The Attack on the WTC in New York was first and foremost a tragedy for the persons involved: those who died and the many who lost family members, friends and acquaintances. From an economic perspective, the terrorists’ act was a destructive blow against a nerve center of the global financial system. And this in the form of an attack as had never before been described in a worst-case scenario or been given even tentative consideration in any emergency plan. Extensive damage was caused to systems and market infrastructures.

The US equity market was closed for four trading days, the bond market for two days. The US Treasury bond cash and repo market was the hardest hit as a number of inter-dealer brokers and a major clearing bank had become wholly or partially inoperative. When bond trading was resumed, settlement periods were extended in order to provide temporary relief to the operations departments. Nevertheless, a massive accumulation of failed trades over several days could not be prevented and, due to the associated shortage of collateral, repo business was severely impaired.

The shock resulted in an abrupt recovery in the banks' demand for liquidity. In a situation in which the receipt of due payments could no longer be relied upon, ensuring one's own readiness to pay became a problem of the first order. The New York Fed, itself domiciled in the immediate vicinity of the scene of disaster and thus forced to dislocate, made the required dollar liquidity available by means of open market operations, swaps and via the discount window. There can be no doubt about it: our colleagues in New York successfully passed the test as protectors of the financial system.

Under the aspect of system security, the experience gained in New York leads to three main insights. First, securing payment transactions between banks must be accorded top priority. Fortunately, this functioning condition was not adversely affected on September 11. A breakdown in the Fedwire would have had disastrous consequences. Second, it has become clear that in a money market based largely

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**The Shock of September 11 - A Central Banker's View**

The events of September 11, 2001, have illustrated the crucial role of international cooperation among central banks. Professor Bruno Gehrig, Chairman of our Foundation Council, shares some of his thoughts on these events. This newsletter also presents an interview featuring Professor Sebastian Edwards, University of California at Los Angeles, who teaches monetary policy in developing countries in our Central Bankers' Courses. In this interview, he gives his views on his teaching at the Study Center, his experience at the World Bank, and several other topics of interest.

Inflation Targeting in Emerging Market and Transition Countries, a new course offered last fall, is also described in this issue. As usual, we attempt to provide the most relevant courses for central bankers, with the adequate depth to cover and assimilate the important concepts. Although not all applicants could be accepted to our courses, participants from 90 central banks attended them last year. Our doctoral courses represent another important element of our activities. We provide basic knowledge for Ph.D. students through our one-year Swiss Program for Beginning Doctoral Students in Economics. We also offer more specialized courses in Economics and Law and Economics. This newsletter describes these courses, as well as various other recent activities.

Prof. Philippe Bacchetta, Director

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on repo transactions, the **functioning capacity of collateral settlements** is necessary for the security of the financial system. This insight must be taken into consideration in the current revision of the Swiss National Bank Law. Third, the **behavior of market participants** deserves recognition. They supported each other with creative flexibility and a high degree of solidarity, the sole purpose being to overcome this tragic crisis together with as little damage as possible. This common approach was facilitated by the circumstance that while delayed payments (liquidity risk) could be expected, there was no feeling of being threatened by default in payments (credit risk).

Outside the US, demand for liquidity also increased abruptly. Like all central banks, we provided additional **Swiss franc liquidity** to the full extent required. On the two days following September 11, our volume of repo transactions rose to CHF 40 billion. On a repo basis, this manoeuvre presented no problem at all. This would not have been possible with USD swaps, the SNB’s principal instrument only a few years ago. On the basis of a swap agreement with the Fed, the ECB supplied banks in the euro area directly with dollar liquidity. We were in close touch with the Swiss banks and – should this have been necessary – we would have been in a position to lend support as well.

