# EX 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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### **FX Monthly**

May 2016

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#### **Quaesta Capital Insight**

# The big picture for small currencies



Prof. Dr. Tobias Straumann Economic historian specializing in financial and monetary history

Whenever the Swiss franc appreciates sharply, the cry is soon raised for a fixed exchange rate or even for abandoning the currency altogether. To date, these appeals haven't found much traction but might that soon change? Has time run out for the smaller currencies generally? Not likely.

In 2007, at the celebrations marking the centenary of the Swiss National Bank (SNB), a number of prominent economists argued forcefully that the franc's days as a safe haven currency were over. The euro was so successful, they reasoned, that alternatives were no longer needed. But just a few years later, things looked very different. The euro suffered from a crushing debt crisis and the franc's safe haven appeal was restored. All prophecies to the contrary had been false.

### Consequential decisions need to be well founded

This little story should remind us just how misleading it can be to view short-term currency market movements as trends. Above all, during periods of crisis, we should refrain from making long-term forecasts and fundamental strategic decisions. A tactical approach is much more helpful at these times. This rule of thumb applies especially to determining the exchange rates of smaller countries like Switzerland. Naturally, when the franc rises sharply, being in the Eurozone would have its advantages. But such a farreaching decision – changing the exchange rate regime – should be based on long-term considerations, not merely on the interests of the export sector.

#### No exchange rate regime is perfect

When considering such significant policy changes, at the outset we have to recognize that no exchange rate regime is perfect; each in fact involves ever-graver disadvantages. In a second step the respective disadvantages need to be weighed against each other. In Switzerland's case, it's not difficult to reach a clear verdict. The disadvantages of an independent currency – primarily short-term problems for the export sector – are less grave than the loss of monetary sovereignty.

#### Advantages of an independent currency

First, without its own central bank, Switzerland would have no tools at its disposal to quickly and effectively respond to a disruptive event like a banking crisis. We should not forget that the UBS ordeal would have



cost Swiss taxpayers a lot more if the SNB hadn't come up with 60 billion dollars overnight to acquire UBS's toxic paper. Second, Switzerland's economy is generally loosening its ties to the euro. In the meantime a good fifty percent of its exports go to non-European countries. Third, once taken, joining the euro is almost irreversible. In matters of economic policy, an escape route should be available if possible in case a decision turns out to be a mistake.

#### Individual considerations

Other small countries may judge these issues differently. Liechtenstein thrives without its own currency. And the Faroe Islands also cannot claim monetary independence, using a local version of the Danish krone as legal tender. In Austria, even though the EU is increasingly disputed, we find no substantial opposition to the euro.

#### Growing resistance to the euro

In general, current trends favour holding on to monetary sovereignty. In Iceland, for example, right after the financial crisis the idea of joining the EU and the European Monetary Union was popular at first. Today most Icelanders are thankful they didn't have to follow the dictates of the European Central Bank. Instead, through devaluation, they could succeed in reviving their economy. Similarly, in Scandinavia and in Poland, Hungary and the Czech Republic, the majority of citizens no longer favour membership in the European Monetary Union, although EU membership terms call for speedy adoption of the currency.

The Scandinavians, like the British, have always had their reservations about the euro, while reluctance among Eastern Europeans followed the outbreak of the euro crisis. That's when it was made clear just how difficult it is to combat a recession without the ability to devalue your currency. These countries are currently trying to limit their dependence on euro-denominated credits and to increase the share of bonds in their own currency. To counter a weakening krone, the Czech central bank has introduced

a floor versus the euro. Like their peers in Switzerland, the policymakers in Prague hope that currency markets will at some point calm down.

#### No end in sight for smaller currencies

It's clear that none of the smaller currencies are about to disappear. Their occasional fleeting disadvantages have to be taken as part of a longer-term project whose outcome is still uncertain. As the saying goes, "Better a bird in the hand than two in the bush." That not only goes for monetary matters but also for national sovereignty. In fact, the number of independent small countries has increased sharply over the past 25 years. Prosperity is not just a matter of size but also flexibility, and in this regard the small countries often outperform the big ones.



#### The macro perspective

# The risk of a US recession is still substantial

In the world economy, there are often vast differences between perception and reality. That gap has been especially evident over the past few months and we think it's worthwhile to take a closer look at some recent developments.

#### Flagging US economy

In the United States, ample evident risks to the economy are often brushed aside. But signs of significant cooling in the US economy have been apparent for several months now. And among them, we find the ongoing drop in corporate investment rates particularly worrying. It turns out that over the last sixty years, in nine of eleven cases, contracting corporate investment also led to a recession in the US economy. The two times corporate investment shrank without leading to a recession, it was only thanks to hardy US consumers that the economy escaped a steeper decline. The tumbling oil price has lately fed hopes that declining corporate investment need not be a sign of a broad recession this time around. But the oil price has started to climb now, while at the same time consumer sentiment has darkened. Therefore, it has to be stated clearly: the risk of a US recession remains substantial.

#### The Eurozone revives

In the Eurozone, political issues are overshadowing quite good economic news lately. Political risk looms on a number of fronts at the moment. To name but three: Britain's heated EU membership referendum on June 23, elections in fractious Spain on June 26, and the ongoing, lately re-escalating, battle over Greece's debt. In addition, legitimate worries persist about the European Union's institutional foundation, which in turn feed concerns about the prospects for the EU itself. All this turbulence in the political arena tends to squeeze out news of some good economic data lately. The Eurozone continues showing clear signs of revival, posting growth of 0.5 percent monthover-month in the first quarter of 2016. And steady growth was already apparent last year. Wellershoff & Partners' own leading indicators for the Eurozone suggest this positive trend is likely to continue in the months ahead, as the graph shows.

