

## INTERVIEW WITH LAWRENCE J. CHRISTIANO

### IDENTIFYING THE EFFECTS OF MONETARY POLICY

*Professor Christiano, what have we learned about monetary policy shocks?*

Among other things, we have learned how monetary policy shocks are transmitted through the economy. This has taught us a lot about how to construct monetary models. It has also taught us about things that are seemingly far away from monetary policy, for example about labor markets, investment decisions and consumption decisions.

*Do these findings contrast with previous views on the monetary transmission channel? And what are their implications for monetary policy?*

When I graduated, a consensus had formed about the monetary transition mechanism. One

aspect of that consensus was that money did not have strong effects on the economy; another was that an increase in money supply generated a rise in the nominal rate of interest. Over the years, studies of economic impact of monetary policy shocks have led us to revise this consensus. For example, we have now come to the view that monetary expansions generate persistent reductions in the nominal rate of interest and, more importantly, that monetary disturbances can have strong effects on the economy. Consequently, it pays to be careful with the design and conduct of monetary policy.

On a more specific note, when I was in graduate school, researchers focused almost exclusively on the demand side effects of monetary policy. In the years since then, we have learned to think more broadly, and to also consider the supply side effects of monetary policy. In particular, we know from surveys that businesses borrow extensively to finance variable inputs into production. They borrow to pay for



wages, for intermediate goods and for inventories. As a result, the interest rate is a part of the cost of production, and this is how monetary policy has supply side effects on the economy. For example, a monetary expansion operates like an improvement in the production technology by decreasing unit-production costs. It had been noticed for a long time that an expansionary monetary disturbance lowers the interest rate and temporarily depresses inflation as well, before eventually translating into higher prices. This empirical regularity can easily be explained by the supply side channel of monetary policy.

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## ACADEMIC CONFERENCES

### MICROECONOMIC ADJUSTMENT AND MACROECONOMIC DYNAMICS

From October 20 to 21, 2006, the Study Center Gerzensee hosted the eighth conference in a series organized jointly with the Journal of Monetary Economics and the Swiss National Bank. Conference organizers Philippe Bacchetta and Robert King, Boston University, selected six papers to be presented.

The conference brought together academics and central bank researchers to discuss salient features of firm behavior and their implications for macroeconomic time series. The real business cycle model by now the workhorse of macroeconomic analysis is a model of smooth adjustment: when shocks hit the economy, producers instantaneously react by changing the number of worker-hours and the size of their capital stock, possibly taking into account convex adjustment costs which penalize sudden and large variations. This description of firm behavior seems to be in stark contrast with microeconomic evidence:

in reality, many firms leave the number of workers unchanged for protracted periods of time, and occasionally vary employment by substantial proportions. Similarly, much of real-life investment activity is characterized by large jumps rather than smooth and marginal adjustments of the capital stock. The key question that linked most papers presented at the conference was whether all this "lumpiness" observed at the micro-level matters for macroeconomic activity: Do economists have to fundamentally alter their specification of preferences and technology to account for these observations? Or are

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## editorial

The main asset of the Study Center Gerzensee is the ability to provide a stimulating environment for learning and for the exchange of ideas. Several exciting events took advantage of this environment in the second half of 2006, and this newsletter reports on the most salient ones. With the Journal of Monetary Economics, we co-organized a conference to examine the implications, if any, of the micro level adjustment of firms and households for macroeconomic dynamics. The presence of top researchers in the field, including two Nobel Prize laureates, made it a fruitful conference where several useful lessons could be drawn. The traditional Summer Symposia in Economic Theory and in Financial Markets, organized jointly with the Centre for Economic Policy Research (CEPR), were productive as well. Our course program, both for doctoral students and central bankers, has been as successful as usual. A sign of the interest raised by our program is the significant excess demand that we face for our courses. Finally, we interviewed one of the lecturers, Lawrence J. Christiano. His views on the recent developments in the empirical analysis of monetary policy are very insightful.

