I. Looking back

We are emerging from a financial and economic crisis of major proportions. The extent of value destruction during the last two and a half years may well match the losses registered during the Great Depression. The lessons we will draw from this historical episode should leave us wiser. They will alter, in some fundamental ways, our understanding of finance and macroeconomics and hopefully, as well, the behaviour of economic participants – with a better designed economic system. Today I will begin by looking back and reviewing some of the main events that have occurred since the last Money Market Event which happened to coincide with the turning point of the financial crisis. I will then look forward and describe how the SNB perceives the immediate future. Finally I will briefly address two of the most pressing challenges confronting us – exiting from unconventional monetary policy measures and rethinking financial regulation.

Let me turn my attention to where it all started, that is, the US real estate sector. During a long period of low interest rates, low risk premia, subdued volatilities and general economic optimism, US house prices increased in an unprecedented wave to the end of 2006, at which point the bubble burst. The loss in housing-related wealth from cycle peak to trough is staggering, something of the order of USD 7 trillion.¹ Part of these losses are paper losses, since not everyone entered the market at its peak and a portion of these losses have been absorbed by households themselves; the rest must be borne by financial intermediaries. To this day the worldwide write-downs by the financial sector, including, but not limited to recognised losses from the housing sector, are estimated at USD 1.7 trillion.² However, we are still counting, as the latest results published by some of the world’s major financial institutes reveal. There have been many examples of real estate crises in the recent past, including one in Switzerland in the early nineties. What distinguishes the current crisis is its breadth and international character. These two characteristics are intimately related: the rapid expansion of subprime mortgages and the internationalisation of the mortgage-based financial instruments brought international capital to the US real estate sector. This capital helped inflate the property bubble in the first place; it also explains why the subsequent crisis turned into an international financial market event and then into a global economic crisis! A quick back-of-the-envelope calculation comes up with a figure for lost flow income of at least 10% of world GDP. We have escaped a new Great Depression, but in the end worldwide income losses have probably exceeded the income losses associated with the Great Depression.

Since the last Money Market Event a year ago, the international financial system has emerged from the brink of collapse, financial conditions have improved on a broad front and a hesitant economic recovery has been initiated. By and large, the trough on the financial front was reached in Q1 2009 while the economic low point was probably attained one or two quarters later. Exceptional fiscal and monetary policy measures contributed without doubt to these developments. Representative charts for last year show a strong recovery in equity markets, a return to calmer money markets, a decrease in credit spreads, and a return to

² Source: Bloomberg.
more activity in corporate bond issuances. Noteworthy is the fact that, in contrast to developments in other countries, there was no credit crunch in Switzerland.

In our country, as elsewhere, a very expansionary monetary policy has been a key element of the response to the crisis. From October 2008 to March 2009, the SNB carried out a massive reduction in the Libor target range, pursuing a *de facto* zero interest rate policy. As of March 2009, the SNB adopted measures termed "unconventional" in order to loosen the monetary reins further when there was no more room for interest rate reduction. These measures took three main distinct forms: longer-term repo transactions, purchases of bonds issued by domestic borrowers, and purchases of foreign currencies.

