflation, in percent.
2 Year-on-year change of the consumer price index (CPI), in percent.
3 Core inflation is a measure of inflation that excludes certain items that can experience volatile price movements, such as energy and certain food items; year-on-year change of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

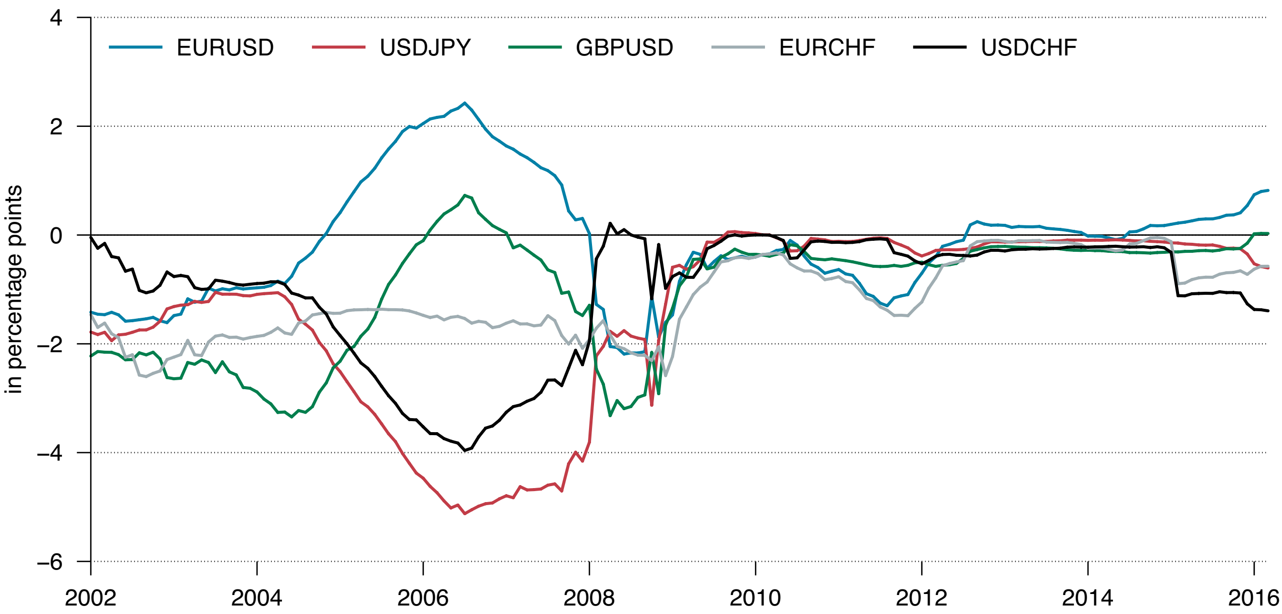
Interest rates

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	1.124	0.75	0.27	-0.06	-0.01	1.11	0.47	0.01	0.02
USDJPY	112.8	-0.61	-0.15	-0.17	-1.20	-1.02	-0.41	-0.37	-1.32
GBPUSD	1.446	0.03	-0.31	-0.34	-0.56	0.13	-0.29	-0.42	-0.61
EURCHF	1.098	-0.65	-0.90	-0.52	-0.91	-0.66	-0.89	-0.68	-0.99
USDCHF	0.977	-1.39	-1.16	-0.45	-0.91	-1.76	-1.37	-0.68	-1.01
GBPCHF	1.412	-1.37	-1.47	-0.79	-1.47	-1.63	-1.66	-1.11	-1.62
CHFJPY	115.4	0.79	1.01	0.28	-0.30	0.74	0.96	0.31	-0.31
AUDUSD	0.708	-1.31	-1.82	-2.65	-2.57	-0.69	-1.23	-2.03	-2.20
USDCAD	1.390	0.23	0.70	0.87	0.37	-0.12	0.34	0.67	0.21
USDSEK	8.436	-1.10	-0.33	0.75	0.24	-1.31	-0.52	0.61	0.21
USDRUB	78.77	10.23	16.29	8.21	6.68	10.13	13.93	7.94	7.16
USDBRL	3.979	13.61	12.14	10.30	9.59	13.39	12.14	10.17	9.55
USDCNY	6.569	2.44	4.64	4.15	2.44	2.11	4.11	3.79	2.22
USDTRY	2.930	11.02	9.27	8.73	9.84	10.67	8.45	8.62	10.15
USDINR	68.21	7.47	8.47	8.85	6.78	5.93	6.98	6.27	4.29