The pattern of reaction of the **global financial markets** to the shock of September 11 was characterized by a general risk aversion, not only in the US, but on all major markets. Business and consumer confidence suffered a severe blow, which further dimmed economic prospects in the US and Europe. The sudden increase in risk aversion led to drastic corrections on all major stock exchanges and to a veritable flight into the Swiss franc. The record highs the Swiss franc reached on September 21 went in tandem with the stock markets hitting record lows in the US, Switzerland and most EU countries. In response to the rapid appreciation of the Swiss franc, we cut interest rates in an extraordinary move on September 24. Following this step, and in the course of a broader normalisation of the financial markets, the euro rebounded somewhat vis-à-vis the Swiss franc. Our currency nevertheless remained strong. Stock markets recovered surprisingly fast from their record lows. Overall, market developments since September 21 can be interpreted as a sign of regained confidence in the medium-term outlook for the global economy.

The experience gained in the aftermath of September 11 has shown that the financial system – even in this unique and completely unexpected situation – still managed to function relatively well. It became clear for all to see how close the integration between the international financial markets and the clearing systems has become. This integration depends just as much on a complex, vulnerable infrastructure as on the timely support of central banks as liquidity providers. The experience clearly underscores that securing the stability of the financial system must constitute an important part of the role of central banks.
Central Bankers’ Courses

Inflation Targeting in Emerging Market and Transition Countries

We introduced a new two-week course for central bank research economists organized in cooperation with the Bank for International Settlements, Basle, last September. The practice of inflation targeting is revolutionizing the way central banks make monetary policy. Indeed, many banks are converting from fixed exchange rate systems in which they commit to maintain a certain external value of the currency, or from targeting monetary aggregates. Problems arose in the traditional systems ranging from the potential currency crisis to inaccurate predictability of price development. Poor economic performance often resulted and unfortunately was becoming more and more of a chronic nature in many nations.

Professor Jeffrey Nilsen taught the first part of the course. He reviewed theories economists use to explain the existence of inflation. According to traditional theories, long-run inflation can be traced to high money growth. If this is the case, the underlying motivation for inflation must then be traced to either a seignorage reason (the revenue savings a government earns by printing money) or an inflation bias (an inability for central banks to commit to a certain policy and with distrust of the public brings a bias to inflation). The class reviewed these theories in some detail and then covered a new theory called the fiscal theory of the price level. This recent theory does not necessarily require high money growth to explain inflation. Instead, it uses government debt to determine the price level. The central bank must accommodate the level of debt, whether it likes it or not.

We also reviewed important empirical studies of the characteristics of inflation. Focusing on operating procedures and practical matters Professor Jeffrey Nilsen led the class through alternatives to inflation targeting, with a brief introduction to the problems with intermediate targets in general. The main alternatives are monetary targeting and fixed exchange rate arrangements. In the afternoon lecture, Professor

Dr. Stefan Gerlach and Jeffrey Nilsen

Philippe Bacchetta talked about the empirical evidence and policy implications of exchange rate pass-through.

In the second part of the course, Dr. Stefan Gerlach, head of monetary policy and exchange rates in the monetary and economic department at the Bank for International Settlements (BIS) and who is currently seconded as executive director (research) at the Hong Kong Monetary Authority, spoke about why inflation targeting initially had been introduced among developed economies. After a review of general issues related to the design of inflation targeting regimes, he focused on issues of particular importance to emerging market and transition economies. These concerned the preconditions for the use of this policy strategy, the need to adopt the regime to local conditions, the potential use of intermediate exchange rate objectives in the transition to fully-fledged inflation targeting, and the fact that inflation may be more volatile in the emerging market countries for structural reasons. Dr. Stefan Gerlach also spoke on the currency board experience of the Hong Kong Monetary Authority.

