

## INTERVIEW WITH NOBUHIRO KIYOTAKI

Visiting the Study Center in August 2009, Professor Kiyotaki taught an advanced doctoral course on Liquidity, Business Cycles and Monetary Policy.

*Professor Kiyotaki, can you describe the different approaches you have followed in your work towards understanding the roles of money and monetary policy?*

Money does not play any positive role in the baseline, frictionless micro and macro models. To analyze the role of money, one therefore has to enrich these baseline models by introducing some friction. One model featuring such a friction is the random matching model of money. In this model, exchange takes place in a decentralized manner: people with different tastes and different endowments of goods are randomly meeting each other, and they are very unlikely to ever meet again in the future. This gives rise to the so-called lack of double coincidence of wants: it is very unlikely to be

matched with somebody who has what you want as well as wants what you have. Due to the lack of double coincidence of wants, somebody has to accept certain goods or objects not for own consumption purposes but as a medium for further exchange — this is where the role of money comes in.

While useful for understanding the fundamental role played by money, this model is difficult to employ in more applied contexts like analyses of monetary policy or business cycles. Recently, researchers have therefore tried to simplify the random matching model for more applied purposes. In our work with John Moore, rather than going all the way to a fully decentralized environment, we consider lack of commitment as a key friction to render money useful. That is, in contrast to the baseline, frictionless model, we assume that borrowers can renege on their promise to repay a loan. If commitment problems of this type become sufficiently severe, situations arise where money circu-



lates and where the circulation of money — both outside money and inside money issued by some private organization — improves efficiency.

Finally, of course, there is the recently most popular approach in monetary economics, the sticky price model. While money per se does not necessarily play a welfare enhancing role in this model, the framework helps to understand the impact of monetary policies. To analyze price stickiness in work with Olivier Blanchard, we modified the assumption in the baseline model that firms take prices as

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## ACADEMIC CONFERENCES

### JMCB-SNB-UniBern CONFERENCE: A DIALOGUE BETWEEN MICRO- AND MACROECONOMICS

On October 23 - 24, the Study Center Gerzensee hosted a special conference organized jointly with the Journal of Money, Credit, and Banking, the Swiss National Bank and the University of Bern. The purpose of this conference was to bring together leading representatives of the micro and macro approaches in various fields of economics

(namely, labor, public, industrial organization and behavioral) and to explore whether anything constructive could be learned from the interaction of the two sides. In particular, are the two sides in each subfield interconnected research wise? Is the flow of ideas and methods a one or a two way street? Are the differences reconcilable?

In Labor Economics, Richard Rogerson extended his earlier, seminal work on the extensive margin of labor decisions to investigate how the source of labor indivisibility matters for the relationship between individual and aggregate labor sup-

ply elasticities. He presented two different foundations for "indivisible labor" in a life cycle setting and showed that not only do they have very different implications for the response of aggregate hours worked to changes in tax and transfer programs but they also differ with regard to their implications about the kind of data (micro vs. aggregate data) that are appropriate for estimating key individual preference parameters.

Under incomplete markets, - idiosyncratic - earnings risk has important implications for the allocation of resources and wel-

## editorial

The financial crisis which has held the world in its grip since summer 2007 has confronted policy makers with many difficult choices. It has also created major challenges for academic economists in their quest for understanding what has happened and learning about ways to improve institutions and policies for the future. Many of our activities in 2009 were directly related to this. The interview with Professor Nobuhiro Kiyotaki (Princeton University) - a leading expert on money, credit and the business cycle - touches on many of these issues. At the conference organized jointly with the Journal of Money, Credit, and Banking, leading researchers debated the relative strengths and weaknesses of micro- and macroeconomic approaches to their fields.

In 2010, an important change will take place. I have decided to step down as director of the Study Center. Dirk Niepelt, former deputy director, has been named by the foundation council as my successor effective January 1, 2010. I will myself continue to serve the Study Center in an advisory role on a part-time basis. In this form, I am happy to be able to maintain my long standing links to Gerzensee and its many friends and supporters.

**Prof. Ernst Baltensperger**



Prof. Dirk Niepelt, new director as per January 1, 2010

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INTERVIEW from cover

given. Instead, we considered a framework with monopolistically competitive firms that set the price of their output good and are willing to accommodate demand at this price because it exceeds marginal cost. In this way, the assumption of monopolistically competitive firms conveniently allows to capture the idea of demand determined output in the Keynesian spirit.