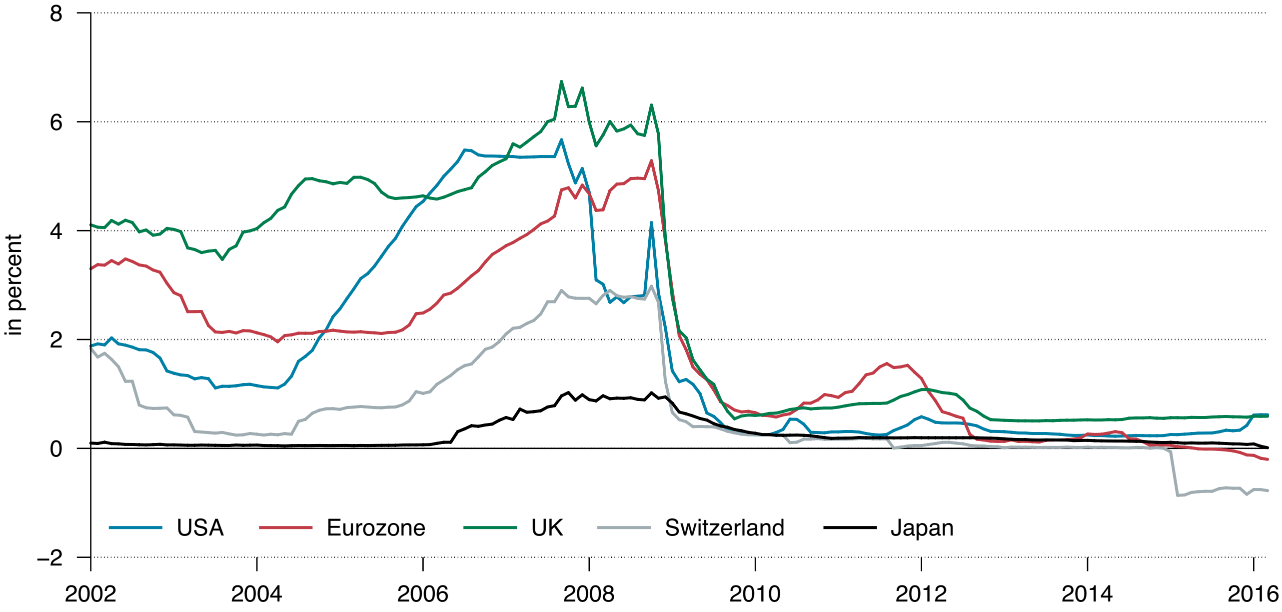
[1] The gap in interest rates between the second currency and the first one, in percentage points; e.g. US dollar minus euro for EURUSD.

Interest rate differentials

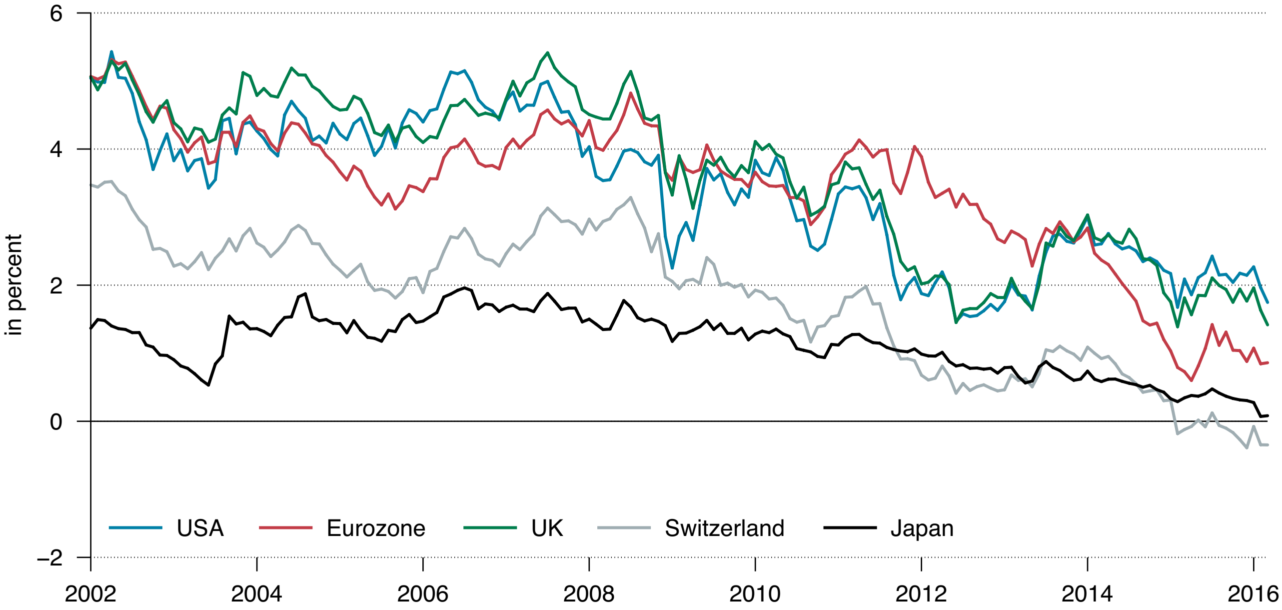


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

3-month Libor



10-year government bond yields



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

FX markets

In the first weeks of February the trade-weighted US dollar lost over 3 percent in value. Among the many reasons for this slide were the sour sentiment data from both the industrial and the service sectors. The ISM Manufacturing Index didn't budge from its previous level of 48.2, still pointing to contraction. At the same time the ISM Non-Manufacturing Index actually worsened, slipping from 55.3 to 53.5 points. And the lukewarm US labour market data only added to the dollar's woes.

