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FX MONTHLY

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

International investors are spoilt for choice. FX risk – take it or leave it!

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Contents

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QCAM Insight

International investors are spoilt for choice: FX risk – take it or leave it!

Many investors look for opportunities abroad, and managing currency risk needs to be part of the plan. Hedging currency risk has gotten a lot smarter lately. Dynamic hedging strategies may hold the answer for "cake-and-eat-it-too" investors who want to minimize losses without missing profitable opportunities.

Challenges in investments abroad

According to the recently published *UNCTAD World Investment Report* Swiss foreign investments have grown strongly again in 2015. The negative interest rate environment in particular incites institutional investors searching abroad for yield to honour local commitments. Opportunities that arise come at a risk – foreign currency denomination. Exchange risk is widely seen as an inevitable evil either simply to be eliminated through FX forward hedging or untouchable as exchange rates are not seen as predictable and negative valuation effects are expected to be compensated by the underlying foreign asset return. The debate amongst the academic community has been going on for decades and might never end.

From our point of view the argument for not hedging FX exposure at all only holds as long as the decision has been taken actively based on a positive view on the foreign currency, perhaps with the exception of exposure in countries with restricted or illiquid currency regimes.

Currency risk management concepts

FX risk managers who take a market view usually implement a hedge based on this specific scenario using forward or option contracts. Although these static strategies are very efficient in expressing that view, the market might force adjustments following unforeseen events that require the managers to amend his market view. The chances of that happening are significant and therefore more active strategies are becoming popular, mostly supervised by strategy committees. The people in power tend to control the hedging process either discretionary or based on proprietary forecasting models and clearly defined rules, perhaps also including stop-loss limits.

The ultimate aim though, to protect against loss without imposing equal limitations on the opportunity for appreciation, can only be achieved following a Dynamic Hedging strategy. The most popular risk management method in this context is CPPI (Constant Proportion Portfolio Insurance), a pro-cyclical mechanism that increases the foreign currency exposure in phases of appreciation and decreases the exposure in phases of depreciation within a pre-defined risk budget.

The chart on the next page visualizes the benefit of a risk-controlling process like CPPI. Clients significantly benefit from reduced downside risk while at the same time enjoying positive foreign currency return opportunities.

But, what if the stop-loss has been hit or the risk budget was spent? How to get back into the market if set boundaries were simply reached by higher market volatility? The underlying noise in market's price action needs to be taken well into consideration and should become an integral part of the overall risk management process.

The way out: dynamic risk control

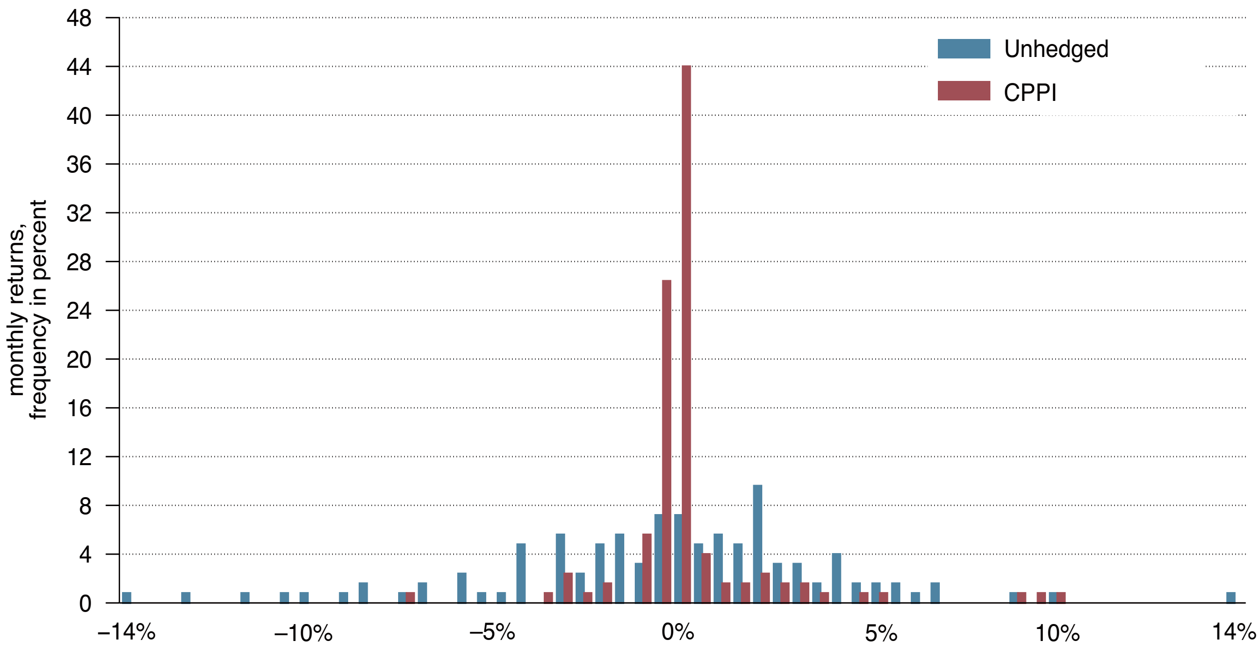
Alan Greenspan during his time as Fed Chairman repeatedly suggested that forecasting foreign exchange rates was not a sensible thing to do. Looking at the *hit ratio* of numerous high ranking researchers in the past might support his view. On the other hand quite often opportunities arise from valuation or excessive positioning misalignments being corrected, as well as unexpected changes taking place in key fundamental indicators. A well-defined and diversified, multi factor approach will help to increase the probability to be well prepared for future exchange rate moves without forecasting specific future exchange rate levels. This is reflected in this well-known citation from Pericles: "The key is not to predict the future, but to be prepared for it."

Active FX hedging strategies need to be surrounded by dynamic exposure management. An enhanced CPPI process does offer one solution that could become the new paradigm. Technical trend indicators and a pro-active strategy implementation optimise timing decisions restricting the negative impact from market noise without limiting the upside potential.

Conclusion

As long as active investment management strategies are considered, there is a good reason to believe in dynamic currency hedging to add value. Many different styles of active currency management are available performing better in different market regimes. A diversified combination of ruling factors strictly controlled within a dynamic risk budgeting process will absorb downside risk from foreign currency devaluation while leaving the door open to capitalize on favourable exchange rate movements.

Risk-controlling processes like CPPI come with evident advantages



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

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The macro perspective

Brexit triggers no new crisis in the Eurozone

Two weeks after the UK voted to leave the EU, the initial turbulence on financial markets has duly subsided. Granted, the full economic and political consequences of Brexit will only be evident years from now. But the impact of heightened post-Brexit uncertainty on Europe's economy is already a theme today. And here we can issue an all-clear: a second euro crisis is not in the cards. Instead, we think that the prospect of impending inflation and interest-rate hikes requires more attention.

The British voters' decision to withdraw from the European Union affects not only the UK's economic prospects but those of Europe as a whole. Step changes of this magnitude have multiple consequences. Directly after the vote, sharp price adjustments for certain assets and exchange rates followed. We think that, with a slight delay, the British economy's growth rates will decline in the coming months. Meanwhile, *Brexit* will not pass unnoticed by the economies of Europe. But will *Brexit*, as widely suggested by Anglo-Saxon pundits, actually tip the Eurozone into a crisis? Our analysis leads us to a different conclusion: *Brexit's* economic impact on the Eurozone will in fact be rather limited.

Modest export losses for the Eurozone

The uncertainties unleashed by *Brexit* will in the first instance burden the economic development in the UK in the coming quarters. The associated heightened insecurity will make both households and companies more cautious about consumption and investment decisions. And in Europe? What impact will weaker UK demand for foreign goods and services have on the broader European economy? A look at the share of goods exported to the UK from the rest of Europe shows that any effect from sagging British demand will be modest at the macroeconomic level. Only Ireland, Belgium, the Netherlands and Norway have over 3 percent of their total demand coming from the UK. Even for the export-oriented German economy, a 10-percent slump in exports to the UK would yield a GDP loss of only 0.21 percentage points.

Europe can manage

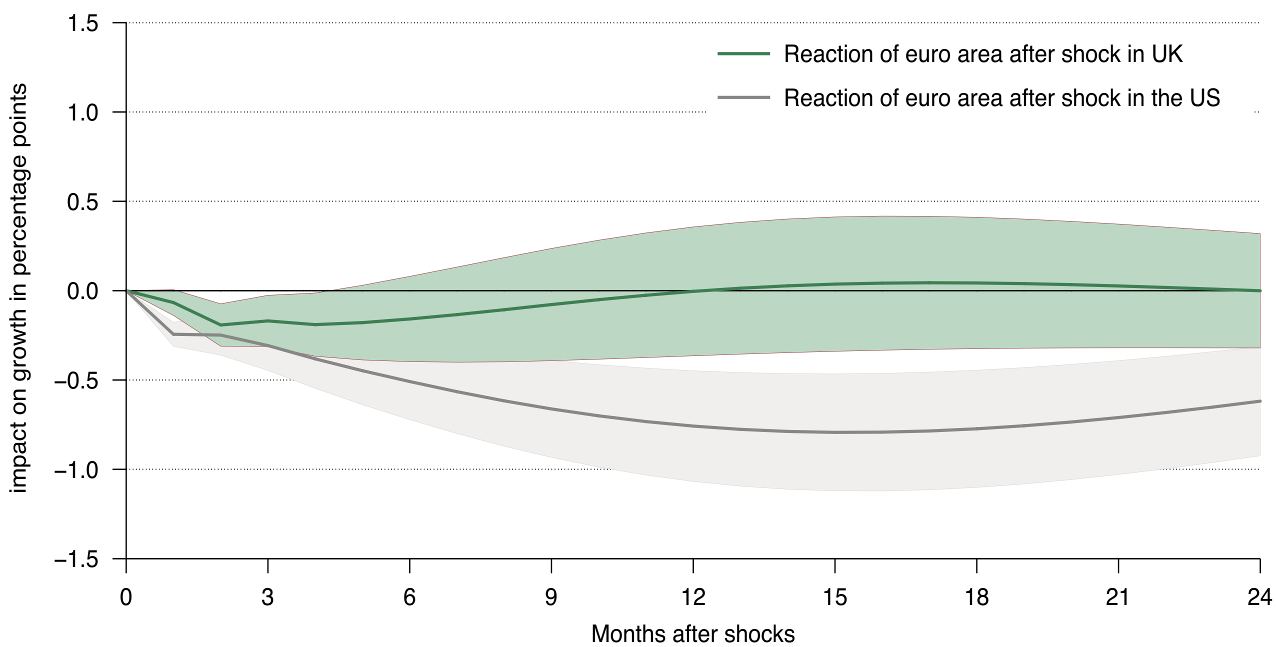
Besides *Brexit* curdling Britain's trade links, the downbeat sentiment now emanating from its shores constitutes another channel of *Brexit's* impact on the rest of Europe. Here, too, the potential consequences for the region's economy are grim. There are many possible reasons for gloom, from fear of political contagion, a domino effect, or heightened volatility on the financial markets. Wellershoff & Partners' survey-based economic climate indicators offer timely updates on market sentiment. At the moment, the indicators exhibit a high correlation with the actual economic developments of many countries.

