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A world of low interest rates

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Ladies and Gentlemen,

It is my pleasure to welcome you to the Swiss National Bank's (SNB) eleventh *Geldmarkt-Apéro*. For the third consecutive year I have the privilege of discussing Swiss monetary policy with you, together with significant aspects of the context in which it is conducted. Today, my deputy and fellow board member, Dewet Moser will provide an overview of the SNB's implementation of monetary policy in the last year. In particular, Dewet will highlight the measures we have taken to address the strong Swiss franc. Meanwhile, I will concentrate on the very low interest rate environment, which has played an important part in guiding economic participants' choices for some time now. Beforehand, however, allow me to make a few comments on our recent monetary policy decision.

As emphasised on 15 March, the minimum exchange rate of CHF 1.20 per euro remains front and centre of the SNB's monetary policy agenda. The SNB will continue to enforce the minimum exchange rate of CHF 1.20 per euro with the utmost determination. It is prepared to buy foreign currency in unlimited quantities for this purpose. The target range for the three-month Libor remains unchanged at 0.00–0.25% and the SNB will continue to maintain liquidity on the money market at an exceptionally high level.

The SNB has taken these decisions in a context of mixed developments in the global economy. While growth in the United States was surprisingly positive in the fourth quarter, GDP fell in the euro area and in Japan. In Switzerland, growth has slowed significantly in the past year. Added value declined in the fourth quarter in those sectors most affected by exchange rate movements. While the high value of the Swiss franc continues to present enormous challenges to the economy, the minimum exchange rate is having an impact. It has reduced exchange rate volatility and given business leaders a better basis for planning. There are growing indications that the Swiss economy is stabilising. For 2012, the SNB is now forecasting moderate growth, at close to 1%.

The situation on the financial markets has also eased a little of late. It remains very uncertain, however, whether the advances made in solving the European sovereign debt crisis will succeed in defusing the situation permanently. Moreover, there is a risk that geopolitical tensions will lead to a further rise in the price of oil.

The SNB's latest analysis has led us to adjust our conditional inflation forecast downwards once again. As my first slide highlights, the most recent forecasts for 2012 show an inflation rate of -0.6% , as compared to a rate of 0.3% in 2013 and 0.6% in 2014. Price stability is therefore assured. That said, if developments in the international economy prove to be worse than foreseen, or if the Swiss franc does not weaken further, as it is expected to, downside risks for price stability could re-emerge. Whatever the case may be, the SNB stands ready to take further measures at any time, if the economic outlook and the risk of deflation so require.

Explanations for low interest rates

Today's low interest rates are a defining feature of the current economic environment far beyond the Swiss borders and this has been the case for some time. I will hence paint a picture of the global situation with broad brushstrokes, before outlining the specifics of the Swiss case. The current low interest rate levels can be viewed as the endpoint of a downward trend that has marked the last twenty years and which has been accentuated by the necessary policy responses to the current economic crisis. As my second slide shows, one can observe a significant and continued decrease in long-term nominal rates of various maturities since the early 1980's. Several factors are responsible for this evolution. Let me first discuss the roots of some of the longer-term trends, before focusing on post-2007 developments.

Long-term trends

Central banks' credible commitment to price stability could well explain the downward trend in nominal interest rates experienced by most mature economies in this period. As we see in slide 3, inflation in G7 countries declined from particularly high levels in the mid-1970's, and again in the early 1980's, to relatively low and stable levels since the mid-1990's. Given the decreasing levels of inflation and inflationary expectations, the inflation premium included in nominal interest rates should have been reduced accordingly. Nevertheless, slide 4 shows that this explanation does not suffice. Real interest rates² also show a declining trend, as represented here in the average real return on the 10 year bonds of G7 countries. What is behind this evolution?

² Real interest rates were calculated using the observed market nominal rate minus CPI inflation.

Some attribute the low interest rate environment to a so-called savings glut. The crux of this argument is that there has been an excessive accumulation of global savings relative to the demand for fixed capital formation since the mid-1990's. To quote Federal Reserve Chairman Ben Bernanke "...the very substantial shift in the current accounts of developing and emerging-market nations ... transformed these countries from net borrowers on international capital markets to large net lenders."³ Indeed, it is interesting to observe that, in the late 1990's, in the aftermath of the Asian crisis, several Asian central banks started accumulating significant foreign exchange reserves in efforts to stabilize their capital flows and their exchange rates, or to be in position to do so, should that prove necessary in the future. Meanwhile, some conjectured that mature economies with ageing populations would experience a peak in their savings rates.

The 'savings glut' hypothesis is contested, however. A first point of contention is that the impact of demographic change on savings and investments may be limited, compared to that of other factors.⁴ Indeed, the savings rates of industrialised countries did not appear to increase in this period (slide 5). In some cases, they even decreased. A second discrepancy, asserted by John B. Taylor and others, resides in the observation that the US savings gap, and the surge in savings in the rest of the world effectively cancelled one another out.⁵ Finally, despite the significant increase in savings rates in China and other emerging countries, there was no clear upward trend in global national savings.

The stable output growth and historically low levels of inflation between the mid-1980's and the onset of the financial crisis, a period often referred to as the 'Great Moderation', provides an alternative or complementary explanation for the downward trend in real rates. Here, the basic argument is that, as macroeconomic volatility decreased, investors became increasingly willing to accept lower term and inflation risk premia on their investments, which could translate into a decrease in observed interest rates.

Whatever the precise explanation may be, the downward progression of long-term nominal and real interest rates over the last twenty years has been conspicuous. Let us now focus on more recent developments.