The EURUSD exchange rate has seen particularly pronounced movement lately. In the first two weeks of February the US dollar depreciated by nearly 5 percent versus the euro, at times broaching the 1.13 mark. But the USDCHF exchange rate also declined by about 4 percent, receding below a value of 1.0. But so far this year it's the British pound that's posted the biggest decline versus the franc.

From the perspective of a Swiss franc investor, the euro is currently particularly interesting. The exchange rate has still not quite digested the lifting of the EURCHF lower limit and still shows a deviation of nearly 12 percent from purchasing power parity.

FX overview

	Current exchange rate	Performance[1]				Purchasing Power Parity[2]		
		YTD	3 months	1 year	5 years	PPP	Neutral territory	Deviation[3]
EURUSD	1.124	3.5	4.8	-1.1	-17.0	1.33	1.19 - 1.48	-15.5
USDJPY	112.8	-6.3	-8.2	-5.2	35.2	96.1	76.2 - 115.9	17.3
GBPUSD	1.446	-1.9	-4.8	-5.9	-9.6	1.64	1.48 - 1.80	-11.9
EURCHF	1.098	1.0	1.5	4.0	-16.6	1.24	1.15 - 1.34	-11.7
USDCHF	0.977	-2.4	-3.1	5.2	0.5	0.97	0.77 - 1.16	1.2
GBPCHF	1.412	-4.3	-7.8	-1.0	-9.2	1.61	1.34 - 1.89	-12.4
CHFJPY	115.4	-4.0	-5.3	-9.9	34.6	91.0	78.5 - 103.4	26.9
AUDUSD	0.708	-2.7	-0.5	-8.2	-29.3	0.71	0.59 - 0.84	-0.6
USDCAD	1.390	0.1	4.2	11.2	40.5	1.15	1.08 - 1.23	20.5
USDSEK	8.436	0.1	-3.1	-0.2	30.2	6.89	6.00 - 7.78	22.4
USDRUB	78.77	7.8	17.9	19.4	168.7	37.2	30.40 - 44.00	111.8
USDBRL	3.979	0.6	4.2	40.0	139.0	2.82	2.31 - 3.33	41.1
USDCNY	6.569	1.2	3.1	5.2	-0.3	6.31	6.10 - 6.52	4.1
USDTRY	2.930	0.4	2.2	18.5	84.6	2.22	1.96 - 2.47	32.1
USDINR	68.21	3.1	3.1	9.6	49.3	62.9	59.80 - 66.10	8.4

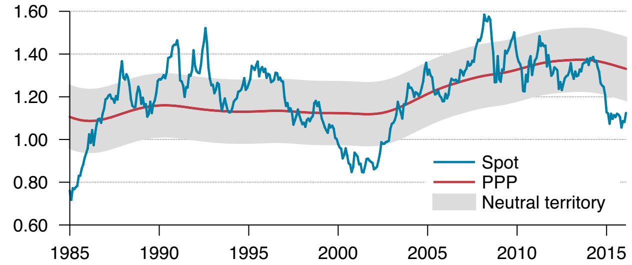
[1] Performance over the respective period of time, in percent.

[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.

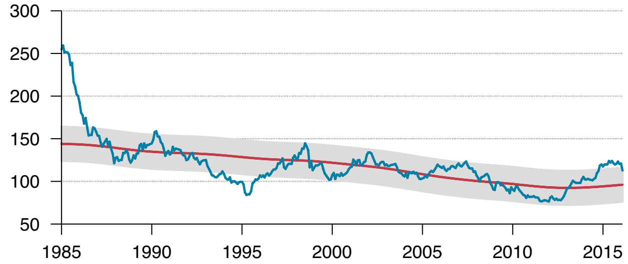
[3] Deviation of the current spot rate from PPP, in percent.

Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

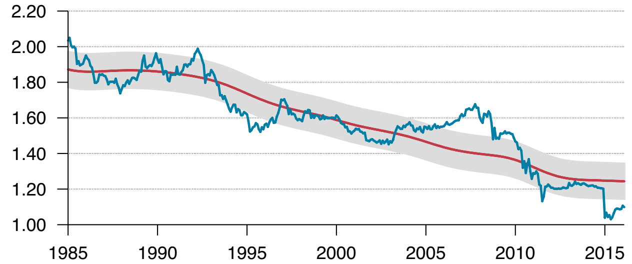
EURUSD



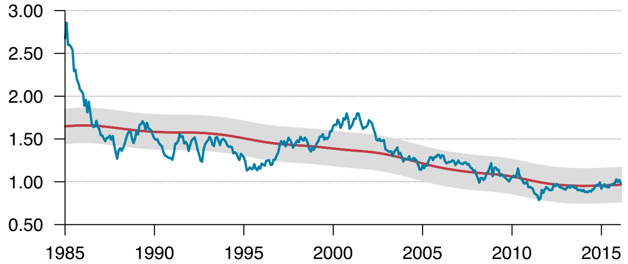
USDJPY



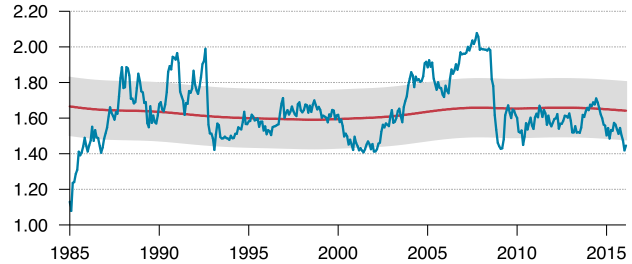
EURCHF



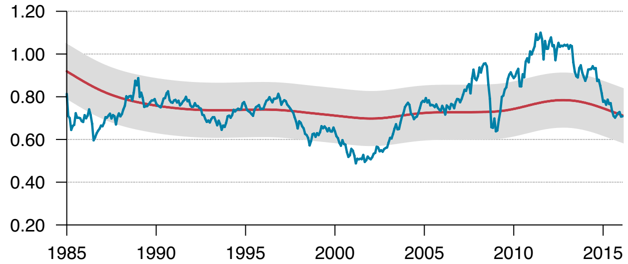
USDCHF



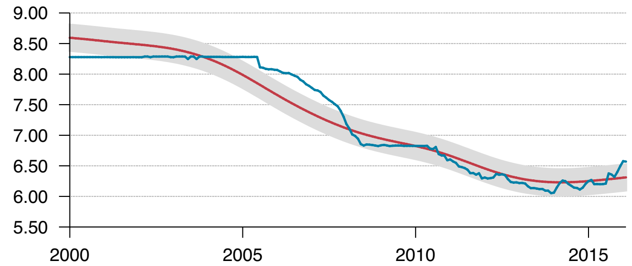
GBPUSD



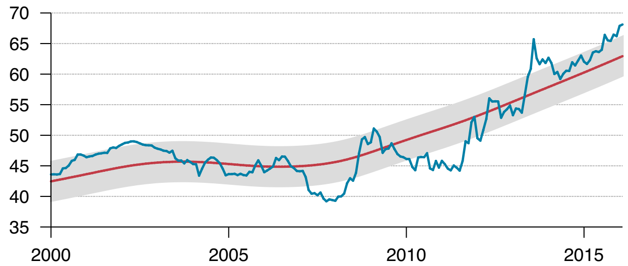
AUDUSD



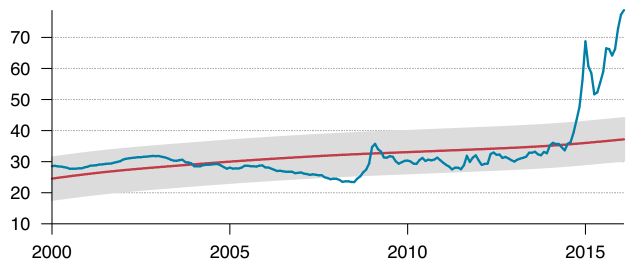
USDCNY



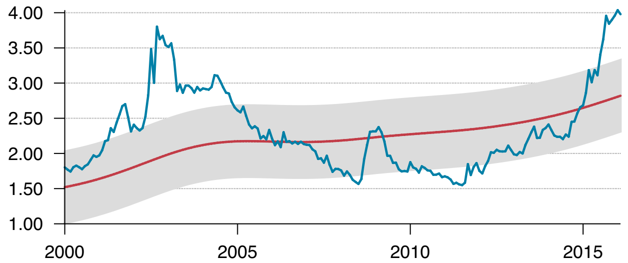
USDINR



USDRUB



USDBRL



Source: Thomson Reuters Datastream, Wellershoff & Partners

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	1.124	10.2	11.0	9.7	10.3	11.8	10.5	10.3	10.7
USDJPY	112.8	10.0	12.1	9.6	10.6	8.9	10.8	10.6	11.0
