QCAM Currency Asset Management

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Understanding the euro rally – a macro perspective

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QCAM Insight

Understanding the euro rally – a macro perspective

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Hardly anyone foresaw the euro's rebound at the start of the year. Since January the euro gained about 13 percent versus the US dollar. Most market participants had expected the euro to weaken and even fall below parity. However, as we know today, outcomes differed.

At the beginning of the year the US economy was seen as stronger and expected to get a boost from tax cuts and infrastructure spending. Interest rates in the US were forecasted to rise and the spread to euro rates to widen. Finally, political uncertainty in Europe was on the rise before key national elections. However, in the end, outcomes differed.

- The Eurozone's economy outperformed that of the US in the first half of the year. While the US fell short of expectations, growing at an annualized rate of just 1.9 percent, the Eurozone exceeded expectations, growing 2.2 percent over the same period.
- The Fed hiked interest rates in March and June, each time by 25bps, but market forward rates moved far less. The spread between US and Eurozone 12-month forward short-term rates widened by just 20bps. Lower growth and inflation dampened market expectations for further Fed rate hikes, while stronger growth in the Eurozone increased speculation that the ECB may have to end its super-easy policy stance earlier. As a result, long-term bond yields in the Eurozone rose, most notably in Germany, while US long-term yields fell slightly.
- The biggest surprise was the outcome of national elections in the Eurozone, most importantly the French presidential and parliamentary elections. This positive turn of political events in Europe stood in contrast to the chaotic performance of the Trump administration.

The euro may have overshot despite strong fundamental support

The QCAM FX macro-model (see FX Monthly, March 2017) helps illustrate the impact these developments had on the EURUSD exchange rate. The model decomposes the average monthly percent exchange rate changes into macro and market components (see chart). The two main opposing forces are the external and fiscal balances, which support the euro, and the interest rate spreads, which support the dollar. External balances have been volatile and fiscal balances have improved in favor of the euro, but the effects of both were not enough to offset the dollar-favorable impact of interest rate spreads.

The key swing factors were the economic outperformance of the Eurozone and the positive political developments, which reduced market risk perceptions. Through June, these factors have explained the euro's rise well, leaving only a small and balanced unexplained factor. In July, however, the unexplained factor increased and continued to rise in August. The Eurozone economy continues to do well, but this has become less surprising. Risk sentiment remains euro-friendly, but it is easing as well. Upcoming new data on external and fiscal balances may reduce the unexplained factor. The political turmoil in Washington may also not yet be fully reflected in the risk sentiment factor. But there is also the possibility that the euro has simply overshot and that some correction is due.

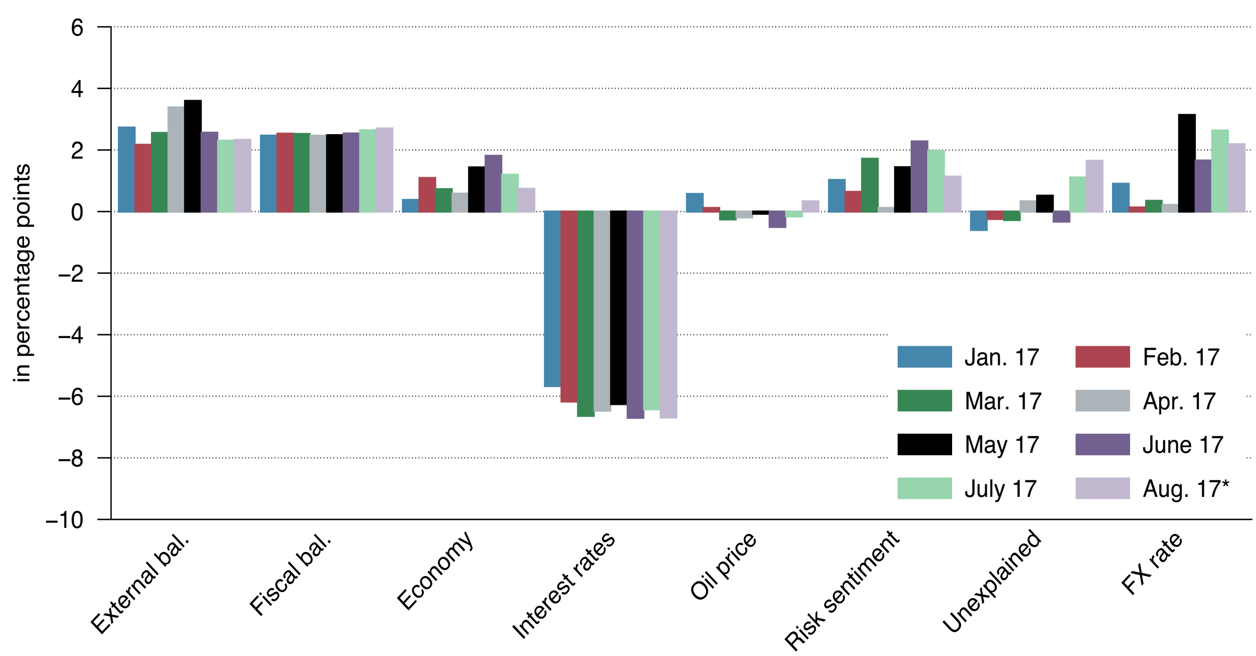
Politics and monetary policy hold the key

The two keys for the outlook are political developments and monetary policy. In the Eurozone, the possibility of further positive political news is limited. A favorable outcome of the German election is priced in. Italy, where elections are due in 2018, could be a source of bad news, while Macron faces resistance to his reform agenda.

In the US, White House staff changes may stabilize politics, but that is unclear. It is interesting that the chaos in Washington has primarily hurt the dollar, but not risky US assets like equities. The market seems to believe that the policy paralysis in Washington dampens growth and inflation and, thus, reduces the risk of Fed tightening. That is viewed as good for equities, especially if earnings remain solid, and it is bad for the dollar. Indeed, the Fed has signaled that its first priority is balance-sheet adjustment, which may well mean that interest rate hikes are being delayed. The ECB is unlikely to hike rates soon. However, unless economic performance collapses, the ECB will soon have to announce the tapering of its bond-buying program. From a market perspective, that would be a fundamental shift and raise forward as well as long-term rates.

On balance, there is a range of scenarios. We see fundamental support for the euro at around 1.14. Further euro upside is possible if US politics remain in turmoil, the Fed takes a pause or the ECB soon announces the unwinding of its bond-buying program. In that case, EURUSD could break through 1.20. From a valuation perspective, that would bring the euro closer to its fair PPP value.

Anatomy of monthly EURUSD changes (positive values are negative for the USD)



(*) Based on data to August 15th with external and fiscal balances kept constant at previous levels.

Source: QCAM

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The macro perspective

Hitting the gas and the brakes

The economy is humming, sentiment decidedly is upbeat and inflation rates stopped flatlining a while ago. So all systems are go, then, ready for a bracing economic takeoff? No, they are not. Monetary policy remains in full crisis mode just as the Fed attempts to normalize its monetary policy – a colossal task in itself.

Looking at the recently released second-quarter GDP statistics for the US as well as the latest US inflation numbers, everything points to the world's largest economy being poised for takeoff. Adding to the good news, the US and the Eurozone economies expanded identically in the second quarter, both by 0.6 percent over the previous quarter. And inflation now seems to have finally turned the page on the era of large fluctuations caused by the energy price component.

Really good to go?

Is everything really in sync now for a growth spurt? Hardly. For one thing, various interest rates remain in negative territory. A very important reason for this is that many central banks are still in monetary policy crisis mode, despite good growth prospects, strong sentiment indicators and the consistently positive development of inflation.

The Fed's daring move to normalize monetary policy

The exception among the world's important central banks for a while now, the US Federal Reserve has been trying to reverse its monetary policy stance taken in the post-crisis years. This effort is nothing less than prodigious, not least because of its scope. Not only should interest rates rise, after some eight years of loitering at near zero percent; at the same time, the Fed's bloated balance sheet should also be drastically reduced. A plan has already been presented detailing how and how much the central bank intends to reduce its gigantic holdings of US government bonds (USD 2,500 billion) and mortgage-backed securities (USD 1,800 billion). All that's missing is a date for the program to commence.

More than herculean

With history's lessons in mind, the question is justified as whether this twofold normalization process can unfold without triggering major collateral economic damage. Remember that after the bursting of the Internet bubble, US interest rates were criticized as being far too low. After US household debt soared back then, the real estate bubble inflated, and then burst, as key interest rates were raised again. Can outcomes improve this time around?

First, it should be stressed that it will not be the Fed's goal to shrink its USD 4,500 billion of debt on its books down to pre-crisis levels. A large part of the liability side of the central bank's balance sheet is made up of the capital that is being used in the economic cycle. Since the 2008 financial crisis erupted, the US economy has nominally grown by 30 percent, and accordingly it needs a lot more capital to operate.

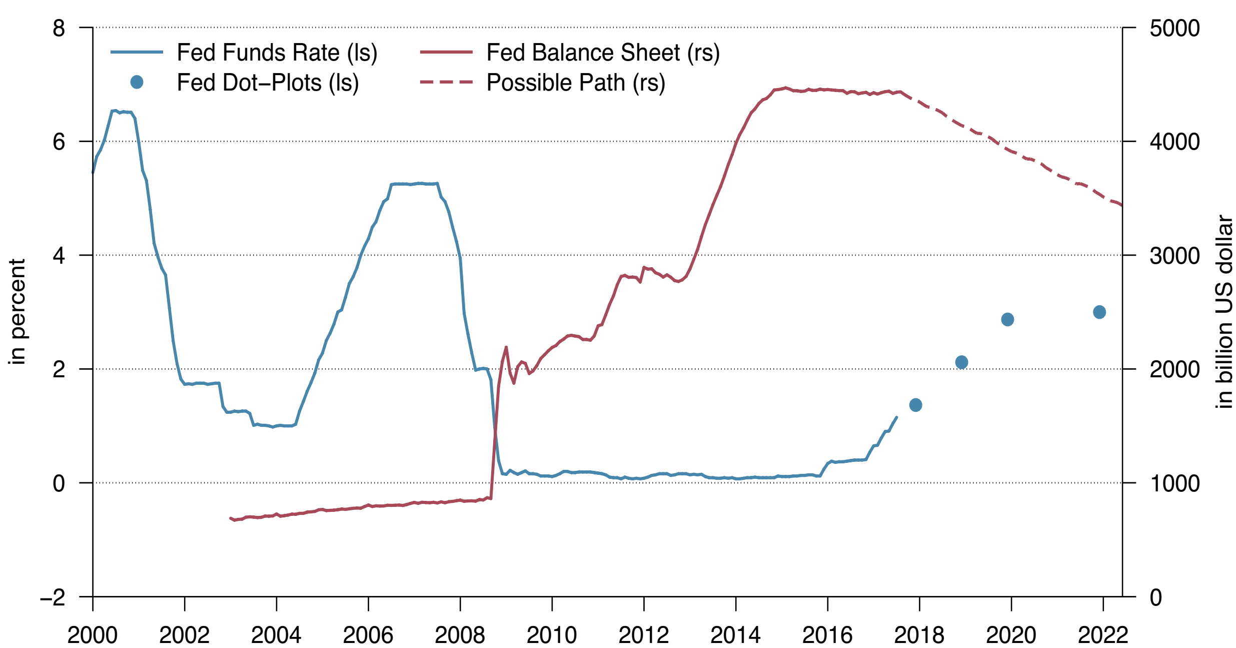
In addition, according to the New York Federal Reserve's estimates, about USD 500 billion in additional capital is needed in order to fulfill new banking regulations. Over the long term, the US central bank can strive for a balance sheet total of just under USD 3,000 billion. This still means an enormous reduction to the Fed's balance sheet is coming but this reduction now no longer appears to be as impossible as a return to pre-crisis levels.