Today, viewed from an international perspective, the Swiss economy is in a relatively favourable position. GDP has been growing for two consecutive quarters. Inflation is back in positive territory but without excessive upward pressure. Fears of deflation, which constituted one of the major risks of the past year, have not yet disappeared but are receding. Employment is no longer falling and unemployment may be stabilising. The Swiss export sector was strongly hit by the crisis and is still fragile. Economic activity has been sustained by domestic consumption (both private and public) and by construction activity. Last year’s GDP growth, at −1.5%, constituted the worst performance for the Swiss economy since 1975. Yet this figure is considerably better than the corresponding figure for most developed economies. Let us spend a moment examining the remarkable fact that private consumption growth in Switzerland has remained positive throughout practically all stages of the downturn. Immigration and precaution are the two key words that explain this exceptional result (with a third contributing factor being the fact that disposable incomes have stayed high in real terms, owing to a strong pre-crisis growth performance and a job market more robust than might have been feared). The recent immigration has been a positive contribution to consumption. But even the per capita figure for consumption has not decreased during the crisis. This has been possible because, very much in a textbook fashion, Swiss consumers have been able, during times of crisis, to draw on savings that had been comfortably replenished before the storm arrived. This is not only exemplary, it is an important lesson we can learn from the crisis for use in the future, and it holds true not only for households but for companies and public entities as well. There are many ways to express this message, but allow me to refer to French classical literature and recall for you Jean de la Fontaine’s celebrated fable about the cricket and the ant: “*La cigale et la fourmi*”. In the fable, the cricket who had not accumulated surpluses during the plenteous summer days preceding the crisis, found herself “fort dépourvue quand la bise fut venue”, that is, she “found when the winter winds blew free, her cupboard bare as bare could be”. The fact that, in this situation, the ant of the fable was not eager to lend to the singing cricket lends further realism to the analogy.

II. Current environment and short-term prospects

What now? We are not yet ashore and the relatively positive assessment of the previous paragraph does not reflect a definitive evaluation. First, private consumption could be less robust should conditions on the labour market improve less than currently anticipated or even deteriorate again. Here the main worry is the ability of the Swiss economy to quickly reabsorb the 60,000 individuals working on a short-time basis. Recently, developments have been encouraging. In turn, the situation of the labour market depends on the continued recovery of the 60% share of the economy that is geared to international markets. This view is confirmed by the apparent difference between the ongoing recoveries in the US and Switzerland. While in the case of the US economy, the recovery is at the moment essentially focused on larger firms with smaller ones probably suffering from restricted access to credit, in the Swiss case, any diverging trend between big and small firms is not of major importance. Rather, the difference is more accentuated for firms that are predominantly export-oriented as opposed to those oriented towards the internal market. On the export side, the ability of Swiss exporters to continue redirecting their efforts towards the more
dynamic regions of the world economy, in particular Emerging Asia may be a crucial test. This region is leading the world in terms of economic recovery from the crisis. It is clear here that the proponents of a reasonable version of the decoupling hypothesis are on the winning side of the intellectual debate.

On a global level, inflation pressures are expected to remain subdued in most economies. In advanced economies, headline inflation is expected to pick up from near neutral levels in 2009, but remain low in 2010. For Switzerland, the path of inflation in the short term will be largely dictated by recent movements in oil prices and associated base effects. Inflation will nevertheless remain positive throughout 2010. This follows a negative rate of 0.5% in 2009. Assuming that monetary policy remains unchanged, the SNB’s forecast show that inflation will reach 0.7% this year. The SNB’s forecasts also show that inflation will begin to increase again from the beginning of 2011, to reach 2% in the first half of 2012.

III. Policy challenges for the future

1. Exit strategies

For the SNB, the return to normality does not pose any difficult conceptual problem. The unconventional measures developed to combat the current crisis have in part modified the nature of the liquidity created. Liquidity resulting from repos and currency swaps is temporary: it flows back automatically when transactions are not renewed. Liquidity created by acquiring foreign exchange and Swiss franc bonds is more permanent. The issuance of SNB Bills routinely practiced since October 2008 has given the SNB a tool that can play a central role in liquidity absorption. The next speaker, my colleague Dewet Moser, will concentrate on the more technical aspects of the exit strategy. Suffice it to say that the toolbox is available. It is not a question of how, only of when. On the timing issue, because of the long and variable lags between monetary policy decisions and their impact on inflation, the decision to start tightening is a difficult one. It is necessary to balance the risk of moving too soon, when the economy may not yet be fully able to withstand the move, against tightening too late and giving too much room to potential inflationary pressures. There is no magic recipe. All the more so because we are reasoning at the level of the aggregate economy, that is, in terms of an average. This means, in particular, that for some parts of the economy even being too late will feel as though it is too soon. What is certain is that the current expansionary monetary policy cannot be maintained indefinitely without incurring inflation risks. Therefore, households and firms should prepare themselves for a return, sometime in the future, to a world of higher interest rates, with exchange rates being guided by market forces. This is the normal state of affairs, and all concerned should shake off bad habits learned in extraordinary times and remember that they are ultimately responsible for the long-run viability of their decisions and operations.