GBPUSD	1.446	8.3	10.3	8.0	9.4	8.4	10.9	8.9	9.9
EURCHF	1.098	5.8	8.0	6.3	6.0	7.7	8.5	7.2	6.3
USDCHF	0.977	9.9	11.0	10.2	10.5	11.3	10.8	10.7	10.8
GBPCHF	1.412	10.4	11.8	8.8	9.7	10.5	11.8	9.6	10.1
CHFJPY	115.4	10.0	12.2	11.0	11.3	10.6	12.0	11.8	11.7
AUDUSD	0.708	12.1	12.9	10.9	12.2	12.7	13.0	11.7	12.5
USDCAD	1.390	9.8	11.5	8.1	9.7	9.5	11.2	8.7	10.0
USDSEK	8.436	10.3	11.7	11.5	12.5	12.7	11.7	12.0	12.7
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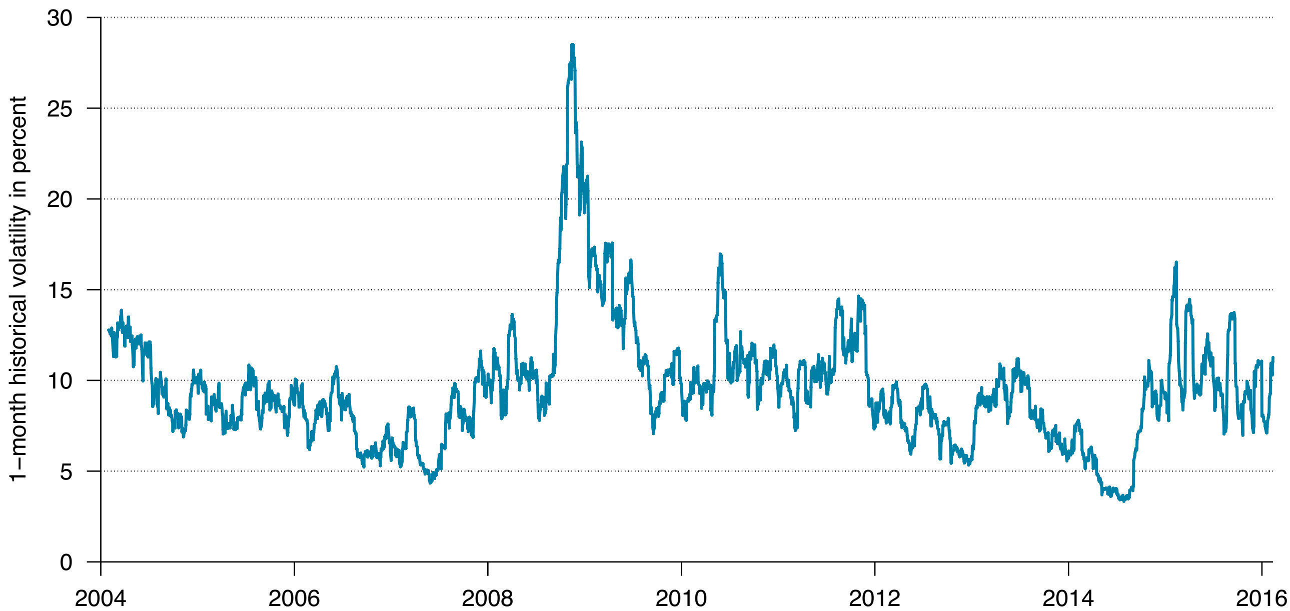
USDBRL	3.979	17.8	20.4	14.2	15.0	19.8	20.3	15.0	15.6
USDCNY	6.569	2.1	9.1	2.5	2.7	3.1	9.9	3.4	4.3
USDTRY	2.930	9.8	13.3	11.8	13.4	13.5	15.0	13.1	14.7
USDINR	68.21	4.3	8.3	9.6	9.4	4.7	9.5	10.6	10.2