Finally, Dr. Jeffery A mato, economist at the BIS, spoke about modeling tools that are potentially useful for forecasting inflation and conducting policy analysis within the context of an inflation-targeting regime. The topics covered included measures of core inflation and models of the monetary transmission mechanism. In regard to the former, different notions of core inflation were discussed; and methods for computing and evaluating the measures were reviewed. In regard to the latter, both small reduced-form and structural models were introduced and compared, emphasizing the interest rate, exchange rate and credit channels of monetary policy. The discussion of theory and methods was complemented by examples using data from emerging market economies. In addition, two computational workshops were offered in which students could apply the knowledge they gained from the lectures in practical empirical exercises using real data sets. Additional sessions were devoted to lectures by visitors including Dr. Jacek Olsinski, deputy director of the department of monetary and credit policy at the National Bank of Poland. He has been closely involved in the development of the Polish inflation-targeting regime.
Sebastian Edwards, thank you for joining us for this interview. The Central Bankers who attend your course come from various backgrounds and experience. What is it that you want them to return to their banks and remember from your course?

It is important for central bank policy makers anywhere in the world to understand the unified framework within which they should develop policy making. We develop here a unified framework that takes into account the specificity of the emerging markets, but also applies to every economy. The second aspect they ought to take from the course is an ability to interpret data and monetary history, not only in their own countries but also from others as well. This year, we have been talking about the unfolding Argentine crisis. With central bankers from Turkey, Russia, Brazil, and Thailand, all countries that have gone through crises recently - it makes the analysis so much more interesting.

This seems to be important for central bankers but there is such a huge literature on currency crises. How can you classify these issues?

We try to find aspects of crises that happen again and again. It is possible to have a typology of crises and classify them in different ways. Starting conditions may be different! The literature on these crises has been organized to make it more manageable to deal with: there are first generation and second generation crisis models, and advanced generation models. We have participants in our group, representing nations with every generation past and future of currency crises. We analyze them and ultimately the notions of policy consistency, expectations and contagion, are the concepts we emphasize.

The book you are writing during this course, will non-central bankers find it interesting? Can you describe the book?

It is a project that I have been toying with for some time. I am writing about country experiences in macroeconomic policy that lead to economic growth via economic stability. I have been thinking about these issues for a very long time. I only have time to make the exposition coherent when I come to Gerzensee and talk to central bankers. It should be a book of interest to anyone who cares about macroeconomic policy and monetary history in emerging markets. I’m quite excited about the project. As with all projects it’s not very clear how it will end or when it will end, but I’m going to devote quite a bit of time...

It seems when you leave Gerzensee it should be a good fitting end.

There will only be a draft of the lectures to be edited. Presumably, it could be used for class lectures right away. But to make it into a book with lasting influence we have to add quite a bit of comparative empirical data. I told a lot of stories in class - I didn’t have the tables. What I will try to do is to make this book accessible to different levels of students: masters’ students, central bankers, Ph.D. students and practitioners. That is the next step.

You mentioned you are using live regression analysis. How will you translate that into print?

It is hard to do, especially since some of what we have done here it is not only live: it’s in real time. I plunge into examples without knowing whether they are going to work or not. In class, we were talking about inflationary inertia in emerging markets and why those countries with a crawling peg have high inflationary inertia. One of the students asked, “Is there any country that has experienced zero inertia?” I said, “Countries that have a long credible experience with fixed exchange rates might have zero inertia. That’s my intuition, let’s check it!” We looked at Honduras, a nation with a fixed exchange rate between 1918 and 1990, the most enduring fixed exchange rate I know. And I said, “Hold it indeed had zero inertia! It is a risky proposition to do real time exercises because you might find out that it doesn’t work! But this time it did!” It is gratifying and the students find it interesting.

But, will it go in the book?

Yes, the Honduras experience will go. Central America is in general very interesting. There are many small countries that have had a long experience with fixed exchange rates (except Costa Rica). These countries have the same location, similar levels of development and similar degree of integration to the world (all mostly trade with the United States). Some countries have incredibly long experiences with fixed exchange rates. For example, Nicaragua is one of the poorest countries in the world and is going through debt forgiveness. This year we have a representative from Angola, too poor to qualify for debt forgiveness. It is amazing: they are so poor they didn’t even record their debt. They do not qualify although they are clearly poorer than other countries that do, like Mozambique. We will try to bring in all these experiences and examples into the book.

