The idea that the Study Center Gerzensee could play a role in graduate education for economists in Switzerland was present from the beginning, when it was conceived and planned by the Swiss National Bank in the early 1980s. Jürg Niehans, then a Professor of Economics at the nearby University of Berne, first suggested that the Study Center Gerzensee should be created as an economics graduate school to support the doctoral programs of the various Swiss universities. Although only part of his original proposal was realized subsequently – the Study Center’s first priority was the training of central bankers from other countries, especially from less developed and emerging ones – Gerzensee has become an ever increasing part of economics doctoral education in Switzerland over the last 15 years.

It has long been realized by internationally experienced economists in Switzerland that, while the country’s universities offer high quality and competitive economics programs at the undergraduate level, their economics departments lack the size and depth necessary to provide PhD programs comparable to those offered at high level US graduate institutions. At the same time, it was clear that ambitious, top quality programs of graduate education are essential for the development of talented young academics and for moving Swiss economics closer to the standards of Anglo Saxon economics. Over the years, this has led the Study Center to adopt various types of doctoral courses offered as a service to the Swiss universities.

In 2003, the Study Center offers for the ninth time its yearly twelve-week program for beginning doctoral students in economics. This program is structured like the first year of a PhD program at a top level US university. It includes four-week courses in microeconomics, macroeconomics and econometrics, respectively, at a level typical for the first year of a US graduate school. The students participating in these courses are enrolled in the PhD programs of their home universities and

EDITORIAL

While the central bankers courses offered at the Study Center Gerzensee are a contribution to the world central bank community, our doctoral courses in economics are a service to the Swiss university system. Actually this service appears to be unique: the Study Center provides not only the sponsoring of these courses, but also solves the coordination problem among Swiss universities. Professor Ernst Baltensperger, member of our foundation council, describes the genesis of our doctoral program. Since growing emphasis is given to graduate education and the number of interested students is increasing, Swiss universities are likely to boost their efforts in doctoral studies in economics in the future. Hopefully, the Study Center can continue to play a useful role in this process.

One of the main teachers in the doctoral program since the beginning is Professor Mark Watson, Princeton University. His interview appears in this newsletter and gives an insightful perspective on econometrics and on the background of one of the world’s leading econometricians. This newsletter also reports on a conference on International Capital Flows and Macroeconomics held last May at Gerzensee. This conference, organized jointly with CEPR, London, and the Swiss NCCR FINRISK gathered several of the best specialists in the field who presented their latest results.

Prof. Philippe Bacchetta, Director

CONTRIBUTING TO GRADUATE EDUCATION IN ECONOMICS

Ernst Baltensperger, Professor of Economics at the University of Berne

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are designated by their respective universities. Typically, they obtain credit from their universities for participating in the Gerzensee program. This service rendered by the Study Center has met with increasing approval and success over its years of existence. The courses are taught by prominent professors from leading American and European universities. This year’s faculty includes Professors Mathias Dewatripont (Université Libre de Bruxelles), Jordi Galí (Pompeu Fabra University, Barcelona), Bo Honoré (Princeton University), Robert G. King (Boston University), John H. Moore (London School of Economics), Sergio Rebelo (Northwestern University), Jean-Charles Rochet (University of Toulouse), Klaus Schmidt (University of Munich) and Mark Watson (Princeton University). The stated aim of this program is to familiarize the participants with advanced concepts and techniques so that they can do their own research on an internationally competitive level.

Even before initiating its program for beginning doctoral students, the Study Center had started to offer intensive one-week courses on specialized topics in economics for advanced doctoral students and faculty members. For some years now, this has been supplemented with similar courses in the area of law and economics. Again, the faculty for these courses is drawn from the leading representatives of their respective disciplines. For example, in 2003 courses are being offered on Financial Crises and Globalization (Michel Bordo, Rutgers University), on Time Series Econometrics (James Hamilton, University of California at San Diego), on the Politics and Economics of Fiscal Policies (Alberto Alesina, Harvard University), and on The Law of Property, Torts, Contracts and Regulation in Light of Recent Developments in Economics, Psychology and Sociology (Robert D. Cooter, University of California at Berkeley), among others.

In this way, the Study Center renders a highly useful service to the Swiss universities and their advanced programs of economics education. The Study Center provides an instrument to the universities which, given their limited capacities and faculty sizes, they could not easily have developed at the same quality level on their own. It remains the task of the universities to make use of this offer to the largest possible extent and to complement it with their own efforts to create a full size, internationally competitive system of graduate education in economics in Switzerland.
A new series of courses for central bank economists has been offered in 2003. As usual the classes for our courses are made up of about 25 participants from around the world, with a majority of participants from developing and emerging economies. The three courses we organized in the Spring were designed for three different sets of participants: banking regulators, researchers in financial economics, and middle management economists.