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

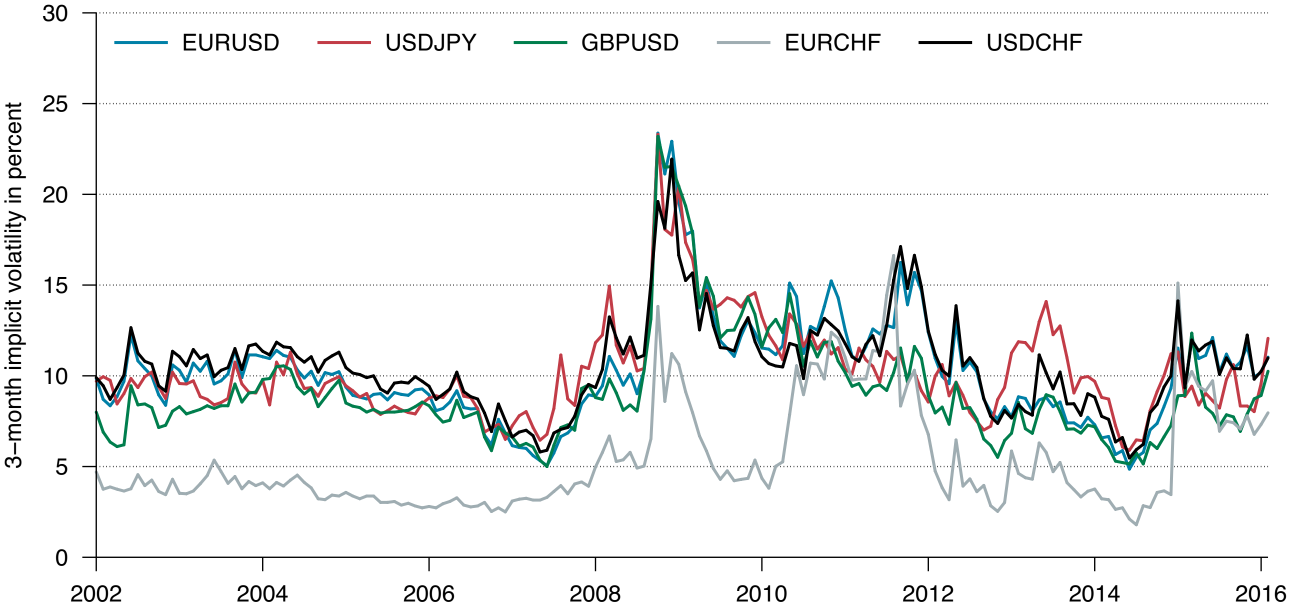
Quaesta Capital volatility indicator[3]



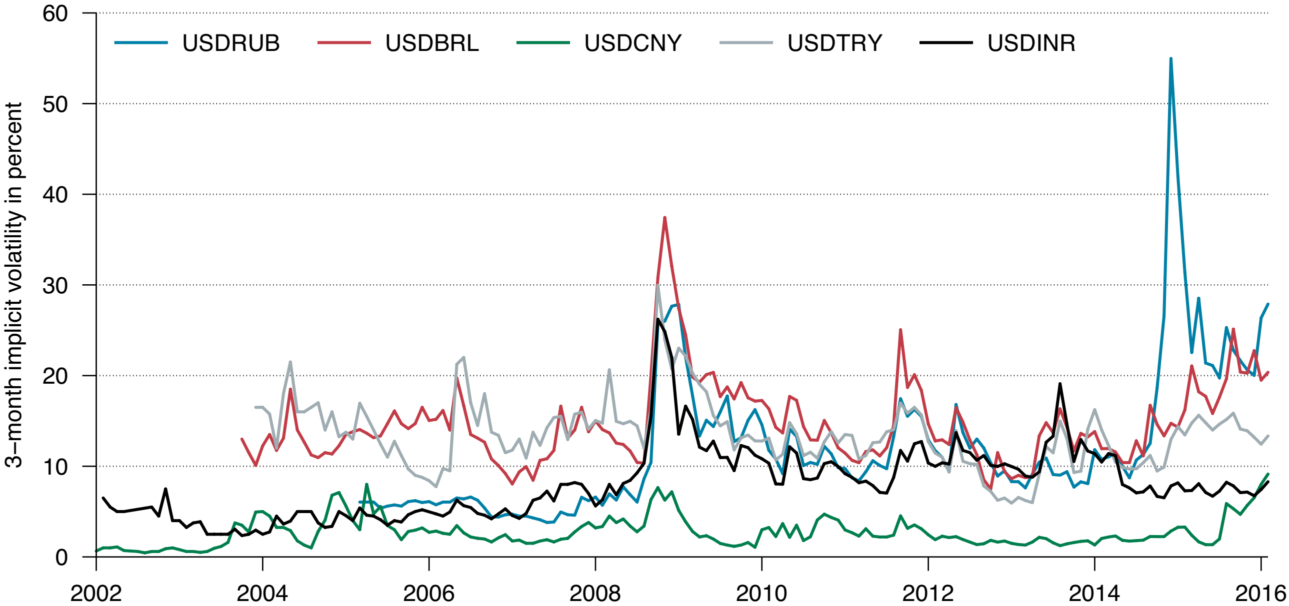
[3] Quaesta Capital's volatility indicator measures general volatility in global FX markets; the indicator is based on historical volatility of the main exchange rates, which are weighted by trading volume.