³ Bernanke (2005).

⁴ Cf. IMF (2005).

⁵ Taylor (2009). Cf. also Borio and Disyatat (2011).

Recent developments

The financial crisis and the global economic decline we have observed subsequently have both added cyclical pressure to this long-run trend. Low or negative output growth and dampened expectations of future growth naturally have a negative impact on long-term rates. In addition, the central banks of most mature economies have, of course, responded to the deteriorating economic situation, first by pushing short-term rates towards appropriately low levels and subsequently by exerting pressure on longer-term rates. As slide 6 illustrates, the first 'conventional' monetary policy response was to bring short-term target interest rates to levels as close to zero as possible. However, confronted with the zero lower bound – that is, the impossibility of using conventional monetary policy to do more – many central banks have supplemented their traditional policies with 'unconventional' measures, often in order to impact long-term rates. Central banks do so by altering the composition of their balance sheets (credit easing), or by expanding the balance sheet, i.e. by increasing liquidity via one form or another of asset purchasing (quantitative easing, QE) (slide 7).

There is evidence to suggest that these measures are having an impact on private sector borrowing costs. Often as intended, its effect has varied from one asset to the next. In the case of the Bank of England, the vast majority of assets purchased were gilts, and, analysis so far indicates that, gilt yields were some 100 basis points lower than they would have been without QE purchases (slide 8).⁶ Several US-centred studies⁷ also estimate that QE measures had a similar effect there. A study by the Federal Reserve Bank of New York estimates, for example, that the measures reduced the ten-year term premium on US Treasuries by "somewhere between 30 and 100 basis points." The findings also indicate that the effect of the asset purchasing on agency debt and agency mortgage-backed securities was even more significant.⁸ In addition, a recent internal SNB study revealed that the doubling of SNB liquidity in August-September 2011 had a significant impact on the yield on 10-year confederation bonds.⁹

With this in mind, I would now like to discuss the specifics of the Swiss case in more detail.

⁶ Joyce, Lasaosa, Stevens and Tong (2010).

⁷ For example, Krogstrup, Reynard and Sutter (2012, forthcoming).

⁸ Gagnon, Raskin, Remache and Sack (2010).

⁹ Krogstrup (2012).

The Swiss case

Historically, Switzerland's long-term interest rates have usually been lower than those of most other mature economies. Recently the 10-year Swiss government bond yields even fell below those of their Japanese equivalent and reached an all-time low (slide 9).

Current low interest rates in Switzerland can largely be explained by negative developments in the global economy, which have progressively increased the demand for 'risk-free' investments, while decreasing their supply. On the demand side, increased financial sector risk and an uncertain economic outlook have led many market participants to seek the protection of safe havens. On the supply side, the European sovereign debt crisis has also had a simultaneous, and not unrelated, impact. Investors have increasingly questioned the relative security of assets that were previously considered safe. This is reflected in the main credit rating agencies' recent downgradings of several sovereign bonds that were formerly triple A-rated.

This increased demand for, and decreased supply of, risk-free assets has directly affected Switzerland. The reasons for this are well known. The country has managed to maintain a longstanding reputation for stability. In relative terms, the Swiss economy has also withstood the 2007 financial crisis rather well (slide 10), its economic figures are healthy and, at less than 40% (slide 11), its GDP-to-debt ratio is relatively low (slide 12). All of this has prompted a surge in the demand for Swiss franc-denominated assets and put downward pressure on Swiss interest rates.

At the policy level, the SNB used a range of instruments to increase the supply of liquidity on the Swiss money market and exert vigorous downward pressure on interest rates, particularly after the Swiss franc reached an all-time high in early August. In line with the goals stated in the SNB's announcement of 3 August, the three-month Libor fell from 17.5 basis points on 2 August to a low of 0.3 basis points on 5 September. Other money market rates then fell to historical lows. At that time, futures contracts on the three-month Libor even implied negative future rates. These negative levels were the inevitable result of the exceptional liquidity measures I mentioned earlier.

Though the current liquidity levels in the Swiss franc money market are still extremely high, and interest rates are fluctuating around zero, conditions on the money markets have slowly

started to normalize and extremely negative rates have disappeared. This is reflected in the recent increase of the three-month Libor, which can be ascribed to a normalisation of the rate's risk premium and should therefore not be seen as a change in monetary policy. Though few loans are currently being concluded on the interbank market, the Libor remains an important benchmark for many credit transactions in the economy.

Concluding remarks

The period of low interest rates in which we live is the outcome of cyclical and secular circumstances which are unlikely to last forever. Even if we accept the 'savings glut' hypothesis, the demographical and regional factors to which it refers could soon lose relevance. While the call for deleveraging should prompt increased savings in advanced economies, the demographic forces in the west are likely to have an opposite effect on the supply of savings. Similarly, the maturing of emerging markets in the east should lead to smaller current account surpluses and to a gradual reduction in the build-up of precautionary reserves by public authorities. It is also clear that the increased risk appetite associated with the 'Great Moderation' was, at least to some extent, based on over-optimistic assumptions. These conditions are unlikely to recur in the future, therefore implying that we will probably not observe again the very low risk and term premia that characterized the end of the 1990's and the beginning of the 21st century.

At the cyclical level, the present low interest rates are the appropriate 'full throttle' response to a very severe global economic crisis, which occurred on the back of the most acute financial crisis since the 'Great Depression' of the 1920's and 1930's. However, even if there are implicit or explicit calls for interest rates to remain "low for long" everywhere – including Switzerland - the corresponding monetary policy remains a **cyclical** response to a cyclical phenomenon, which, from a historical perspective, should be relatively short-lived.