#### Credit boom in China

With regard to China it's often blandly assumed that the authorities have everything under control. Indeed, China's economy has stabilised in recent months. Wellershoff & Partners' proprietary *GDP Growth Stat for China* records a notable uptick at the start of the second quarter of this year. That spurt neatly coincides with the adoption of some extremely expansive economic policy measures. It must be said that the Chinese government's immense credit program has had the wished-for effect on growth. But the levels



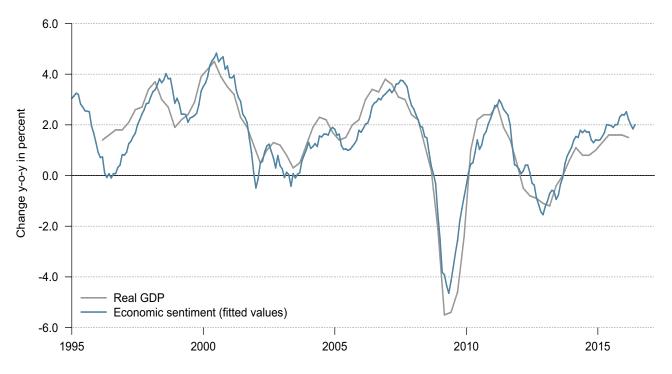
targeted for credit growth will add substantially to the country's existing mountain of debt. At the end of 2015, total corporate, public and consumer debt reached 240 percent of GDP in China. That shows the kind of effort the Chinese government has to make to guarantee growth that is nonetheless declining.

Massive challenges in Brazil

In Brazil, optimism outweighs concerns right now, despite the country's many pressing challenges. With a new government, so goes one storyline, it will be possible for Brazil to break down old structures, battle corruption and strengthen the institutions serving the rule of law. In the longer term, this should help boost economic activity. Maybe that scenario will indeed unfold. In addition, an upturn on Brazil's financial markets appears likely in the coming weeks. Sentiment indicators are currently at such unprecedented depths that some improvement is probable,

which in turn would be well received by financial markets. But Brazil will still face some very substantial challenges. The economic climate remains grim, and the budget deficit of around 10 percent of GDP is exorbitant. The new government's capacity to act is still unknown. In short: It is more than worthwhile to monitor the situation in Brazil closely.

#### The Eurozone shows some growth potential





#### **FX** market talk

# Monetary authorities as volatility drivers

Interest rates remain stuck near zero. Volatility has emerged in other areas, currency markets among them. And the central banks are often the trigger. For example, three of the ten biggest-ever one-day shifts in the EURUSD exchange rate occurred on days when the Fed or the ECB held meetings.

That a central bank decision can ignite a period of heightened volatility on currency markets is certainly clear to Swiss franc investors, at the latest since January 15, 2015. On the day the Swiss National Bank abandoned its minimum exchange rate versus the euro, the difference between the highest and lowest EURCHF rate was 40 percent. Numerous price upheavals also occurred around the time the floor was introduced in September 2011. Looking at the ten biggest intraday swings in the EURCHF rate, eight can be associated with the introduction and withdrawal of the minimum exchange rate. On the other hand, volatility fell to a minimum once the price floor was estabished.

#### A missing word unleashes a rate drop

The biggest single intraday movements for EURUSD can also be explained by the actions of the respec-

tive central banks. The chart shows that the largest intraday EURUSD price band since 2002 occurred on March 18, 2015. In October 2014, after the US Federal Reserve ended its third bond purchasing program, the timing of the first rate hike was already being hotly discussed. After meetings of the Fed's Open Market Committee, market participants carefully scrutinised every word in the press releases. Because the press release from the March 2015 meeting failed to include the word "patience", financial markets soon started hyperventilating. Fed Chair Janet Yellen took pains to explain at the press conference that the missing "patience" should not be interpreted to mean "impatience" about any potential interest rate hike. Currency markets subsequently reversed. The price band for the day was fully 4.38 percent.

#### The ECB also plays with matches

The second-largest intraday price band for EURUSD can also be tied to a central bank meeting. On December 3, 2015, European Central Bank President Mario Draghi announced a range of expansionary monetary policy measures. But financial markets were expecting even more and within a few hours the euro changed 4.34 percent in value versus the US dollar. And after the ECB's March meeting this year, volatility increased sharply on currency markets and the intraday price band reached 3.66 percent, the ninth-largest margin since 2002. We note that the remaining of the ten highest daily rate differences occurred at the height of the global financial crisis.



#### Fed and ECB operate in crisis mode

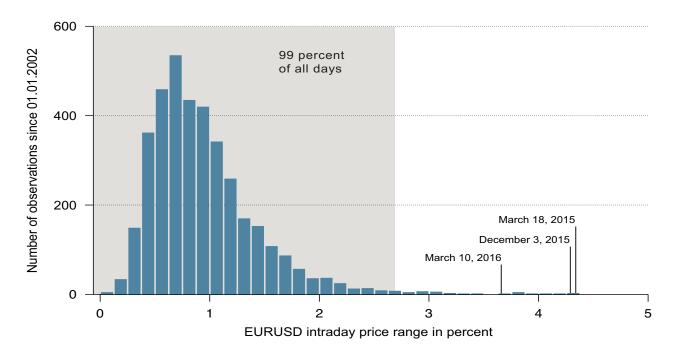
Looking at the exchange rate fluctuations triggered by the central banks, it seems that the Fed as well as the ECB operate in a kind of crisis mode. And in so doing, we think the Fed may have missed the right moment to normalise US interest rates. In the Eurozone, after the latest increase in quarterly growth, a further round of bond purchases appears to be unnecessary from an economic perspective.

malisation of monetary policies would then become ever more probable. The big challenge for both central banks is how to disengage their monetary policies from crisis mode without sending financial markets and national economies into a crisis mode of their own. Heightened volatility once again seems preprogramed for currency markets.