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

Implied volatility



Implied volatility



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

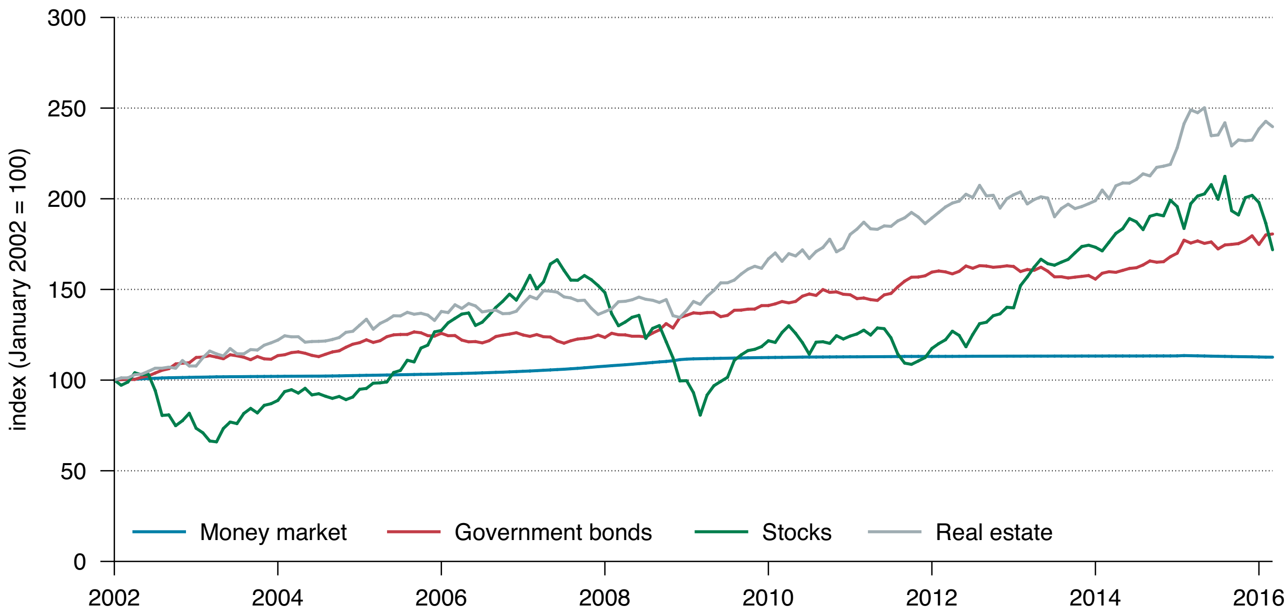
Financial markets

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	-0.1	-0.2	-0.8	-0.2	-0.1	-0.2	-0.8	-0.2
Swiss government bonds	3.3	1.6	3.2	24.6	3.3	1.6	3.2	24.6
Swiss corporate bonds	1.9	0.4	2.3	20.1	1.9	0.4	2.3	20.1
Swiss equities (SMI)	-13.2	-12.5	-8.4	34.8	-13.2	-12.5	-8.4	34.8
Eurozone equities (Stoxx600)	-14.5	-15.2	-14.0	29.0	-13.0	-13.5	-10.2	8.1
UK equities (Ftse100)	-8.4	-6.3	-13.3	12.7	-11.5	-13.0	-13.3	2.5
Japanese equities (Topix)	-22.7	-24.4	-15.9	40.5	-18.6	-20.0	-6.2	4.7
US equities (S&P 500)	-8.5	-7.3	-8.8	56.1	-10.0	-10.0	-4.4	56.7
Emerging markets equities	-10.4	-13.0	-24.7	-24.9	-11.8	-15.5	-21.1	-24.6
Global equities (MSCI World)	-10.4	-9.7	-12.5	26.6	-11.8	-12.4	-8.3	27.0
Swiss real estate	0.5	1.5	-1.9	30.0	0.5	1.5	-1.9	30.0
Global real estate	-8.9	-5.2	-12.5	34.1	-10.3	-8.0	-8.3	34.6
Commodities	-4.0	-8.5	-26.8	-53.6	-5.5	-11.1	-23.3	-53.4
Brent oil	-7.8	-24.3	-42.5	-67.3	-9.3	-26.5	-39.7	-67.2
Gold	16.1	14.0	0.8	-9.7	14.3	10.7	5.7	-9.4