Our analysis includes vector autoregression (VAR) models and these clearly show that Britain's deteriorating sentiment will indeed weigh on Eurozone growth. But our analysis also makes it clear that this effect will be modest. An abrupt decline in British sentiment indicators – say, on the order of one standard deviation – would only reduce the Eurozone's GDP growth by 0.2 percentage points, we estimate. A comparable slump in US sentiment would be far more alarming for the Eurozone, as the graph clearly shows, having an impact of roughly 0.8 percentage points according to our estimations.

Impending inflation and interest-rate hikes

In sum, we see *Brexit* having only modest economic consequences for the Eurozone. For us, worries about a new European economic crisis are misplaced right now. We think the prospect of impending inflation and interest-rate hikes requires more attention. Futures contracts for the US currently price in no further rate hikes this year. Nonetheless, we think a sharp rise in capital market interest rates at the longer end can be expected over the rest of the year. In many countries, we anticipate the shrinking base effect of the recent low energy prices to spur inflation rates. We think US inflation rates could approach 3 percent in the first quarter of 2017. In the UK, despite a slowing economy, we expect even higher inflation, thanks also to the weakening pound. Thus, we think it's highly unlikely – having set new lows lately, partly due to the *Brexit* vote – that capital market interest rates will fail to rise in the coming months.

Europe can manage an abrupt decline in British sentiment indicators



Source: Thomson Reuters Datastream, Wellershoff & Partners

FX market talk

Financial markets show an unhealthy obsession with monetary policy

Brexit has arrived with a boatload of questions. Among them, will Britain's EU exit be orderly or chaotic? How long will the process take? How will relations develop between the exiters and the exited? And how will financial markets react to all this? Immediately post-Brexit market participants increased their tendency to watch the key central banks closely – a focus not without risk.

New government promises orderly transition

Events of recent days give good reason to hope that *Brexit's* implementation can proceed without drama. With Theresa May, the Conservatives have found a steady and analytical Prime Minister who is fully behind *Brexit's* realization. Any second referendum is a fantasy now. The new British government is well balanced, uniting the Party's shriller and the more moderate voices. The approach taken by May also has integrative features as she seeks to bring the *Brexit* faction into fold of existing Party structures. This all suggests that while *Brexit* is the source of much uncertainty, we don't think a UK government crisis will be among the worries. The new situation might even have the potential to calm the turbulent waters of British politics longer term.

Schedule is still unknown

No one knows how long it will take to enact *Brexit* on the formal, legal and regulatory levels. EU rules officially call for full implementation within two years. But the clock only starts when Britain officially informs the EU that it is withdrawing from the Union. And the timing of this step is one of Britain's the last poker cards. Different forces are at play with the timing issue: Preparing a smooth transition obviously takes some time; but preparation also prolongs the cloud of uncertainty hovering over the British economy. As we closed this issue of *FX Monthly*, the signals emerging from London were decidedly mixed. We can only say with certainty that *Brexit* so far has no e.t.a.

What's next?

As precisely imprecise as *Brexit's* schedule is, so too is the course of relations between the EU and Great Britain after the break-up. The issue here – one that Swiss observers know well – is the tension between market access and Britain's readiness to accept EU regulations on the free movement of people. As it did with Switzerland, the EU is stating its position loud and clear: the free movement of people is essential to full EU market access. But renewed border control was a primary goal for *Brexit* supporters. We shall see if a compromise can be forged on this difficult issue. Speculation on the modalities of future EU-UK relations ranges from the UK employing a Swiss-type of bilateralism to the parties negotiating a comprehensive free trade agreement, among other variants. At present all is unclear.

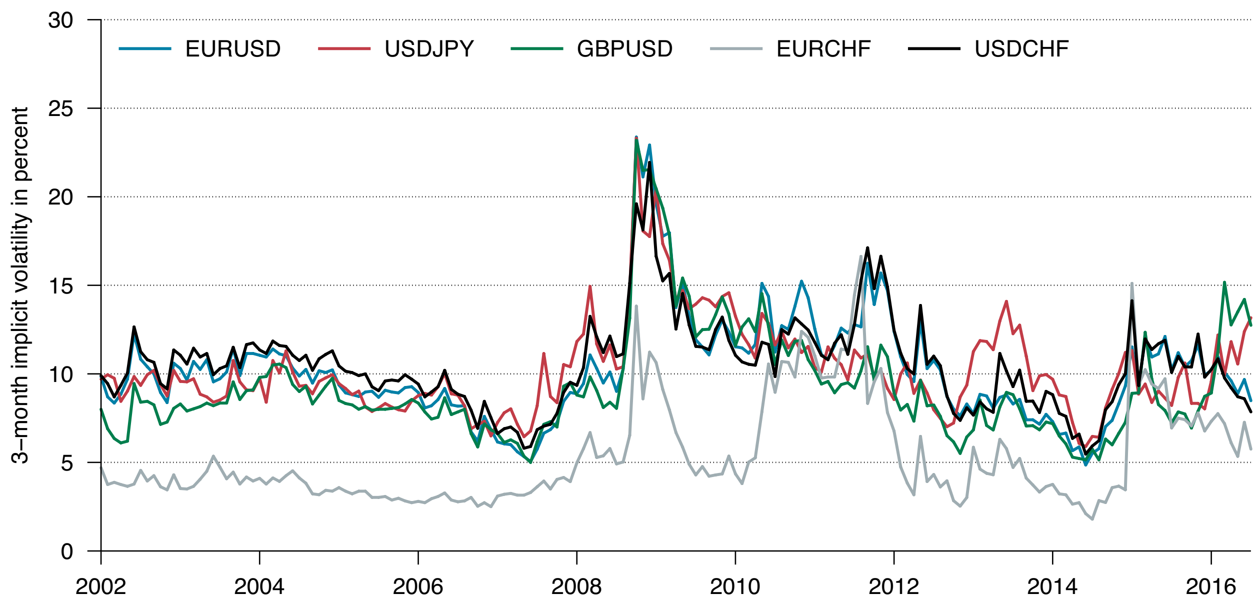
Follow the monetary policy?

Once again the market responded to a game-changing event by quickly focusing on monetary policy. Market pundits and participants like nothing better, it seems, than to ponder central banks' possible policy moves. That admittedly is much more fun than contending with unruly economic or financial market developments. But the market story must be told: Between June 24, the day after the vote, and July 13, one day before the most recent BoE decision, market expectations for an expansionary surge from the Bank of England sank the interest rate on 10-year government bonds by 0.6 percentage points to a new record low. In the same time frame, the pound lost 11 percent in value against the US dollar and the FTSE 100 rose by 5 percent.

Do central banks play by the rules?

Market expectations can be stubborn. Consider what happened on July 14, when the BoE announced it would *not* be undertaking any new expansionary measures right now. Wait and see what *Brexit's* economic effects will be – that was the official explanation for inaction. This promptly led the pound to appreciate by 1.5 percent against the US dollar in the course of the day. The FTSE 100 closed the day with a minus of 1.3 percent. This all shows just how nervously markets are ready to react to monetary policy these days. What might happen if the Fed or the ECB would similarly fail to fulfill market expectations? And how will financial markets react to the inevitable series of government and EU summits related to *Brexit*? One thing *is* clear: *Brexit's* many questions will occupy financial markets for some time to come.

The British pound remains volatile



Source: Thomson Reuters Datastream, Wellershoff & Partners

Economic activity

US economic data has been encouraging lately. In June 287 000 new jobs were created in the US, well above the 180 000 expected. The ISM sentiment surveys posted a pair of increases: the industrial sector stepped up from 51.3 to 53.2 while services rose from 52.9 to 56.5. Thus, Wellershoff & Partners' oft-expressed concerns about recession risk in the US have softened a bit. Additionally, some key leading indicators also suggest improving US economic conditions ahead.

In the most important emerging economies, the process of setting a floor is ongoing. Despite deep political uncertainty, Brazil has lately seen consumer sentiment revive. Meanwhile, sentiment in Russia's industrial sector has risen faster than in any other emerging economy over the past three months. Wellershoff & Partners looks for China's GDP to have grown by 5.9 percent in the second quarter, marking a deceleration in the growth rate's slide. Turkey, on the other hand, is likely to witness an at least temporary economic slowdown in the aftermath of last week's turbulences.