*Monetary theorists and policy makers at central banks have been strongly influenced by the last approach you described, focusing on the tradeoffs between inflation and output stabilization rather than potential frictions in financial markets. Has this focus been contributing to the recent financial crisis?*

This is a quite controversial question, with good arguments pro and con. On the one hand, focusing exclusively on inflation stabilization is not sufficient an objective for central banks since monetary or inflation rate stability does not imply financial or macroeconomic stability. On the other hand, focusing on one particular objective is a means for central bankers to defend their independence from other parts of the political system. And if one wants the central bank to focus on one policy objective, then inflation stabilization is perhaps the appropriate one since the central bank can control inflation relatively well. In this sense, inflation targeting can be seen as a means for central banks to maintain their independence, but maybe too much so in some way.

*Which elements of the monetary transmission mechanism broadly defined are missing in the workhorse models currently employed by many central banks?*

**Nobuhiro Kiyotaki** is Professor of Economics at Princeton University. Prior to coming to Princeton, he was Professor of Economics at the London School of Economics and Associate Professor at the University of Minnesota. His research interests are in monetary and macroeconomics. He has made contributions to the foundation of monetary theory (such as the random matching model of a monetary economy), the monopolistic competition approach to macroeconomics, and the interaction between credit constraints and aggregate production. Professor Kiyotaki received the Yrjö Jahnsson Award of the European Economic Association and is a fellow of the Econometric Society and the British Academy.

Financial frictions. Sticky price models are typically built on the assumption of complete markets and a representative agent. These models ignore financial frictions and the role of the financial system in overcoming them. But in my view, the limited commitment friction is a fundamental one; it distinguishes an environment with intertemporal exchange from one with intratemporal exchange. Neglecting this friction leads to abstract from a host of issues that are central today if we want to understand and respond to the financial crisis. I am convinced that the role of financial frictions in the transmission mechanism deserves careful and systematic analysis.

*In your research with John Moore, you analyze the consequences of lack of commitment on the part of borrowers. What are these consequences?*

With limited commitment, productive assets play a dual role: as factors of production, and as collateral. If the value of assets increases, so does the value of collateral, enabling an expansion of credit. Moreover, the amount of credit then feeds back into asset prices, reinforcing the initial positive effect from asset value to credit and more general-

ly, economic activity. This feedback effect is characteristic of the limited commitment economy: the quantity of production and of credit and the value of assets are intimately related. The same interaction works in reverse. When asset prices fall and credit starts shrinking, borrowers lose purchasing power. But since borrowers typically have better investment opportunities or are more productive, the inability to shift resources to them implies that resources are stuck in unproductive sectors and aggregate productivity falls. The implications for total factor productivity and output can be severe.

*Such shocks to net worth are amplified whenever borrowing constraints are binding. How does the specific leverage ratio of a borrower matter?*

If the leverage ratio is high, a small change of asset value has a strong effect on the borrower's net worth. For example, with a leverage ratio of ten to one a ten-percent fall in the value of the assets completely wipes out net worth. In that sense, the amplification effect becomes stronger with high leverage ratios. What is more, by increasing the risk of a complete loss of net worth, a high leverage ratio raises the risk of insolvency. On the downside, high leverage therefore contributes more towards financial amplification.

A borrowing constraint derives from the fact that a borrower can only commit to pay a limited

amount to a lender. Illiquidity refers to the fact that the liability of the borrower cannot circulate freely from the original lender to new potential lenders. That is, it refers to a resaleability constraint. This resaleability constraint arises because the borrower cannot commit to pay to a third party what it can commit to pay to the initial lender. There are many reasons why this might be the case. One is adverse selection due to asymmetric information. If the initial lender knows more about the quality of the debt than a potential buyer, then the latter will shy away from buying — this is Akerlof's "lemons" problem".

John Moore and I use the term liquidity to refer to multilateral rather than bilateral commitment: a liability is liquid if its issuer can commit to pay not only to the initial lender but also to third parties. Such debt can start circulating. If a borrowing constraint is generally tight, then the liquid liabilities become useful means to lubricate exchange and production; these liabilities take the role of inside money. If such inside money stops circulating, as has happened for mortgage-backed securities in the recent crisis, then this has serious consequences for resource allocation.

