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## **Swiss monetary policy in the public eye**

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## **Introduction: The Great Recession vs. the Great Depression.**

The Great Recession is behind us. In the case of Switzerland, we may wonder if the term is justified. With a fall in output of 3.2% from the top of the cycle in 2008 to the trough in 2009, the recession was the most severe since the mid-1970s.<sup>1</sup> However, measured on a quarterly basis, consumption, which is a more meaningful indicator of economic well-being, barely fell. In Switzerland, the Great Recession was a (relatively severe) recession.

What was it, that transformed what many feared could have been a new Great Depression into the Great Recession? As historical data show, the downturn in global industrial output in the first ten to twelve months of the two crises was similar (Chart 1). Economic historians will be occupied with this question for a long time. Let me venture to say that the policy reactions of fiscal and monetary authorities will occupy a central position in the historians' final answer. Charts 2 and 3 provide some illustrations of the difference in policy responses between 1929 and 2008. The much stronger monetary policy reaction, a greater willingness to run fiscal deficits and incomparably larger amounts of support to the financial sector are the distinctive features of the present crisis. Monetary and fiscal policy were both restrictive in the Great Depression. The opposite is the case in the Great Recession; both have been and continue to be very expansive. Stabilisation packages to help the banking sector have been very large, while they were non-existent in the early thirties. It will be hard to argue that these policy responses have not played a crucial role in avoiding a repetition of the Great Depression. Of course, expansive fiscal policies, support measures to the financial sector and unconventional monetary policies do not come for free. This can be seen in the increase in public debt levels registered in many countries and in the size of, and the corresponding risks present in, many central banks' balance sheets.

What in turn are the reasons why, in Switzerland, the Great Recession took the form of a "relatively severe recession"? A number of factors, some of which were already hinted at in my Money Market speech last year, were surely at play: the sound condition of the Swiss economy when it entered into the crisis, the demand impulse provided by immigration, the absence of a real estate bubble, strong private savings ahead of the crisis, and, last but certainly not least, a very expansionary monetary policy response completed with a determined and calibrated support to one of our big banks.

Today, I will focus on one of the most discussed elements of the monetary policy response, our interventions in the foreign exchange market. Before doing so, I would like to stress a key element of the Swiss financial market structure that has shown particular resilience and has helped to provide appropriate financial conditions throughout the crisis in the Swiss economy: the Swiss franc repo market. The good performance of this market is closely

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<sup>1</sup> During the recession of 1974-1976, real output in Switzerland fell by more than 10%.

related to another element of the SNB's policy that has drawn public attention, and even criticism - our collateral policy.

### **I. An important feature of the Swiss money market: the SNB's collateral policy.**

A plausible and popular diagnosis for the recent financial crisis is that it started with a bank run. In contrast to a "traditional" bank run, such as those that occurred during the 1930s,<sup>2</sup> the run in the current crisis took the form of a large and sudden increase in collateral haircuts in the US repo market.<sup>3</sup> If one plausibly estimates the size of the US repo market at \$10 trillion at the eve of the crisis, a 20% increase in haircuts led to a withdrawal of funds from the banking sector equivalent to \$2 trillion.<sup>4</sup> Chart 4 provides an estimate of the increase in haircuts in the US market while Chart 5 displays the drop in overnight repo volume between March and December 2008.<sup>5</sup> This run on the repo market had obvious implications for the ability of the banking sector to lend. The consequent dearth of liquidity in US dollars was felt throughout the world, in particular in Europe. It was the main reason for the swap agreements initiated by the Federal Reserve and a number of international central banks, including the SNB. The aim was to substitute central bank liquidity provision for the failing money market in US dollars, and was directed, particularly, at international market participants. In contrast to this account of the early phase of the financial crisis in the US, Chart 6 reports the evolution of the exchanged volumes in the Swiss secured and unsecured money markets. The contrast between the last two charts could not be more striking: in Switzerland, the secured interbank market progressively took over from the collapsing unsecured market to achieve record volumes of activity in the week following the Lehman Brothers collapse. Clearly this market showed its resilience and fulfilled its function, which no doubt helped prevent a credit crunch materialising in Switzerland. Note that later developments (starting in late autumn 2008) were strongly marked by the abundant liquidity situation created by the SNB swap agreements with other central banks and later by the interventions in foreign exchange markets. As a result, demand for short-term liquidity by market participants disappeared. Preliminary evidence strongly suggests that a key factor in the relative performance of the Swiss and US repo markets lies in the quality of the collateral backing repo transactions.<sup>6</sup> In the US, as emphasised in a BIS study, repo markets had doubled in size since 2002, with gross amounts outstanding at

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<sup>2</sup> See Diamond and Dybvig (1983). "Bank runs, deposit insurance, and liquidity", *Journal of Political Economy* 1983, vol. 91, no. 3, pp. 401–19.