**Banking Regulation and Supervision, April 28 - May 16**

This three-week course was designed mainly for central bankers in charge of banking supervision. The course provided a mix of analytical tools, case studies, and broad discussion. Basel II was obviously a hot topic throughout the course and was discussed in more detail during a visit at the Bank for International Settlements (BIS) in Basel, where various members of the Secretariat of the Basel Committee gave interesting talks. Japanese banks, Enron, or recent banking crises were among the case studies discussed. However, while the course was obviously driven by real-world applications, participants were introduced to a thorough sequence of analytical tools. They started with a few days in finance theory taught by Monique Ebell, focusing in particular on portfolio theory and derivatives. Philipp Harms and Philippe Bacchetta then provided a macroeconomic perspective for bank risks. During the second week, Professor Anthony Saunders (New York University) covered the systematic analysis of bank risk; he focused in particular on interest rate, credit, liquidity, market, derivatives, and operational risk. For this purpose, the roles and functions of commercial banks were thoroughly examined. Finally, in the third week, Professor Xavier Freixas (University Pompeu Fabra, Barcelona) focused on how regulation and monitoring can best be implemented and how it is done in practice. Measures such as capital requirements, deposit insurance and non-bank activity regulation were carefully examined. Throughout the course, various guest speakers from private banks, the Swiss Banking Commission, and the Swiss National Bank gave a practical complement to the morning lectures.

**Advanced Topics in Empirical Finance, March 24 – April 4**

Central banks devote a growing amount of attention to the analysis of financial markets. We offered an advanced two-week course for research economists taught by Professor Michael Dellas (University of Bern) and G erzensee teachers Philippe Bacchetta, Monique E bell, and Philipp H arms taught in this course. For the empirical part of the course, participants worked with actual data and applied recent econometric techniques in different exercise sessions organized and supervised by our teaching assistants. The course also included policy discussions, simulation games, class presentations, a visit to the Swiss National Bank, as well as presentations by various guest speakers.

**Monetary Theory and Monetary Policy, February 3 - 21**

In this three-week course, we provided an overview of modern monetary theory, its empirical applicability and the implications for monetary policy. Professor H arris D ellas (University of B ern) and G erzensee teachers Philippe Bacchetta, Monique E bell, and Philipp H arms taught in this course. For the empirical part of the course, participants worked with actual data and applied recent econometric techniques in different exercise sessions organized and supervised by our teaching assistants. The course also included policy discussions, simulation games, class presentations, a visit to the Swiss National Bank, as well as presentations by various guest speakers.
International Capital Flows and Macroeconomics

From May 16 - 17, the Study Center Gerzensee hosted the 5th Conference of the Analysis of International Capital Markets Research Training Network, funded by the European Commission. The conference was organized jointly with the Centre for Economic Policy Research (CEPR) and the Swiss National Centre of Competence in Research "Financial Valuation and Risk Management" (NCCR FINRISK). Conference organizers Philippe Bacchetta, Philip Lane (Trinity College Dublin) and Hélène Rey (Princeton University) selected eight papers addressing several important issues like the evolution of world capital markets and its determinants, the defense of a fixed exchange rate regime or the analysis of Foreign Direct Investment (FDI) flows.

A series of empirical papers presented new valuable results concerning world capital markets. Philip Lane and Gian-Maria Milesi-Ferretti gave a good perspective on the evolution of the world capital markets over the last two decades. These authors showed how total external assets and liabilities have been growing steadily both as a share of GDP and as a share of total assets and liabilities since the 1980s. They investigated what characterizes the countries where this phenomenon has been more marked. The paper also showed that the rates of return earned on foreign assets and liabilities vary over time, across asset classes and, perhaps most importantly, between home and foreign investors. Higher rates of return are associated with investments with a higher equity share.

A related paper was the one by John D. Burger and Francis E. Warnock who focused on international bond portfolios of U.S. investors and investigated their risk and return as well as their composition. In terms of their risk and return, hedged foreign bonds have dominated U.S. bonds, but the opposite is true for unhedged foreign bonds. While there is a severe home bias in U.S. investors' foreign bond portfolios, the authors found that portfolio weights are greater for countries with more open capital accounts and whose bond returns are less correlated with U.S. returns. The authors also discovered that there has been a flight to quality over the period 1997-2001.