2. Safer financial system: regulation

It is here that we have most to learn from recent events, and here that we must adapt. There is a lot that could be said. However, I will be modest and confine myself to putting forward three simple ideas that are becoming part of the general consensus, as outlined in the G20 and FSB agendas.

Firstly, it should not be a game of us (the central banks, the regulators, the government) versus them (the banks or their managers, the financial sector). What is at stake is the design of an economic system that is efficient, compatible with the rules of a market economy and favourable to value creation. One essential lesson of the financial crisis is that the system was not properly designed. There is nothing bad per se about speculation, high risk taking or even high levels of remuneration, provided the principals fully assume the consequences of their actions, and provided, in particular, that the tax payer remains out of the picture. It is clear that our financial system did not satisfy this requirement. In the
advanced G20 countries, public-sector capital injections to the banking sector so far have been estimated at 3.4% of GDP!\(^3\) This is a lower bound for the risks assumed by the public sector; the latter may have been closer to 25% of GDP for the major western economies, according to a recent estimate by J.C. Trichet.\(^4\) There is absolutely no economic, let alone moral, justification for situations where individuals enjoy high levels of remuneration or high returns when times are good, while the public sector has to come to the rescue when times are bad. In an ideal world, it should now be the responsibility of the financial sector – rather than regulators – to come up with credible proposals for change. These proposals must inevitably imply that all the main players, in particular managers and creditors, have much more at stake than in the past. Depending on how creative we are in finding solutions, financial institutions will have to be smaller and less prone to risk taking. For managers, at the very least, this must mean bonuses being tied to the long-run performance of their firm. Logically, one could envisage going further. The first real source of asymmetry is the very principle of limited liability. Beyond a certain level of remuneration and risk taking, one should ideally envisage a system which mimics that of partnerships or full personal liability. The fact that this is probably too ambitious justifies more ad-hoc complementary forms of regulation. Shareholders have by and large paid their dues in the crisis, but creditors typically have not. This is the level at which there is most to gain in both correcting the incentives (ultra-high leverage should worry creditors first, and regulators only afterwards) and protecting taxpayers. By definition banks rely a great deal on credit; it is conceptually clear that creditors should come into play before taxpayers when something goes wrong. This would naturally be the case via bankruptcy proceedings. If we cannot go that far because of the crucial role of banks and certain financial institutions, we must find other ways for creditors to step in before taxpayers are involved. This can be achieved through ways of anticipating part of bankruptcy outcomes (living wills) or/and through some form of automatic conversion of a significant proportion of bank debt into equity.

Secondly, these considerations address the financial stability issue only through the lens of individual institutions. We now know that this is not enough. Microprudence must be supplemented by macroprudcense, i.e., a system design that encourages well-managed individual institutions to act, in particular at times of crisis, in ways that do not make life harder for other institutions under stress. The issue is clear, the perfect solution less obvious. At the moment, regulators are talking about dynamic provisioning or capital requirements conditional on the cycle phase. The key idea is that regulators may want to be more lenient in bad times so that individual institutions have more breathing room. If this is the case, the logical consequence is that the overall requirements (e.g. capital adequacy rules) should be tougher in good times. Of course Jean de la Fontaine would argue that this is simply good management and that regulation should be superfluous!