We also need to apply this perspective to interest rate increases, four of which having already taken place in recent years. Here, too, the pre-crisis level of above 5 percent should not be taken as any sort of benchmark for today's situation. The members of the Open Market Committee, the Fed's rate-fixing body, expect an interest rate of 3 percent over the longer term. This, too, does not seem impossible.

Next downswing might interfere with the central banks' planning

And herein lies our story. Despite the ongoing normalization of monetary policy, are things really looking up? The long-term plans of the Federal Reserve as well as the other central banks for reversing their expansive monetary policies appear to be carefully drawn up and look like they could be implemented without necessarily triggering the next crisis. But one big issue remains on the table: the timetables for monetary policy normalization all use very long time horizons. Given the present stage of the economic cycle, we would be surprised if a recession did not interfere with these plans. And under some circumstances, that could mean all the recent good economic news are far from okay.

Pre-crisis levels are poor measures for assessing monetary policy normalization efforts today



Source: Federal Reserve, Thomson Reuters Datastream, Wellershoff & Partners

FX market talk

Resolving currency market imbalances is in full swing

In recent weeks, currency markets have seen substantial price movements. But the historically large deviations from purchasing power parity of many currency pairs have not yet been completely resolved. Thus, there are still rewarding opportunities for investors. We take inventory.

Currency markets heated up this summer. If you enjoyed a longer than usual holiday this year, away from market news and numbers, upon your return you would find exchange rates at levels not seen for quite a while. The Swiss franc flirted with the 1.15 mark versus the euro before it once again resumed its role as a safe-haven currency, as the rhetorical sparks flew between the US and North Korea. The euro also continued to gain against the US dollar, in the meantime having traded above 1.18. Since the beginning of the year, the euro has gained almost 12 percent in value against the dollar.

Large imbalances persist

The market movements of the past few months have by no means transformed the euro into a strong currency. Comparisons of purchasing power parity (PPP) still show the euro with much potential for further appreciation. Fair-value PPP exchange rates are now indicating another 7 to 8 percent of upside for the euro versus both the US dollar and the Swiss franc. The dollar and franc remain the two strong currencies for now, albeit with markedly less impetus than we saw at the start of the year.

The concept of purchasing power parity, which corrects a respective country's exchange rate according to its underlying rates of inflation, serves above all in the estimation of fair exchange rates. Since all exchange rates routinely fluctuate around the PPP level over the long term, investors can use PPP comparisons to identify temporary currency market opportunities and risks.

Our analysis indicates that despite the big moves recently in the markets, not all currency imbalances have been resolved yet. We think sizeable risks and opportunities still persist, as shown in the graph on the right hand side. The line shows the average absolute deviation from PPP for all ten exchange rates between the world's major currencies, the US dollar, euro, yen, pound and franc. The signal is subdivided on a scale from 0 to 5, where 0 implies a particularly small deviation and 5 a particularly large deviation. With a current value of just under 3, the signal still indicates large imbalances remain.

Opportunities in euro, yen, pound and the Nordics

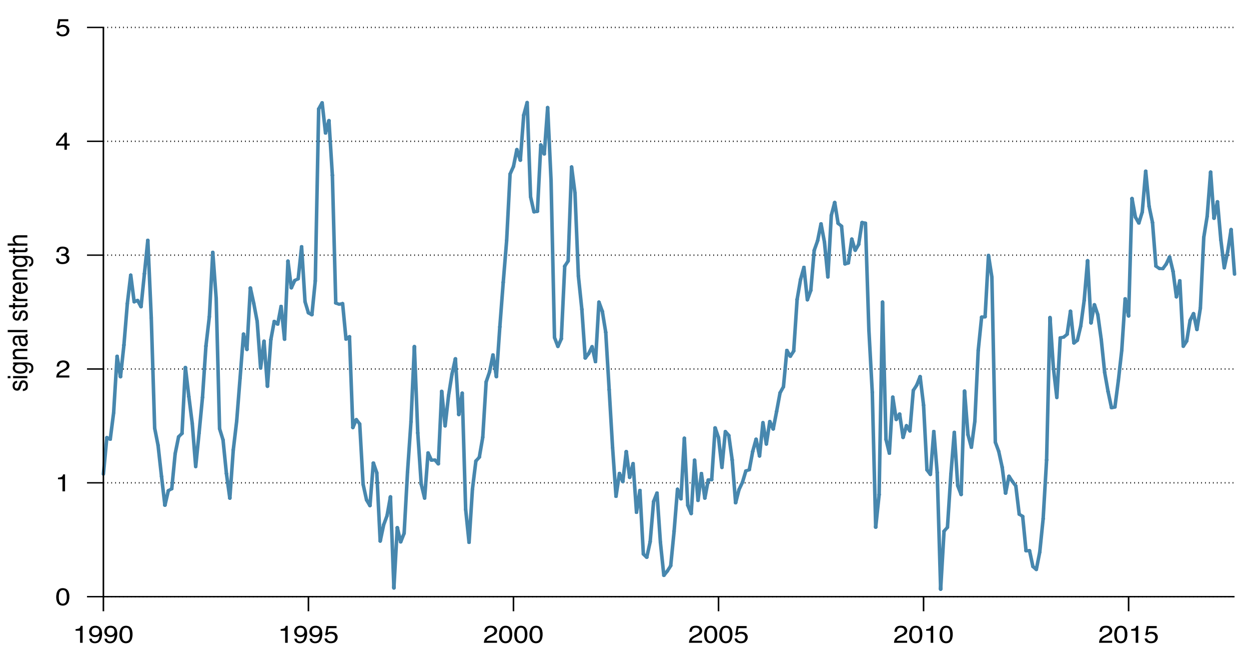
Today, the biggest deviations from PPP are no longer to be found only among the bilateral exchange rates against the euro. The Japanese yen and the British pound clearly share the title of currency weaklings now. In terms of purchasing power, the appreciation potential of these two currencies against the Swiss franc and the US dollar is more than twice as high as that of the euro. PPP deviations are also substantial with the Nordic currencies. With an undervaluation against the franc of about 12 per cent, the Norwegian crown exhibits the greatest deviation right now. The chart below also shows that, historically, the sheer extent of the current imbalances cannot last for much longer. In such instances, there were often large movements in only one currency (thus, in four pairs of currencies in our model), which led to a correction of our deviation signal. This year, the euro has largely played the role of the currency that gains in value against all the others. The Eurozone's economic prospects continue to shine, so that the change in mood could continue to favor the Eurozone and the euro.

Add to that scenario the revival of inflation in recent months, which should motivate the European Central Bank to push forward with normalization of its monetary policy. However, after a progressive speech by ECB president Mario Draghi in late June fueled the euro's appreciation, he turned down the heat, at least for now, at the latest ECB meeting in mid-July. An announcement detailing how the 2018 borrowing program will be wound down is not expected before the next ECB meeting, in early September.

No SNB interventions

The Swiss National Bank, of course, would warmly welcome any further appreciation of the euro against the franc. The latest data on sight deposits and currency reserves indicate that the SNB played no role in the franc's recent depreciation phase. The unspoken risk in the room, of course, is that the situation on the Korean peninsula will need more time to settle down, if indeed that is its path, than has been the case with other North Korean provocations in the past. Perhaps the SNB will not allow its dealers to extend their summer holidays for much longer.

Average deviations of the G-5 currencies from their respective PPP



Source: Thomson Reuters Datastream, Wellershoff & Partners

Economic activity

After the growth data released so far for the second quarter confirmed the positive leading indicators, the latest economic and sentiment data also supports optimism about the prospects for the global economy in the third quarter.

Among other things, the situation in Switzerland is particularly striking. On the one hand, the purchasing managers index was able to grow again after its steep rise in June, posting 60.9 index points. Breaking through the 60-point mark was mainly due to the significantly improved order books compared to the previous month. Meanwhile, consumer sentiment continued its gradual recovery after the Frankenshock of January 2015. The indicator climbed from -8 to -3 points and is now well above its historical average of -9 points.

Despite rising corporate profits in the US, business sentiment has retreated lately, steeply in the services sector and only slightly in manufacturing. This indicates that the US economy may grow a bit less dynamically than suggested by previous sentiment data. The labor market remains a positive, as does the upbeat consumer sentiment in the US.