Usually an individual loan is difficult to resell due to asymmetric information problems. Financial intermediaries typically respond to this difficulty by bundling loans and issuing securities against a pool of loans. During booms such a synthetic security is more liquid since it reduces the asymmetric information problem and is therefore easier to resell. During booms, the quality of senior tranches of securitized assets is known to be high and investors therefore do not need to worry about default risk.





Before the onset of the crisis, senior securitized assets were indeed very liquid. However, when housing prices stopped growing and households started to default not just for idiosyncratic reasons but also because of systemic refinancing problems, then the senior tranches of mortgage-backed securities turned into heterogeneous assets whose characteristics depend upon the quality of the underlying mortgage pool. As a consequence, the asymmetric information problem became more relevant for senior tranches as well, rendering these tranches illiquid.

*Debt instruments issued by governments are generally considered highly liquid. Do you expect this to change with the recent widespread surge in government borrowing?*

I do not expect that a resaleability constraint will be important for government debt since government debt is homogeneous and information about its quality is public. Government debt therefore should remain liquid. At the same time, however, high debt-to-GDP ratios might increase the temptation for governments to inflate and give rise to a general erosion of the real value of government debt. In that sense, one might argue that the commitment of governments to service their debt can be in doubt.

*Proposals for regulatory reform include suggestions to strengthen securities clearing houses, foster liquidity requirements in addition to capital requirements, or relax mark-to-market accounting standards during periods of financial stress. How do you evaluate these proposals in light of your models?*

By netting out credit and debit positions of financial market participants, a central clearinghouse should be helpful to reduce the

vulnerability of the financial system. Systemic risk rises if market participants are borrowing and lending simultaneously through bilateral arrangements. This happened for example with credit default swaps. If one party in such a web of bilateral credit relationships defaults then the lenders to this party lose net worth and might have to default as well, triggering a chain reaction. A central clearinghouse absorbs the losses due to a default by one party; it does not pass the loss on to another party. Systemic risk is therefore reduced. I think that central clearinghouses are inherently a good idea; we should coordinate and establish more of them.

The current financial crisis is centered on investment banks or the "shadow banking system". Existing financial regulation, in contrast, is predominantly concerned with commercial banks. If a commercial bank in the United States runs into difficulties, the Federal Deposit Insurance Corporation or some other regulatory authority takes over. For investment banks, there exists no comparable resolution system. This became problematic in the crisis because investment banks had become so big and important in their role as shadow banks that it became impossible for governments to accept a disorderly default of such an institution. But if governments are expected to step in when an investment bank is in danger of failing, investors anticipate such government intervention and change their behavior towards taking more risk. To avoid such induced excessive risk taking, investment bank activities therefore need to be regulated, and a capital requirement for big players that contribute to systemic risk is probably a useful idea in this context. Liquidity

requirements are more difficult because they work like reserve requirements which reduce usable liquidity. As far as accounting standards are concerned, I am not an expert. Some observers argue that mark-to-market requirements contributed to the crisis by exacerbating borrowing constraints. But what is the alternative? If one relaxes accounting standards, discipline will suffer. It seems to me that procyclical capital requirements are a better idea than relaxing mark-to-market requirements.

*The so-called "lost decade" in Japan is widely attributed to problems in credit markets. Which parallels do you see to the current situation?*

There are parallels. In the late 1980s, the Japanese economy experienced a big boom and asset price buildup while broad inflation measures were stable. The bank of Japan was following an expansionary monetary policy at the time to stimulate domestic demand in order to mitigate the trade conflicts. A tightening of monetary policy in 1989 led to a stock market collapse. Real estate value fell after 1991 and the economy entered into recession. Boom and bust in the real estate and construction sectors left a lot of non-performing loans, many banks became insolvent and the government stepped in. Similar developments could recently be observed in the United States.

But there are also differences between the Japanese crisis and the recent financial crisis. For example, in the United States the housing market played a crucial role. In Japan, in contrast, commercial mortgages were more problematic; residential mortgages were less exposed since Japanese house buyers put signif-

icantly more down payment than American ones. Another difference concerns the speed with which the different governments responded to the crisis: the US government acted much faster than the Japanese government. Japan took ten years to sort out the non-performing loan problem of its banking sector, much more than the United States and other countries today.