#### Inflation as explanation

For now, the central banks can still cite low inflation in their explanations. However, given that the low annual inflation rates are due to the drop in the oil price at the end of 2015, a sharp rise in inflation rates is conceivable. We believe that in the second half of this year the US inflation rate will surpass the Fed's target of 2 percent. And in the Eurozone we also expect inflation to rise, in this case to 1 percent. A nor-

#### Monetary authorities as volatility drivers





#### **Economic activity**

In the emerging markets the economic situation is decidedly mixed. In China, the cyclical picture appears to be brightening. In Brazil, on the other hand, the signals are negative, and not only because of the latest political turmoil. Sentiment indicators in Brazil are at historical lows.

In the US, first-quarter GDP growth of 2 percent year-over-year didn't quite achieve the hoped-for surge. The ISM Manufacturing Index slipped from 51.8 to 50.8 points in April, disappointing expectations. And the labour market showed signs of cool-

ing off as well, adding only 160 000 new jobs in April, not the 200 000 that were expected.

The Eurozone positively surprised in the first quarter with quarter-over-quarter GDP growth of 0.5 percent. A higher quarterly growth rate has only been recorded twice since the financial crisis, and leading indicators suggest robust economic performance should continue in the Eurozone. In particular, after several months of weakness, Italy is now showing considerable growth potential.

#### **Growth overview**

	Trend						W&P economic sentiment indicators <sup>3</sup>				
	growth <sup>1</sup>	Q2/2015	Q3/2015	Q4/2015	Q1/2016	1/2016	2/2016	3/2016	4/2016		
United States	1.7	2.7	2.2	2.0	2.0	2.0	2.1	2.6	2.6		
Eurozone	1.0	1.6	1.6	1.6	1.5	2.2	2.0	1.8	2.0		
Germany	1.4	1.6	1.7	1.4	1.6	2.2	2.1	2.1	2.2		
France	0.7	1.1	1.2	1.4	1.3	1.8	1.9	1.6	1.5		
Italy	0.2	0.6	0.8	1.1	1.0	1.8	1.5	1.0	1.9		
Spain	1.6	3.2	3.4	3.5	_	3.7	3.6	3.5	3.2		
United Kingdom	1.8	2.4	2.2	2.1	2.0	2.8	2.6	2.7	2.5		
Switzerland	1.5	1.2	0.8	0.4	_	0.7	0.6	1.0	1.1		
Japan	0.4	0.7	1.7	0.8	_	2.2	1.9	2.0	1.9		
Canada	1.6	1.0	1.1	0.5	_	0.3	-0.1	0.2	0.4		
Australia	2.4	2.0	2.7	3.0	_	2.9	3.0	3.1	3.1		
Brazil	1.4	-2.9	-4.5	-6.0	_	0.9	-0.9	0.0	-2.0		
Russia	0.1	-4.5	-3.7	-3.8	-1.2	-1.3	-1.5	-1.9	-2.0		
India	7.7	7.6	7.7	7.3	_	6.1	6.1	6.7	5.8		
China	7.4	7.0	6.9	6.8	6.7	7.6	7.4	8.4	8.2		
Advanced economies <sup>4</sup>	1.4	2.1	2.0	1.9	1.9	1.9	1.8	2.1	2.1		
Emerging economies <sup>4</sup>	6.0	4.6	4.6	4.5	4.7	4.5	4.3	5.1	4.6		
World economy <sup>4</sup>	3.5	3.4	3.3	3.2	3.3	3.1	3.0	3.2	3.0		

<sup>1</sup> Current year-on-year trend growth rate of real GDP, in percent, according to the proprietary trend growth model of Wellershoff & Partners.

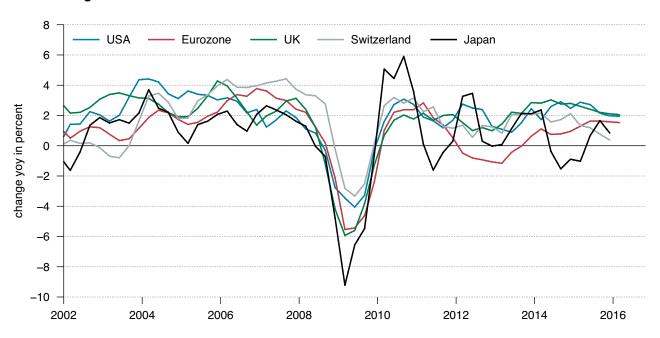
Source: European Commission, Penn World Table, Thomson Reuters Datastream, Wellershoff & Partners

<sup>&</sup>lt;sup>2</sup> Year-on-year growth rate, in percent.

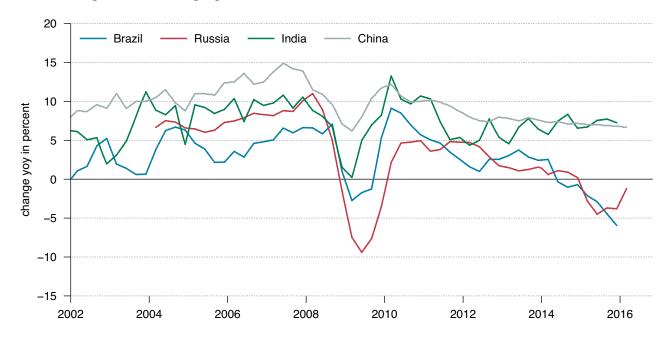
Wellershoff & Partners economic sentiment indicators are based on consumer and business surveys and have up to 6 months lead on the year-on-year growth rate of real GDP.

<sup>4</sup> Calculations are based on nominal GDP weights derived from purchasing power parity exchange rates.