**Prof. Philippe Bacchetta**  
Director

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INTERVIEW from cover

*Which problems arise when researchers try to identify the effects of monetary policy shocks on economic activity?*

The problem is one of identification: the economy is affected by a multitude of different shocks. Some of them, like disturbances to government spending, can be observed, while we have only a limited understanding of what many of the other shocks might be. Thus, when we try to identify the effects of monetary policy shocks, it's like pulling a needle out of a haystack: we have to isolate the monetary policy shock from all the other shocks driving the economy. This problem of disentangling monetary shocks from the rest is called the identification problem. To resolve the identification problem, we have to make assumptions about how shocks affect the economy. But different people have different views about what assumptions to make. This makes empirical research more complicated but it also makes it a lot of fun and sometimes controversial.

*In your handbook chapter, you discuss the role of Structural Vector Autoregressions (SVARs) to identify the effects of monetary policy shocks. How do SVARs differ from conventional Vector Autoregressions (VARs)?*

A VAR is a statistical tool for summarizing the data and for forecasting. In the late 1970s, economists had lost confidence in the huge models that were in use at the time for policy analysis and prediction. Then came Chris Sims, and he introduced VARs as nice simple-minded substitutes for these huge models. VARs quickly became part of the standard toolkit of forecasters. I remember, for exam-

ple, how they came to be used at the Federal Reserve Bank in Minneapolis.

As I said before, to unscramble the various shocks hitting the economy one has to make assumptions. A VAR happens to be a particularly convenient and transparent vehicle on which to place these assumptions. Combining a VAR with identifying assumptions turns the VAR into an SVAR; an SVAR can be used to isolate a specific shock and determine its effects on the economy. Of course reasonable people can differ on what constitutes reasonable identifying assumptions, and this is what gives rise to controversy.

*What are the advantages and the drawbacks of the SVAR methodology?*

The big advantage of the SVAR methodology is that it allows us to uncover shocks and their effects. This makes the SVAR an ideal tool for macroeconomists in constructing models.

In the course of studying macroeconomic models, we don't feel we've arrived at a deep understanding of the model until we understand what it implies about the propagation of economic shocks. For example, if I were to explain to you somebody's model of money, you will feel comfortable that you understand it when you can work out in your own mind what a monetary policy shock does to people, how it affects their perception of their environment, how people react, and so on. The beauty of VARs is that they allow the researcher to compile statistics which speak directly to these types of implications of models. In particular, after a VAR is combined with identifying assumptions, it can be used to obtain an empirical estimate of how the economy



**Professor Lawrence J. Christiano** is the Alfred W. Chase Professor of Business Institutions in the Department of Economics at Northwestern University. He also is a visiting scholar at the Federal Reserve Bank of Cleveland and a consultant at the Federal Reserve Bank of Chicago. A fellow of the Econometric Society and associate editor of several journals, Professor Christiano has been a visiting scholar at the IMF and many central banks. His research interests include macroeconomics and applied time series analysis. Together with Martin Eichenbaum and Charles L. Evans, Professor Christiano is the author of "Monetary Policy Shocks: What Have We Learned and to What End?" in the *Handbook of Macroeconomics* (1999).

responds to shocks. With this empirical estimate in hand, you can select between different economic models. You choose the model whose implications for what happens after a shock best matches your VAR-based estimate. So, an advantage of SVARs is that they help you to select models in a way that focuses on what we find most intuitive about models.

In macroeconomics, it is absolutely necessary that we build models. Macroeconomics is an advice-giving profession. And, the most reliable advice is based on some sort of experience. If it were possible, the best experience would be what comes from experimenting on actual economies. But of course this is not possible! So, our advice must

instead be based on experiments with artificial, model economies. Of course, for our advice to be credible we must be able to argue that our models are good replicas of the actual economies in which our policies will be implemented. Evidence for a model is particularly persuasive if we can argue that the implications of the model for what happens after a shock match well what we estimate to be true in the data. This is why VARs, actually, SVARs, are so uniquely useful for macroeconomists.