Thirdly, it is important to realise that there is no perfect solution and no perfect design. This means that we need to be pragmatic and attack the problem from various angles. Some of the new regulation proposals are elegant and attractive because they go straight to the heart of the problem (convertible debt or contingent capital), others are less pretty (e.g. size requirements), but we should accept this state of affairs until we have a clearer intellectual picture of this major issue.

A final note on the issue of remuneration. There may or may not be some truth to the idea (not very popular at the moment) that the financial sector is a high contributor to national value creation, and that this explains the high level of remuneration in that sector. But bankers have some convincing to do and doing so requires being honest about the source of income: is it truly high productivity or is it leverage? It is my view that return and profit

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calculations should be made over the medium to long run and properly adjusted for risk and leverage. As an example: When returns-to-equity figures are used to boast about the efficiency of an institution they should be adjusted for leverage if the speaker does not want to be guilty of intellectual fraud.

IV. Conclusion

We have lived through several months of intense turbulence in the national and international financial markets. The more violent storms that raged in 2008 and the first part of 2009 receded a little in the second half of 2009. A certain degree of calm has returned but the wind has not died down completely yet. The years ahead will be ones of transformation. A priority for fiscal as well as monetary policy will be a return to normality. Equally important will be to learn the right lessons from these turbulent times and to act firmly to address the shortcomings identified in the financial system.
Real estate market: Signs of stabilisation

Case Shiller house prices

<table>
<thead>
<tr>
<th>20 biggest cities</th>
<th>NY</th>
<th>Washington D.C.</th>
<th>Miami</th>
<th>Detroit</th>
<th>LA</th>
</tr>
</thead>
</table>

Index (Jan 2000 = 100)

US households: Aggregate writedowns

Losses for Households

- Real Estate Wealth
- Equity of HH in real estate

bn USD

Sources: SNB Markets Analysis Platform

16.03.2010 14:18:25
World banking system: writedowns

Worldwide writedowns & capital raised (cumulative)

- Writedowns & credit losses
- Capital raised

bio USD

Prior Q307 Q407 Q108 Q208 Q308 Q408 Q109 Q209 Q309 Q409
18.03.2010 11:22:15

Sources: SNB Markets Analysis Platform, Bloomberg

Worst for a long time, but not a ‘Great Depression’

Source: B. Eichengreen, O’Rourke (2010)
Money market in calmer waters

Risk premium money market

CHF Libor 3M - T0S swap 3M
USD Libor 3M - OIS swap 3M
EUR Euribor 3M - Eonia swap 3M
GBP Libor 3M - Sonia swap 3M

bp

2007 2008 2009 2010

Sources: SNB Markets Analysis Platform, Bloomberg

Recovery in financial markets

Stock Price Development Switzerland and USA

S&P 500  S&P 500 - Financials  SMI  SMI - Financials

% 120

2007 2008 2009 2010

Source: SNB Markets Analysis Platform
Lower long-term spreads

Evolution of Credit Spreads

- Pre-SNB March Decision (Mar. 11th, 2009)
- Latest

bp

Source: SNB Markets Analysis Platform

Lively CHF bond issuance

CHF bond market - Swiss issuers

- mortgage bond instit.
- banks
- others (domestic)

bn CHF

Sources: SNB Markets Analysis Platform, EASY

18 March 2010 11:18:03

17.03.2010 10:23:17
No credit crunch in Switzerland

Credit Growth International Comparison
Bank Credits to Private Sector, monthly data, yoy change

- Switzerland
- USA
- EU

Sources: BNS, BCE and Reserve Fiscale

Conventional’ monetary policy measures support recovery...