#### Economic growth in advanced economies



#### Economic growth in emerging economies



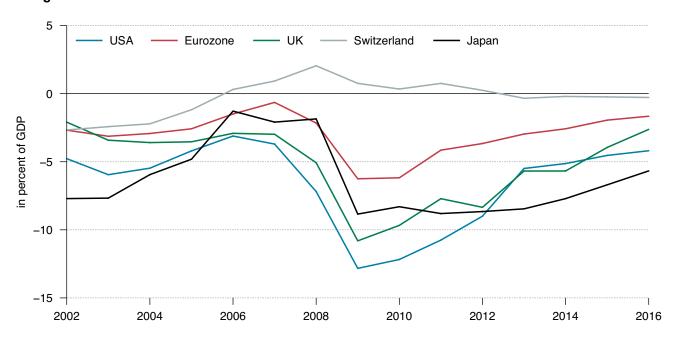
#### **Economic indicators**

#### Overview

			D 1112 121								
	Global G	DP share <sup>1</sup>	Current account <sup>2</sup>		Public debt <sup>2</sup>		Budg	et deficit <sup>2</sup>	Unemployment rate <sup>3</sup>		
	Ø 5 years	Current	Ø 5 years	Current	Ø 5 years	Current	Ø 5 years	Current	Ø 5 years	Current	
United States	22.4	25.1	-2.6	-2.8	110.7	111.4	-7.0	-4.2	7.2	5.0	
Eurozone	17.2	16.0	2.6	3.7	105.1	110.2	-3.1	-1.7	11.2	10.2	
Germany	4.9	4.7	7.0	8.0	82.4	75.0	0.0	0.6	6.8	6.2	
France	3.6	3.3	-0.7	0.2	112.1	121.3	-4.3	-3.4	9.6	10.0	
Italy	2.8	2.5	0.2	1.3	144.4	159.9	-3.0	-2.2	11.1	11.5	
Spain	1.8	1.7	0.1	1.3	102.0	118.7	-7.4	-2.9	23.8	20.4	
United Kingdom	3.7	3.7	-3.7	-3.4	111.5	115.5	-6.3	-2.6	3.8	2.1	
Switzerland	0.9	0.9	9.2	9.9	45.9	46.6	0.0	-0.3	3.1	3.5	
Japan	6.8	6.0	1.6	2.9	220.1	232.4	-8.1	-5.7	4.0	3.2	
Canada	2.4	2.0	-3.0	-3.5	86.0	92.3	-2.0	-2.4	7.1	7.1	
Australia	1.9	1.6	-3.7	-3.6	30.8	39.1	-3.3	-2.4	5.6	5.7	
China	12.5	15.4	2.1	2.6	39.3	46.8	-1.1	-3.1	4.1	-	
Brazil	3.1	2.1	-3.3	-2.0	64.2	76.3	-4.9	-8.7	5.7	8.2	
India	2.6	3.1	-2.7	-1.5	67.3	66.5	-7.5	-7.0	_	_	
Russia	2.6	1.5	3.5	4.2	14.0	18.4	-0.8	-4.4	5.7	6.0	

<sup>&</sup>lt;sup>1</sup> In percent; calculations based on market exchange rates.

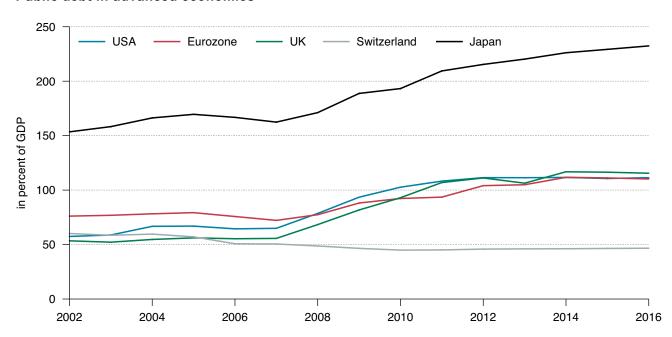
#### Budget deficits in advanced economies



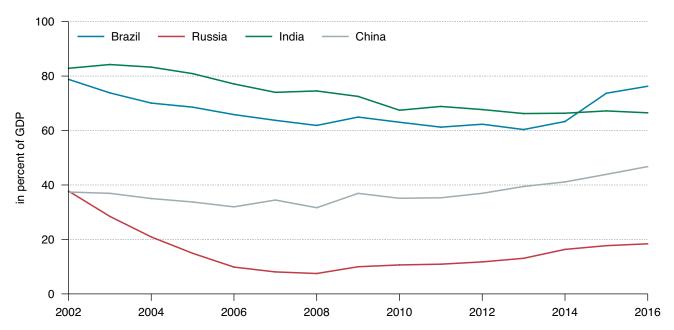
<sup>&</sup>lt;sup>2</sup> In percent of nominal GDP.

<sup>&</sup>lt;sup>3</sup> In percent.

#### Public debt in advanced economies



#### Public debt in emerging economies





#### Inflation

In Germany the core inflation rate rose 1.2 percent in April compared to a year earlier. In March the rate also stood at 1.2 percent. The core rate was accompanied by an overall inflation from 0.1 percent year-over-year in April 2016. The difference between the two inflation rates can once again be explained by the impact of low energy prices. We estimate that the overall inflation rate has been suppressed by around 1 percent thanks to low oil prices. Wellershoff & Partners expects both inflation rates to converge, in the EU and the US, towards the end of the year.

The US Fed has its first interest rate hike behind it now. In its communications the Fed explicitly leaves the question open as to whether there will be any further rate hikes this year. Any hike will depend on how the US economy develops and given April's rather disappointing data we expect the Fed to continue its cautious tone and refrain from any quick rate hikes. Futures markets are currently assigning a mere 10 percent probability of a rate hike in June.