I suppose a drawback of the SVARs methodology is that you have to make identifying assumptions, which in practice are controversial. It would be ideal if we could learn about the effects of shocks on actual economies without having to make identifying assumptions. But with an SVAR you have to make assumptions and as a consequence, the analysis is controversial in practice. On second thought, I'm not sure it's right to call this a drawback, since it's just a fact of life. In order to draw inferences from data about economic structure, we have to make identifying assumptions. This is a central lesson of econometrics.

Sometimes, the information provided by SVARs is not very precise. This could be because the shock is actually not a very important driving force in the data or for some other reason. In these cases, the question being asked of the VAR - how does the economy respond to a particular shock? - is difficult to answer. The good news is that when this is the case, VARs give you the right response - they give you large standard errors. The fact that VARs sometimes give very imprecise estimates of how the economy responds to a shock has received a lot of attention. Some have argued that this is a

drawback of VARs. I don't agree. Certain questions are tough to answer. That's just the way it is. The advantage of VARs is that when a question like this is given to them, they say so.

*In the discussion among researchers and central bankers, the effects of monetary policy shocks frequently take center stage. Does this relegate monetary policy rules to issues of second-order importance?*

It is rules, not shocks, which are the ultimate objects of interest. The purpose of identifying monetary policy shocks and their effects is to provide researchers with clues that are helpful for constructing a model. The purpose of constructing a model is to study the operating characteristics of alternative monetary policy rules. So, shocks are simply an input into the larger task of studying monetary policy rules.

*Several authors have recently questioned the usefulness of SVARs. What are the central points in the debate?*

Some researchers have constructed an example, in which they know by how much a variable, say hours worked, responds to a shock. They then applied the SVAR methodology and concluded that on average the researcher using the SVAR in artificial data generated by their example would overestimate the true response of hours worked by a factor of 2. Other researchers studied the example closely. That the example attracted a lot of attention is not surprising since, if VAR-based estimates could be literally 100% off the mark, this would be a major problem for VARs.

As it turns out, the example poses no problem for VARs. The example does not predict that a researcher using standard econo-



metric practice would overestimate the response of hours to a shock. This is because, while the VAR estimates are indeed off on average by a factor of two, VAR confidence intervals in the example are huge, much wider than the factor of two. An econometrician, noticing such a degree of imprecision, would heavily discount the point estimates of the VAR and thus would not be misled into taking the VAR's estimate at face value. Seeing such large confidence intervals, a researcher would walk away from his VAR results, having learned nothing. Such a researcher would perhaps look for an answer to his question using other methods. Or, perhaps he would find a way to increase the precision of the VAR analysis by bringing more a priori information to bear on the VAR. Either way, the example provides no reason for thinking that SVARs might mislead researchers into reaching the wrong conclusions.

*Which alternatives to SVARs do you see?*

There is a range of useful econometric estimators that are available to economists. In general, they are of two types: limited and full information estimators. The SVARs belong to the first group. They are limited information estimators in the sense that they only compare a slice of the model with the corresponding slice of the data. Full information methods, in contrast, compare all implications of a model with the corresponding features of the data. But this can

cause problems. Since full information estimators compare so many things about model and data at the same time, it is often difficult to determine exactly what is driving the results. For example, if a parameter estimator takes on a strange value the researcher often has difficulty identifying what aspect of the data is responsible since so many dimensions of the data are simultaneously in play.

What makes SVARs so attractive is that they allow one to evaluate specific dimensions of the model in isolation. They do so in a very transparent way, and in a way that goes to the heart of a researcher's intuition about a model. This is why SVARs can be very helpful in the quest for a good model.