What is more, insolvent Japanese banks were kept alive by the government and continued to lend money to non-performing companies. This, as well as government stimulus packages benefiting declining industries and areas, contributed to a misallocation of resources. The growth rate in Japan dropped from an average of four percent between the 1970s and 1990 to one percent afterwards. The key insight from the Japanese experience is that one should try to sort out non-performing loans relatively quickly, and to shut down insolvent financial institutions in order to avoid the misallocation of resources. With such measures, a return to growth should be possible.

*Professor Kiyotaki, thank you very much for this interview!*



Dirk Niepelt conducted this edited interview

## ACADEMIC CONFERENCES from cover

fare. In their paper, Flavio Cunha (and James Heckman) used an innovative risk identification scheme that relies on the decomposition of earnings variability into forecastable and non-forecastable (risky) components. They found that most of the substantial increase in the variance in the earnings of college educated individuals was forecastable, while most of the increased variance for high school educated individuals was not (and hence, represented risk).

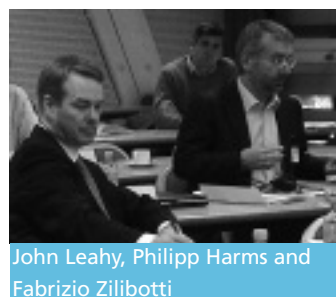
In the Industrial Organization session, John Leahy provided a valuable discussion of the key IO ingredients of the New Keynesian Phillips curve. These ingredients are price frictions (the degree and frequency of price rigidity, its relation to strategic complementarities), markups (their size and cyclical-ity), and marginal costs (their sensitivity to idiosyncratic and aggregate variables). These ingredients define an IO research agenda that is relevant for macro. John Leahy invited IO economists to contribute to this agenda by carrying out studies that would apply to the economy as a whole rather than to particular industries or firms.

The paper by Hugo Hopenhayn provided a concise and critical survey of the evolution of IO theory during the last half century as well as a review of its

contribution to macroeconomic questions. He argued that little of general interest and importance has come out of the micro line of IO research because of its special case orientation. No robust empirical regularities that hold across industries and could thus have relevance for understanding aggregate phenomena have been uncovered. The macro line, on the other hand, has focused on broader questions. It has relied on the study of firm heterogeneity and dynamics to shed light on important macro questions such as the determination and evolution of aggregate Total Factor Productivity.

Mike Golosov (and Aleh Tsyvinski) offered an integrated survey of the micro and macro literatures in Public Finance and also provided intriguing suggestions of how the two approaches could be merged. Their main contribution was to show that the introduction of a consolidated labor income account and the integration of the tax and social security system can lead to a characterization of optimal taxes in a dynamic economy that is simple, intuitive and empirically relevant.

In his contribution, Kenneth Judd discussed optimal taxation and the gains from tax reform (a move to consumption taxation) in dynamic economies characterized by realistic features such as imperfect competition, risky assets and human capital.



John Leahy, Philipp Harms and Fabrizio Zilibotti



David Laibson, Filippo Brutti, Barbara Rudolf and Richard Rogerson

## PROGRAM JMCB-SNB-UniBern CONFERENCE: A DIALOGUE BETWEEN MICRO- AND MACROECONOMICS

### Organizing Committee:

**Ernst Baltensperger**, Study Center Gerzensee and University of Bern

**Harris Dellas**, University of Bern

**Marcel Savioz**, Swiss National Bank

### Session Labor Economics

Microeconomics: **James Heckman/Flavio Cunha**, University of Chicago/University of Pennsylvania

Discussant: **Richard Rogerson**, Arizona State University

Macroeconomics: **Richard Rogerson**, Arizona State University

Discussant: **Flavio Cunha**, University of Pennsylvania

### Session Industrial Organization

Microeconomics: **Hugo Hopenhayn**, UCLA

Discussant: **John Leahy**, New York University

Macroeconomics: **John Leahy**, New York University

Discussant: **Hugo Hopenhayn**, UCLA

### Session Behavioral Economics

Microeconomics: **Klaus Schmidt**, University of Munich

Discussant: **David Laibson**, Harvard University

Macroeconomics: **David Laibson**, Harvard University

Discussant: **Klaus Schmidt**, University of Munich

### Session Public Economics

Microeconomics: **Kenneth Judd**, Stanford University

Discussant: **Mike Golosov**, Yale University

Macroeconomics: **Mike Golosov**, Yale University

Discussant: **Kenneth Judd**, Stanford University

He argued that these features strengthen the case for consumption taxation; that differential treatment of different types of capital creates substantial efficiency losses; and that existing tax policies are too complex to make the concept of a single effective tax rate meaningful.