<sup>3</sup> Typically, the total amount of the deposit will be some amount less than the value of the underlying asset, with the difference called a "haircut". For more details, see Gorton and Metrick (2009) "Securitized Banking and the Run on Repo", *NBER Working Paper Series* (NBER Working Paper No. 15223), August 2009.

<sup>4</sup> This could be a reasonable approximation. See Gorton (2009): "Slapped in the Face by the Invisible Hand: Banking and the Panic of 2007", Prepared for the Federal Reserve Bank of Atlanta's 2009 Financial Markets Conference, May 2009; and Gorton and Metrick (2009).

<sup>5</sup> Chart 4 illustrates the average repo haircut on structured debt. This is a good indication for an overall "haircut index", as shown by Gorton and Metrick (2009).

<sup>6</sup> Another important difference is that the Swiss repo market is conducted on a highly efficient automated and centralised platform while US repo transactions are traded over the counter.

year-end 2007 of roughly USD 10 trillion.<sup>7</sup> These markets ended up financing up to one-half the total assets of the major investment banks. This growth in volume was based on a widely broadened collateral basket, including corporate bonds, bonds issued by agencies, mortgage-backed securities and other lower-rated collateral. In March 2008, following the Bear Stearns rescue, confidence waned and market participants immediately ceased accepting any collateral other than Treasury and agency securities. In Switzerland by contrast, the collateral accepted in 99.8% of the transactions in the secured interbank market corresponds to the definition of the SNB collateral basket, that is, to the collateral accepted by the SNB in its own repo operations. The SNB's collateral policy is based on a transparent, essentially rule-based approach. This means that when securities are excluded from the list of acceptable securities there is no new information but only the application of the existing and published criteria. Compared to many other central banks, the definition of eligible collateral is unusually open in the sense that the SNB is rare among central banks in accepting securities denominated in foreign currencies and not only in its home currency, the Swiss franc. The quid-pro-quo of this multi-currency policy is that securities eligible for SNB repo transactions must satisfy stringent quality requirements: these requirements concern their credit ratings and liquidity properties. This policy is coherent – open but strict! – and it has substantial advantages. First, no initial margin or haircut is applied during standardised repo transactions, making the system more capital efficient.<sup>8</sup> Second, it allows a broad range of financial institutions to participate, including many international banks. Third, it creates incentives for banks to hold high-quality, liquid assets in their balance sheets. Finally, as already suggested, this highly credible collateral policy has resulted in SNB eligible collateral becoming the standard for the secured interbank money market in Swiss francs. This, in turn, has made an essential contribution to creating a robust secured interbank market and thereby keeping interbank credit lines open at all times during the crisis.

## **II. The SNB's interventions in foreign exchange markets.**

Let me now move on to my second main point, the interventions in foreign exchange markets carried out by the SNB during 2009 and 2010. The SNB acted on foreign exchange markets in this period for one reason and one reason only: the zero interest rate lower bound had been reached and the economic situation unequivocally called for looser, not tighter, monetary conditions. The goal was to maintain price stability, which meant, in these circumstances, avoiding deflation. One should always have in mind that there are no clear recipes for avoiding a deflationary trend in such a situation. The most famous illustration of this statement is the US experience in the late 1920s and early 1930s. At the time the US policymakers underestimated the consequences of a bout of deflation and failed

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<sup>7</sup> Hördahl and King (2008). However, these numbers are estimates given that almost all of the repo transactions are conducted over the counter. See also IMF (2010), *Global Financial Stability Report*, October 2010.

<sup>8</sup> There are, however, twice daily margin calls in case of variations in the collateral market value.

to take aggressive action. The consumer price index (and the GDP deflator) declined by 24% from August 1929 to March 1933, after having been virtually flat from 1921 to 1929. This decline was accompanied by a fall in real GDP of almost 30 percent.<sup>9</sup> A more recent example is Japan's "lost decade". There the situation was not underestimated to the same degree. However, public actions culminating in a doubling of Japanese public debt proved to be insufficient to avoid a protracted deflationary episode. Let me review the history of our interventions in more detail.