*Do these alternatives yield very different predictions for the effects of monetary policy?*

We live in a somewhat unusual time in the history of economic thinking because we have temporarily coalesced around essentially one theoretical framework. The dynamic stochastic general equilibrium (DSGE) models that are used by central banks in various countries are based on the same basic theoretical framework. This framework was constructed largely under the guidance of SVARs; additional details in the form of extra shocks were later added using maximum likelihood methods. But the model has not been changed very much in the process, and all the different empirical methods therefore have similar monetary policy implications. I think our current situation of consensus is a little bit unhealthy it would be much better to have people argue with each other more about the appropriate model. I see this beginning to happen, and I welcome this development. For the time being,

however, the various econometric methods used to estimate DSGE models seem to point in the same direction that was originally pointed to by VARs.

*As you emphasized before, the identification of causal relationships in the data requires assumptions, i.e., a model. But central bankers are wary of model misspecification, and this leads them to rely on a whole battery of models rather than a single one. How can we reconcile the need for identification assumptions and the quest for "robustness"?*

Hopefully, we will soon have a variety of theoretical models at our disposal, founded on different identifying assumptions. By exploring more fully the empirical implications of models based on different assumptions, we will be in a position to evaluate those assumptions. Presumably, after this exercise there will still be a range of different identifying assumptions and models that seem plausible. In our policy advice we will want to emphasize policy rules that work well regardless of which of these models is the right one.

Right now, there is a lot of agreement about models, and too little analysis of robustness. I believe that a dam is going to break in the next five years and that we are going to have many new models and theories.

*Professor Christiano, thank you very much!*



This edited interview was conducted by Dirk Niepelt

**ACADEMIC CONFERENCES** from cover

these microeconomic phenomena attenuated by aggregation and general equilibrium affects, such that the macroeconomic properties of a realistically specified model closely resemble those of the neoclassical RBC model?

The need to further modify standard models of the labor market was emphasized by the first paper of the conference, contributed by Russell Cooper, John Haltiwanger and Jonathan Willis. Their study focuses on firms' employment decisions and their consequences for fluctuations of unemployment and vacancy rates. Using a search model of the labor market that allows for fixed costs of posting vacancies and for variations of employment at both the intensive and the extensive margin, the authors are able to replicate the amplification effect recently stressed by Robert Shimer, i.e. the fact that small variations in productivity result in highly volatile unemployment and vacancy rates.

The second and third paper of the conference focused on investment behavior. In both contributions, the point of departure was Julia Thomas' earlier finding that replacing smooth capital adjustment by lumpy investment does not matter for macroeconomic aggregates once general equilibrium effects are taken into account. After offering evidence on the importance of investment spikes for the volatility of aggregate investment, Francois Gourio and Anil Kashyap reported various approaches to break the symmetry between the Thomas model and the neoclassical benchmark. They suggest that a model with a non-uniform dis-

tribution of adjustment costs across firms is able to generate impulse response functions that differ from those generated by an RBC model. Conversely, in the model of Aubhik Khan and Julia Thomas, adjustment costs are zero at low levels of investment. The authors demonstrate that such a framework can replicate the features of plant-level investment and that these features do not disappear through aggregation. However, much of investment volatility is dampened in general equilibrium by endogenous variations in wages and interest rates.

While the first three papers of the conference focused on firm behavior in an environment with flexible prices, the following presentations analyzed the mechanics of price adjustment. Again, the task was to reconcile seeming contradictions between firm-level facts and macroeconomic observations, micro-features and macro-modeling. In their presentation, Ricardo Caballero and Eduardo Engel explored the appropriate macroeconomic representation of price adjustment in an environment where firms set their prices according to an Ss-rule, i.e. where they change prices whenever the difference between the optimal and the prevailing price level exceeds a critical threshold. The authors show that under certain assumptions on the distribution of desired price changes, the appropriate representation at the macro level reduces to time-dependent pricing, modified according to a simple rule of thumb. The other paper that was devoted to the mechanics of price adjustment focused on a puzzle that has been haunting macroeconomics for decades: how can the observed persistence of the aggregate price level and the persistent real effects of monetary



Philippe Bacchetta, Stephan Gerlach, Lucrezia Reichlin, Julian Messina, and Eduardo Engel

shocks be reconciled with the rather short duration of nominal contracts? In their presentation, Peter Klenow and Jonathan Willis presented a model featuring menu costs of price adjustment and "sticky information" in the sense that agents process new information with some delay. Their model suggests that "old" shocks to the aggregate price level have a strong impact on firms' prices. However, the authors show that this implication is not borne out by data on the pricing behavior of US firms.