In the next stage, we will try to clean up the text: when teaching I try to carry on a conversation: the students ask a question and I may go into a digression that lasts the whole class! Sometimes questions lead to issues of more interest that are more challenging than what I was planning to say. In the lecture, the digression may lead us into literature or music or architecture or anything that helps...

You mentioned Angola and Nicaragua. What can central bank economists do except wait until the war is over to start rebuilding?

That is a very good point. I do not deal with what economists can do while a nation goes through civil conflict. The analysis I make starts...
after the conflict is over. With Nicaragua, we discussed a macroeconomic policy mix – I gave an example from my work for Nicaragua on the best mix of fiscal and monetary policy after they get their debt forgiven. These countries have had to borrow; now they have too much debt. They have lived in limbo for many years: they do not pay their debt; they get more aid, and it escalates. After their debt is forgiven, they should become one of the normal countries. They have to do their homework and be responsible. My task is to ask what it implies for them to have their massive debt forgiven? Now they will again be a normal country, what does that mean? It is more than dealing with the war aspect; it is economic reconstruction after the war.

You have been to Gerzensee for teaching several years: what is the strong point of the Study Center? Do you find a creative atmosphere here?

There are many strong points. I find it extremely conductive towards thinking. The staff is highly dedicated and very knowledgeable. The assistants who work on their dissertations are very curious and eager. Then the doctoral students add a certain granularity to the whole atmosphere. This year, giving a talk to them was a lot of fun and they liked it! The central bankers are very diverse and add a lot to the whole intelectual atmosphere. In the four years I have come here, I have learned a lot. Overall it's a wonderful place to visit, make good projects and think using the serenity of the place.

Your style of teaching is riveting. It's impossible to sit in your class and let your mind drift because you focus the class so well. How do you attract the students' attention?

I am not sure. It just came with time. I am in a way maybe a frustrated actor (laughs!) It is nice to have a captive audience. For instance, at UCLA many of my colleagues want to restrict the classes to twenty students. I would like to get 65, the number the room will take. If I get less I am pretty depressed because I am acting in front of half a full house! And acting, as some argue, is a very good substitute for a psychoanalyst (laughs!)

You were the Chief Economist at the Latin Desk of the World Bank. Did you find it a rewarding experience? What was the accomplishment that made you feel most proud?

The experience was challenging in more than one sense and it helped me to get to know myself better. For instance, I found myself to be a very poor administrator! It was difficult for me to supervise the work of a very large number of Ph.D. economists. What made the job especially interesting was that the Mexican debt crisis occurred at that time. It was gratifying to be able to help the Mexican authorities. I have since kept close relationships with these authorities and some of them are still prominent policymakers. A nother rewarding aspect of being at the bank is to have improved the Latin American Desk that has around 400 Ph.D. economists most of whom are not from Latin America. The Vice President has not been from Latin America for at least 30 years. I tried to give the senior staff, from the Indian subcontinent, a better understanding of Latin America. I brought in Mario Vargas Llosa, one of the greatest novelists in modern time and also Felipe Pazos, the first post-revolution governor of the Central Bank of Cuba. A certain Che Guevara who led a rebel group in Cuba (the chief of the other group was Fidel Castro) replaced Felipe Pazos as governor. Pazos eventually became one of the seven wise men of Latin America, the intellectuals who built a bridge between the Alliance for Progress program of the Kennedy and Johnson administrations and the Latin American governments. Felipe Pazos had discussions on monetary policy with Che Guevara and was on equal footing with Fidel Castro. He had written one of the most interesting works on inflationary inertia in the world. Yet no one in the World Bank had ever heard
of Felipe Pazos. The Vice President, a very intelligent person, was delighted to see this guy who embodied all this history. It was very useful and helped the World Bank to better understand the historical and cultural aspects of the region.

What is the idea about bringing authors to the World Bank? What contribution did that have?