#### Inflation overview

	Ø 10 years <sup>1</sup>				Inflation <sup>2</sup>	Core inflation				
		1/2016	2/2016	3/2016	4/2016	1/2016	2/2016	3/2016	4/2016	
United States	1.9	1.3	1.0	0.9	_	2.2	2.3	2.2	-	
Eurozone	1.6	0.3	-0.2	-0.1	-0.3	1.0	0.8	1.0	0.7	
Germany	1.4	0.6	-0.1	0.1	0.1	1.3	0.9	1.2	1.2	
France	1.2	0.2	-0.2	-0.2	-0.2	_	_	_	_	
Italy	1.6	0.3	-0.3	-0.2	-0.4	0.7	0.5	0.6	0.5	
Spain	1.7	-0.3	-0.8	-0.8	-1.0	0.9	1.0	1.1	0.7	
United Kingdom	2.5	0.3	0.3	0.5	_	1.2	1.2	1.5	_	
Switzerland	0.2	-1.3	-0.8	-0.9	-0.3	-0.9	-0.5	-0.5	0.0	
Japan	0.3	-0.1	0.3	0.1	_	0.7	0.9	0.6	_	
Canada	1.7	2.0	1.4	1.3	_	2.0	1.9	2.1	_	
Australia	2.6	1.6	1.4	1.3	_	2.0	1.8	1.7	_	
Brazil	5.9	10.7	10.4	9.4	9.3	9.2	9.2	7.9	7.8	
Russia	9.4	9.8	8.1	7.3	7.2	10.7	8.9	8.0	7.6	
India	8.1	5.7	5.3	4.8	5.4	_	_	_	_	
China	2.9	1.8	2.3	2.3	2.3	1.5	1.3	1.5	1.5	
Advanced economies <sup>4</sup>	1.6	0.8	0.5	0.5	0.4	1.6	1.6	1.6	1.5	
Emerging economies <sup>4</sup>	5.3	4.3	4.3	4.0	4.1	3.6	3.2	3.1	3.0	
World economy <sup>4</sup>	3.2	2.5	2.3	2.2	2.2	2.2	2.0	2.0	1.9	

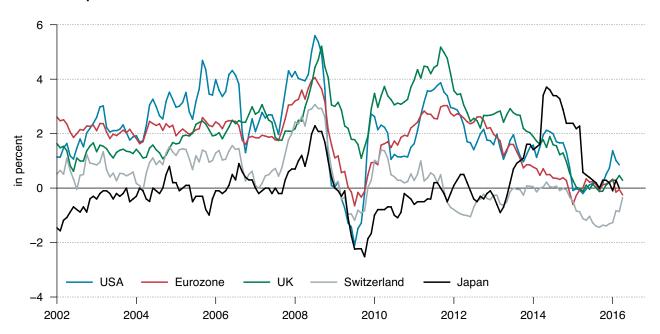
<sup>&</sup>lt;sup>1</sup> Average annual consumer price inflation, in percent.

<sup>&</sup>lt;sup>2</sup> Year-on-year change of the consumer price index (CPI), in percent.

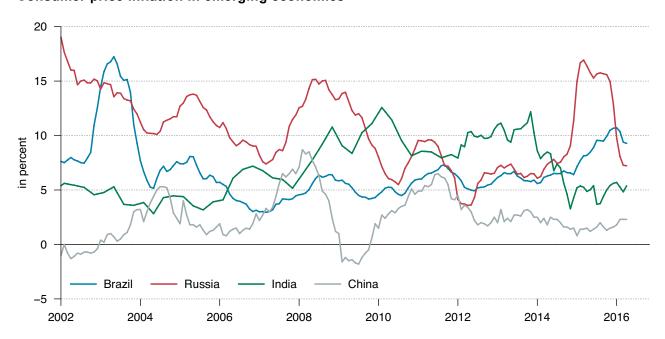
<sup>&</sup>lt;sup>3</sup> Core inflation is a measure of inflation that excludes certain items that can experience volatile price movements, such as energy and certain food items; year-on-year change of the core consumer price index, in percent.

<sup>&</sup>lt;sup>4</sup> Calculations are based on nominal GDP weights derived from purchasing power parity exchange rates.