While the Klenow-Willis paper was characterized by an exogenous sequence of information acquisition and processing, the presentation by Laura Veldkamp and Justin Wolfers, which concluded the conference, put the endogenous character of information into the very center of attention: arguing that information on aggregate shocks is cheaper to acquire than information on sector-specific events, the authors explain why the intersectoral correlation of output is much higher than the correlation of sectoral factor productivities. According to this interpretation, macroeconomic fluctuations are driven by a plethora of sectoral shocks whose consequences for output are synchronized by agents' optimizing information acquisition.

Two key insights repeatedly emerged during this conference: First, general equilibrium effects



John Haltiwanger



Ricardo Caballero, Stephen Nickell and Edward C. Prescott



Michel Peytrignet and Marcel Savioz



Francois Gourio and Anil Kashyap



Robert E. Lucas

go a long way in ironing out the spikes that are so prevalent in plant-level observations. As a consequence, the variances and covariances of time series borne out by models with "realistic" firm behavior may not be too different from those of the neo-classical benchmark. Second, as both Robert E. Lucas and John Haltiwanger pointed out in their comments, this does not mean that sluggish adjustment at the firm-level is irrelevant for macroeconomics: if a researcher is interested in normative issues - the efficiency of an allocation or the desirability of certain policy changes, say - the inertia caused by fixed costs may well make a big difference. Thus, far from closing the issue, the contributions to the conference highlighted the need to take microeconomic observations seriously when developing micro-based models of the macroeconomy. Conversely, they documented that the macroeconomic consequences of microeconomic

lumpiness can only be assessed properly if the latter is embedded in a dynamic general equilibrium model.



Julia Thomas and Aubhik Khan



Jean-Pierre Danthine  
and Peter Kugler



Ulrich Kohli and  
Philippe Bacchetta

## PROGRAM

### MICROECONOMIC ADJUSTMENT AND MACROECONOMIC DYNAMICS

**Russell Cooper**, University of Texas-Austin,  
**John Haltiwanger**, University of Maryland and  
**Jonathan Willis**, Federal Reserve Bank of Kansas City  
"Hours and Employment Implications of Search Frictions:  
Matching Aggregate and Establishment-level Observations"  
Discussants: Julian Messina, European Central Bank  
Stephen Nickell, Bank of England

**Francois Gourio**, Boston University and  
**Anil Kashyap**, University of Chicago  
"Investment Spikes: New Facts and a General Equilibrium  
Exploration"  
Discussants: Jeffrey Campbell, Federal Reserve Bank of  
Chicago, Edward C. Prescott, Arizona State University and  
Federal Reserve Bank of Minneapolis

**Aubhik Khan**, Federal Reserve Bank of Philadelphia and  
**Julia Thomas**, University of Minnesota  
"Idiosyncratic Shocks and the Role of Nonconvexities in Plant  
and Aggregate Investment Dynamics"  
Discussants: Robert E. Lucas, Jr., University of Chicago  
Marcelo Veracierto, Federal Reserve Bank of Chicago

**Ricardo Caballero**, Massachusetts Institute of Technology and  
**Eduardo Engel**, Yale University  
"Price Stickiness in Ss Models: Basic Properties"  
Discussants: Oleksiy Kryvtsov, Bank of Canada  
Virgiliu Midrigan, New York University and Federal Reserve  
Bank of Minneapolis