At the beginning of 2009, the severe downturn in the global economy had translated into a very serious threat of deflation in Switzerland. For example, the inflation forecasts produced by the IMF showed inflation in Switzerland to be in negative territory for two years in a row. Price stability was evidently not assured. The substantial increase in the value of the Swiss franc since the beginning of financial crisis represented an inappropriate tightening of monetary conditions. Yet, it was imperative that monetary conditions be kept as loose as possible, a fortiori to avoid a further monetary tightening. Given that the interest rate was effectively at a zero level, the SNB decided to prevent any appreciation in the Swiss franc with respect to the euro from March 2009 on. The SNB achieved this goal by repeatedly intervening in the foreign exchange market during the course of 2009. This policy was maintained until the monetary policy assessment (MPA) of December 2009.

By the end of 2009, the economic situation was showing some signs of improvement and the threat of deflation was estimated to have diminished. As a consequence, the SNB decided that a certain appreciation in the Swiss franc could be allowed without price stability being compromised. At the December MPA, the SNB therefore announced that it would act decisively in the event of an excessive appreciation of the Swiss franc. This policy was maintained throughout the first half of 2010.

In spring 2010, the news on the state of the Swiss economy turned increasingly positive although the forecast remained fraught with major uncertainties. It was not clear, for instance, that partial unemployment (short-time work) could be reabsorbed without a significant additional increase in the rate of unemployment. The recovery appeared to be on the way but was presumed to remain very fragile. At the same time, the sovereign debt crisis in Europe was causing major tensions in financial markets. In general, markets were commonly afraid that the euro could face long term structural problems, the flight to safe investments was universal and the pressures on the Swiss franc were substantial. The SNB considered that, at that time, the Swiss economy was unlikely to have gained enough strength to be able to withstand a further violent appreciation of the franc. Such a development would have placed the Swiss economy under such severe strains that the threat of a deflationary trend would have again come to the fore. The SNB was not prepared to take this risk; it resisted an excessive appreciation of the franc and in so doing was led to acquire large quantities of foreign exchange.

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<sup>9</sup> Source: IMF (2003), *"Deflation: Determinants, Risks, and Policy Options"*, April 2003.

As is now well known, the EU authorities came up with a “shock and awe” package<sup>10</sup> that, after some hesitations, market participants accepted as providing some reassurance, although not a complete and final solution to the European periphery debt problem. By the end of May, the pressures on the franc started to subside. Taking stock of these developments and of the visible strengthening of the recovery of the Swiss and global economies, the SNB considered in its June monetary assessment that the threat of deflation had largely disappeared. A further appreciation of the Swiss franc was no longer such a threat to price stability and the economy as it had been previously. In the second half of the year the SNB thus refrained from carrying out further interventions on the foreign exchange market.

One can summarise this historical episode as follows. From March 2009 to the end of the year the SNB decided, in view of providing the most appropriate monetary conditions to an economy in recession, and given that traditional monetary policy had hit the zero lower bound, that it would prevent any appreciation of the Swiss franc against the euro. It maintained this policy stance until the MPA of December 2009. As Chart 7 shows, the nominal export weighted value of the Swiss franc which had appreciated by more than 10% since August 2007 was halted. In fact, over the March to December 2009 period, the Swiss franc depreciated by a little over 2% with respect to the euro and by less than 1% on an export-weighted basis. In December 2009, the SNB updated its view of the economy and decided that some appreciation of the franc would be tolerable but that an excessive appreciation needed to be prevented. It maintained this policy until June 2010. Over the course of this period, while the franc gained almost 8% with respect to the euro it lost about 10% against the dollar. Chart 7 shows that the export-weighted value of the franc increased by approximately 2.5% during this period. After June 2010, the SNB refrained from intervening. Until the end of the year the franc gained around 10% on the euro, 15% on the dollar and more than 10% on an export-weighted basis.

What can we conclude from this? We can certainly not conclude that the SNB was not able to hold on its policy, or was “defeated by the markets”. On the contrary, the SNB did what it had announced it would do and thus provided the Swiss economy with monetary conditions that have contributed to a reasonably swift recovery from the crisis and an early return to pre-crisis GDP levels, while, importantly, assuring price stability. Chart 8 shows the evolution of the Swiss GDP in comparison with a few other industrialized countries. The downturn has been less severe in Switzerland and Swiss output has been the first to reach its pre-crisis level. Overall, GDP rose by 2.6% in 2010, after having fallen by 1.9% in 2009. Chart 9 shows the evolution of inflation together with our most recent conditional forecast. The inflation rate recovered to 0.7% in 2010 after hitting a low of -0.5% in 2009.

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<sup>10</sup> See press release by the Council of the European Union’s Extraordinary Council meeting, Economic and Financial Affairs, Brussels, 9/10 May 2010.