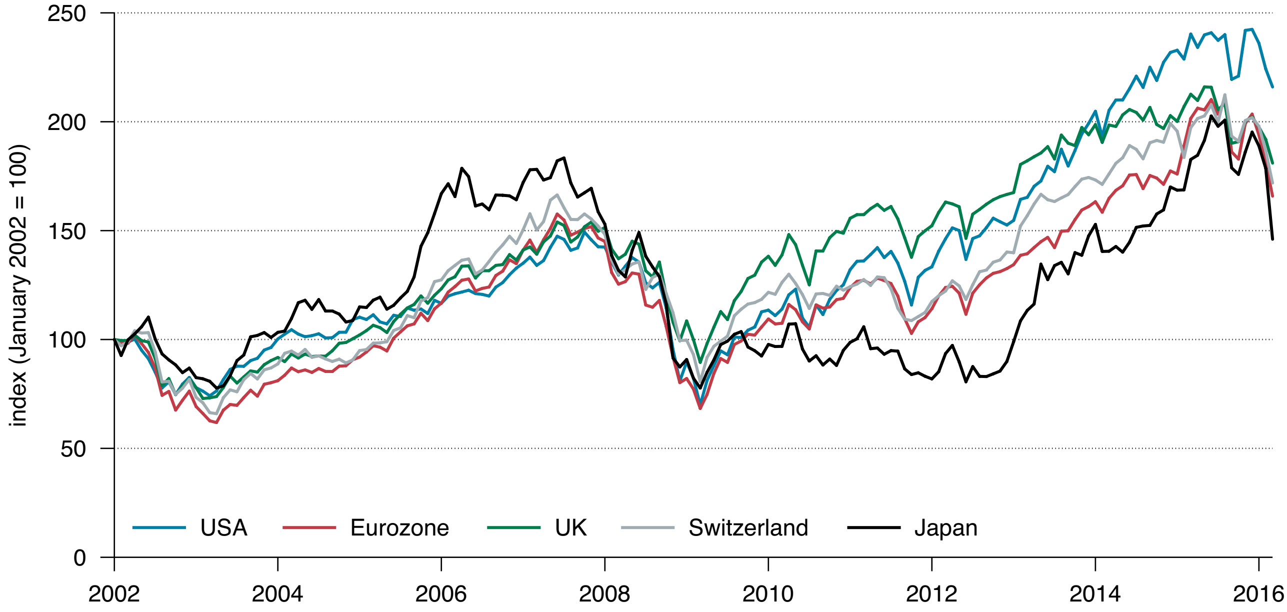
[1] Performance over the respective period of time, in percent.

Performance of selected Swiss asset classes

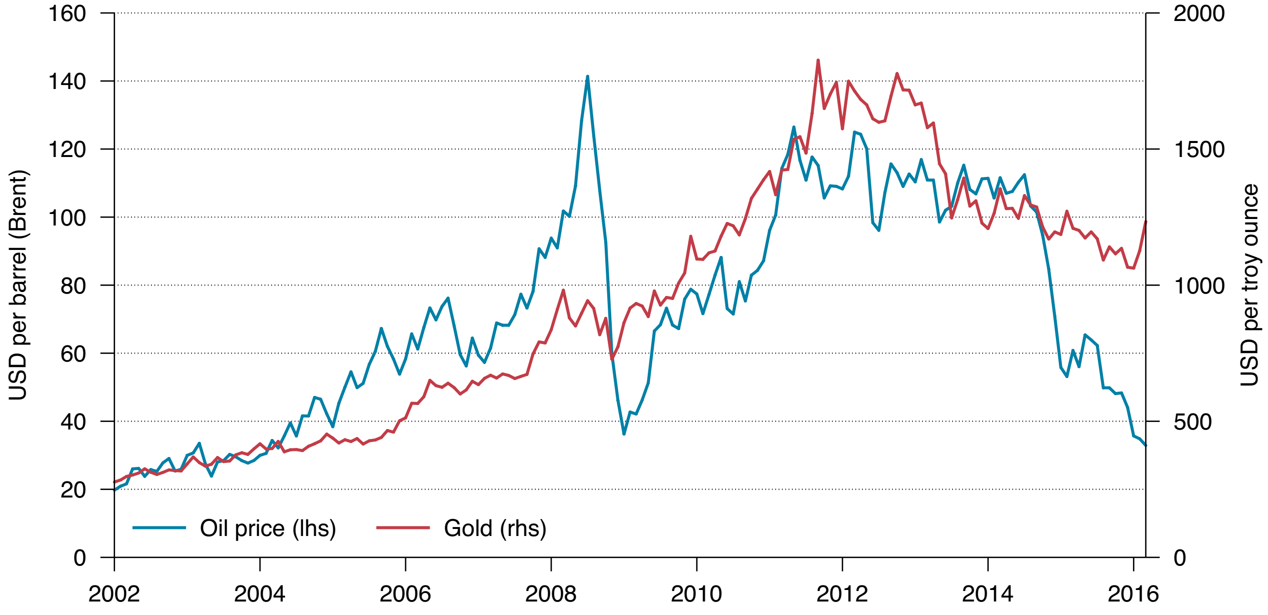


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

Performance of selected equity markets (in local currency)



Performance of selected commodity prices



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

Number of the month

3.7 percent

By the end of 2015 the euro's share in the portfolios of Swiss pension funds was a tiny 3.7 percent. This is the lowest observed level since collection of this data began, in 2002. At that time Swiss pension funds had invested 16 percent of their holdings in euro-denominated investments. The franc's portfolio share rose from 58 to over 78 percent over the same period. Given our outlook for a depreciating Swiss franc, we think such a currency allocation sacrifices precious returns.