**Pete Klenow**, Stanford University and  
**Jonathan Willis**, Federal Reserve Bank of Kansas City  
"Sticky Information and Sticky Prices"  
Discussants: André Kurmann, University of Québec at  
Montréal, Christopher Sims, Princeton University

**Laura Veldkamp**, New York University and  
**Justin Wolfers**, University of Pennsylvania  
"Aggregate Shocks or Aggregate Information? Costly  
Information and Business Cycle Comovement"  
Discussants: Lucrezia Reichlin, European Central Bank  
Diego Comin, New York University

## EUROPEAN SUMMER SYMPOSIUM IN ECONOMIC THEORY (ESSET)

From July 3 to 14, the Study Center once more hosted the annual European Summer Symposium in Economic Theory (ESSET), co-organized with CEPR. Andrea Prat

## EUROPEAN SUMMER SYMPOSIUM IN FINANCIAL MARKETS (ESSFM)

As in every year during the second half of July, the Study Center hosted the European Summer Symposium in Financial Markets, which is co-organized with the Centre for Economic Policy Research in London (CEPR). The conference is split into a corporate finance week and an asset pricing week, each attracting some 50 researchers from Europe and overseas.

This year's organizers were David Thesmar from HEC Paris and Magnus Dahlquist from the Stockholm School of Economics. Their program displayed a diverse array of research topics and a number of top speakers. There were over 30 presentations in the plenary sessions plus evening workshops. Focus sessions were dedicated to the following research agendas:

CEO Compensation should provide incentives for future performance. But Erik Lie documents that companies get to set the terms of option schemes after observing their performance. The financial press has already written about his joint work with Randall Heron and questions are now being asked from investors and regulators alike. David Yermack then

(London School of Economics) and Antonio Calvó-Armengol (Universitat Autònoma de Barcelona) organized this program. The meeting's purpose was to bring together established scholars and promising young researchers who share an interest in microeconomic theory and its applications.

showed how differently companies treat options once the executive retires. Some sunset schemes are to their benefit, some not, which calls for a review of the existing literature. Finally, Alex Edmans pointed to the importance of debt-like remuneration, like pensions, in theory and practice.

Politics and Finance come together when government owned banks extend credits without regard for creditworthiness, as shown by Shawn Cole for the case of India. Atif Mian drew on Pakistan's nuclear tests and the resulting financial sanctions as a natural experiment for analyzing banks' responses to liquidity shocks, and Raj Iyer documented how Indian banks associated with political parties are more likely to face bank runs because of rumors spread by rivals.

The session on Market Microstructure and Speculative Bubbles was kicked off by Albert S. Kyle highlighting central open issues. Amongst others, he stressed the importance of competition in disseminating private information and the need to regulate manipulative trading. Another theme of his speech was the need to understand the nature of liquidity both in terms of transaction costs and the markets' willingness to insure against defaults. The two following presentations

About 35 papers were presented during the Symposium in morning or evening sessions. In the first week, Matthew O. Jackson (Caltech and Stanford University) organized a focus session on "The Economics of Social Networks". In the second week, Ran Spiegler organized a focus session on "Boundedly Rational Beliefs in Games".

turned to analyzing speculative behavior in model economies: Guillaume Plantin showed how speculative dynamics can be exacerbated due to the presence of carry costs. Peter Kondor's model articulated how the competition of arbitrageurs does not only reduce average mispricing but also increases the riskiness of arbitrage strategies.

Time-Series and Cross-Sectional Predictability of stock returns is a serious challenge for asset pricing models as laid out by Pietro Veronesi in his introduction. He made the case for considering the joint evidence as a selection device amongst competing theories. For instance, whereas Peso Problems may be an attractive explanation for the equity premium, they offer hardly any insight into the sources of observed time-variation in risk premia. In this vein, his coauthor Tano Santos presented a general equilibrium explanation of value premia. Given multiple assets with different cash flow risks, the authors' habit formation model endogenously generates value stocks whose risk premia are due to higher cash flow risks. Stavros Panageas presented an asset pricing model with two sources of technological progress: Small-scale "everyday" progress on one hand, and large advances in technology that are embodied in investment on the other hand. In this model, investment patterns generate

technological cycles and cause time-variation in risk premia.