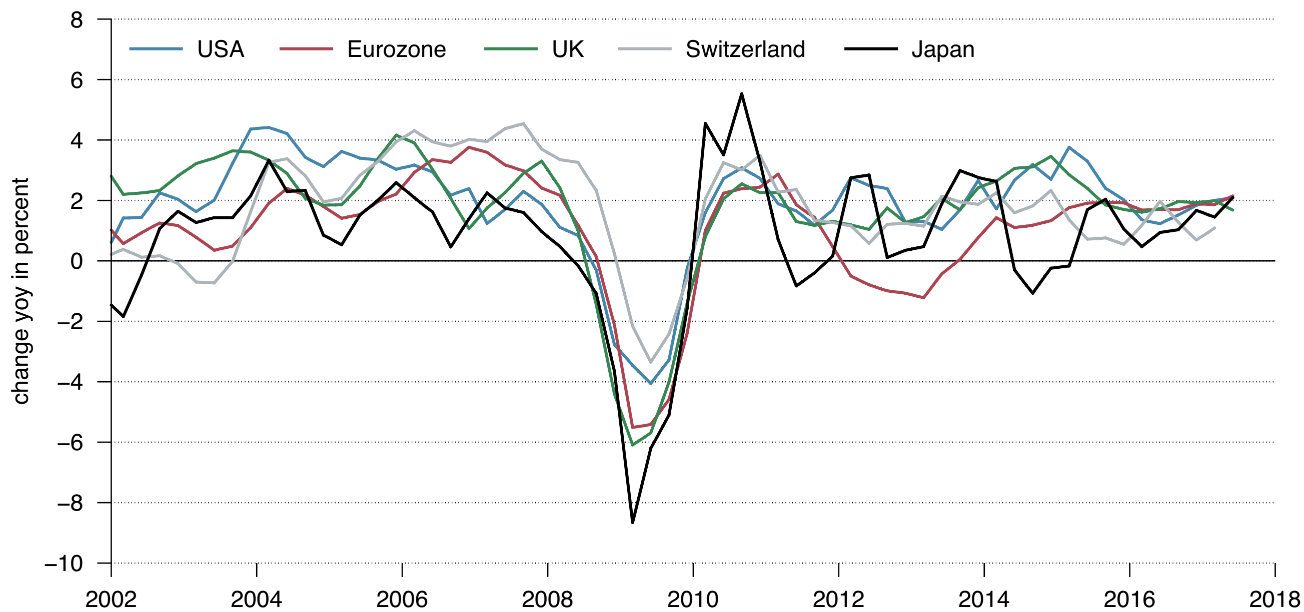
Growth overview

	Trend growth[1]	Real GDP growth[2]				W&P economic sentiment indicators[3]			
		Q3/2016	Q4/2016	Q1/2017	Q2/2017	4/2017	5/2017	6/2017	7/2017
United States	1.7	1.5	1.8	2.0	2.1	2.8	2.7	3.1	2.5
Eurozone	1.0	1.7	1.9	1.9	2.1	2.4	2.3	2.6	2.6
Germany	1.4	1.9	1.9	1.9	2.1	3.2	2.9	3.3	3.4
France	0.7	0.9	1.2	1.1	1.8	1.4	1.5	1.7	1.7
Italy	0.2	1.0	1.1	1.2	–	1.0	0.8	0.8	0.7
Spain	1.6	3.2	3.0	3.0	–	2.2	2.3	2.4	2.2
United Kingdom	1.8	2.0	1.9	2.0	1.7	2.6	2.3	2.5	3.0
Switzerland	1.5	1.3	0.7	1.1	–	1.6	1.2	2.0	1.8
Japan	0.4	1.0	1.7	1.5	2.1	2.3	2.4	2.4	2.4
Canada	1.6	1.5	2.0	2.3	–	1.7	1.8	1.6	1.4
Australia	2.4	1.8	2.4	1.7	–	2.6	2.6	2.5	2.5
Brazil	1.4	-2.8	-2.4	-0.4	–	1.5	2.6	1.8	1.5
Russia	0.1	-0.4	0.3	0.5	2.5	1.1	2.5	0.6	2.8
India	7.7	7.5	7.0	6.1	–	7.4	7.3	7.2	6.9
China	7.4	6.7	6.8	6.9	6.9	6.7	6.5	6.7	6.9
Advanced economies[4]	1.4	1.5	1.8	2.1	–	2.9	2.8	3.1	2.9
Emerging economies[4]	6.0	4.7	5.0	5.1	–	5.1	5.0	5.1	5.0
World economy[4]	3.5	3.2	3.4	3.6	–	4.0	3.8	4.0	3.9

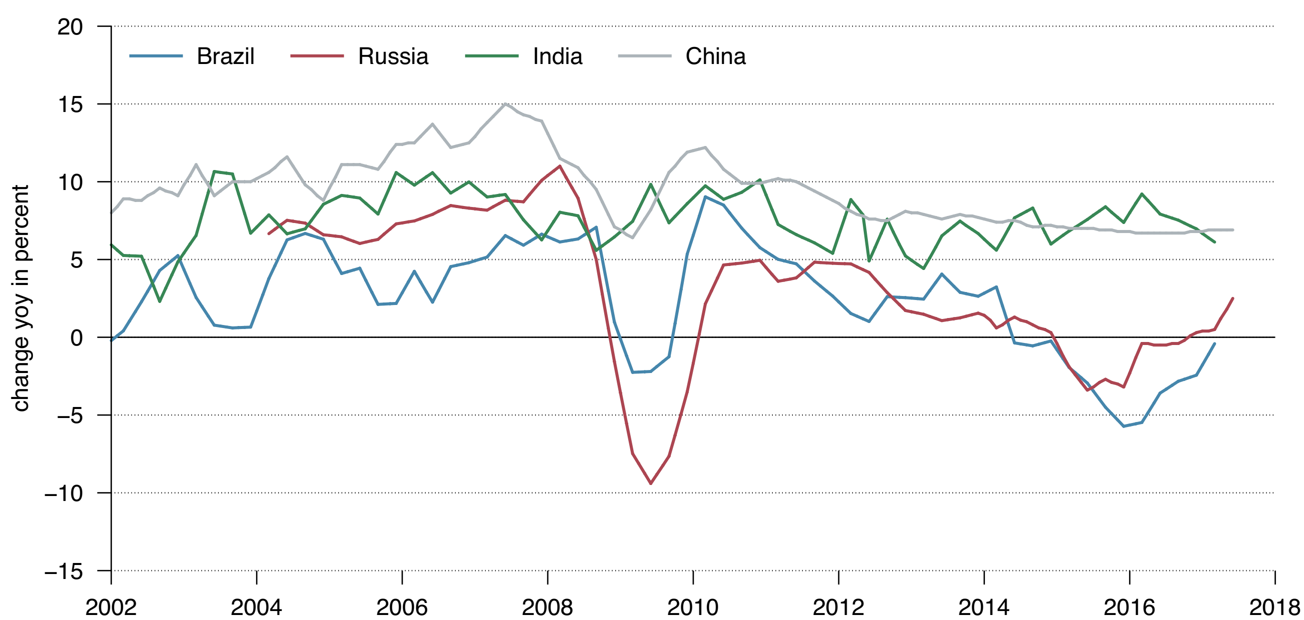
[1] Current year-on-year trend growth rate of real GDP, in percent, according to the proprietary trend growth model of Wellershoff & Partners.
[2] Year-on-year growth rate, in percent.
[3] Wellershoff & Partners economic sentiment indicators are based on consumer and business surveys and have up to 6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

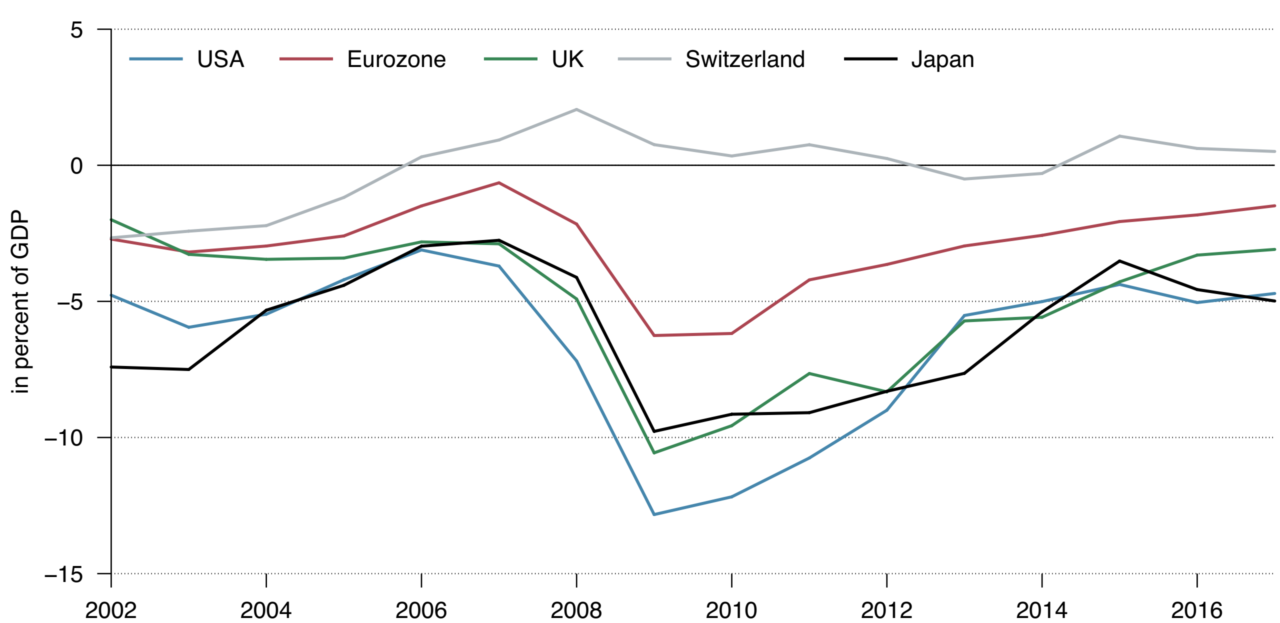
Economic indicators

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	22.9	24.9	-2.5	-2.4	105.2	107.8	-5.8	-4.7	6.4	4.3
Eurozone	16.6	15.0	3.2	4.0	108.1	108.3	-2.6	-1.5	11.2	9.1
Germany	4.8	4.4	7.7	7.5	82.1	73.5	0.3	0.7	6.6	5.7
France	3.5	3.1	-0.9	-1.2	117.2	124.9	-4.0	-3.0	9.8	9.3
Italy	2.6	2.3	1.3	2.1	152.0	157.4	-2.8	-2.1	11.8	11.1
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	4.5
Switzerland	0.9	0.8	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	-2.9	88.0	91.2	-1.4	-2.4	7.0	6.3
Australia	1.8	1.7	-3.5	-2.8	34.3	42.9	-2.9	-2.2	5.7	5.6
China	13.5	15.1	2.2	1.3	40.0	49.3	-1.7	-3.7	4.1	4.0
Brazil	2.9	2.7	-3.0	-1.3	67.1	81.2	-6.1	-9.1	8.4	13.0
India	2.7	3.1	-2.0	-1.5	69.1	67.8	-7.1	-6.4	–	–
Russia	2.4	2.0	2.9	3.3	14.7	17.1	-1.8	-2.6	5.4	5.1