Finally, they showed that countries with stronger institutions and better inflation performance have larger local-currency bond markets.

A third paper went along the same lines, but concentrated on developing countries. Christophe Klingen, Beatrice Weder and Jeromin Zettelmeyer estimated the ex-post returns of emerging market debt as the internal rate of return of an investment project. Their results are surprising: the return on emerging market debt turns out to be about the same as the return on 10-year U.S. government bonds. The absence of a risk premium might be explained by the low correlation of developing countries' bonds returns with those of developed countries or by the short sample period. There is however considerable variability in the returns over time and across countries.

Two papers presented in this conference treated the subject of exchange rates. David Cook and Michael B. Devereux developed a framework where the lack of discipline in the fiscal authorities arises because there is a fixed exchange rate. The model predicts that in case of a (fully credible) fixed exchange rate the authorities will choose to subsidize capital inflows and this will lead to excessive foreign borrowing and an exchange rate crisis if the level of taxes that can be raised is not enough to pay for the subsidy. The solution for this problem would be to have the Central Bank follow an exchange rate policy where the exchange rate is appreciated in case of capital inflows.

Ailan Drizen and Stefan Hrubich addressed the difficult question of the effectiveness of raising interest rates to defend a currency. Past studies of the question have been inconclusive, but the authors argued that this might be because of the existence of two offsetting effects: a rise in the interest rate can signal that a government is committed to the fixed exchange rate but at the same time it can also show that the fundamentals of the economy are weak. To test for the existence of these two effects, the authors disaggregated the expected exchange rate for the next period into several short term and long term components. Their estimations showed that an increase in the interest rate has both a positive short-term effect and a negative effect on the risk premia and the long-term exchange rate forecast.

Another pair of papers dealt with the present-value model of the current account. James M. Nason and John H. Rogers made an attempt to identify what assumptions could be wrong in the theory. Their procedure was the following: they started from a "canonical" small open economy and showed that its predictions are inconsistent with actual data. In order to find the source of the differ-
ences they modified their model in four different ways, each time incorporating a "suspect" for the failure of the model. The changes they proposed were: non-separable preferences, country specific fiscal shocks, a world real interest rate shock, and imperfect international capital mobility. Their experiment pointed towards world real interest rate shocks as the most relevant.

The paper of Pierre-Olivier Gourinchas and Hélène Rey also started from the fact that the present-value model of the current account is rejected by the data. In contrast with the literature, they allowed the returns on a country's external assets and liabilities to differ, and took into account valuation changes coming from exchange rate variations. This model predicted that the ratio of net foreign assets to net exports will be stationary.

Finally, the paper by Ashoka Mody, Assaf Razin and Efraim Sadka developed a model to study the determinants of FDI. The accent was put on two factors that can affect the amount of FDI: first, on the source-country side, industry specialization provides an advantage for foreign direct investors. Second, on the host-country side, corporate transparency and good capital market institutions act in the opposite sense, reducing the information-valuation advantage of foreign direct investors. To test these factors they used a gravity model that includes some new variables. To account for industry specialization the authors used the degree of concentration in the sectoral composition of the source country's exports, while both a measure of creditors' rights and the debt-equity ratio in the host-country were used to proxy for transparency. The results showed that these variables affect FDI flows in the way the authors expected.
Does econometric research make you more humble or more confident over time?

I guess it’s both. When you use economic theory and try to predict things about the world, you are humbled by your lack of ability to forecast future economic outcomes. However, when you are successful for a while, when you have found something, then the fact that you see it repeatedly gives you confidence that it’s really there. Let me give you an example: Jim Stock and I started doing real-time economic forecasting in 1989. We thought that we were pretty smart guys and that we had very good statistical methods. We would not have expected that our models would perform nearly as poorly as they did. I mean, they have done better than some, but we thought their out-of-sample forecast performance would be significantly better than it turned out to be. So in that sense we have been humbled, and we have learned that you need different kinds of models if you are doing something in real time. You want to have models that are more robust to changes in the economy that we could not have foreseen – or at least did not foresee – in 1989. So that’s the humbling part. The confident part is that in forecasting out of sample we have seen various characteristics of the data, for example, that current economic activity turns out to be a pretty good thing to use to forecast inflation over the next six months or twelve months. We have seen this through history in the U.S., we have seen this out of sample in other countries. So I think we are more confident now than we would have been in 1989 that this is a robust feature of the U.S. economy and of similar economies.

Do you think that the profession as a whole is making progress?