Growth overview

	Trend growth[1]	Real GDP growth[2]				W&P economic sentiment indicators[3]			
		Q3/2015	Q4/2015	Q1/2016	Q2/2016	3/2016	4/2016	5/2016	6/2016
United States	1.7	2.2	2.0	2.1	–	2.6	2.6	2.4	3.2
Eurozone	1.0	1.6	1.7	1.7	–	1.8	2.0	2.1	2.1
Germany	1.4	1.7	1.4	1.6	–	2.1	2.2	2.2	2.6
France	0.7	1.1	1.3	1.3	–	1.7	1.6	1.8	1.5
Italy	0.2	0.8	1.1	0.9	–	1.0	1.9	2.0	1.2
Spain	1.6	3.4	3.5	3.4	–	3.4	3.2	3.1	3.3
United Kingdom	1.8	2.0	1.8	2.0	–	2.7	2.5	2.7	2.9
Switzerland	1.5	0.7	0.3	0.7	–	1.0	1.1	1.3	1.5
Japan	0.4	1.8	0.8	0.0	–	2.0	1.9	1.9	1.9
Canada	1.6	1.0	0.3	1.1	–	0.3	0.4	0.9	1.3
Australia	2.4	2.7	2.9	3.1	–	3.5	3.5	3.5	3.4
Brazil	1.4	-4.4	-5.9	-5.1	–	-0.2	-2.3	-3.0	-2.0
Russia	0.1	-3.7	-3.8	-1.2	–	-1.5	-1.8	-0.2	1.7
India	7.7	7.6	7.2	7.9	–	6.7	5.9	6.0	6.4
China	7.4	6.9	6.8	6.7	6.7	8.4	8.2	8.1	7.7
Advanced economies[4]	1.4	2.1	1.9	1.6	–	2.4	2.4	2.4	2.8
Emerging economies[4]	6.0	4.6	4.5	4.8	–	5.1	4.6	4.7	4.6
World economy[4]	3.5	3.3	3.2	3.2	–	3.3	3.1	3.1	3.2

[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

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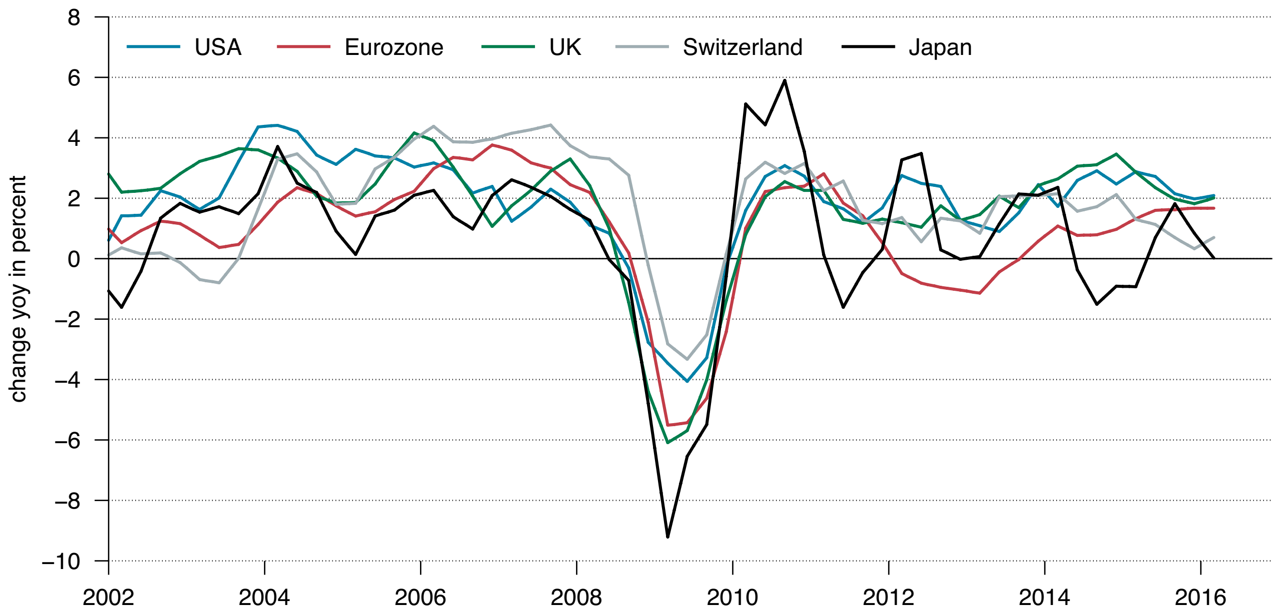
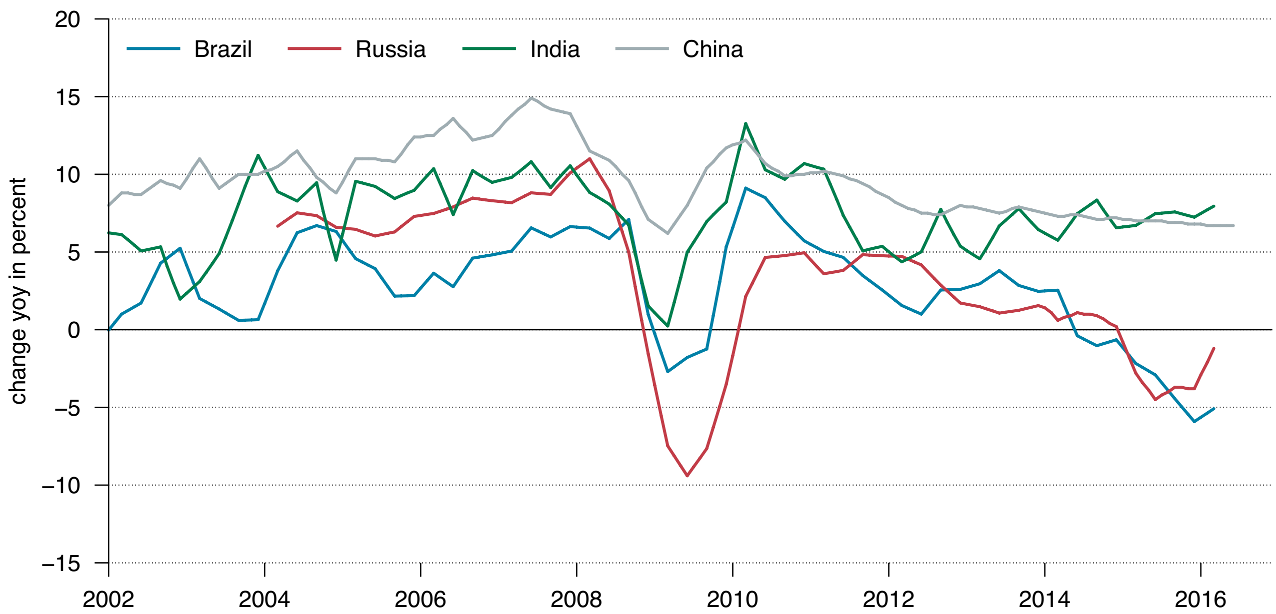
Economic growth in advanced economies



Economic growth in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

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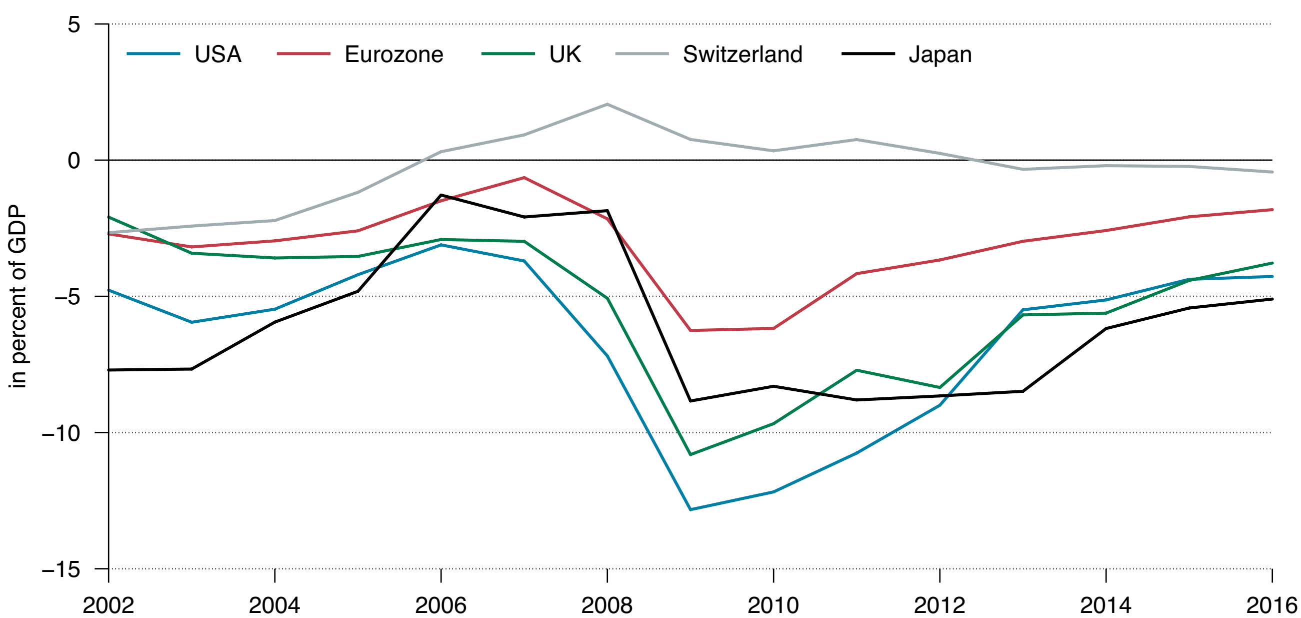
Economic indicators

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	22.4	25.1	-2.6	-2.5	111.3	114.2	-7.0	-4.3	7.2	4.9
Eurozone	17.2	16.0	2.6	3.8	105.1	109.6	-3.1	-1.8	11.2	10.1
Germany	4.9	4.7	7.2	9.2	82.4	75.2	0.0	0.3	6.8	6.1
France	3.6	3.3	-0.8	-0.7	112.6	121.6	-4.3	-3.4	9.6	9.9
Italy	2.8	2.5	0.3	2.1	144.5	160.3	-3.0	-2.3	11.1	11.6
Spain	1.8	1.7	0.1	1.1	101.6	117.4	-7.6	-3.7	23.8	19.8
United Kingdom	3.7	3.7	-3.9	-5.9	110.9	115.3	-6.4	-3.8	3.8	2.2
Switzerland	0.9	0.9	9.9	10.6	45.6	46.2	0.0	-0.4	3.0	3.1
Japan	6.8	6.0	1.5	3.4	220.8	233.1	-7.5	-5.1	4.0	3.2
Canada	2.4	2.0	-3.0	-3.5	86.0	92.3	-2.0	-2.4	7.1	6.8
Australia	1.9	1.6	-3.7	-3.6	30.8	39.1	-3.3	-2.4	5.6	5.8
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	–
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	5.6