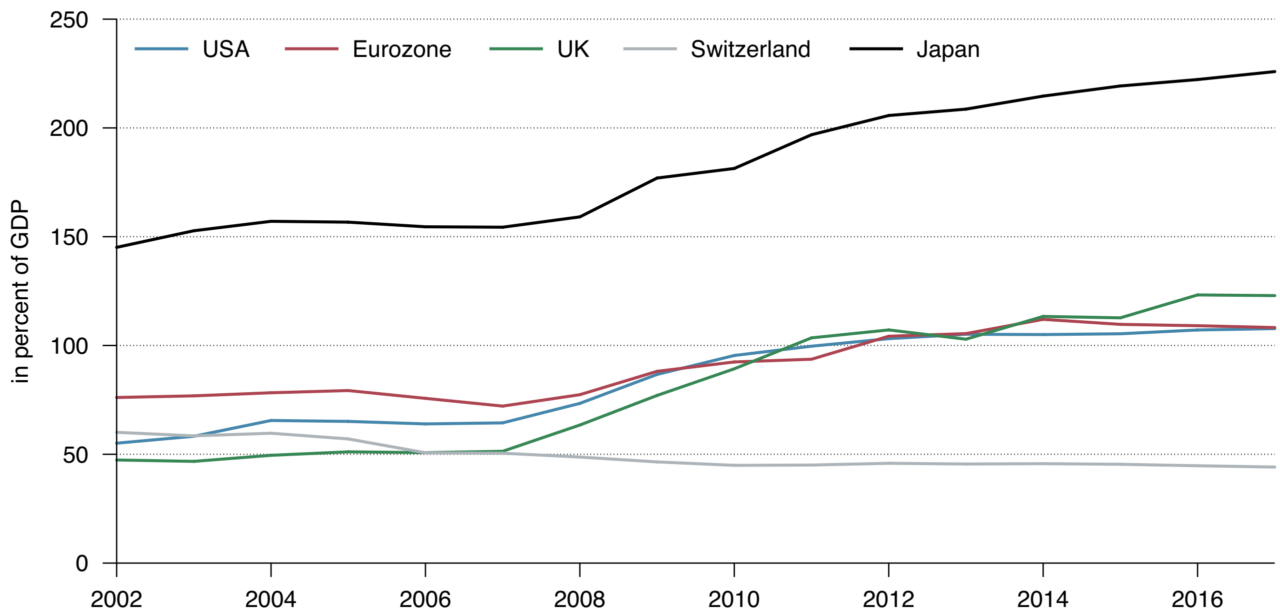
[1] In percent; calculations based on market exchange rates. [2] In percent of nominal GDP. [3] In percent.

Budget deficits in advanced economies

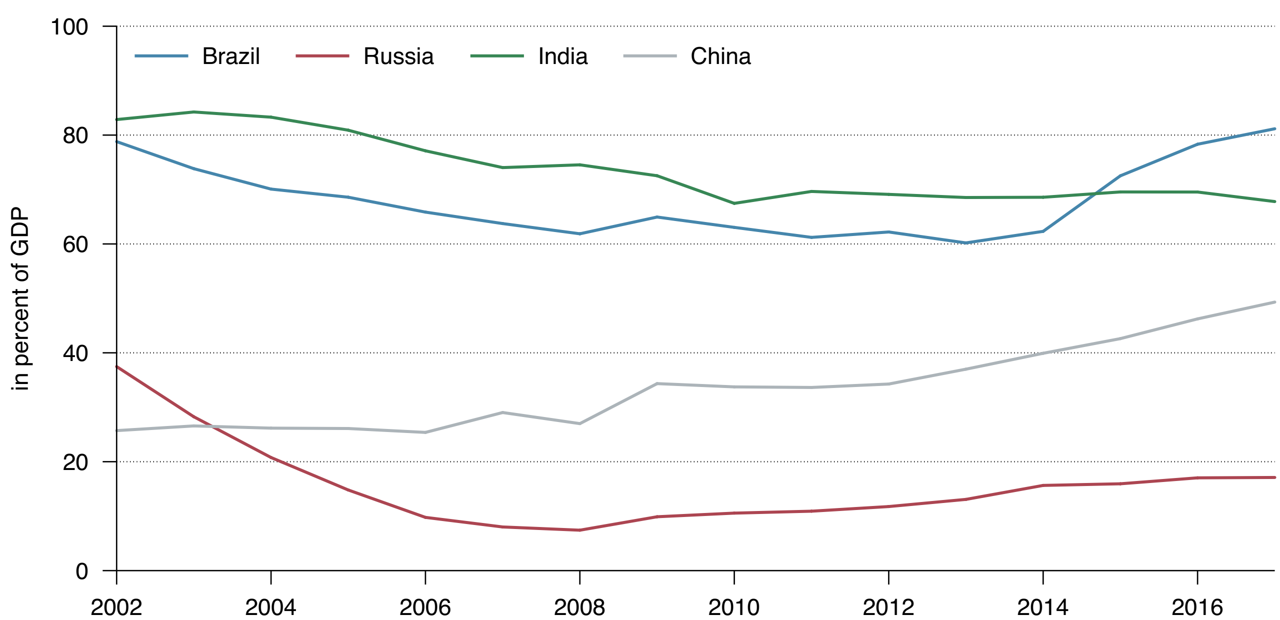


Source: Thomson Reuters Datastream, Wellershoff & Partners

Public debt in advanced economies



Public debt in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

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Inflation

In Great Britain, consumer prices have been rising almost twice as quickly as in the Eurozone in July as the weakening pound is pushing import prices further upwards. Thus, consumer prices in the UK again rose more than average wages, weighing on consumer sentiment and dampening effective private consumption. In July, for the third month in a row, consumer confidence stayed at low levels, similar those posted after the Brexit vote a year ago. Annual inflation will continue to exceed the Bank of England's declared target of 2 percent.

Swiss inflation rose 0.3 percent, compared to July a year ago. Here, the broad depreciation of the franc could, with a certain delay, cause prices on imports to move upwards. An annual inflation rate close to the 1 percent mark cannot be excluded by the end of this year. If the franc sees no significant appreciation by mid-September, the Swiss National Bank is likely, at the least, to revise its position on the currency's overvaluation in its next monetary policy assessment.

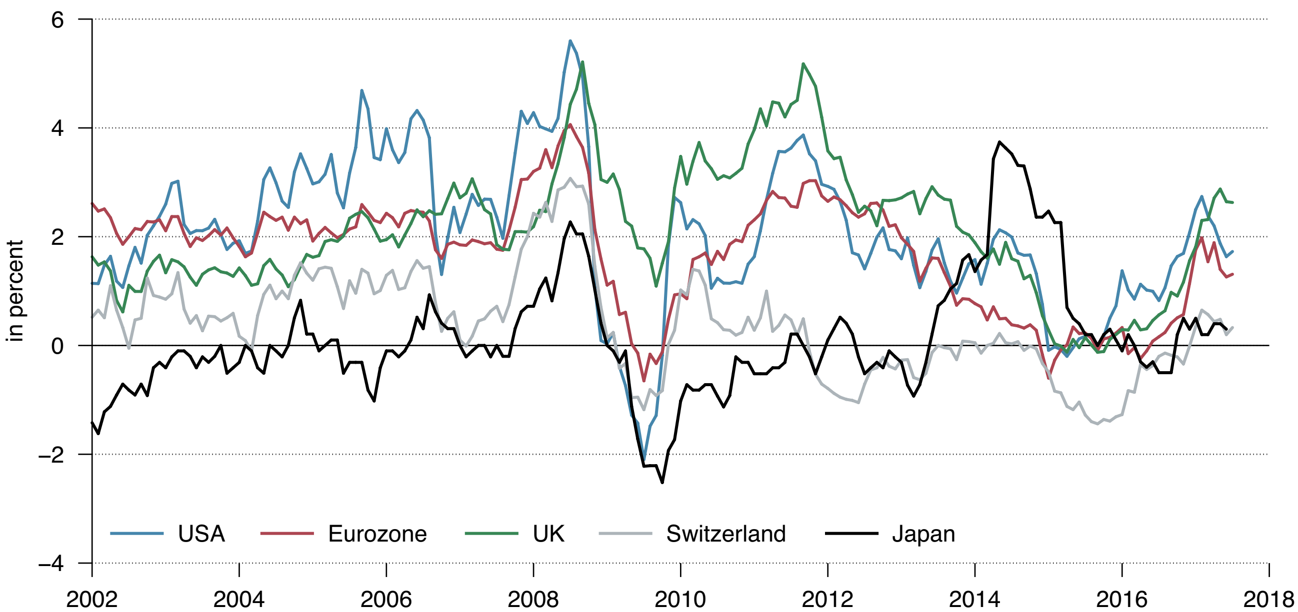
Inflation overview

	Ø 10 years[1]	Inflation[2]				Core inflation[3]			
		4/2017	5/2017	6/2017	7/2017	4/2017	5/2017	6/2017	7/2017
United States	1.7	2.2	1.9	1.6	1.7	1.9	1.7	1.7	1.7
Eurozone	1.4	1.9	1.4	1.3	1.3	1.3	0.9	1.1	1.2
Germany	1.3	2.0	1.5	1.6	1.7	1.3	1.5	1.6	1.8
France	1.1	1.2	0.8	0.7	0.7	–	–	–	–
Italy	1.5	1.9	1.4	1.2	1.1	1.1	0.7	0.9	0.8
Spain	1.5	2.5	1.9	1.5	1.5	1.2	1.0	1.2	1.4
United Kingdom	2.3	2.7	2.9	2.6	2.6	2.4	2.6	2.4	2.4
Switzerland	0.1	0.4	0.5	0.2	0.3	0.1	0.2	0.2	0.3
Japan	0.3	0.4	0.4	0.3	–	0.0	0.1	0.0	–
Canada	1.6	1.6	1.3	1.0	–	1.1	0.9	0.9	–
Australia	2.4	2.1	2.0	1.9	–	1.5	1.5	1.5	–
Brazil	6.2	4.1	3.6	3.0	2.7	5.0	4.5	4.2	4.2
Russia	9.0	4.1	4.1	4.4	3.9	4.1	3.8	3.5	3.3
India	7.8	3.0	2.2	1.5	2.4	–	–	–	–
China	-0.1	-1.1	-0.5	-0.4	1.5	2.1	2.1	2.2	2.1
Advanced economies[4]	1.5	1.9	1.6	1.4	1.5	1.4	1.3	1.3	1.3
Emerging economies[4]	3.5	0.8	0.9	0.8	0.9	2.7	2.6	2.6	2.5
World economy[4]	2.4	1.4	1.3	1.1	1.2	1.7	1.6	1.7	1.6