When you do policy, you need to understand the history of the place. Of course, we can say from a technical point of view that initial conditions matter in dynamic models: if we are off the steady state, whether we come from a country's history A or history B makes a difference. By not understanding initial conditions many mistakes are made: either being too strict with policy, or too lax. You see (today) the IMF facing a $40 billion package for Argentina in December, and here we are in August the IMF now is discussing a new X billion dollars package. How can it happen? It happens because they don't understand Argentina; they were too easy on them. History is very important, and it is carried out more by scholars in the humanities than by economists who know very little about history and culture.

You are a development economist at a very good business school in the US. Don't you find this contradictory? Why are business school students interested in development economics?

I don't find it contradictory. First, most economists define themselves by disciplines rather than geography. I am an international economist; I happen to work mostly on developing countries' applied issues. I am not a "Latin-Americanist" and it's hard to find good economists who would label themselves by geography. The second point is that emerging markets are very exciting. Over the last 10 years, emerging market bonds have yielded 400 basis points over the S&P index. Anyone who has seriously invested in emerging market bonds has done very well. There are a lot of people in a business school interested in this kind of experience.

Which economists inspired you when you were in your formative years? Why?

I have always been a great admirer of Arnold Harberger. I met him before I went to the University of Chicago and I worked with him as his assistant for several years. Then he became my colleague at UCLA and we worked together on a wide variety of projects in Indonesia, in Europe, in Central America, and all over the world. Although I didn't write my thesis with him, I have been very close to him; he is a remarkable economist. In terms of my own formative years, I made a decision to remain in the US when I was finishing my dissertation. Almost no one from Latin America made the same decision at that time. Yet to pursue an academic career in the US was a very important decision. It meant to submit myself to the rigors and discipline, the frustration and all the tremendous problems and efforts that are implied in being a junior professor in the US. At the time, I had an offer to go back to Chile to a very senior position. I decided to stay although my offer was a lot of money. All my Chilean friends said "You're absolutely crazy! Why did you study economics? Soon a crisis occurred in Chile that I had sensed would happen since I saw the overvalued exchange rates. I was very lucky to make it in the US.

Who motivated you to get where you are today?

I always wanted to be a professor. When I was young I wanted to be a politician; there are several ways to become a politician. One was through ideas, the other through action. I wanted to be a professor but one who would go into politics. With time, I've become totally uninterested in partisan politics. The motivation was the world of ideas. One of the things that motivates intellectuals is the need to be influential, not necessarily in a political partisan way, but in the sense of affecting people's way of looking at the world and affecting ideas. There is some important literary work done in this context. Take for instance Harold Bloom who wrote a book called The Anxiety of Influence. He writes about how poets want to be unique and influential and captures very well that driving force. To achieve this, one has to be careful, creative and persuasive. Persuasion is very important and means you have to explain things very carefully. I always make an effort to persuade!

This is an edited interview conducted by Jeffrey Nilsen with the help of Vangheli Lakiotis
Teaching assistants

The Study Center would not work efficiently without the graduate students who are part of our staff. Their role is crucial in our Central Bankers’ Courses in which they teach various courses such as a refresher course on econometrics or national income accounting. They also provide support to participants in the exercise sessions and in the computer room. Their tasks are however multiple: they need to maintain and update our computer hardware and software, our library, our homepage, our databases and they are responsible for the preparation of teaching material. They also need to make sure that all our external lecturers can work in perfect conditions at the Study Center.

There are between four and six assistants working for the Study Center at any given period. They are all doctoral students either in economics or in finance, typically affiliated with a Swiss University. At the beginning of their working period, they participate in our “Swiss Program for Beginning Doctoral Students in Economics”. They need to pass successfully the exams to continue at the Study Center. This is a tough requirement, but it guarantees an excellent knowledge of economics and increases the odds of writing a good doctoral thesis.