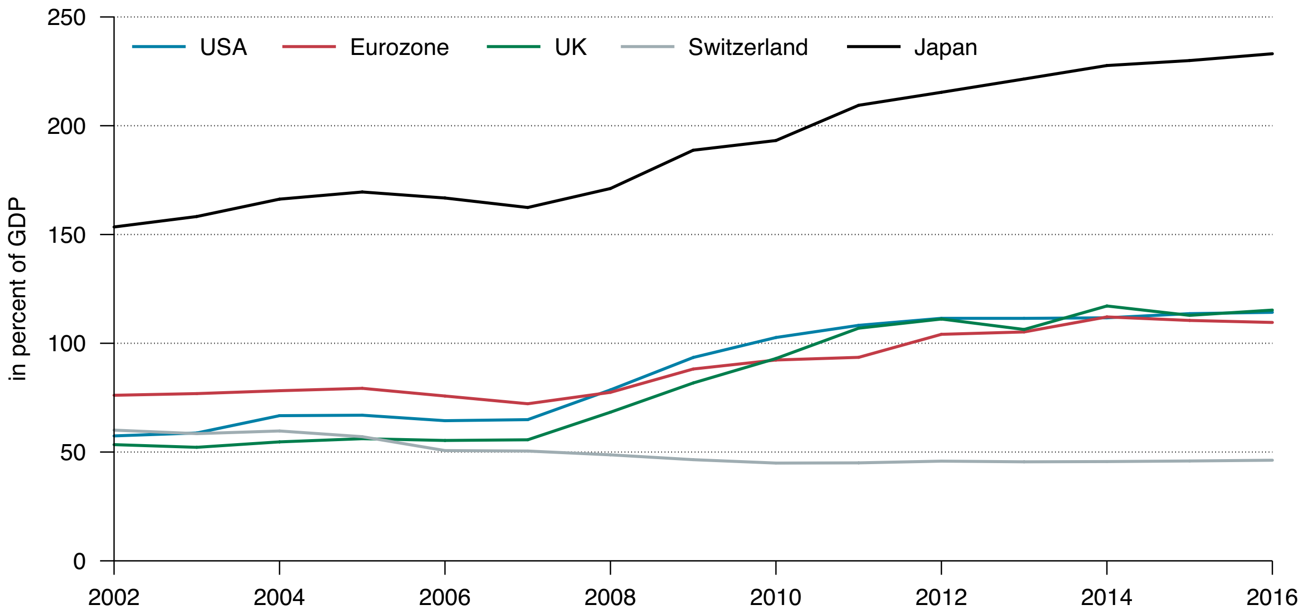
[1] In percent; calculations based on market exchange rates. [2] In percent of nominal GDP. [3] In percent.

Budget deficits in advanced economies

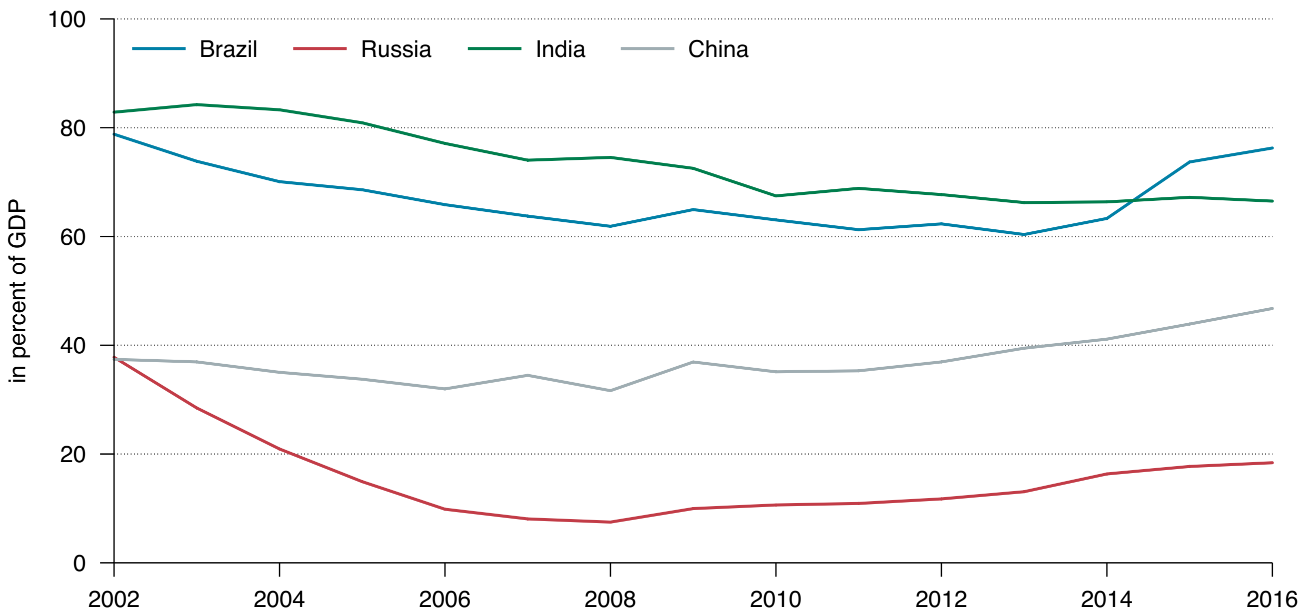


Source: Thomson Reuters Datastream, Wellershoff & Partners

Public debt in advanced economies



Public debt in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

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Inflation

The overall price level rose 0.1 percent year-on-year in the Eurozone in June. This uptick was broadly evident across member countries and now totals 0.2 percent, on average. Core inflation has held steady over the past few months, just under 1 percent. By year-end we expect the two rates again to converge – as long, that is, as the oil price refrains from drama.

Post-*Brexit*, the pound has, well, taken a pounding from basically every other traded currency. Higher prices on imported goods seem inevitable for Great Britain. A 10-percent devaluation of the pound versus the euro would increase British prices on imports from the EU by about 1.5 percent. Along with a weaker currency, the UK will also experience the waning effects of a prolonged period of low oil prices. We expect an overall inflation rate of over 3 percent in the UK next year.

Swiss inflation looks set to return to positive territory soon, for two reasons. Here, too, we think the declining effect of the energy price component is one factor. The other is that the inflation-dampening effect of the franc's recent heady appreciation has began to fade slowly but surely.

Inflation overview

	Ø 10 years[1]	Inflation[2]				Core inflation[3]			
		3/2016	4/2016	5/2016	6/2016	3/2016	4/2016	5/2016	6/2016
United States	1.8	0.9	1.1	1.0	1.0	2.2	2.1	2.2	2.3
Eurozone	1.5	-0.1	-0.2	-0.1	0.1	1.0	0.8	0.8	0.9
Germany	1.4	0.3	-0.1	0.1	0.3	1.2	1.2	1.1	1.2
France	1.2	-0.2	-0.2	0.0	0.2	–	–	–	–
Italy	1.6	-0.2	-0.5	-0.3	-0.4	0.6	0.5	0.6	0.5
Spain	1.6	-0.8	-1.0	-1.0	-0.8	1.1	0.7	0.7	–
United Kingdom	2.4	0.5	0.3	0.3	–	1.5	1.2	1.2	–
Switzerland	0.2	-0.9	-0.3	-0.4	-0.4	-0.5	0.0	-0.1	-0.2
Japan	0.3	0.0	-0.3	-0.4	–	0.6	0.7	0.7	–
Canada	1.7	1.3	1.7	1.5	–	2.1	2.2	2.1	–
Australia	2.6	1.3	–	–	–	1.7	–	–	–
Brazil	5.9	9.4	9.3	9.3	–	7.9	7.8	8.2	–
Russia	9.4	7.3	7.3	6.9	–	8.0	7.6	7.5	–
India	8.1	4.8	5.5	5.8	–	–	–	–	–
China	2.9	2.3	2.3	2.0	–	1.5	1.5	1.6	–
Advanced economies[4]	1.6	0.5	0.5	0.5	–	1.6	1.5	1.5	–
Emerging economies[4]	5.3	4.0	4.2	4.0	–	3.1	3.0	3.1	–
World economy[4]	3.2	2.1	2.2	2.2	–	2.0	1.9	2.0	–