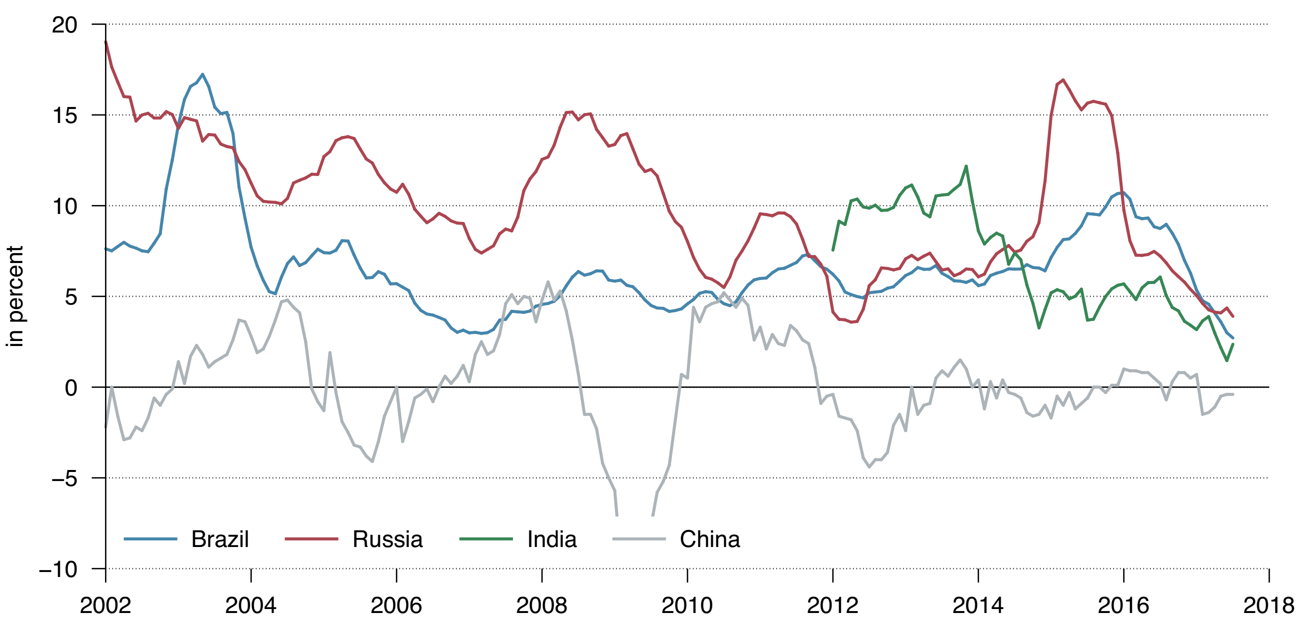
[1] Average annual consumer price inflation, in percent.
[2] Year-on-year change of the consumer price index (CPI), in percent.
[3] Core inflation is a measure of inflation that excludes certain items that can experience volatile price movements, such as energy and certain food items; year-on-year change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

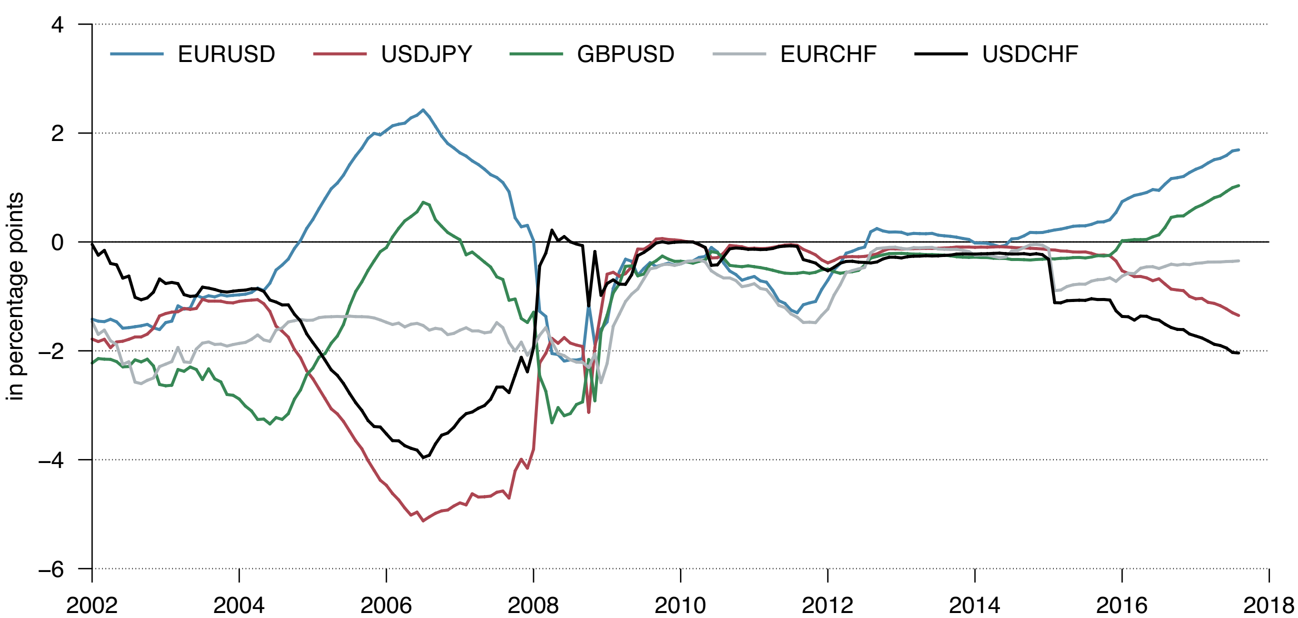
Interest rates

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	1.172	1.70	1.09	0.51	-0.09	1.96	1.56	0.75	0.03
USDJPY	110.6	-1.35	-0.81	-0.40	-0.62	-1.61	-1.40	-0.69	-0.84
GBPUSD	1.285	1.03	0.42	-0.03	-0.49	1.12	0.78	0.04	-0.48
EURCHF	1.140	-0.34	-0.45	-0.35	-0.74	-0.26	-0.43	-0.40	-0.83
USDCHF	0.973	-2.04	-1.54	-0.87	-0.65	-2.22	-1.98	-1.15	-0.86
GBPCHF	1.250	-1.01	-1.13	-0.89	-1.14	-1.10	-1.21	-1.11	-1.33
CHFJPY	113.6	0.69	0.73	0.47	0.03	0.61	0.59	0.45	0.02
AUDUSD	0.782	-0.19	-0.67	-1.71	-2.55	0.16	0.15	-1.14	-2.04
USDCAD	1.276	-0.02	0.09	0.61	0.51	-0.08	-0.38	0.34	0.29
USDSEK	8.095	-1.84	-1.43	-0.26	0.37	-1.92	-1.73	-0.43	0.24
USDRUB	59.9	7.44	9.57	9.37	8.14	6.93	9.00	8.81	8.20
USDBRL	3.198	7.09	13.29	10.80	10.12	6.20	11.65	10.40	9.92
USDCNY	6.678	3.00	2.00	3.53	2.88	2.68	1.53	3.15	2.56
USDTRY	3.537	11.49	8.48	9.04	9.42	11.25	8.18	8.91	9.57
USDINR	64.12	7.47	7.47	8.64	7.49	5.42	5.50	6.68	4.72

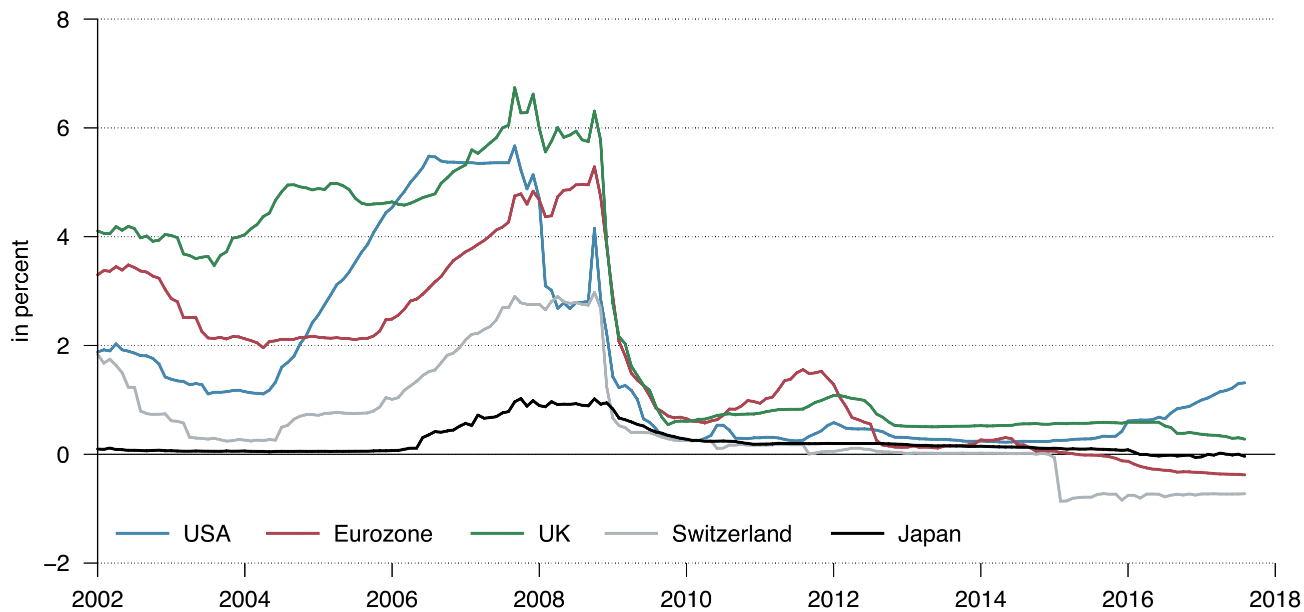
[1] The gap in interest rates between the second currency and the first one, in percentage points; e.g. US dollar minus euro for EURUSD.