#### Consumer price inflation in advanced economies



#### Consumer price inflation in emerging economies



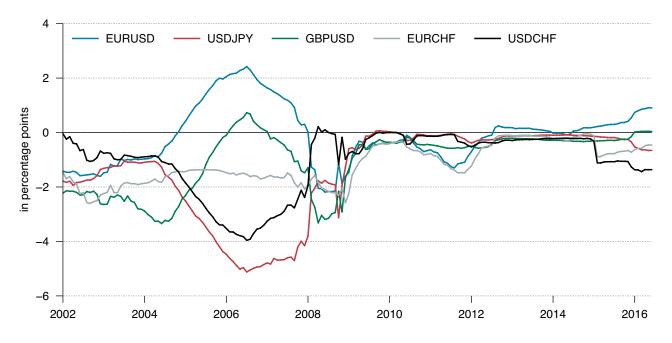
#### **Interest rates**

#### Interest rate differentials overview

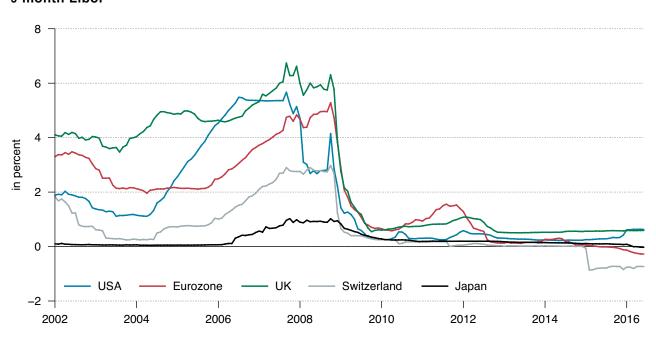
	Current		Interest rate	differential	s 3 months <sup>1</sup>	Interest rate differentials 12 months <sup>1</sup>					
	exchange rate	Current	1 year ago	Ø 5 years	Ø 10 years	Current	1 year ago	Ø 5 years	Ø 10 years		
EURUSD	1.133	0.89	0.28	0.02	-0.04	1.28	0.58	0.13	-0.01		
USDJPY	108.8	-0.66	-0.18	-0.20	-1.10	-1.14	-0.47	-0.42	-1.23		
GBPUSD	1.440	0.04	-0.29	-0.31	-0.57	0.24	-0.27	-0.37	-0.62		
EURCHF	1.107	-0.47	-0.79	-0.49	-0.89	-0.48	-0.73	-0.63	-0.97		
USDCHF	0.977	-1.36	-1.07	-0.52	-0.85	-1.75	-1.31	-0.76	-0.96		
GBPCHF	1.406	-1.33	-1.36	-0.83	-1.42	-1.52	-1.58	-1.13	-1.58		
CHFJPY	111.4	0.71	0.89	0.32	-0.25	0.61	0.83	0.34	-0.26		
AUDUSD	0.730	-1.05	-1.70	-2.49	-2.59	-0.28	-1.18	-1.85	-2.20		
USDCAD	1.290	0.28	0.72	0.84	0.40	-0.12	0.38	0.61	0.23		
USDSEK	8.237	-1.14	-0.58	0.59	0.28	-1.34	-0.81	0.44	0.24		
USDRUB	65.00	10.32	13.69	8.53	6.96	9.72	12.60	8.16	7.34		
USDBRL	3.505	13.41	13.26	10.40	9.66	11.93	13.04	10.21	9.62		
USDCNY	6.521	2.28	2.92	4.06	2.43	1.82	3.45	3.69	2.21		
USDTRY	2.977	9.82	10.52	8.88	9.87	9.28	10.03	8.73	10.17		
USDINR	66.81	7.47	8.07	8.83	6.90	5.77	7.02	6.25	4.40		

<sup>&</sup>lt;sup>1</sup> The gap in interest rates between the second currency and the first one, in percentage points; e.g. US dollar minus euro for EURUSD.

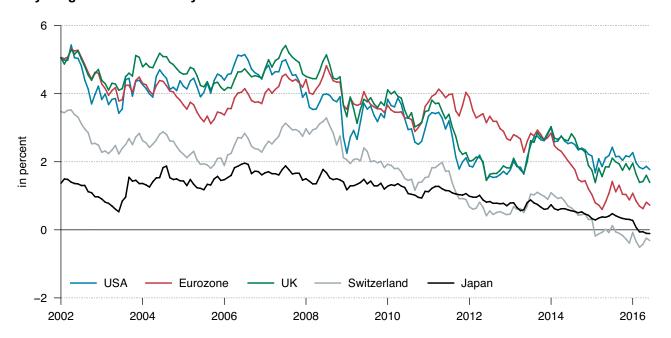
#### Interest rate differentials



#### 3-month Libor



#### 10-year government bond yields





#### **FX** markets

The British pound's volatility remains at high levels leading up to the June 23 referendum on the United Kingdom's membership in the European Union. Currently, the three-month forward volatility priced in by the market ranges from 50 to 70 percent above the average of the past five years. Until the vote, we recommend to keep seatbelts fastened.

The Japanese yen again grew more expensive in April after the Bank of Japan disappointed market expectations. At its April meeting, the BoJ undertook no new expansionary measures, driving the yen up by 3 percent versus the US dollar. From a trade-

weighted perspective, the yen has risen around 8 percent in value so far this year and thus leads the pack of G10-currencies. It has appreciated over 9 percent against the US dollar and nearly 7 percent against the Swiss franc. Our purchasing power parity calculations indicate the yen has the potential to appreciate by about another 20 percent versus the Swiss franc.