The experience they gain at the Study Center, with a mix of academic and more practical activities as well as an interaction with many famous economists and central bankers from all around the world, is invaluable. This opens wide employment opportunities. Although most of them stay until they bring to an end their doctoral thesis, they often receive interesting job offers before they finish. Some actually leave before getting their degree.

Previous assistants are: Thomas Stucki (Head of Investment Section, Swiss National Bank); Hansruedi Scherer (PPC Metrics AG, Financial Consulting and Controlling); Iwan M eier (Aujunct Aistant Professor of Finance, Northwestern University); Markus M eier ( until recently at Swiss Banking Commission); Martin Hess (A assistant Professor, ITA M, Mexico); Nicolas Cuche (Senior Economist at UB S). Among our current assistants, Pierre-Alain Bruchez will soon join the economist team at the Federal Finance Administration and Giovanni Leonardo will become a portfolio manager at UBS. Vangheli Lakiotis, Tim Frech, and Marco Cavaliere are finishing the doctoral program and will continue at the Study Center in 2002. Several student assistants also worked at the Study Center for shorter periods.

Doctoral courses

Swiss Program for Beginning Doctoral Students in Economics

Last March 9 students of the full 2000 program graduated and 19 students passed partial exams. The teachers of the 2001 program were the following:

**Microeconomics**
- Prof. Klaus Schmid, University of Munich
- Prof. Jean-Claude Rochet, University of Chicago
- Prof. Mathias Dewatripont, University of Brussels
- Prof. Jean-Jacques Laffont, University of Sciences, Toulouse

**Macroeconomics**
- Prof. Robert G. King, University of Wisconsin
- Prof. Sergio Rebelo, University of Boston
- Prof. Jordi Galí, University of Sciences, Toulouse

**Econometrics**
- Prof. Mark Watson, Princeton University
- Prof. Bo E. Honor, Princeton University
- Prof. Matthias Dewatripont

Advanced Courses for Doctoral Students and Faculty Members

**Econometrics of Finance**
- July 30 – August 3
  - Prof. Tim Bollerslev, Duke University

**The Challenge of Monetary Theory**
- July 30 – August 3
  - Prof. John H. Cogan, Edinburg University and London School of Economics

**Experimental Economics**
- August 6 – 10
  - Prof. Avin Roth, Harvard University

**Understanding Currency Cycles**
- August 13 – 17
  - Prof. Philippe Bacchetta and Prof. Giancarlo Corsetti, University of Roma III and Yale University

Courses in Law and Economics

**Economic Analysis of Damages and Liability**
- March 26 – 30
  - Prof. Robert D. Cooter, University of California at Berkeley

**Intellectual Property Issues**
- June 25 – 30
  - Prof. Peter S. Menell, University of California at Berkeley

From left: Giovanni Leonardo, Marco Cavaliere, Vangheli Lakiotis, Pierre-Alain Bruchez, and Tim Frech
Charles Edouard Jeanneret, better known as Le Corbusier (1887-1965), made this colorful tapestry called "Nature morte" in 1965. This tapestry replaces the paintings by A. Giacometti in the reception building.

Dr. Georg Rich, Chief Economist at the Swiss National Bank (SNB) in Zurich, retired in November 2001. At the same time he transferred his seat at the Study Center Gerzensee Foundation Council and the chair of the Council's Academic Committee to Prof. Dr. Ulrich Kohli. As representative of SNB, Dr. Rich was a member of the Foundation Council since 1985, one year prior to the opening of the Study Center. His first task in the Academic Committee was to develop the courses to be offered in Gerzensee. With his excellent academic background along with his dedication, he laid the framework of the Study Center's current worldwide reputation. He was also a driving force when the Study Center initiated graduate education for doctoral students of Swiss universities. The large number of students who participate in this program indicates how essential it is for the Swiss academic environment as well as for the entire economy. Dr. Rich also greatly supported the Study Center in its efforts to expand research activities. He has always been open to new ideas and has been a great contributor to realize them. We thank Dr. Rich for all his valuable contributions and wish him all the best for his newly gained freedom.