Sure. It must be. For example, I think that we understand a lot more about the correct way to carry out monetary policy. Of course, there may be small differences: you can be a strict inflation-targeter or a flexible inflation targeter or use precisely this Taylor rule with these coefficients or that Taylor rule with those coefficients. But all of these prescriptions for monetary policy are quite similar and they are a lot different from the monetary policies carried out in the 1970s.

When did you decide to become an econometrician?

As an undergraduate I majored in economics and minorsed in political science. In the fourth year of my undergraduate program I took a good statistics course from someone in the statistics department, and it was kind of fun. I hadn’t taken any mathematics, so I took a couple of mathematics courses and that also seemed like fun. I then left and took a job, and that wasn’t fun (laughs). So I decided that going back to graduate school would be a good thing for me. I got into the graduate program of U.C. San Diego, which was convenient since I lived in Los Angeles at that time, and I could just move my sailboat down to San Diego. I enjoyed all of the first year core courses very much. I liked the theory courses, I liked macro, I liked econometrics. Econometrics was taught by several people, one of which was Rob Engle who became my thesis advisor along with Clive Granger. Rob was nice enough to hire me for the summer between my first year and my second year to help him on a paper. And both he and Clive turned out to be wonderful advisors. We were just working on really fun and exciting things. So I sort of drifted into econometrics. It wasn’t any great plan. It was working with great people who seemed to be doing exciting work, and I just followed them around.

Which people were most influential in shaping your career and views?

Rob Engle and Clive Granger I have already mentioned. Both had a very good impact on me. I think Rob in particular. He was a great thesis advisor. He didn’t just advise me on my work. We worked together. And when I would work with him, I could watch him think. It was the process of how he thought about a problem: “Here is a problem. How do we attack it? What do we rule out? What are the first things we do?”. And watching him think through problems had a really big impact on me. I then took my first job as an assistant professor at Harvard, and there was a really nice and helpful person there, Olivier Blanchard. He was a few years ahead of me, and I viewed him as a very sophisticated and smart macroeconomist who was already famous. Olivier was nice enough to work on a couple of papers with me, and I learned a lot about what econometrics might say about macroeconomics from him. He had a big impact on me early in my career – more so than he knows on that. And then for the last 16 or 17 years I have done an enormous amount of work with Jim Stock. He thinks about problems very systematically, he knows the core of statistics, and he knows it in his gut. So when he attacks a problem he immediately goes back to first principles and attacks problems from the very beginning. I have learned that from him, and that’s just beautiful. So I think these are the people who had the biggest impact on me.

You have recently published a textbook with Jim Stock. What made you write this book? What gap did you perceive in available econometrics textbooks?

Both Jim and I have been teaching masters students of public policy. These students are very smart and motivated, but they don’t learn by doing mathematics, by writing equations on the board. What they find more important than understanding the mathematical subtleties is what you can learn from empirical analysis and what you can’t learn, what you have to control for and what you should not control for, and what you might be certain about coming out of empirical analysis and what you cannot be certain about. So both Jim and I thought that teaching econometrics by using, on the one hand, serious applications (not toy applications) and, on the other hand, modern econometric techniques would be interesting and that’s what we
were trying to get across here: Our book is aimed at students who need to understand econometrics and who basically know what’s going on. But it does not spend a lot of time on proving theorems. All the theorems are proved, but that’s not what we are trying to get at. We would much rather have students understand what omitted variable bias is – because that’s important – than prove the Gauss-Markov theorem, which is of second order compared to whether you are asking the right question and whether you are using the right data to answer this question.

So would you encourage students to go to the data and do applications at an early stage and with a fairly basic knowledge of econometric theory?

It depends on whom I am teaching. Masters students in public policy – that is, students who are not going to be doing serious economic research – need to understand basic econometric and statistical analysis and quantitative reasoning. The way these students understand this best is by doing econometrics. So they do serious empirical projects starting from day two. And they become pretty sophisticated consumers of econometric analysis, having gone through the process a few times themselves. That’s different than teaching Ph.D. students. These students – and even those who are not going to specialize in econometrics – need to understand econometric theory at a pretty deep level. And for that you need mathematics, you need to know the logic of the problem. When I teach in Gerzensee – just as when I teach first year students elsewhere – a lot of time is spent on straight theory and on setting up a logical framework. The looking at data and that kind of analysis comes later. It does not make a lot of sense to have you do this in the first year when you haven’t completely digested the theory.

How much does economics a statistician need to become an econometrician? Is econometrics just an application of statistic methods or is it more than that?