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

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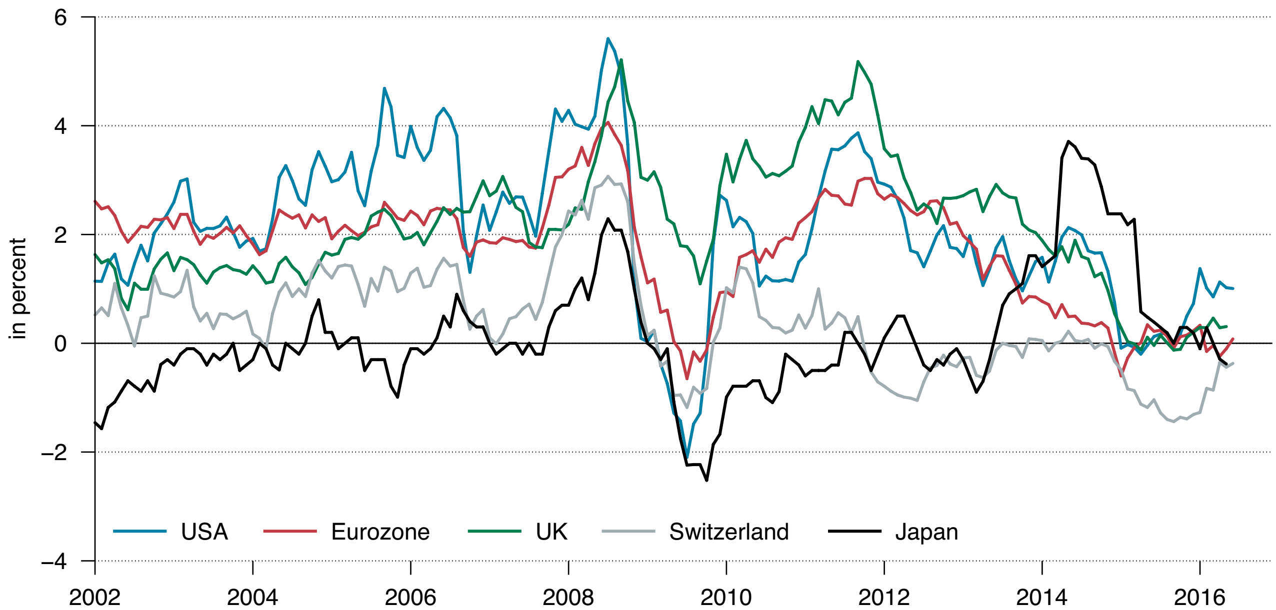
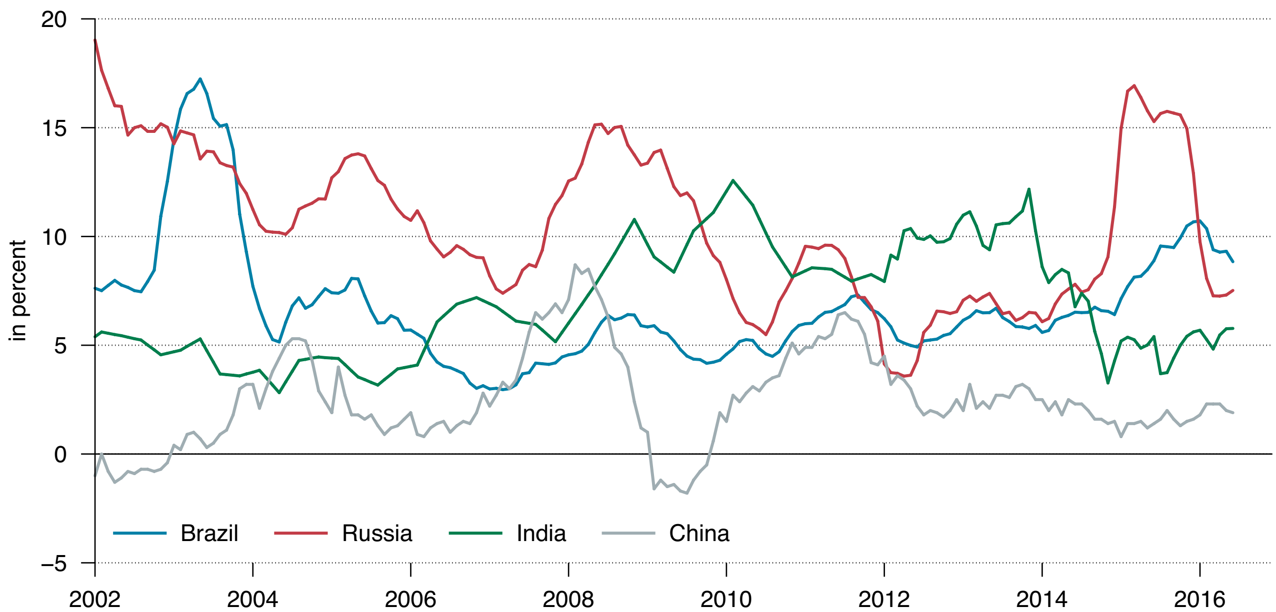
Consumer price inflation in advanced economies



Consumer price inflation in emerging economies



Source: Thomson Reuters Datastream, Wellershoff & Partners

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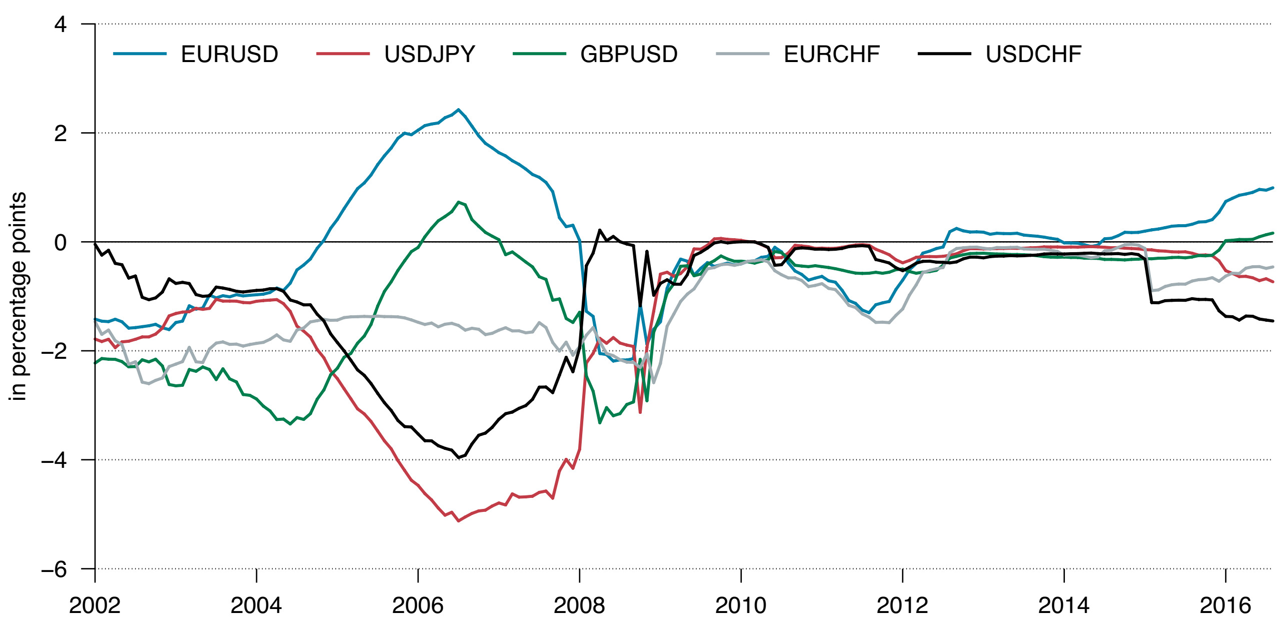
Interest rates

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	1.107	0.97	0.27	0.10	-0.07	1.39	0.58	0.22	-0.02
USDJPY	105.8	-0.73	-0.19	-0.22	-1.02	-1.25	-0.53	-0.45	-1.16
GBPUSD	1.323	0.16	-0.29	-0.29	-0.58	0.47	-0.30	-0.33	-0.62
EURCHF	1.088	-0.49	-0.78	-0.47	-0.87	-0.48	-0.80	-0.59	-0.95
USDCHF	0.983	-1.45	-1.04	-0.56	-0.81	-1.87	-1.37	-0.82	-0.93
GBPCHF	1.301	-1.29	-1.34	-0.85	-1.38	-1.39	-1.68	-1.15	-1.55
CHFJPY	107.6	0.72	0.85	0.34	-0.22	0.62	0.84	0.36	-0.23
AUDUSD	0.759	-0.93	-1.66	-2.37	-2.60	-0.17	-1.10	-1.72	-2.19
USDCAD	1.294	0.19	0.45	0.81	0.42	-0.20	0.04	0.57	0.24
USDSEK	8.537	-1.31	-0.55	0.48	0.31	-1.55	-0.85	0.31	0.26
USDRUB	63.44	9.56	12.47	8.74	7.17	8.94	11.64	8.33	7.50
USDBRL	3.273	13.38	13.71	10.45	9.73	11.86	13.11	10.22	9.67
USDCNY	6.681	2.19	2.86	3.95	2.43	1.74	2.62	3.60	2.20
USDTRY	2.892	8.70	10.78	8.90	9.80	8.27	10.30	8.74	10.07
USDINR	67.06	7.47	7.68	8.81	7.00	5.69	6.97	6.26	4.47

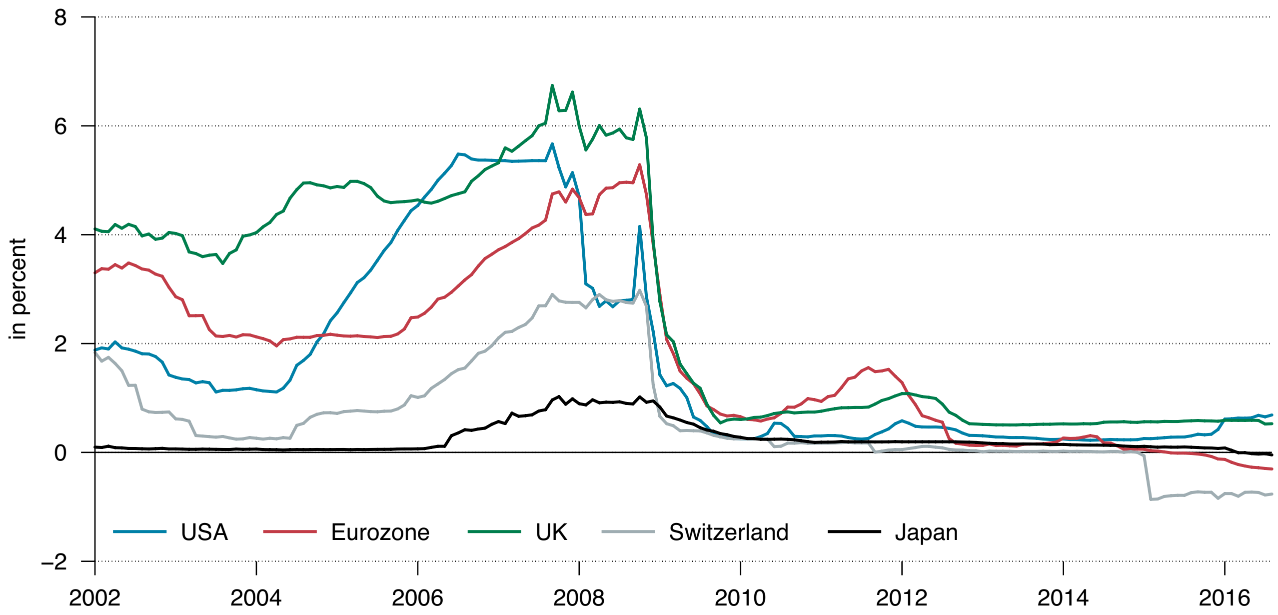
[1] The gap in interest rates between the second currency and the first one, in percentage points; e.g. US dollar minus euro for EURUSD.