Thus, as most mature economies gradually return to their normal growth path – and I do not dispute the diagnosis that this demands more time after a severe financial and banking crisis than it would in more normal business cycle circumstances – one can reasonably expect real rates to return to higher levels than those observed recently. This is good news for savers and pension funds alike. It should also be taken into account by borrowers, especially long-term borrowers, such as those active in the mortgage market. From their

perspective, it is inappropriate to consider the current low rates as representative of a so-called new normal. The intended economic stimulus provided by low interest rates will only last for a few years, not decades. It is crucial for long-term financial stability that those who make long-run debt commitments are fully aware of this reality and that they plan accordingly.

What about inflation risk? Personally, I do not share the view that the current period of central bank activism will be followed by a resurgence of inflation. First, contrary to common assertions, persistent – as opposed to unanticipated – inflation is limited in its capacity to reduce sovereign debt burdens. Second, the low levels of inflation we are currently experiencing are the result of improved monetary policy, combined with a general acknowledgement that inflation does not buy durable economic performance. Neither of these factors are affected by recent events. We can therefore anticipate that, with current or enhanced levels of understanding of monetary mechanisms, and central bankers' continued preference for price stability, future inflation levels will resemble those of the last 20 years.

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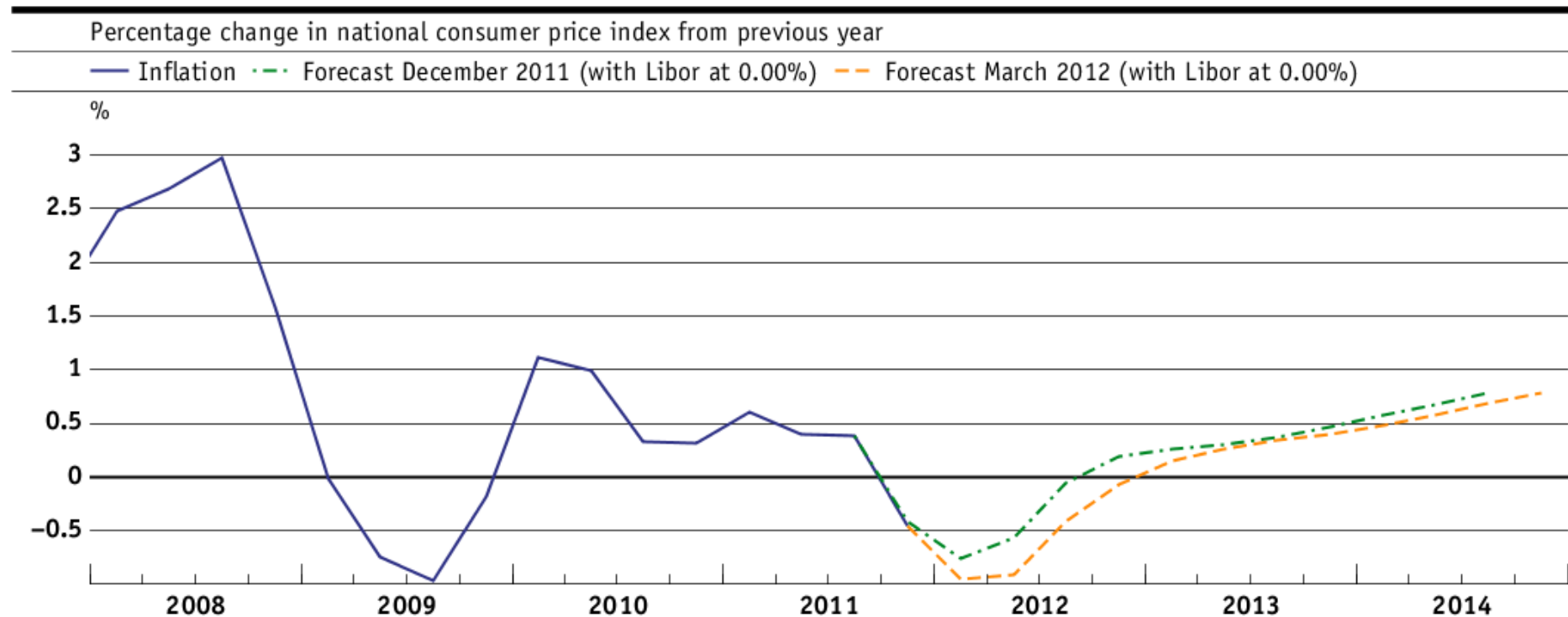
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Inflation forecast