I think it’s more than that. There is a range of economist-econometricians who are very good economic theorists and also very good statisticians and who put the two parts together in a beautiful way. The models they produce are always a perfect blend of really good economic theory and thoughtful statistical theory. And there are others of us who use economics less and mathematics more. An example of this is Don A ndrews who is just a god in econometrics circles. Don doesn’t solve problems in which he takes an economic theory and statistics and puts them together. He rather looks at what empirical researchers are doing in economics and says: “Here is a statistical problem that these guys keep running into, I better go solve it for them.” And he solves it. And he solves one in a week and keeps helping economists who keep running into these inference problems. So his research is really statistics, but he has solved hundreds of problems that are fundamentally important for applied econometricians.

What do you consider the greatest achievement of the profession in the past decade?

I can’t really tell for the last decade. But in the time from the mid-seventies through 2000, a lot of important work has been done on linear time series models: vector autoregressions, cointegration, and inference in these models. Empirical time series analysis was very naive in the mid seventies, and there has been enormous progress in this area. I think that time series econometricians have largely finished that. What’s left is about nonlinear models. There are hundreds of attempts and hundreds of models, but we don’t really know how important nonlinearities are in general, and in particular in macroeconomic data, and what the best nonlinear models are. A nother area of research that we haven’t solved and that people are actively working on now is the area of large-scale models. What if you are interested in modeling not four or seven economic time series but four hundred? Or trying to use four hundred variables to forecast a small number?

So is there something like a Hilbert list of the remaining big problems in econometrics?

I don’t think that these problems should concern econometricians for the next century as Hilbert thought. I think that these are problems that, hopefully, should concern econometricians over the next five years – or maybe over the next ten years if we are unlucky. To understand inference and specification in vector autoregressions took about ten years. Sims wrote his paper on VARs in 1980, and by 1990 that essentially was a standard tool. So my hope is that this will take a lot of small steps – as opposed to some giant problem that we should work on for a century.

If someone asked you to forecast US output in 2004, how long would it take you to come up with a forecast?

A couple of hours! What I would do is forecast GDP growth from some sort of linear regression. And then the hard part, the thoughtful part would be thinking about what variables I would use as predictors. But please don’t ask me the number now, because I don’t know it. I haven’t invested those two hours recently.

This is an edited interview conducted by Philipp Harms.
At the end of June 2003, Professor Bruno Gehrig stepped down as chairman of the Study Center Foundation Council, at the same time as he resigned as Vice-Chairman of the Governing Board at the Swiss National Bank. He is being replaced in both positions by Professor Niklaus Blattner. Bruno Gehrig had been President of our Foundation Council since 1996. With his academic background along with his dedication, Professor Gehrig strengthened the Study Center’s worldwide reputation. He was also a driving force behind the Study Center’s academic focus on central banking issues. Bruno Gehrig’s great personality was a motivation for the entire staff of the Study Center and it was always a pleasure to welcome him to Gerzensee. He has been open to new ideas and has greatly contributed to realizing them. We thank Professor Gehrig for his most valuable contributions to Gerzensee and wish him all the best in his new position as Chairman of the Board of Directors at Swiss Life Holding.

**Foundation Council**

**Staff News**

Several changes in the staff have been occurring in 2003. We wish all the best to Corinne Conti Ambühl, who is on maternity leave and welcome Brigitte Hirschi-Durtschi in the academic administration. While Jeffrey H. Nilsen has left the Study Center, Pinar Yesin – who is receiving her PhD in Economics from the University of Minnesota – will join our teaching staff in September 2003. Doris Hirschi and Elmar Mertens have also joined the Study Center as teaching assistants. Finally, Andreas Fischer, Swiss National Bank, will be spending the academic year 2003-2004 at Gerzensee, while the Director, Philippe Bacchetta, will be on sabbatical leave. He will be visiting the Department of Economics at Harvard University and the National Bureau of Economic Research.

**Dorffest**

On June 20-22, the village of Gerzensee organized a village fair (Dorffest). The highlight of this event was surely the friendly soccer game between the semi-professional teams Young Boys (Bern) and FC Thun, both of the Swiss first division. The game took place at the Study Center’s soccer field and attracted an unusually large crowd.

**Publication**

Conference on “Monetary Policy under Incomplete Information”

In April 2003, the Journal of Monetary Economics published the papers from a research conference sponsored by the Swiss National Bank and the Study Center Gerzensee held in Gerzensee, October 12 – 14, 2000. This research conference brought together academic and central bank economists from around the world to discuss issues of central importance for monetary policy.