Why are the SNB interventions often perceived as unsuccessful? For outside observers studying the performance of the Swiss economy going in and out of the crisis and looking at Charts 8 and 9, this must be a puzzle. All the more so when they realise that this performance was not the result of an amply expansionary fiscal policy; on the contrary, the Swiss policy mix, a very expansionary monetary policy combined with a more contained fiscal policy, was appropriate given the circumstances. With the crisis originating almost entirely in foreign markets and hitting the export sector very strongly, a large domestic fiscal stimulus would have missed the target. The results of this appropriate policy mix, which placed the burden of the response to the crisis on the shoulders of the SNB, can be seen in the remarkable accounts of the Swiss general government: public surpluses in both 2009 and 2010 (+0.8% and +0.2% relative to GDP, respectively) and a reduction of the debt level to less than 40% of GDP.<sup>11</sup>

One reason for the misperception is probably the view, propagated by the academic literature on the subject, that central bank interventions in foreign exchange markets are geared to achieving an exchange rate target and that they are generally unsuccessful at doing so. As has been repeatedly emphasised, this was not the objective for the SNB in 2009-2010.<sup>12</sup> The SNB's objective was to provide appropriate monetary conditions to the Swiss economy. A given exchange rate level in that context may be maintained for a limited time period, but it is subject to review as macroeconomic conditions evolve. And as the SNB's experience in 2009 demonstrates (illustrated in Chart 7), influencing the exchange rate level temporarily is feasible and makes sense at the zero lower bound when the traditional monetary policy instrument is exhausted.

### **III. Conclusion: How to judge whether interventions were successful?**

All actions by the SNB have to be considered in the light of its mandate. The primary goal is to ensure price stability, while taking due account of the overall economic situation. In this way monetary policy contributes to creating an environment that fosters prosperity and economic growth. To achieve its goal, the SNB strives to provide the most appropriate monetary conditions, not to achieve an exchange rate target. The primary indicator of the success of interventions is the inflation chart. Conversely, the more significant gauge of the potential cost of interventions is not found in the central bank's balance sheet. Our foreign exchange interventions will be revealed to have been costly if they result in serious inflationary pressures two to three years from now. As the subsequent speaker, Dewet Moser, will explain in further detail, since June 2010 the SNB has been setting up and using instruments that allow us to adapt the conduct of monetary policy to the new excess liquidity situation. We are convinced that these instruments, reverse repos and SNB Bills of

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<sup>11</sup> The Swiss Confederation also had public surpluses both in 2009 and 2010 (+0.5% and +0.4% relative to GDP, respectively) and a debt level of around 20% relative to GDP.

<sup>12</sup> See, for example, Hildebrand, Philipp (2010) "Monetary policy challenges: Swiss exports in a globalised world", Brussels, November 2010.

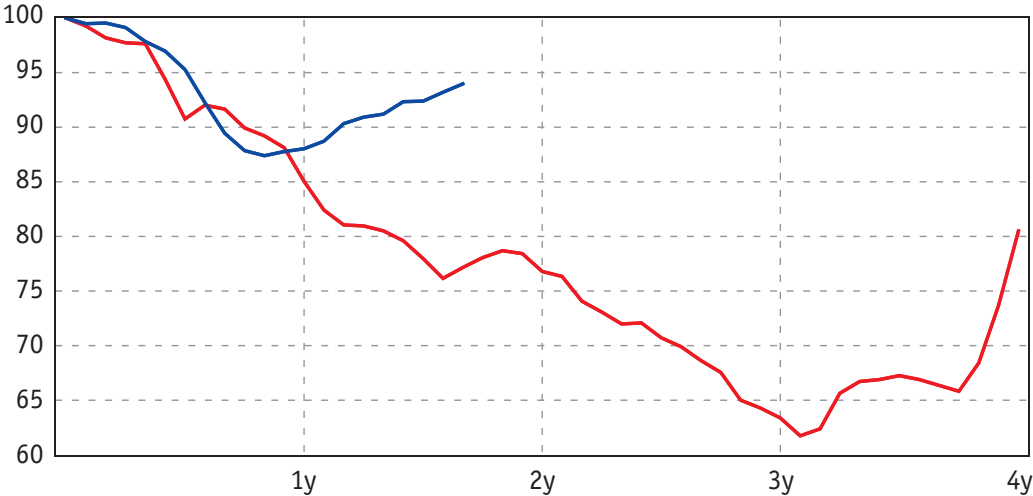
various maturities, which are now fully operational, constitute an efficient toolset for the times to come. They place the SNB in a sound position to steer the Libor rate at the level required to maintain price stability.