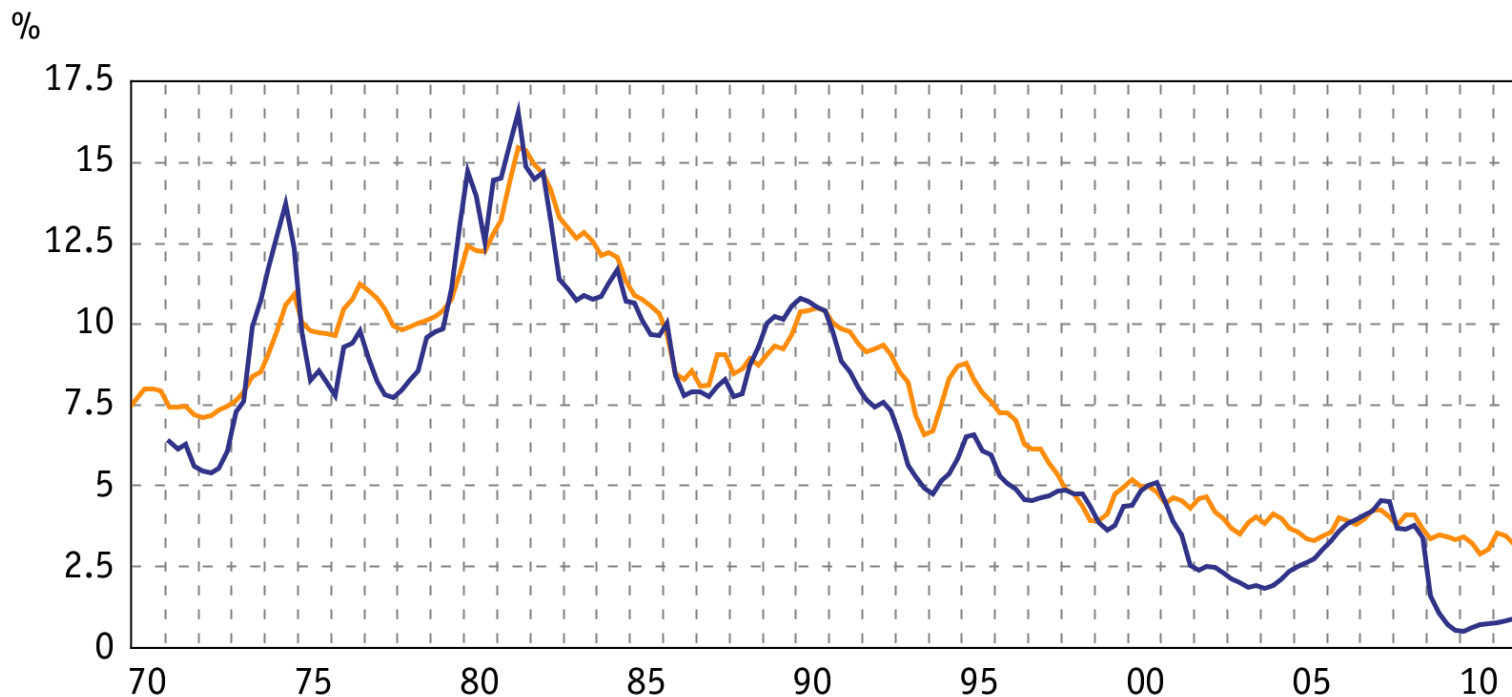
Conditional inflation forecast of December 2011 and of March 2012



Nominal interest rates

Government bonds, nominal yields

- Average long-term government bonds of G7 countries
- Average short-term government bonds of G7 countries



Source: SNB Markets Analysis Platform, Bloomberg/OECD

Inflation rates

Annual CPI inflation

— Average of G7 countries

%



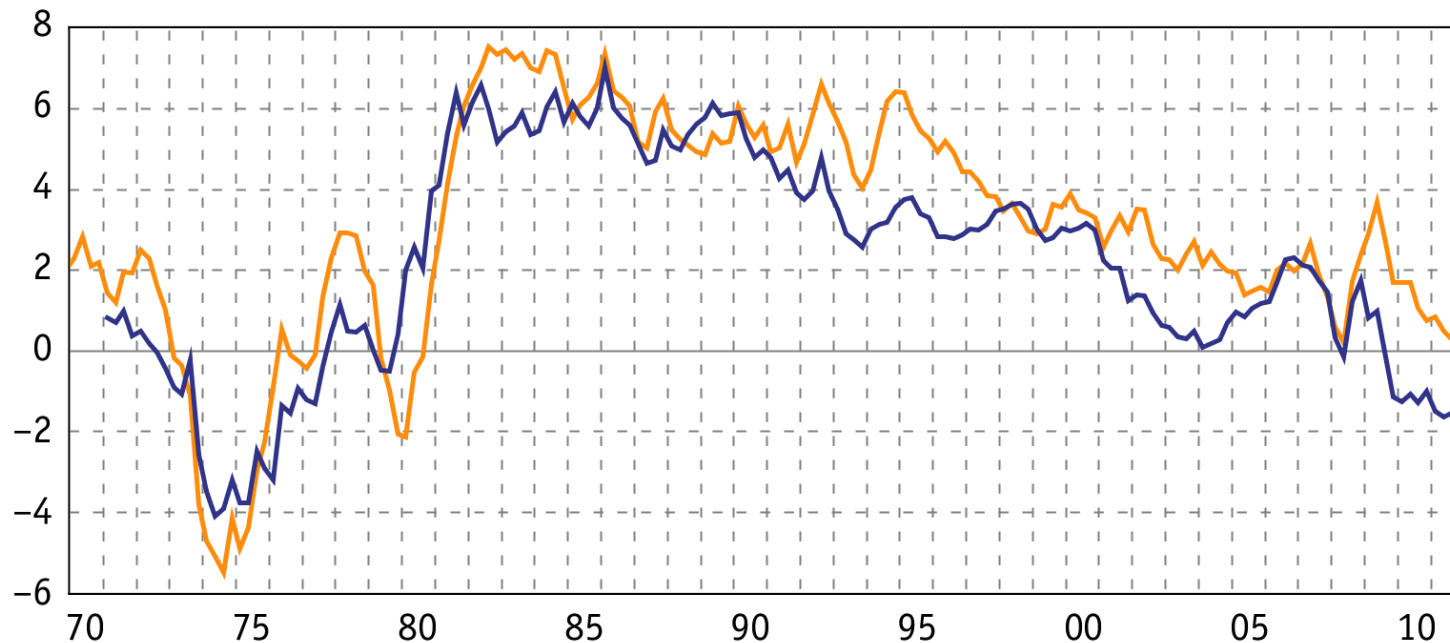
Sources: SNB Markets Analysis Platform, OECD, IMF, BIZ