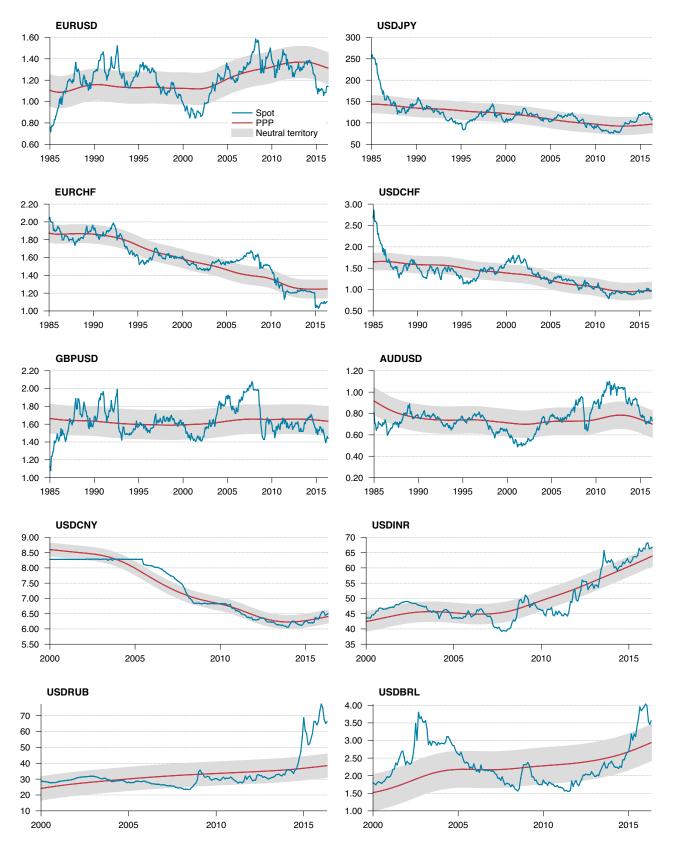
#### **FX** overview

	Current			Dow	formance <sup>1</sup>		Durchesing	Dawar Daritu²
	Current exchange			Per	rormance -		Purchasing	Power Parity <sup>2</sup>
	rate	YTD	3 months	1 year	5 years	PPP	Neutral territory	Deviation <sup>3</sup>
EURUSD	1.133	4.3	1.7	-1.0	-20.0	1.31	1.17 - 1.46	-13.6
USDJPY	108.8	-9.5	-4.4	-8.8	33.7	97.1	77.3 - 116.9	12.1
GBPUSD	1.440	-2.3	0.6	-8.8	-11.2	1.63	1.47 - 1.79	-11.8
EURCHF	1.107	1.8	0.5	5.6	-11.7	1.25	1.15 - 1.35	-11.3
USDCHF	0.977	-2.4	-1.2	6.6	10.4	0.98	0.79 - 1.17	-0.4
GBPCHF	1.406	-4.7	-0.6	-2.8	-1.9	1.60	1.33 - 1.88	-12.3
CHFJPY	111.4	-7.3	-3.2	-14.4	21.0	91.1	78.6 - 103.7	22.3
AUDUSD	0.730	0.4	3.0	-9.3	-30.8	0.70	0.58 - 0.82	4.1
USDCAD	1.290	-7.2	-7.1	7.4	32.1	1.19	1.12 - 1.26	8.3
USDSEK	8.237	-2.3	-3.1	0.0	29.6	7.01	6.11 - 7.90	17.6
USDRUB	65.00	-11.0	-16.5	31.3	130.5	38.5	31.2 - 45.8	68.8
USDBRL	3.505	-11.4	-13.7	17.7	114.6	2.94	2.43 - 3.45	19.2
USDCNY	6.521	0.4	0.1	5.1	0.2	6.41	6.20 - 6.62	1.8
USDTRY	2.977	2.0	0.2	15.5	87.0	2.29	2.03 - 2.55	30.0
USDINR	66.81	1.0	-2.3	5.2	48.0	63.9	60.7 - 67.0	4.6

 $<sup>^{1}\,</sup>$  Performance over the respective period of time, in percent.

<sup>&</sup>lt;sup>2</sup> 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.

 $<sup>^{\</sup>rm 3}\,$  Deviation of the current spot rate from PPP, in percent.



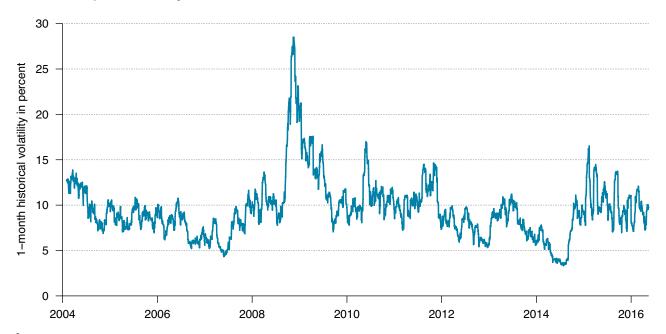
#### **FX** volatility

#### FX volatility overview

	Current			Volatili	ty 3 months <sup>1</sup>		y 12 months <sup>1</sup>		
	exchange rate	Historical	Implied	Ø 5 years <sup>2</sup>	Ø 10 years <sup>2</sup>	Historical	Implied	Ø 5 years <sup>2</sup>	Ø 10 years <sup>2</sup>
EURUSD	1.133	8.7	9.8	9.7	10.4	10.8	9.8	10.1	10.7
USDJPY	108.8	10.7	11.4	9.6	10.6	9.8	10.9	10.5	11.0
GBPUSD	1.440	9.6	14.9	8.2	9.5	8.4	11.5	9.0	10.0
EURCHF	1.107	5.0	6.7	6.2	6.1	6.8	7.5	7.1	6.4
USDCHF	0.977	8.6	9.8	10.1	10.6	10.3	10.1	10.7	10.8
GBPCHF	1.406	9.4	14.0	8.9	9.8	10.1	11.9	9.6	10.2
CHFJPY	111.4	10.4	11.8	11.0	11.3	10.5	11.4	11.8	11.8
AUDUSD	0.730	12.9	12.5	11.0	12.3	12.7	12.5	11.7	12.6
USDCAD	1.290	10.5	10.7	8.2	9.8	9.7	10.4	8.7	10.1
USDSEK	8.237	9.2	10.1	11.4	12.5	11.3	10.5	11.9	12.7
USDRUB	65.00	21.8	20.0	15.7	13.1	25.0	20.6	16.1	14.2
USDBRL	3.505	20.5	17.8	14.7	15.2	19.3	17.9	15.3	15.7
USDCNY	6.521	2.7	6.0	2.7	2.8	3.4	7.9	3.6	4.4
USDTRY	2.977	10.0	12.9	11.8	13.5	12.6	14.0	13.2	14.8
USDINR	66.81	4.0	6.6	9.5	9.5	4.6	8.4	10.5	10.3

<sup>&</sup>lt;sup>1</sup> Annualized volatility, in percent.

#### Quaesta Capital volatility indicator<sup>3</sup>

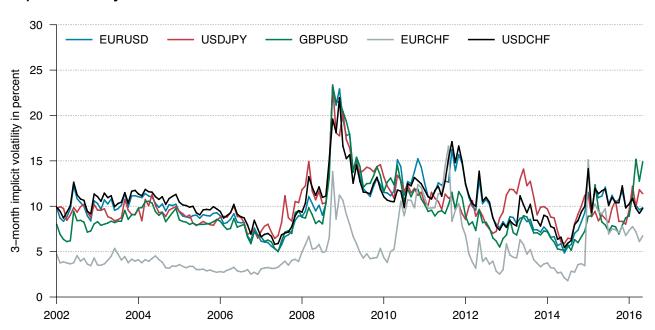


<sup>&</sup>lt;sup>3</sup> Quaesta Capital's volatility indicator measures general volatility in global FX markets; the indicator is based on historical volatility of the main exchange rates, which are weighted by trading volume.