Source: SNB
...as well as ‘unconventional’ monetary policy measures

Source: SNB

Abundance of liquidity

Source: SNB
Euro-Swiss franc during the crisis

EURCHF

price

1.7000

1.6500

1.6000

1.5500

1.5000

1.4500

1.4000

2007

2008

2009

2010

Sources: SNB Markets Analysis Platform, Bloomberg

18.03.2010 06:42:21

Decreasing deflationary risk

SNB Inflation Forecast

2009Q1

% 2

1.5

1.0

0.5

0.0

-0.5

-1

2008

2009

2010

2011

Source: SNB Markets Analysis Platform

17.03.2010 10:06:35
Switzerland: consumption strength

Real Consumption Development

1Q2008=100

- Switzerland
- USA
- UK
- Germany
- Japan
- Ireland

Mar 08 Jun 08 Sep 08 Dec 08 Mar 09 Jun 09

Source: SNB

...due to increased disposable income

Real labour income, national accounts

Year-on-year change

- Real wages
- Hours worked
- Real labour income

Source: SNB
... demographics

Real Consumption
In levels, sa

- Per capita consumption of private households
- Total private consumption (SECO) (rhs)
in CHF  

Source: SNB

... and a decrease in savings

Household Saving Rates

Switzerland  |  United States  |  Euro Area

Source: SNB Markets Analysis Platform  17.03.2010 10:16:00

Calmer waters after the storm?
Jean-Pierre Darbline
18 March 2010
2. Looking forward

- Room for moderate optimism
- Consumption and the labour market
- Exports and developments in emerging markets

Business confidence returns

Purchasing managers’ indices (manufacturing)

Source: SNB
Consumption dependent on labour market

Unemployment and vacancies (SECO)

Seasonally adjusted

- Unemployed
- Vacancies (rhs)

In thousands

Index 2003 = 100

Source: SNB

Short-time work

Source: SNB
Heterogenous US recovery...

US Business Condition

Sources: SNB Markets Analysis Platform

... less so in Switzerland

Business Development by Company Size (Switzerland)

Sources: SNB Markets Analysis Platform
.. exporters more upbeat

Business Development by Export Share

<table>
<thead>
<tr>
<th>Year</th>
<th>Low Export Share</th>
<th>Large Export Share</th>
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<tbody>
<tr>
<td>2000</td>
<td></td>
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<td>2010</td>
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Sources: SNB Markets Analysis Platform

16.03.2010 14:18:26

Global: ‘Decoupling revisited’

Global GDP Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>World</th>
<th>Advanced Economies</th>
<th>Emerging Economies</th>
</tr>
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<tbody>
<tr>
<td>2006</td>
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<td>2011</td>
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</tbody>
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Sources: IMF, SNB Markets Analysis Platform

09.03.2010 08:38:15
Switzerland: ‘Decoupling revisited’

Swiss Export Shares

- Share of total exports to EMA ex. Japan, nsa
- Share of total exports to US, nsa

Source: SNB Markets Analysis Platform

17.03.2010 11:06:57

SNB inflation forecast

Inflation forecast of December 2009 with Libor at 0.25% and of March 2010 with Libor at 0.25%

Percentage change in national consumer price index from previous year

- Inflation
- Forecast December 2009 (0.25%)
- Forecast March 2010 (0.25%)

%
3. Challenges: normalisation strategies

- No conceptual or practical difficulty
- ‘Temporary’ liquidity measures will automatically not be renewed
- The SNB Bill, as an instrument to withdraw liquidity, may play an increasingly important role
- Right timing is essential

Challenges: Regulation

- It should not be a game of ‘us’ against ‘them’
- Designing a financial system compatible with the rules of a market economy and favorable to value creation
- Those who take risks must have more at stake; taxpayers out of the equation!
Regulation

- Managers: bonuses paid as a function of long run performance
- Shareholders: higher capital requirements
- Creditors must come into play before the taxpayer:
  - Convertible debt
  - Living will

Regulation

- Macro-prudence vs micro-prudence: pro-cyclical capital requirements
- Market design limiting contagion: Central clearing for derivatives (and possibly other instruments)
- No silver bullet: pragmatism is required
Conclusions

- A form of calm is back but we have not yet reached the shore
- SNB is maintaining its expansionary monetary policy
- Learning our lesson and designing a better (more efficient) & safer system