Real interest rates

Government bonds, real yields

- Average long-term government bonds of G7 countries
- Average short-term government bonds of G7 countries

%

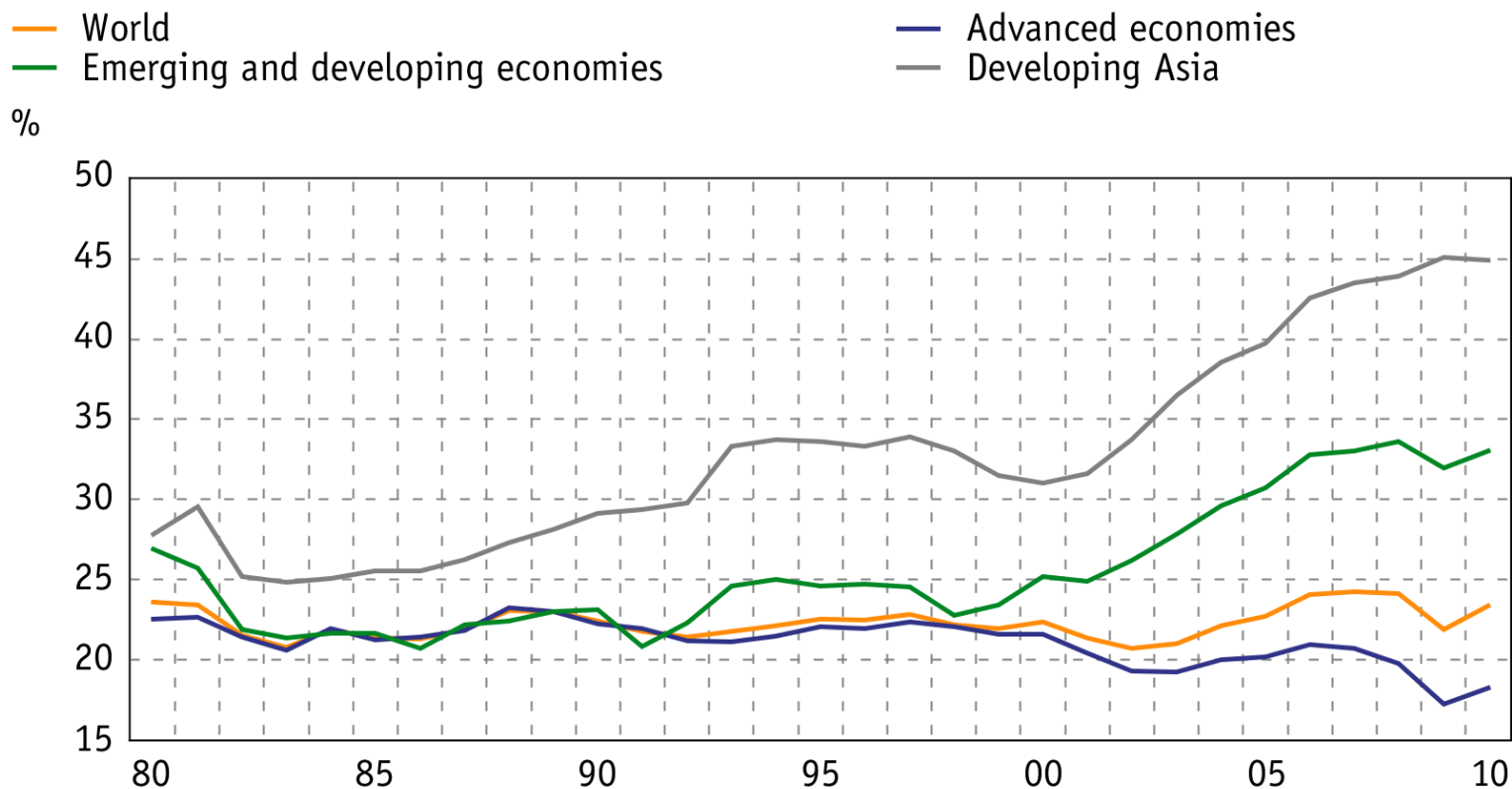


Source: SNB Markets Analysis Platform, Bloomberg/OECD



Global gross national savings