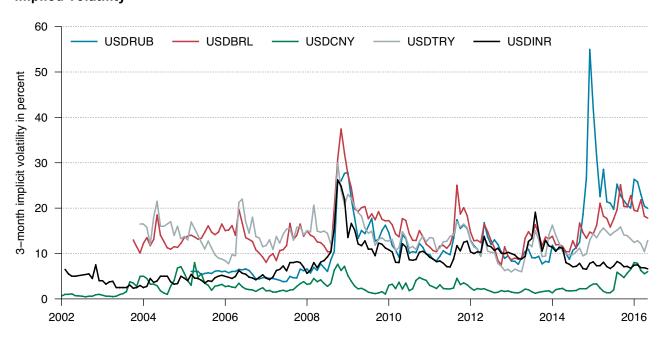
Source: Bloomberg, Quaesta Capital, Thomson Reuters Datastream, Wellershoff & Partners

<sup>&</sup>lt;sup>2</sup> Average of implied volatility.

#### Implied volatility



#### Implied volatility



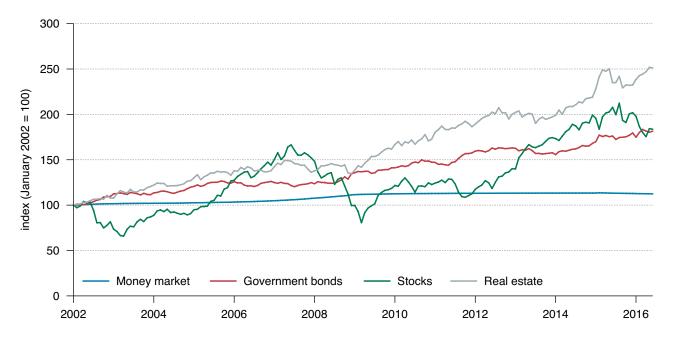
#### **Financial markets**

#### Performance overview

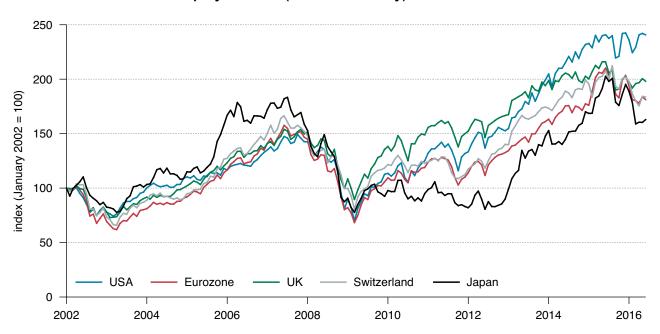
_	Perfori	mance in eithe	r local currer	ny or USD <sup>1</sup>			Performan	ice in CHF <sup>1</sup>
_	YTD	3 months	1 year	5 years	YTD	3 months	1 year	5 years
Swiss money market	-0.3	-0.2	-0.7	-0.4	-0.3	-0.2	-0.7	-0.4
Swiss government bonds	3.9	0.4	4.0	24.7	3.9	0.4	4.0	24.7
Swiss corporate bonds	2.5	0.4	2.8	20.1	2.5	0.4	2.8	20.1
Swiss equities (SMI)	-7.3	4.7	-10.1	42.1	-7.3	4.7	-10.1	42.1
Eurozone equities (Stoxx600)	-6.6	6.5	-12.7	43.2	-4.8	6.4	-7.7	25.8
UK equities (Ftse100)	0.2	6.5	-8.3	24.7	-4.5	4.4	-11.1	22.4
Japanese equities (Topix)	-13.7	2.9	-16.0	75.2	-6.3	6.1	-2.2	44.0
US equities (S&P 500)	2.0	9.6	-0.5	71.6	-0.1	7.9	5.2	89.1
Emerging markets equities	1.0	9.6	-21.4	-19.8	-1.0	7.9	-16.9	-11.6
Global equities (MSCI World)	0.3	9.5	-6.4	40.2	-1.7	7.8	-1.0	54.5
Swiss real estate	5.3	4.5	4.9	37.6	5.3	4.5	4.9	37.6
Global real estate	7.1	14.4	3.9	49.7	4.9	12.6	9.9	65.0
Commodities	8.4	14.0	-19.2	-47.7	6.2	12.2	-14.5	-42.4
Brent oil	37.7	51.5	-25.3	-56.2	34.9	49.1	-21.0	-51.7
Gold	20.1	4.9	4.4	-14.8	17.6	3.3	10.4	-6.1

<sup>&</sup>lt;sup>1</sup> Performance over the respective period of time, in percent.

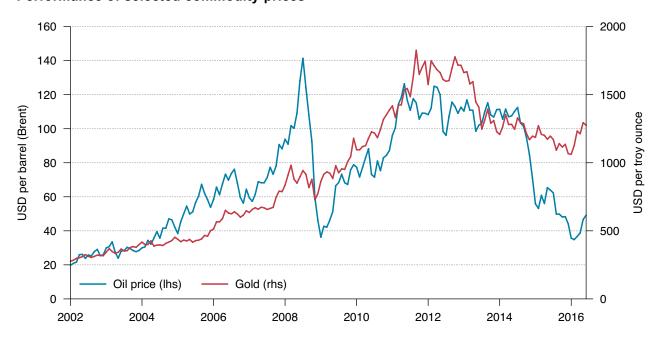
#### Performance of selected Swiss asset classes



#### Performance of selected equity markets (in local currency)



#### Performance of selected commodity prices



#### Number of the month

### 990 minutes

Brazil has 81 senators, 55 of whom recently voted to remove Dilma Rousseff from office, and 66 of whom then took to the Senate floor to explain their vote. Each senator had 15 minutes – totalling 990 minutes of rare political spectacle.

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