Interest rate differentials

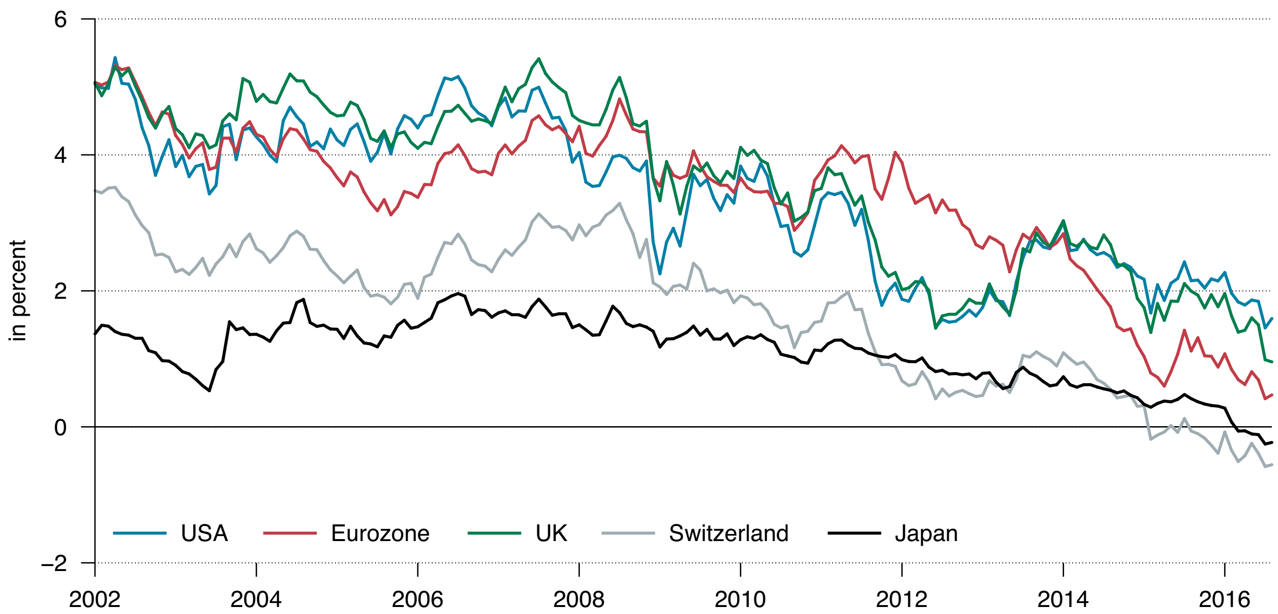


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

3-month Libor



10-year government bond yields



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

QCAM®
Currency
Asset
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FX markets

On June 24th, the day after the *Brexit* vote, the British pound shed around 10 percent of its trade-weighted value. In the week prior to the vote, the pound had appreciated about 5 percent. Given how tight the final pre-vote polls were, the market's evident surprise at the result is slightly astounding. Interestingly, the currency market assesses *Brexit's* negative effects for Europe as moderate because, unlike the pound, the euro can develop solidly. This contradicts the projections of many commentators, who thought the EU would stumble after *Brexit*, not Great Britain.

The Japanese yen has clearly appreciated against the Swiss franc this year. Based on purchasing power parity, the yen's undervaluation versus the franc was around 30 percent back in January. Today the yen remains around 18 percent undervalued versus the franc. We think the exchange rate's continuing undervaluation and positive momentum argue against cashing in these gains right now. Moreover, we note that, even if the yen were to appreciate further, an exchange rate overshooting purchasing power parity is not untypical.

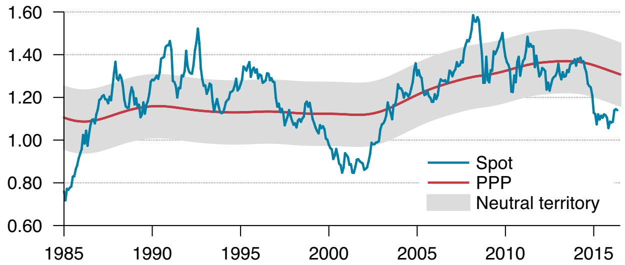
FX overview

	Current exchange rate	Performance[1]				Purchasing Power Parity[2]		
		YTD	3 months	1 year	5 years	PPP	Neutral territory	Deviation[3]
EURUSD	1.107	1.9	-2.0	1.5	-21.6	1.31	1.16 - 1.45	-15.3
USDJPY	105.8	-12.0	-2.7	-14.7	33.8	97.4	77.6 - 117.2	8.6
GBPUSD	1.323	-10.2	-6.7	-15.1	-17.9	1.63	1.47 - 1.79	-18.9
EURCHF	1.088	0.1	-0.3	4.5	-5.6	1.25	1.15 - 1.35	-12.7
USDCHF	0.983	-1.8	1.7	2.9	20.5	0.98	0.79 - 1.18	0.0
GBPCHF	1.301	-11.8	-5.1	-12.6	-1.1	1.60	1.32 - 1.88	-18.7
CHFJPY	107.6	-10.4	-4.3	-17.1	11.1	91.0	78.5 - 103.6	18.2
AUDUSD	0.759	4.3	-1.5	2.2	-28.7	0.70	0.57 - 0.82	9.0
USDCAD	1.294	-6.9	0.5	0.1	35.2	1.20	1.13 - 1.28	7.5
USDSEK	8.537	1.3	5.0	0.0	31.0	7.05	6.16 - 7.94	21.1
USDRUB	63.44	-13.1	-4.8	12.2	125.7	38.7	31.5 - 46.0	63.9
USDBRL	3.273	-17.3	-7.3	4.3	107.7	2.98	2.47 - 3.48	10.0
USDCNY	6.681	2.9	3.1	7.6	3.4	6.43	6.22 - 6.64	3.9
USDTRY	2.892	-0.9	1.4	9.0	75.3	2.32	2.06 - 2.58	24.8
USDINR	67.06	1.4	0.7	5.6	50.6	64.3	61.2 - 67.5	4.3

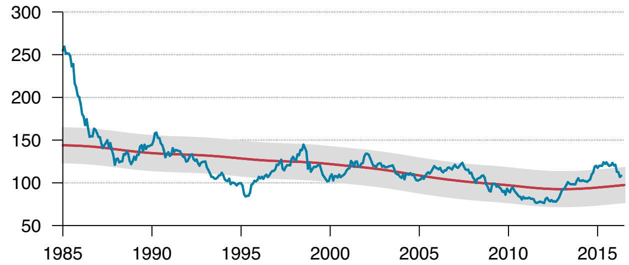
1 Performance over the respective period of time, in percent.
2 Purchasing power parity (PPP) is estimated based on the relative development of inflation rates in two currency markets; the neutral territory is determined by +/- 1 standard deviation of the historical variation around the PPP value.
3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

Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

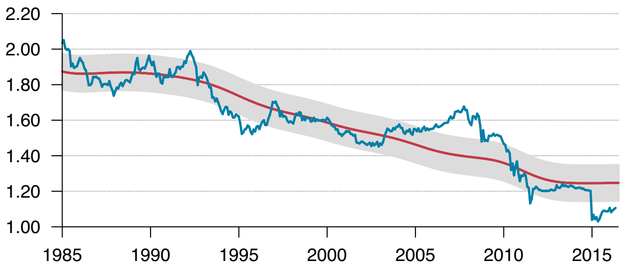
EURUSD



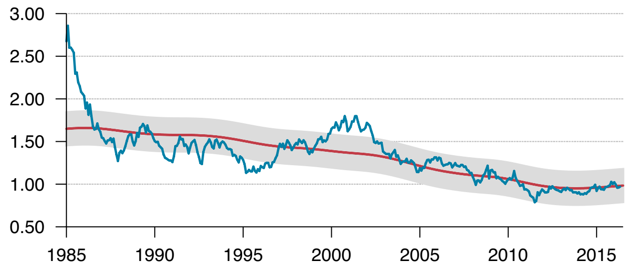
USDJPY



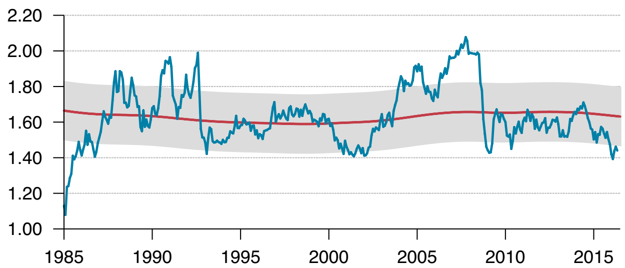
EURCHF



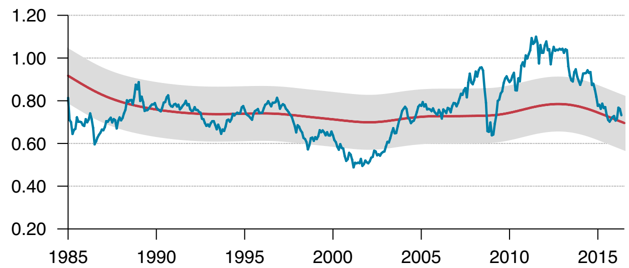
USDCHF



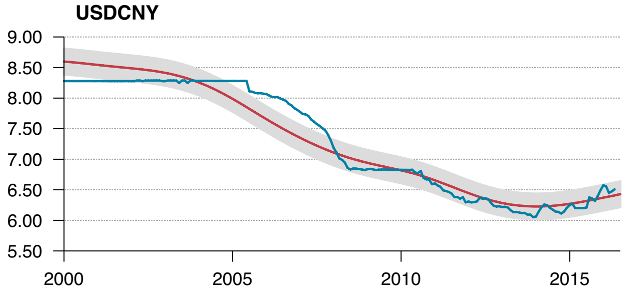
GBPUSD



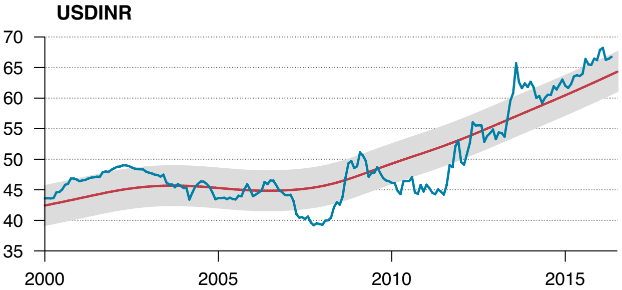
AUDUSD



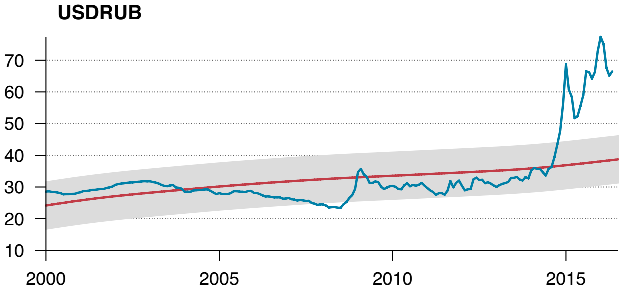
USDCNY



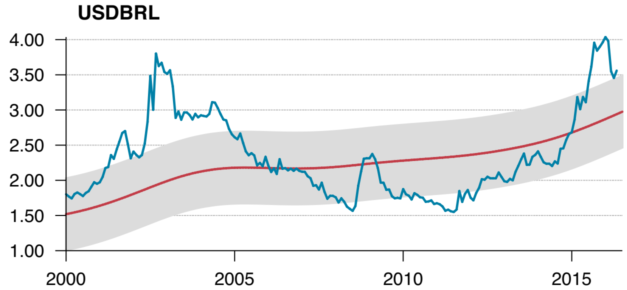
USDINR



USDRUB



USDBRL



Source: Thomson Reuters Datastream, Wellershoff & Partners

QCAM® Currency Asset Management

FX volatility

FX volatility overview

	Current exchange rate	Volatility 3 months[1]				Volatility 12 months[1]			
		Historical	Implied	Ø 5 years[2]	Ø 10 years[2]	Historical	Implied	Ø 5 years[2]	Ø 10 years[2]
EURUSD	1.107	9.0	8.5	9.5	10.4	10.0	9.6	10.0	10.7
USDJPY	105.8	13.3	13.2	9.6	10.7	10.7	11.9	10.4	11.1
GBPUSD	1.323	18.0	12.7	8.3	9.6	11.5	11.7	9.0	10.1
EURCHF	1.088	6.9	5.8	6.0	6.2	6.6	6.9	7.0	6.5
USDCHF	0.983	8.3	7.9	10.1	10.5	9.6	9.2	10.6	10.8
GBPCHF	1.301	17.6	12.1	9.0	9.9	12.5	11.6	9.6	10.3
CHFJPY	107.6	14.1	13.1	11.0	11.4	11.1	12.6	11.7	11.8
AUDUSD	0.759	13.0	11.4	10.9	12.4	12.7	12.1	11.6	12.7
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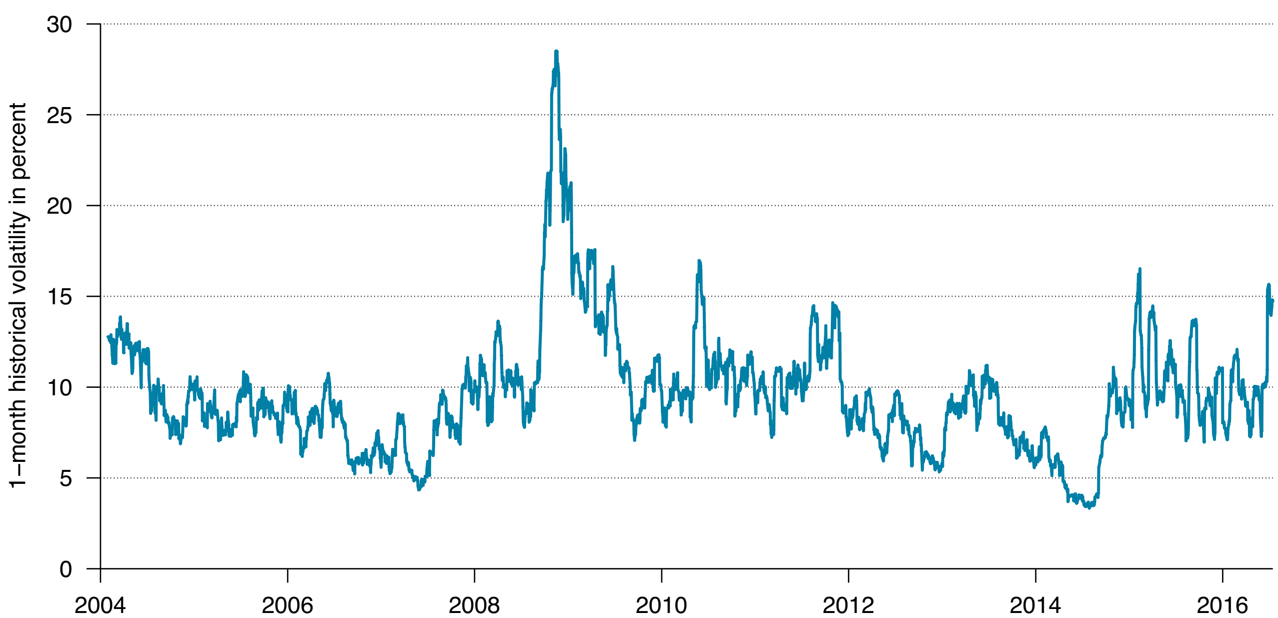
USDBRL	3.273	17.8	17.4	14.9	15.2	19.8	17.4	15.4	15.7
USDCNY	6.681	2.6	5.3	2.8	2.9	3.5	7.4	3.7	4.5
USDTRY	2.892	13.5	12.3	11.8	13.3	12.5	13.3	13.1	14.7
USDINR	67.06	4.6	6.1	9.5	9.5	4.8	7.9	10.5	10.3

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

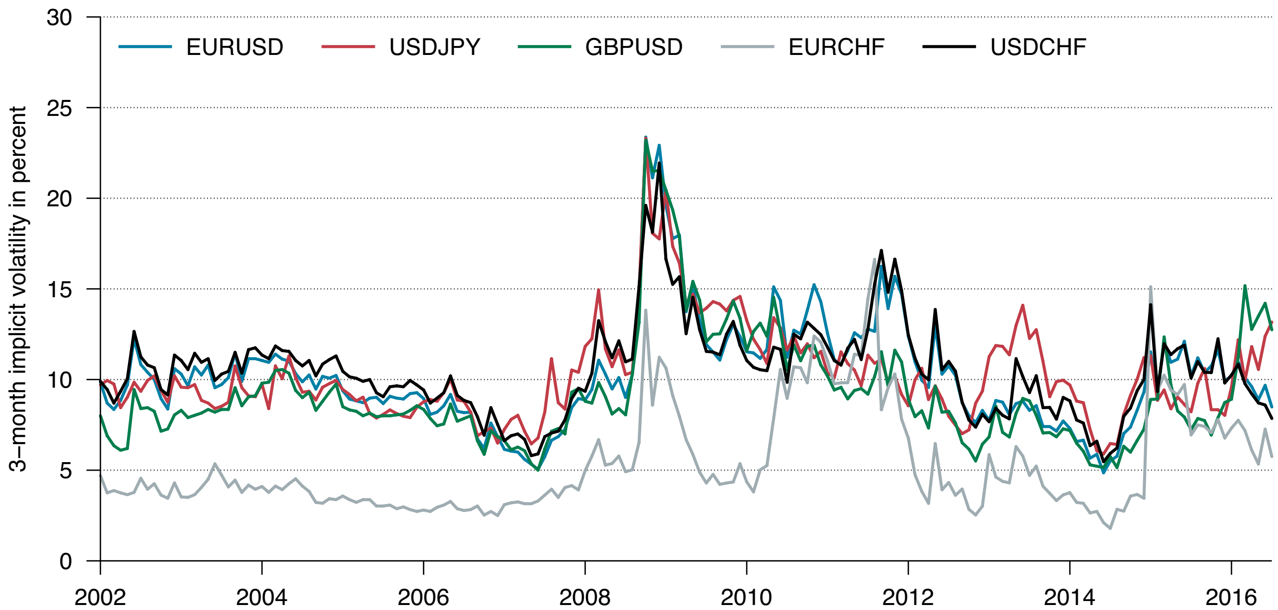
QCAM volatility indicator[3]



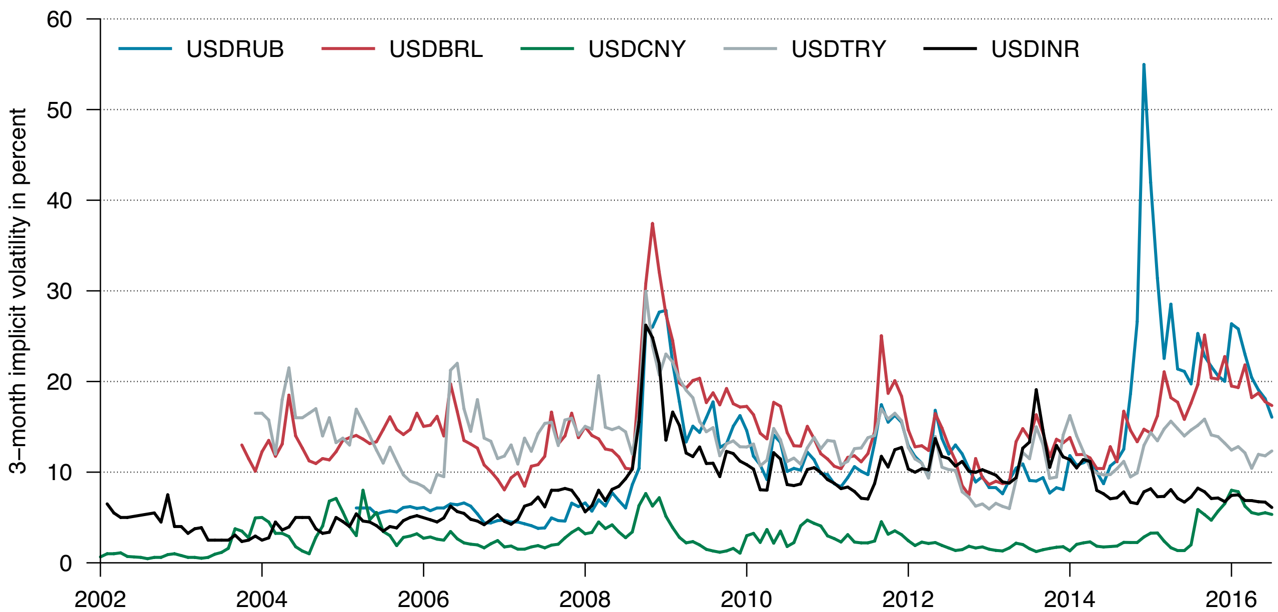
[3] The QCAM volatility indicator measures general volatility in global FX markets; the indicator is based on historical volatility of the main exchange rates, which are weighted by trading volume.