Gross national savings as a percentage of GDP



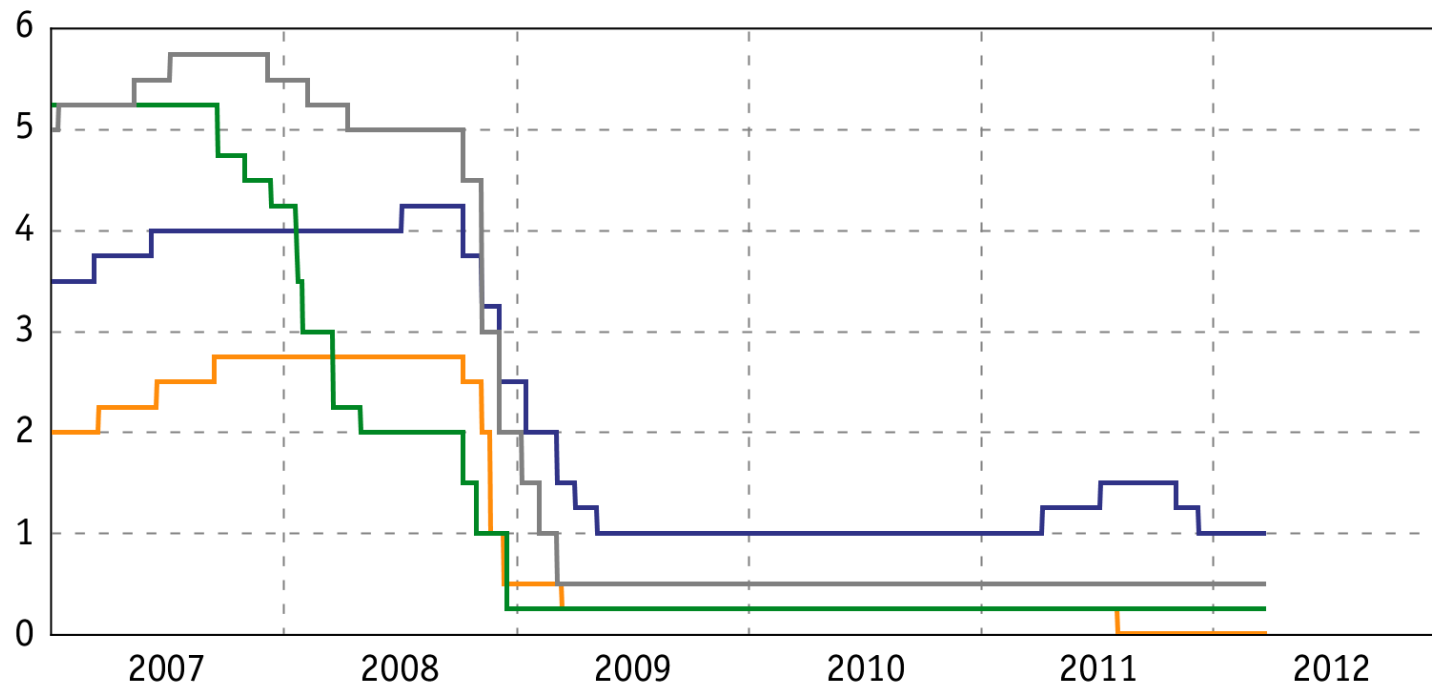
Sources: SNB Markets Analysis Platform, WEO

Conventional monetary policy

Official interest rates

— Switzerland — Euro area — US — UK

%



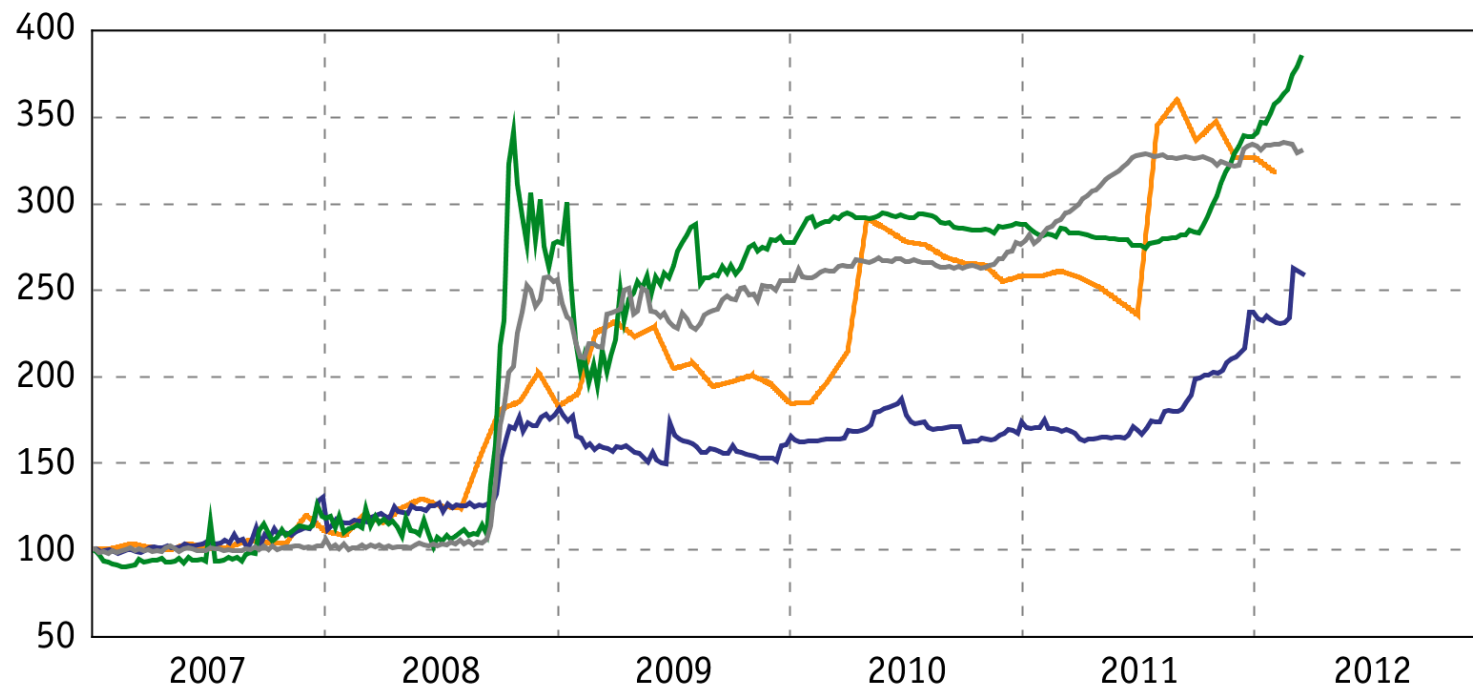
Sources: SNB Markets Analysis Platform, Bloomberg