### Chart 1: World industrial output.

— 1929-1933    — 2008-2009

Index (100 = 06.1929, 04.2008)

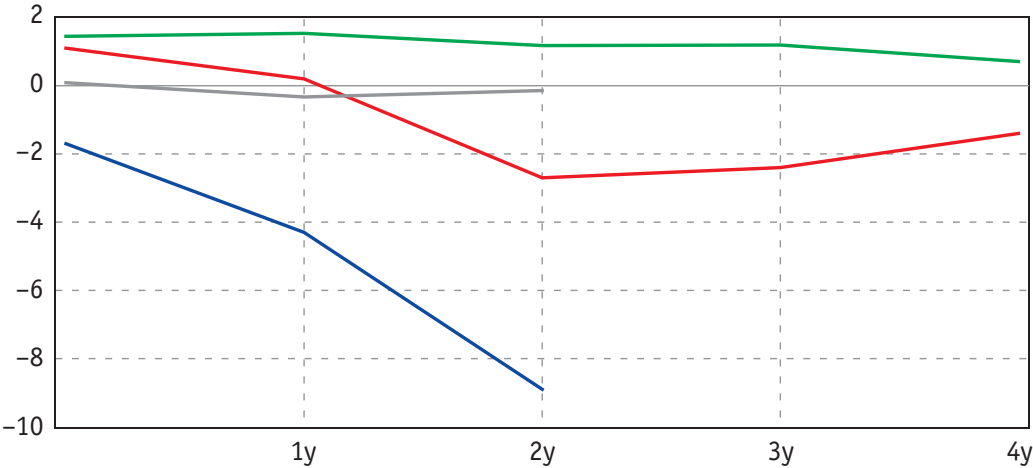


Source: Eichengreen and O'Rourke (2010).

### Chart 2: Government budget surpluses: USA.

— 1929-1933 Federal government    — 2007-2011 Federal government  
 — 1929-1933 State and local government    — 2007-2011 State and local government

%



Source: Federal Reserve Economic Data.

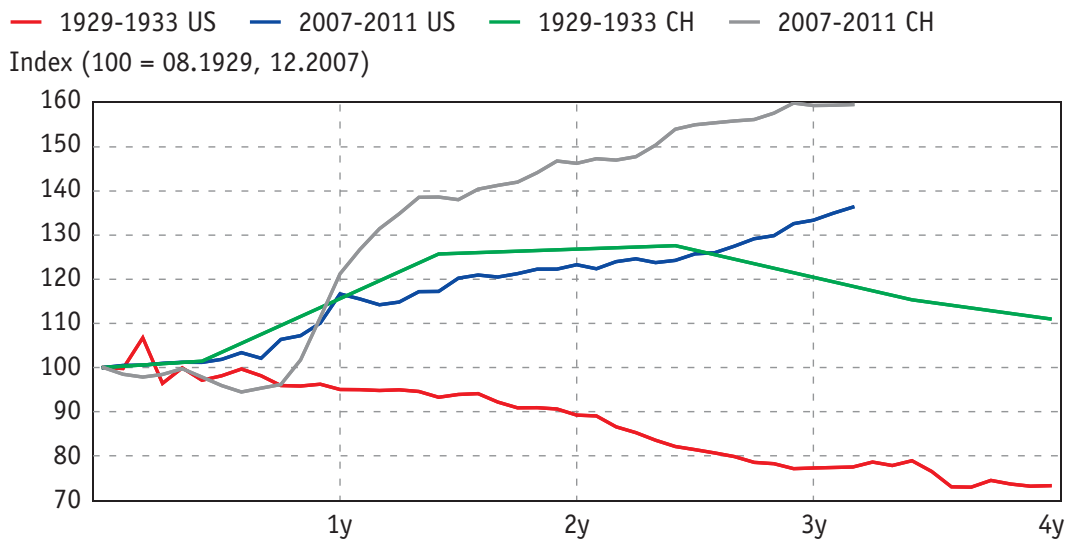
### Chart 3a: Monetary policy measures. Central bank rates.<sup>1</sup>



Sources: Eichengreen and O'Rourke (2010), SNB, Bloomberg.