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

Implied volatility



Implied volatility



Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

QCAM® Currency Asset Management

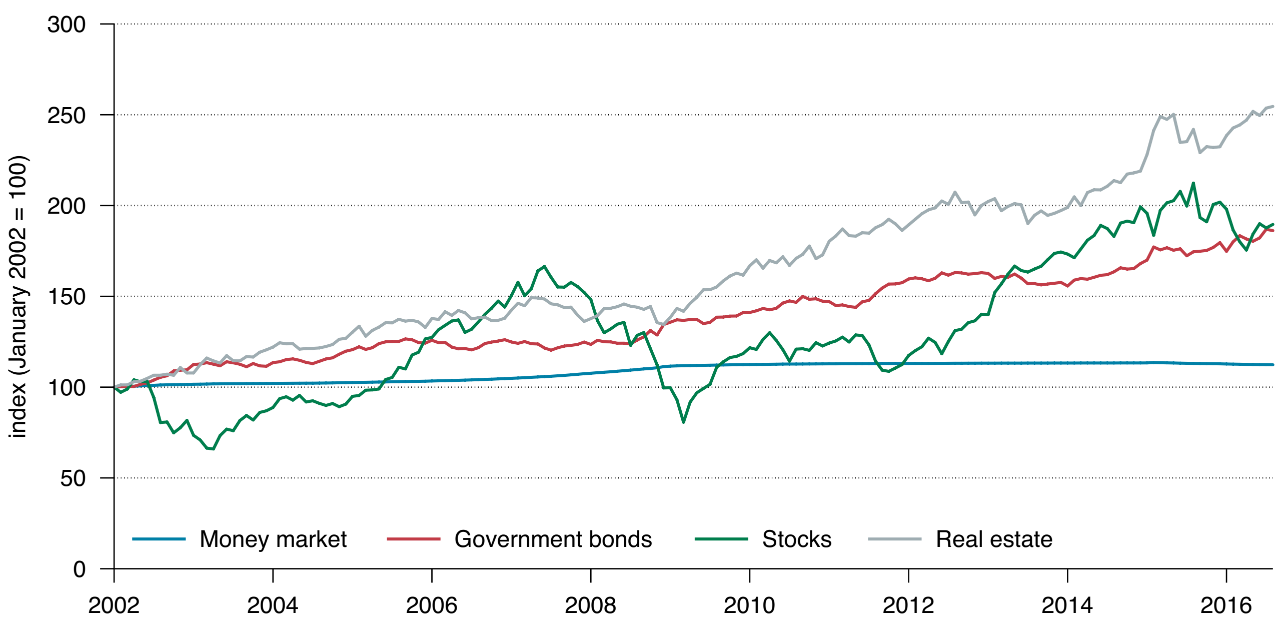
Financial markets

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	-0.6	-0.4	-0.2	-0.7	-0.6
Swiss government bonds	6.5	2.3	7.8	23.9	6.5	2.3	7.8	23.9
Swiss corporate bonds	3.5	0.9	4.3	18.6	3.5	0.9	4.3	18.6
Swiss equities (SMI)	-4.2	2.7	-10.6	61.5	-4.2	2.7	-10.6	61.5
Eurozone equities (Stoxx600)	-5.0	0.2	-13.7	50.8	-4.2	0.3	-9.6	42.5
UK equities (Ftse100)	9.3	6.2	2.1	37.4	-2.1	1.9	-10.1	37.1
Japanese equities (Topix)	-13.9	-3.1	-19.0	70.3	-3.2	1.3	-2.8	52.6
US equities (S&P 500)	7.0	4.5	4.0	83.0	5.8	5.7	6.6	119.0
Emerging markets equities	11.2	3.8	-5.2	-11.8	9.9	5.0	-2.9	5.6
Global equities (MSCI World)	4.0	2.6	-2.0	47.9	2.8	3.9	0.5	77.0
Swiss real estate	6.7	1.0	9.8	37.0	6.7	1.0	9.8	37.0
Global real estate	12.4	5.9	12.8	56.5	11.2	7.1	15.7	87.3
Commodities	10.4	7.8	-11.6	-47.3	9.1	9.1	-9.4	-36.9
Brent oil	33.6	11.0	-17.5	-59.8	32.1	12.4	-15.5	-51.8
Gold	25.0	7.9	16.0	-16.5	23.6	9.2	18.9	0.0

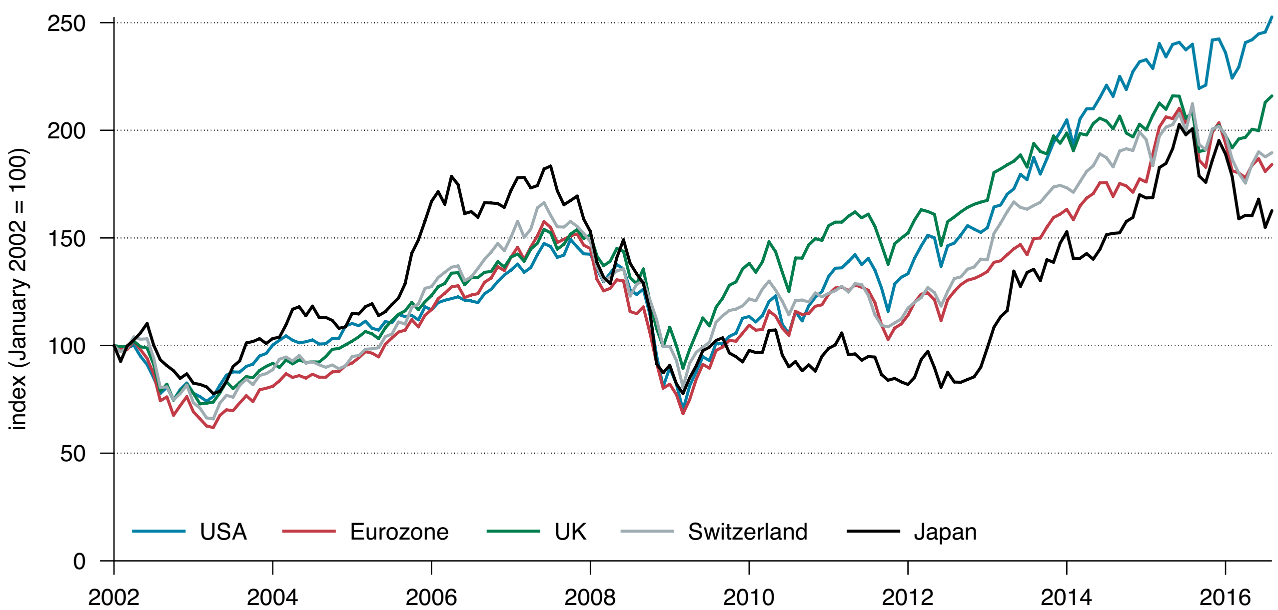
[1] Performance over the respective period of time, in percent.

Performance of selected Swiss asset classes

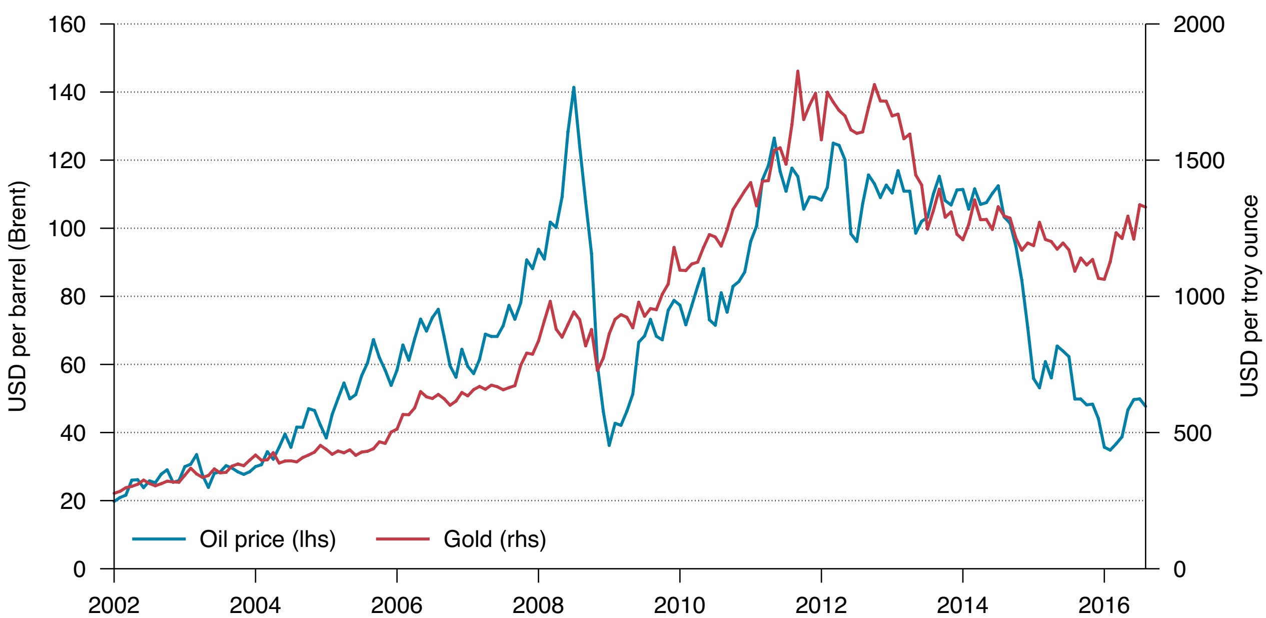


Source: Bloomberg, Thomson Reuters Datastream, Wellershoff & Partners

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

CHF 14 000 000 000

According to Wellershoff & Partners, that's the Swiss National Bank's impressive outlay for its FX market interventions in June. Fourteen billion Swiss francs. That's roughly what the Swiss Confederation budgeted to spend in 2015 on education, defense and agriculture – combined.