Unconventional measures

Central banks' total assets

— SNB — ECB — BoE — FED

Index 100 = 1.2007



Sources: SNB Markets Analysis Platform, ISDA



Bank of England, QE asset price movements

Asset	Change	
	Around announcements	4 March – 31 May 2010
Gilts	-100 bp (of which -90 bp in gilt-OIS spreads)	+30 bp (of which +15 bp in gilt-OIS spreads)
Gilts (surprise calibration)	-125 bp (of which -80 bp in gilt-OIS spreads)	+30 bp (of which +15 bp in gilt-OIS spreads)
Corporate yields (investment grade)	-70 bp	-400 bp
Corporate yields (high yield)	-150 bp	-2000 bp
FTSE All-Share	-3%	+50%

Long-term bond yields

10-year government bonds

— Switzerland — Japan



Sources: SNB Markets Analysis Platform, Bloomberg

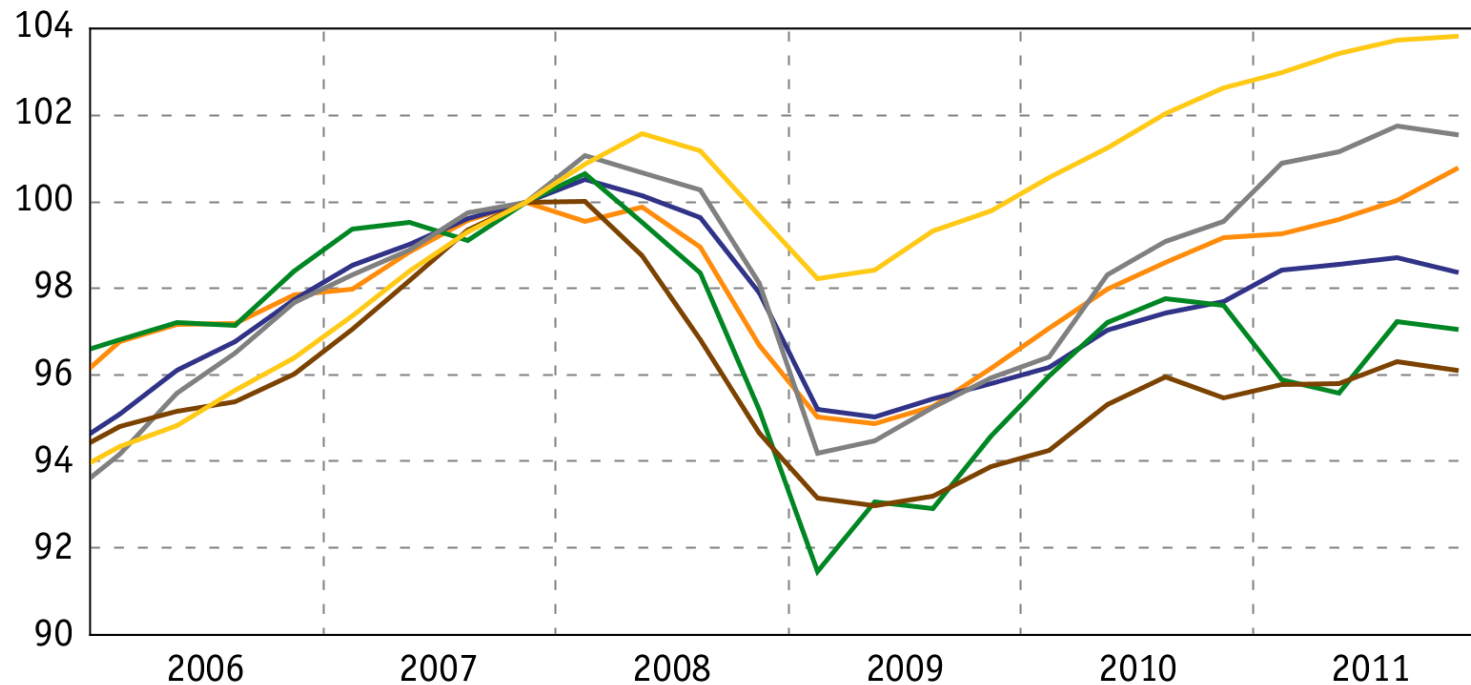


Global levels of real GDP

Global: Real GDP level

— USA — Euro area — Japan — Germany — UK — Switzerland

Index Q4 2007 = 100



Source: SNB Markets Analysis Platform

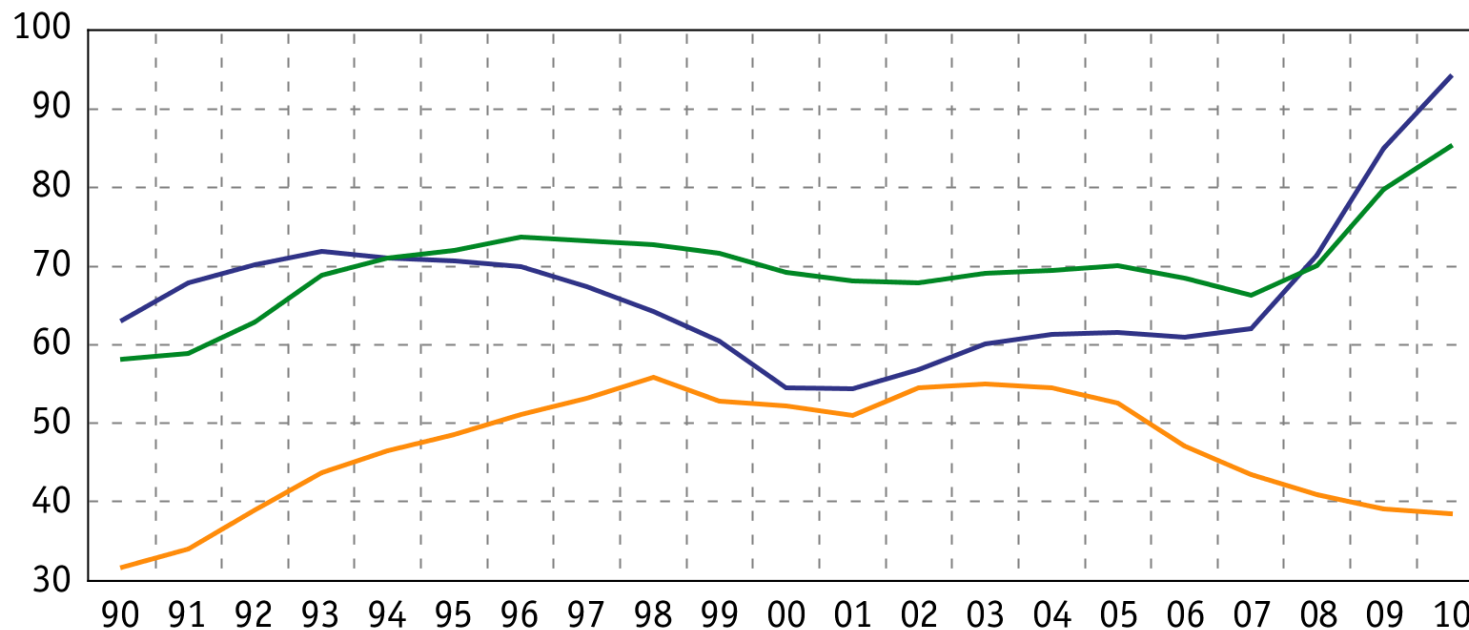
Low levels of Swiss public debt

Gross public debt

in % of nominal GDP

— Switzerland — United States — Euro area

%



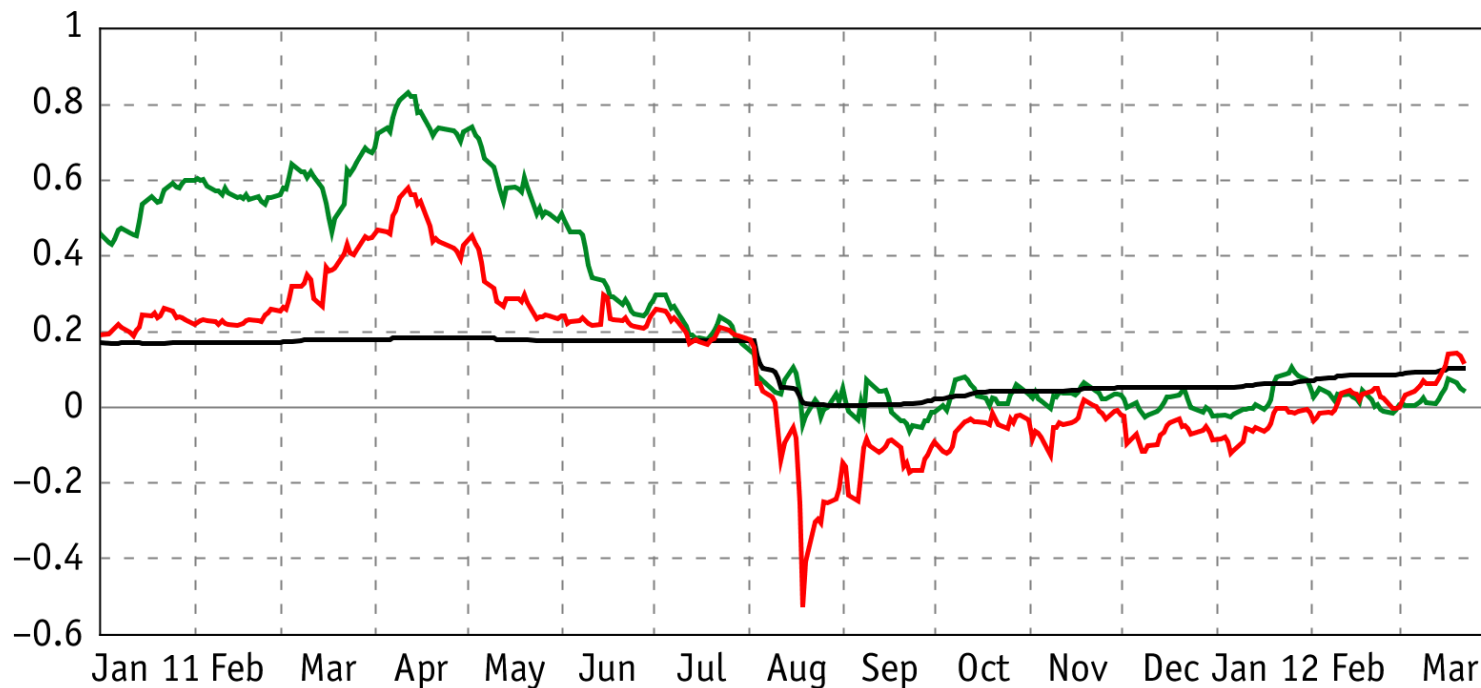
Sources: SNB Markets Analysis Platform

Negative Swiss interest rates

CHF interest rates

— CHF 2Y government bond — CHF 3M Libor — CHF 3M Libor future 2nd

%



Sources: SNB Markets Analysis Platform, Bloomberg

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