### Chart 3b: Monetary policy measures. M1.

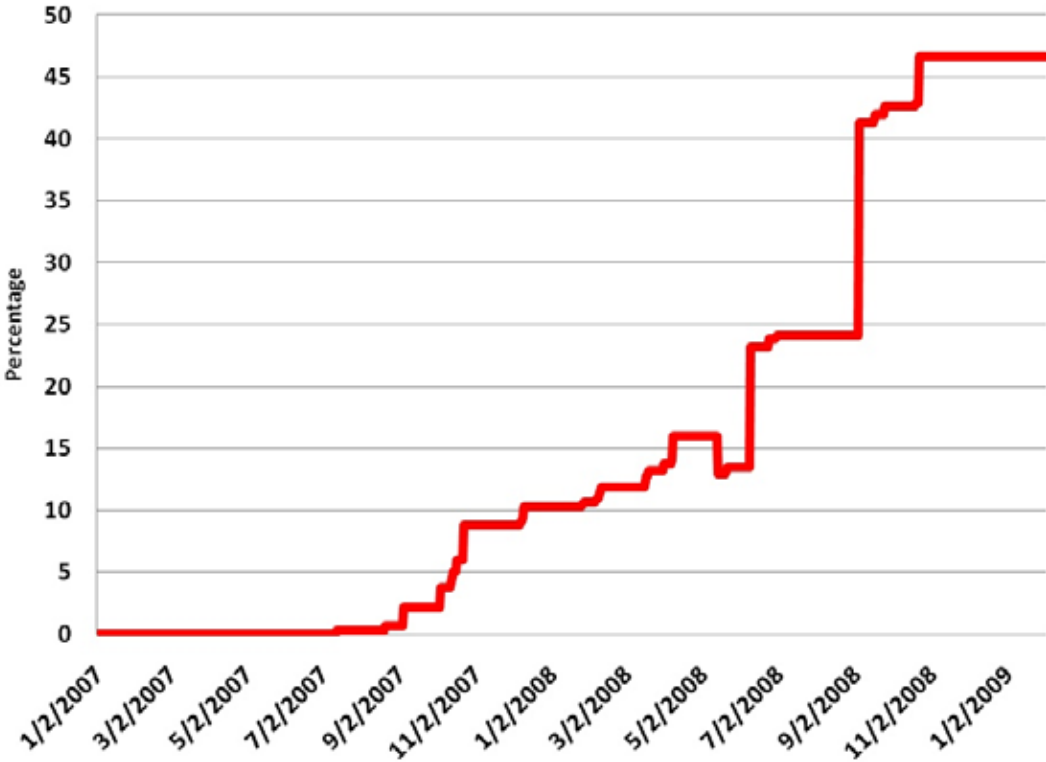
1929-1933 CH only annual data



Sources: Friedman and Schwartz (1963), SNB, BIS.

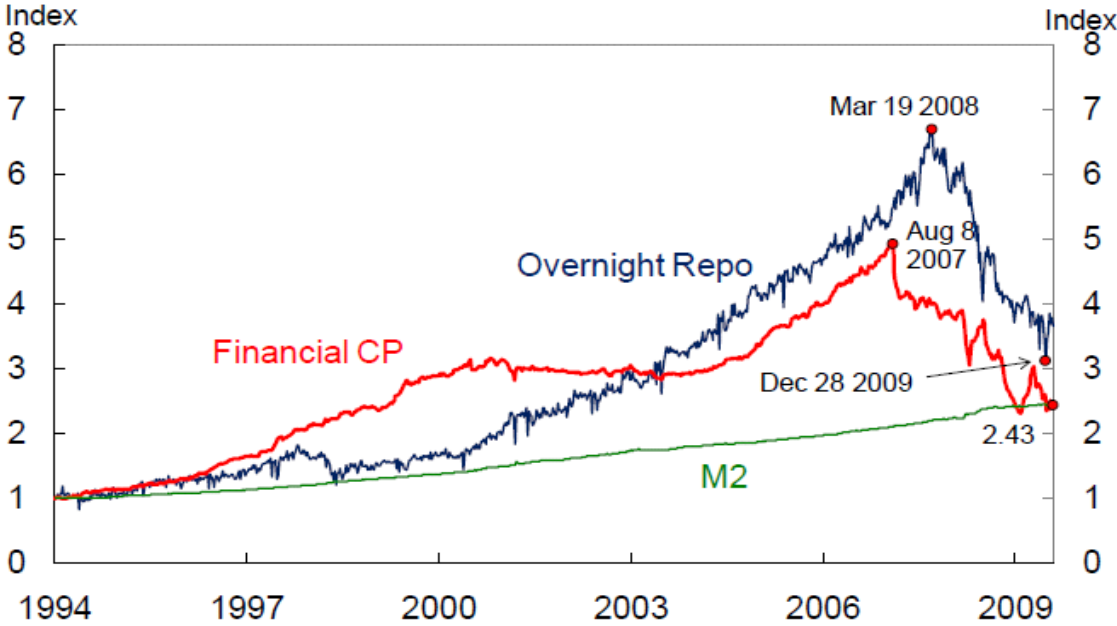
<sup>1</sup>Central bank discount rates, GDP-weighted average for seven countries. Source for 1929-33 data: Eichengreen and O'Rourke. Data for 2007-2011: SNB and Bloomberg. GDP-weighted average of policy rates used from Federal Reserve, Bank of England, Bank of Japan, European Central Bank, National Bank of Poland, Sveriges Riksbank and Swiss National Bank.