Beyond the focus sessions, topics ranged from investment banking careers, regulation of rating and auditing, bubbles and housing prices to experiments in laboratory markets. Discussions were lively and animated. There were many familiar faces from previous years but also many new participants who enjoyed the working atmosphere at the conference. And yes, July 2006 was awfully hot in Gerzensee, too. But then the Study Center is located close to the eponymous lake where participants can refresh before the next session.



Matthew O. Jackson



Antonio Cabrales and Antonio Calvó

The full program of ESSET, as well as the program of the European Summer Symposium in Financial Markets (ESSFM) is available on our homepage at [www.szgerzensee.ch/conferences](http://www.szgerzensee.ch/conferences)



Albert S. Kyle



Bernard Dumas

## DOCTORAL COURSES

### PROGRAM FOR ADVANCED DOCTORAL STUDENTS IN ECONOM- ICS AND FACULTY MEM- BERS 2006

From the end of July and continuing through August, the Study Center offered another sequence of Advanced Courses in Economics for doctoral students and faculty members. Like in the past four courses were held. Professor Manuel Arellano from *CEMFI in Madrid* taught a course on **panel data econometrics**, emphasizing the interaction between the empirical question of interest, the characteristics of the data at hand, and the appropriate choice of econometric technique. Professor Paul R. Milgrom from *Stanford University* taught a course on **advanced market design**, discussing the application of auction and matching theories to issues as diverse as business procurement, on-line bidding, school allocation, or organ exchanges. Professor Lawrence J. Christiano from *Northwestern University* taught a **monetary**



Manuel Arellano



Lawrence J. Christiano

**economics** course, focusing on identification issues in structural vector auto-regressions as well as policy analysis by means of dynamic stochastic general equilibrium models. Finally, Professor Kenneth J. Singleton from *Stanford University* taught an **empirical finance** course in which he discussed the econometric analysis of dynamic term structure models.



Kenneth J. Singleton



Paul R. Milgrom

## VISITORS' PROGRAM

During the year 2006, three young researchers visited the Study Center. **Ethan Kaplan** (Institute for International Economic Studies at Stockholm University) visited in spring. Together with Dirk Niepelt, he worked on a model of asset prices under asymmetric information. Ethan Kaplan also presented his work on the effect of the Fox News channel on election outcomes in the United States; this paper is forthcoming in the *Quarterly Journal of Economics*. In the fall, **Martín Gonzalez-Eiras** (Universidad de San Andrés, Buenos Aires) and **André Kurmann** (Université du Québec à Montréal) visited the Study Center. Martín Gonzalez-Eiras worked with Dirk Niepelt on a model of the determinants and consequences of the government budget composition. André Kurmann presented his work on the effect of financial frictions on business cycles; he also acted as discussant at the conference organized jointly with the *Journal of Monetary Economics*.

### PROGRAM FOR DOCTORAL STUDENTS IN LAW AND ECONOMICS 2006

As in previous years, the Study Center offered two one-week courses that were:

**Economic Foundations  
of Law for Business**  
Prof. Robert D. Cooter,  
*University of California*

**The Law and Economics  
of Securities Regulation,**  
Prof. Merritt B. Fox  
*Columbia Law School*

## CENTRAL BANKERS COURSES

In the second half of 2006, the Study Center organized two courses. In early September, Professors Fabio Canova (Universitat Pompeu Fabra) and Carl Walsh (University of California, Santa Cruz) taught a two-week course for research economists on "Advanced Topics in Monetary Economics". In late September we offered a three-week course on "Instruments of Financial Markets". This course was organized jointly with the Swiss Finance Institute. The main teachers were Professors Giovanni Barone-Adesi (University of Lugano), Michel Habib (University of Zurich), Michael Rockinger (University of Lausanne), and Erwan Morellec (University of Lausanne).