Interest rate differentials

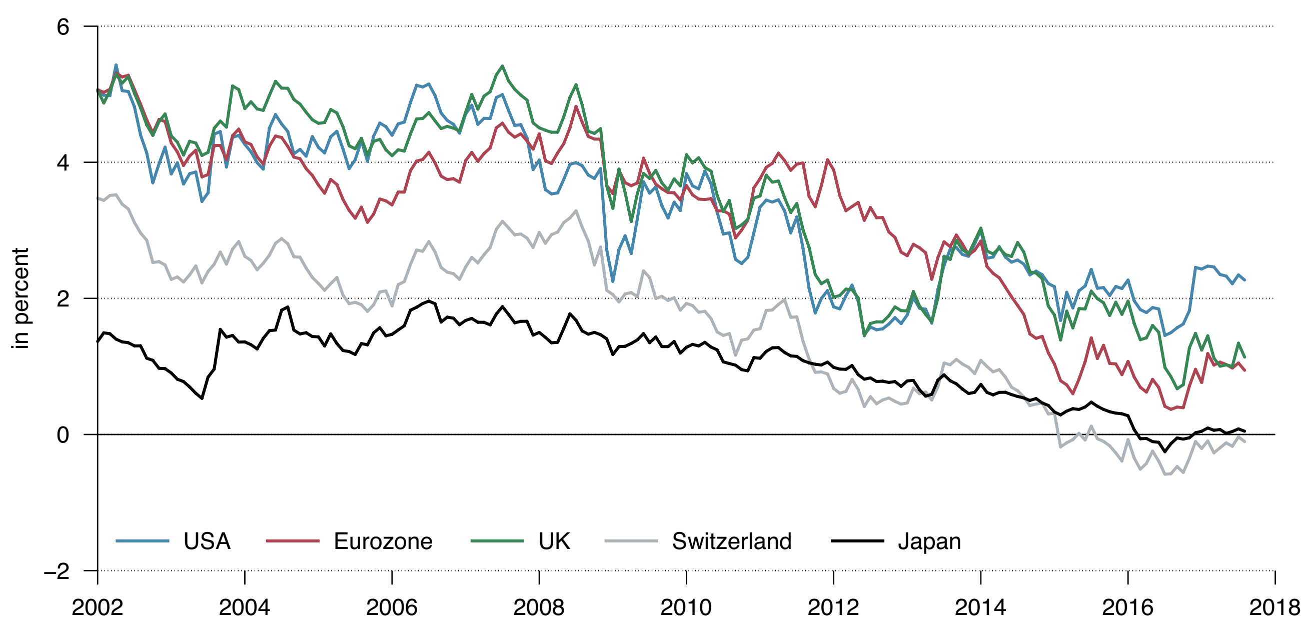


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

3-month Libor



10-year government bond yields



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

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FX markets

The latest developments on currency markets match the slowly begun normalization of monetary policy. The world's most important exchange rate, EURUSD, managed to break out of its stable trading range since 2015 of between 1.05 and 1.15. It moved sharply in the direction of purchasing power parity and currently stands at 1.26 US dollars. The Eurozone's common currency also flexed its muscles against the Swiss franc, reaching 1.15 francs, a big step closer to the PPP level of 1.23 than it has been in a long time. This environment also should enable the Norwegian and Swedish crowns to realize their potential for renewed appreciation.

The renminbi's appreciation versus the US dollar began in May and continued in July. By adjusting the center of the range in which the currency pair can be traded, the Peoples' Bank of China permitted its national currency to rise to its highest level in ten months. On top of that, the fact remains that the renminbi is not only overvalued against the US dollar. On a trade-weighted basis, too, it is still more than 10 percent above its purchasing power parity.

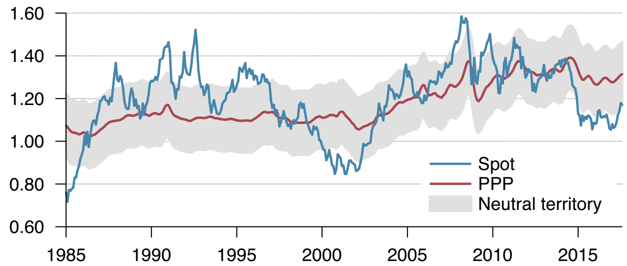
FX overview

	Current exchange rate	Performance[1]				Purchasing Power Parity[2]		
		YTD	3 months	1 year	5 years	PPP	Neutral territory	Deviation[3]
EURUSD	1.172	11.1	5.1	4.7	-4.6	1.31	1.16 - 1.46	-10.8
USDJPY	110.6	-5.2	-0.7	9.4	40.2	90.5	60.2 - 120.9	22.1
GBPUSD	1.285	4.0	-0.9	-0.2	-18.1	1.62	1.42 - 1.82	-20.7
EURCHF	1.140	6.3	4.5	4.7	-5.1	1.18	1.06 - 1.3	-3.5
USDCHF	0.973	-4.3	-0.6	0.1	-0.5	0.93	0.7 - 1.16	4.6
GBPCHF	1.250	-0.4	-1.5	-0.1	-18.5	1.48	1.21 - 1.76	-15.7
CHFJPY	113.6	-1.0	0.0	9.3	40.9	90.0	74.7 - 105.3	26.2
AUDUSD	0.782	8.0	5.3	1.7	-25.6	0.71	0.6 - 0.83	9.6
USDCAD	1.276	-4.9	-6.2	-1.2	28.9	1.21	1.13 - 1.28	5.8
USDSEK	8.095	-10.9	-7.4	-4.2	21.0	7.34	6.41 - 8.28	10.2
USDRUB	59.9	-1.9	5.2	-6.5	87.5	42.4	34.1 - 50.8	41.0
USDBRL	3.198	-1.7	2.9	1.2	58.1	2.81	2.3 - 3.32	13.8
USDCNY	6.678	-3.9	-3.1	0.6	5.0	6.78	6.55 - 7.01	-1.5
USDTRY	3.537	0.5	-0.7	20.2	96.9	2.86	2.62 - 3.1	23.7
USDINR	64.12	-5.5	0.0	-4.1	15.0	71.1	67.5 - 74.7	-9.9

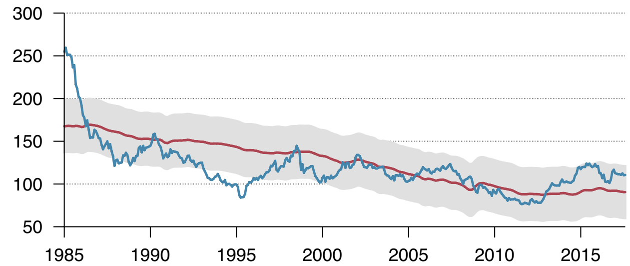
1 Performance over the respective period of time, in percent.
2 Purchasing power parity (PPP) is estimated based on the relative development of inflation rates in two currency markets; the neutral territory is determined by +/- 1 standard deviation of the historical variation around the PPP value.
3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

Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

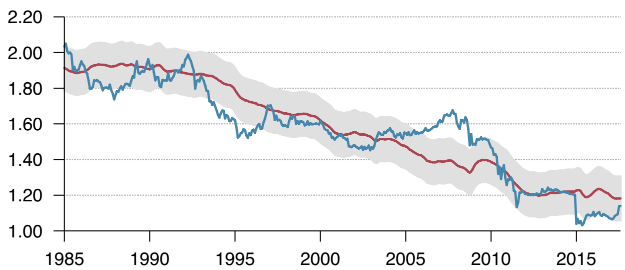
EURUSD



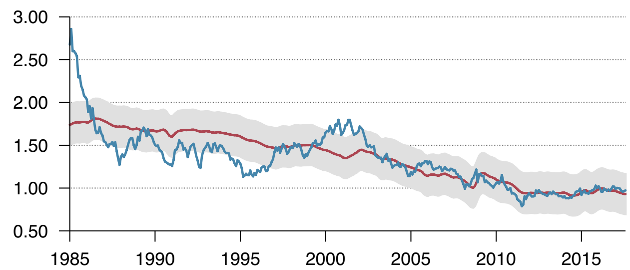
USDJPY



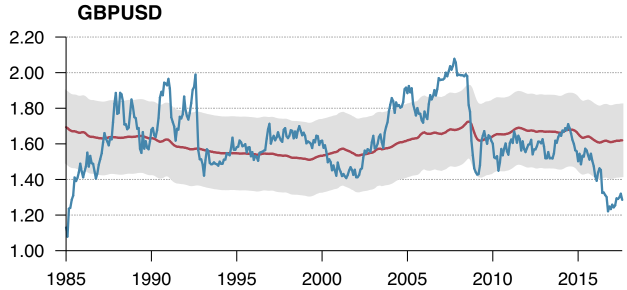
EURCHF



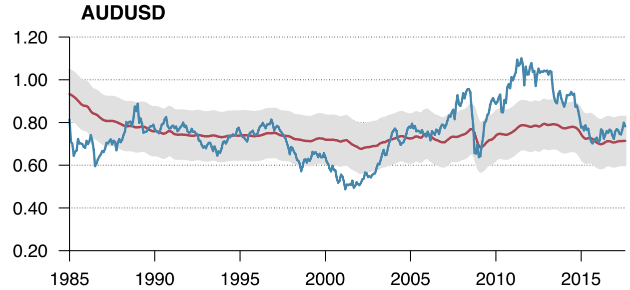
USDCHF



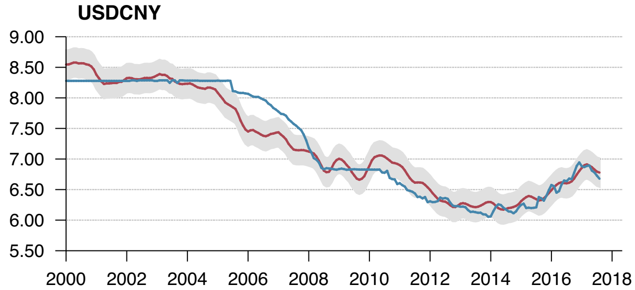
GBPUSD



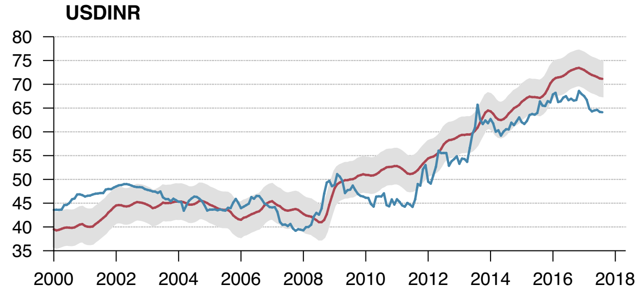
AUDUSD



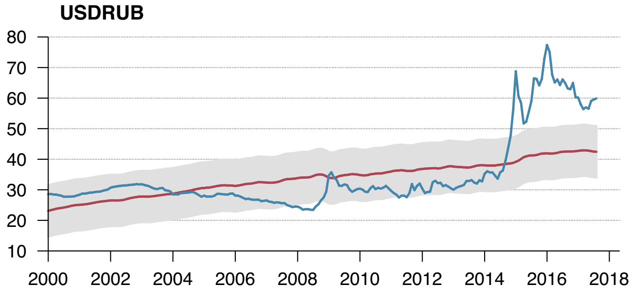
USDCNY



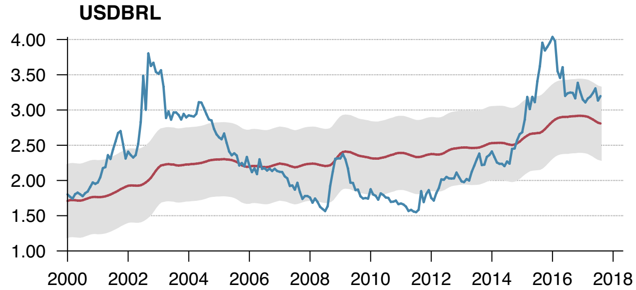
USDINR



USDRUB



USDBRL



Source: Thomson Reuters Datastream, Wellershoff & Partners

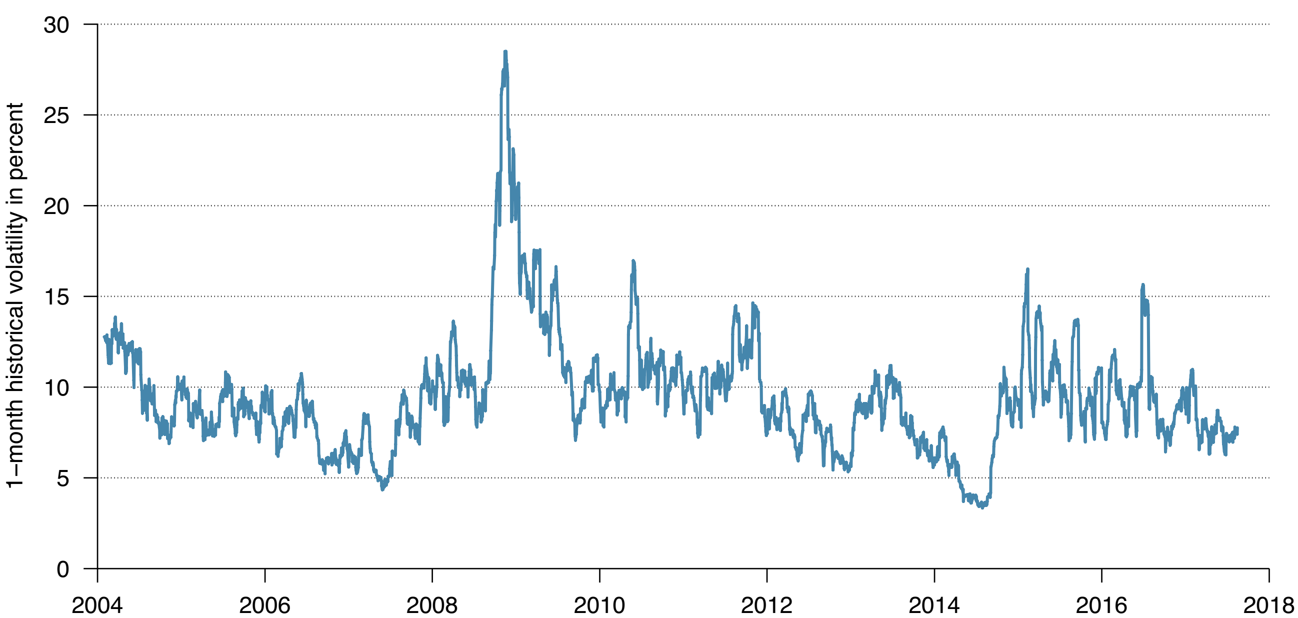
FX volatility

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	1.172	6.9	7.7	8.7	10.6	7.7	7.9	9.0	10.9
USDJPY	110.6	8.0	8.8	9.9	11.0	10.0	9.5	10.3	11.4
GBPUSD	1.285	8.2	7.8	8.3	10.0	9.4	8.6	8.8	10.4
EURCHF	1.140	5.2	7.5	5.5	6.4	4.7	6.9	6.3	6.9
USDCHF	0.973	7.2	8.0	8.9	10.6	7.3	8.2	9.5	10.9
GBPCHF	1.250	8.9	8.7	8.7	10.3	9.2	9.1	9.1	10.7
CHFJPY	113.6	7.8	8.9	10.2	11.7	8.5	10.0	10.8	12.2
AUDUSD	0.782	8.1	8.8	10.0	12.6	8.9	9.6	10.6	13.0
USDCAD	1.276	7.1	7.5	7.8	9.9	7.5	7.9	8.2	10.3
USDSEK	8.095	8.3	8.9	10.0	12.6	9.0	9.1	10.5	12.8
USDRUB	59.9	11.2	12.4	16.1	14.3	13.3	13.4	16.4	15.3
USDBRL	3.198	19.2	12.7	14.7	15.7	14.9	13.9	15.1	16.1
USDCNY	6.678	2.5	3.6	3.3	3.2	2.6	4.5	4.2	4.8
USDTRY	3.537	8.4	10.7	11.8	13.3	11.9	13.0	13.0	14.5
USDINR	64.12	3.5	5.4	8.3	9.6	3.7	6.8	9.5	10.5

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

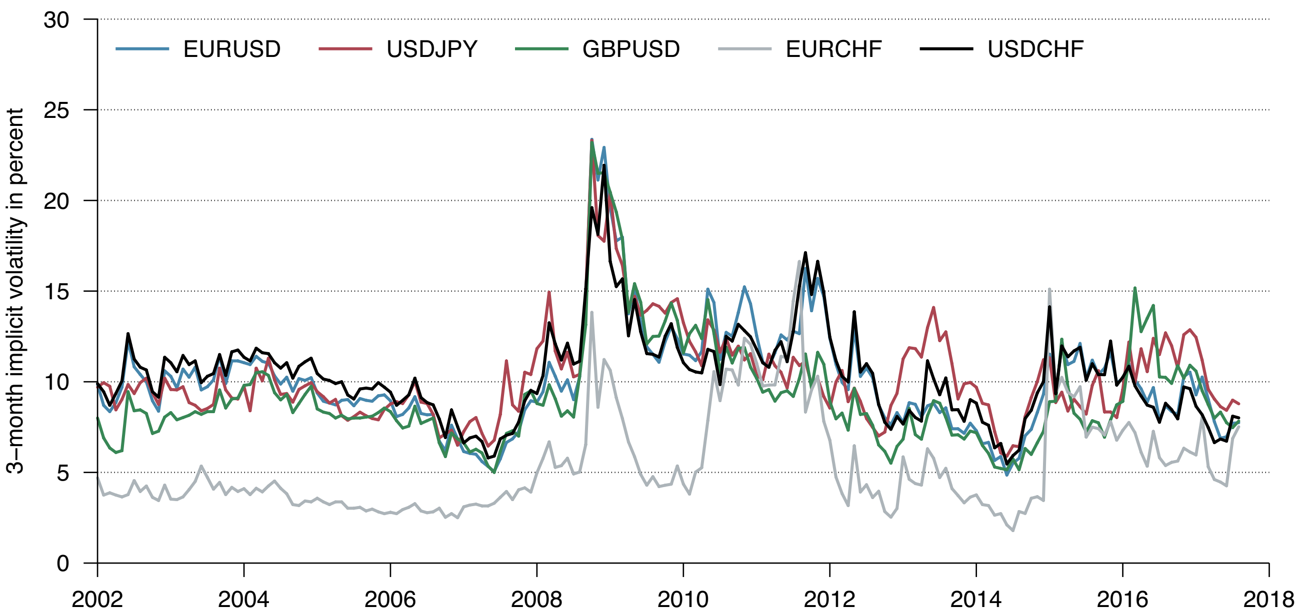
QCAM volatility indicator[3]



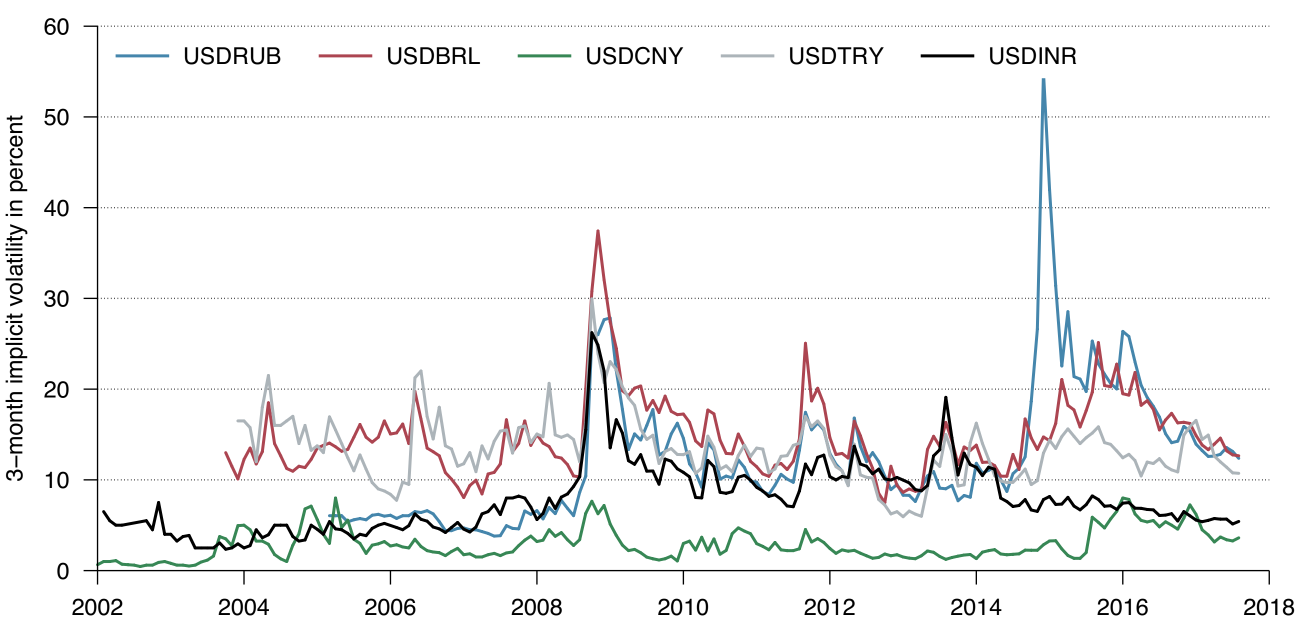
[3] The QCAM volatility indicator measures general volatility in global FX markets; the indicator is based on historical volatility of the main exchange rates, which are weighted by trading volume.