**Chart 4: Average repo haircut on structured debt.**



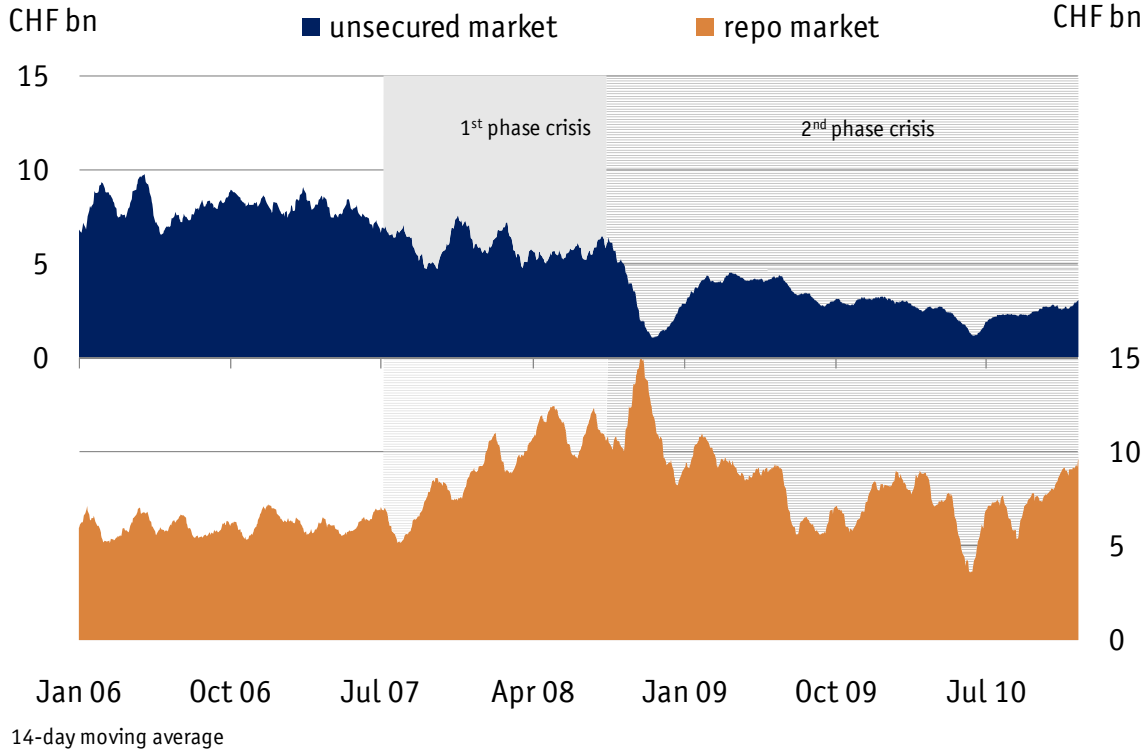
Sources: Gorton (2009), Gorton and Metrick (2009).

**Chart 5: Growth in funding liquidity.**



Sources: Brunnermeier (2010), Adrian and Shin (2010).

**Chart 6: Turnover in repo market: Switzerland.**



Sources: SNB, Eurex.

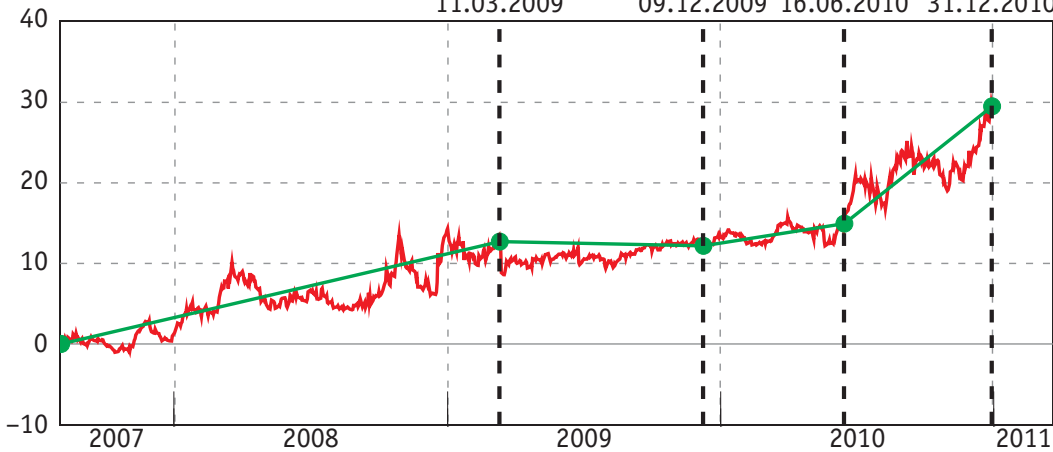
Note: Only interbank transactions; 14-day moving average.