Carl Walsh



Fabio Canova

**WORKING PAPERS**

**06.04**  
Philippe Bacchetta,  
Elmar Mertens, and  
Eric van Wincoop:  
"Predictability in Financial  
Markets: What Do Survey  
Expectations Tell Us?"

**06.03**  
Assar Lindbeck and  
Dirk Niepelt:  
"The Stability Pact-Rationales,  
Problems, Alternatives"

**06.02**  
Philippe Aghion,  
Philippe Bacchetta,  
Romain Ranciere, and  
Kenneth Rogoff:  
"Exchange Rate Volatility and  
Productivity Growth: The Role  
of Financial Development"

**06.01**  
Pinar Yesin:  
"Financing Government  
Expenditures Optimally"

**FOUNDATION COUNCIL**

Member of our foundation council since 1997, **Ms. Marion Gétaz**, former President of the "Ecole hôtelière de Lausanne", has stepped down in 2006. The Study Center and the foundation council are grateful for her involvement in the past ten years. We are pleased and honored that **Mr. Olivier Steimer**, Chairman of the Board of Directors, Banque Cantonale Vaudoise, will replace her in our council.



Mr. Olivier Steimer

**COURSE PROGRAM 2007**

In addition to the "Swiss Program for Beginning Doctoral Students in Economics" we will offer the following courses:

**CENTRAL BANKERS COURSES**

- 05.02 - 15.02    Advanced Topics in Empirical Finance (jointly with Swiss Finance Institute)
- 12.03 - 29.03    Monetary Policy, Exchange Rates, and Capital Flows
- 14.05 - 31.05    Banking Regulation and Supervision
- 30.07 - 16.08    Monetary Policy in Developing Countries
- 03.09 - 14.09    Advanced Topics in Monetary Economics
- 17.09 - 04.10    Instruments of Financial Markets (jointly with Swiss Finance Institute)

**PROGRAM FOR ADVANCED DOCTORAL STUDENTS IN ECONOMICS**

- 30.07 - 03.08    Financial Stability in the Open Economy  
Prof. Ricardo Caballero, MIT
- 06.08 - 10.08    Time Series Econometrics  
Prof. James Hamilton, University of San Diego
- 13.08 - 17.08    Asset Pricing under Asymmetric Information  
Prof. Markus Brunnermeier,  
Princeton University
- 20.08 - 24.08    Labor Markets and Technological Change  
Prof. Gilles Saint-Paul, University of Toulouse

**PROGRAM FOR DOCTORAL STUDENTS IN LAW AND ECONOMICS**

- 26.03 - 30.03    Antitrust Law and Economics  
Prof. Daniel Rubinfeld,  
University of California, Berkeley
- 18.06 - 22.06    The Law and Economics of Criminal Law  
Prof. John J. Donohue, Yale Law School

**STAFF NEWS**

A few changes occurred over the last few months. **Yves Ortiz** and **Toni Beutler** joined the Study Center as assistants in December 2006 and January 2007, respectively, with the objective of starting a doctoral thesis. Dr. Benedikt Braumann, Program Director Central Bankers Courses, left the Study Center to take on a new challenge. Last but not least, we would like to congratulate Judith Urfer, the Administrative Manager of our Doctoral Program, on her diploma as "Public Relations Specialist with Federal certificate of higher vocational education and training".

**EXCURSION STAFF STUDY CENTER GERZENSEE**

On September 22nd, the staff of the Study Center went on an excursion into the Jura region. Among other highlights, the trip included a visit of the wind turbines on Mont-Crosin.



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**NEW WEBSITE**  
The Study Center has overhauled its website. We invite you to visit [www.szgerzensee.ch](http://www.szgerzensee.ch). Your comments are appreciated.