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

Implicit volatility



Implicit volatility



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

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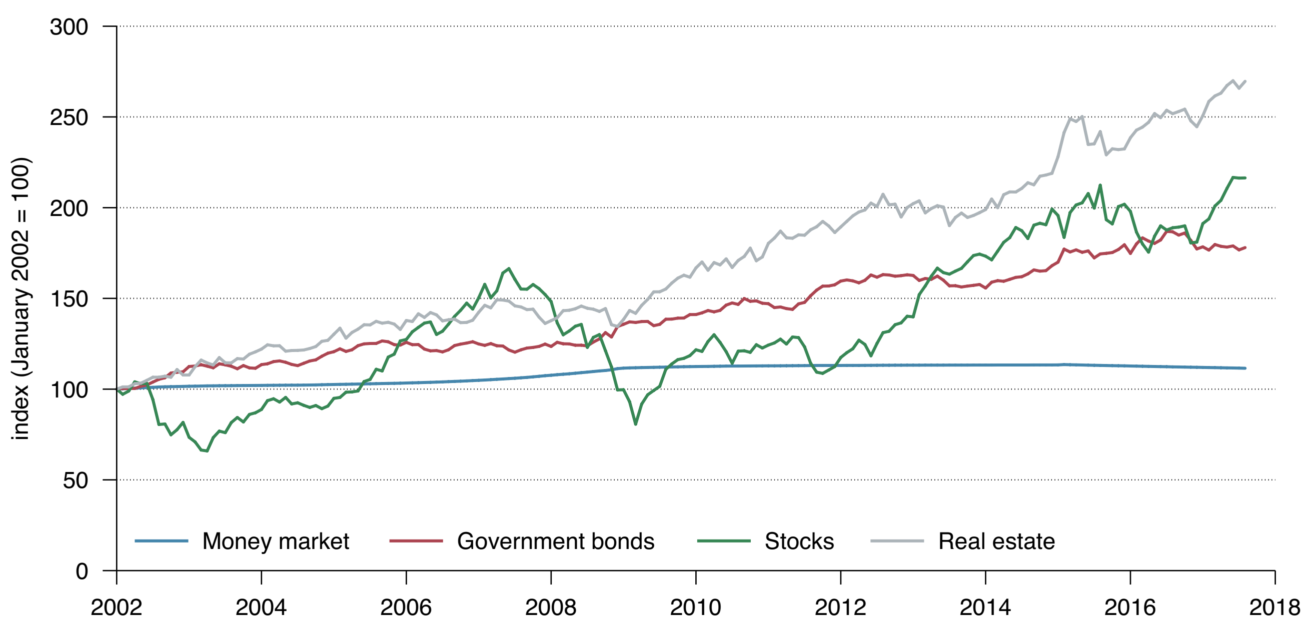
Financial markets

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	-0.4	-0.2	-0.7	-1.5	-0.4	-0.2	-0.7	-1.5
Swiss government bonds	-0.2	0.0	-4.3	9.9	-0.2	0.0	-4.3	9.9
Swiss corporate bonds	0.2	-0.1	-1.9	10.1	0.2	-0.1	-1.9	10.1
Swiss equities (SMI)	13.2	0.2	12.1	62.0	13.2	0.2	12.1	62.0
European equities (Stoxx600)	7.0	-3.0	12.4	64.0	13.9	1.5	17.9	55.9
UK equities (Ftse100)	6.4	-0.3	10.6	52.5	6.9	-1.8	10.2	24.6
Japanese equities (Topix)	7.7	2.8	25.4	136.1	9.1	3.3	14.4	68.1
US equities (S&P 500)	11.5	5.1	14.9	93.6	6.6	3.7	14.5	92.2
Emerging markets equities	24.3	5.7	17.9	23.7	18.8	4.3	17.6	22.9
Global equities (MSCI World)	13.2	4.1	14.9	72.0	8.2	2.7	14.5	70.8
Swiss real estate	7.6	2.1	5.2	32.4	7.6	2.1	5.2	32.4
Global real estate	5.9	2.8	-2.3	44.1	1.2	1.5	-2.7	43.1
Commodities	-5.7	-1.7	-3.2	-42.2	-9.8	-3.0	-3.5	-42.6
Brent oil	-10.9	-3.7	4.9	-56.4	-14.8	-5.0	4.5	-56.7
Gold	9.8	1.1	-5.3	-21.3	5.0	-0.3	-5.6	-21.9

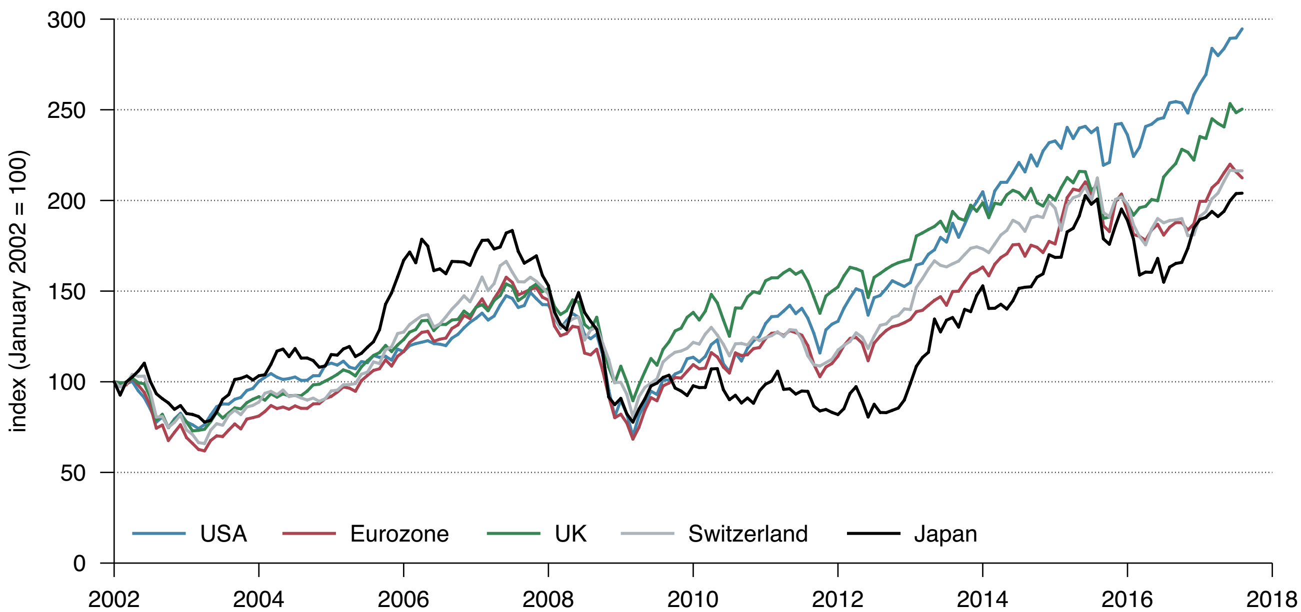
[1] Performance over the respective period of time, in percent.

Performance of selected Swiss asset classes

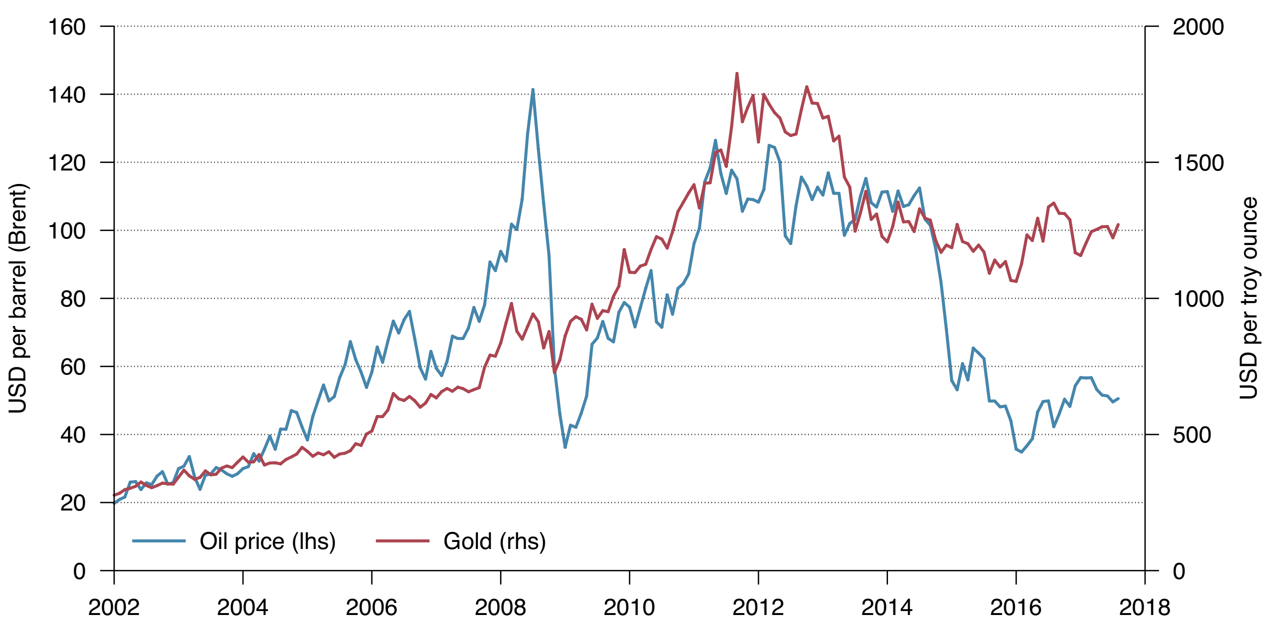


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

Performance of selected equity markets (in local currency)



Performance of selected commodity prices



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

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Number of the month

26 percent

Allegations of cronyism sent Japanese Prime Minister Abe's approval rating plummeting to 26 percent, well into the "death zone" of Japanese politics. No prime minister has ever been re-elected with ratings below 30 percent. This increases uncertainty about the future of Abenomics. Will this collapse in the public's trust prove to be the tipping point that moves the Bank of Japan to normalize its monetary policy?