**Chart 7: Nominal CHF exchange rate.**

Export-weighted with 24 countries

— Nominal CHF

Index (0 = 01.08.2007), in %



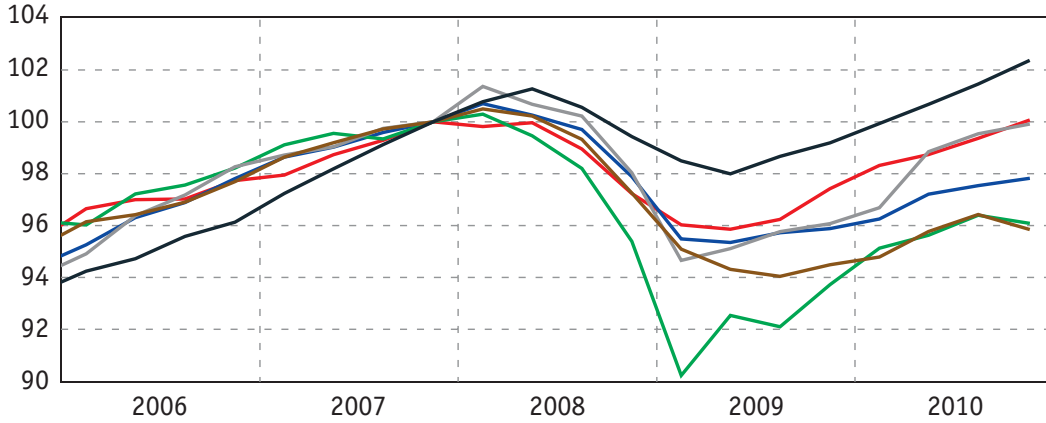
Source: SNB.

## Chart 8: Recovering from the crisis.

International comparison of economic activity

— USA      — Euro area      — Japan  
 — Germany      — United Kingdom      — Switzerland

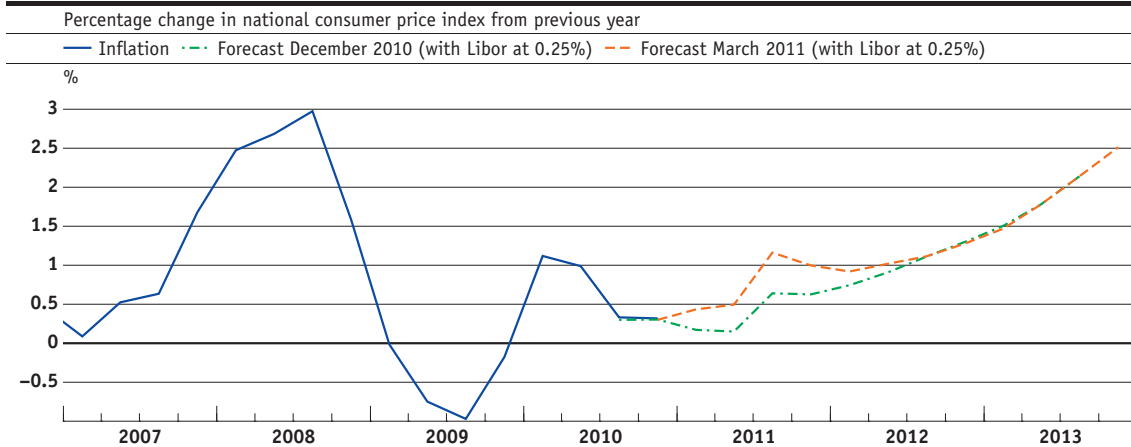
Real GDP, Index (100 = 12.2007)



Sources: SNB, Bloomberg.

## Chart 9: The SNB's conditional inflation forecast.

Conditional inflation forecast of December 2010 and of March 2011



Source: SNB.