Most of the macroeconomic literature assumes rationally behaving, self-interested economic agents. Recently, however, there has been a surge of interest in the consequences of non-selfish preferences for macroeconomic outcomes. In his contribution in Behavioral Economics, Klaus Schmidt reviewed and qualified the role of social preferences in competitive markets. He argued that social preferences do not matter under perfect competition unless the selfish and social components of utility are non-separable

and complete contingent contracts cannot be traded. An important challenge for research remains to quantify the contribution of social preferences to macroeconomic outcomes.

David Laibson (and Kyle Chauvin as well as Johanna Mollerstrom) attempted to measure the size of welfare losses associated with - presumably preventable - asset price bubbles. In the presence of agent heterogeneity a bubble can generate additional consumption volatility - due to asset trade - relative to that in a representative agent economy. Their estimate of the costs of "excessive" (relative to the no-bubble equilibrium) consumption volatility in their calibrated model turned out to be a large multiple of that obtained in the famous Lucas calculations.

## CONFERENCE WITH AVENIR SUISSE ECONOMIC POLICY AFTER THE CRISIS: FUTURE PROSPECTS FOR SWITZERLAND

Switzerland's economic policy after the financial crisis was the central theme of a conference co-organized by the Study Center and Avenir Suisse – a Swiss think tank for economic and social issues – on November 20 - 21, 2009 in Gerzensee. The objective of the conference was to assess the strengths and weaknesses of current economic policy in seven central areas, to identify major economic policy challenges that Switzerland will face in the future and to propose potential solutions. The conference succeeded in fostering a constructive dialogue with an audience composed of around 40 representatives of the Swiss academic community, leading economic policymakers and the media.

The conference started with a positive note on public finances in Switzerland. Christoph Schaltegger showed that the public sector in Switzerland is among the least indebted in OECD-countries and Fritz Zurbrugg noted that the "debt brake" introduced in 2003 at the federal level has been successful in stabilizing the public debt level. Moreover, due to the relatively small fiscal stimulus provided in response to the financial crisis and the recession, Switzerland's relative position has improved further in that respect.

As for many developed countries, demography and globalization were identified as the main risks for public deficits in the long run. Under current policies, the ageing of the Swiss population is associated with

much higher public expenditures for health care and pensions. In addition, globalization threatens to undermine the sources of government revenue by increasing international tax competition and the mobility of production factors. Based on several examples, Christoph Schaltegger argued that budget consolidation could foster economic growth if the policy measures reduced expenditures rather than expanded revenues.

Monika Bütler analyzed interdependences between the labor market, the health care and social security systems. She observed that the social security system significantly reduces income inequality; households below the 40th percentile of the income distribution have their after tax incomes nearly equalized. Such equalization goes hand in hand with very high marginal tax rates, exceeding 100 percent in some cases and fundamentally altering the incentives to work. Income-dependent government subsidies for child care or health insurance are among the numerous examples she provided to illustrate her point. To a large extent, the negative effects on incentives can be attributed to the complexity of the system and the absence of a global perspective guiding policies to support low-income households.

A global and long term perspective is certainly needed when it comes to energy and climate policies, discussed by Lucas Bretschger. He argued that rising fossil energy prices need not undermine economic growth. Instead, higher energy prices may foster innovation and investments in energy-efficient technologies, contributing positively to the competitiveness of the Swiss economy. He also called for regulations to



Ernst Baltensperger, Monika Bütler and Yves Rossier



Boris Zürcher, Marie-Gabrielle Ineichen-Fleisch and Rolf Weder

quickly induce an efficient use of energy.

Slides presented at the conference are available at [www.szgerzensee.ch/research/conferences](http://www.szgerzensee.ch/research/conferences)

### PROGRAM Economic Policy after the Crisis: Future Prospects for Switzerland

#### Organizing Committee

**Prof. Ernst Baltensperger**, Study Center Gerzensee and University of Bern

**Prof. Dirk Niepelt**, Study Center Gerzensee, University of Bern and Stockholm

**Dr. Boris Zürcher**, Avenir Suisse

#### Public Finances

**Dr. Christoph Schaltegger**, *economiesuisse* and University of St. Gallen

**Dr. Fritz Zurbrugg**, Federal Department of Finance

#### Labor Market, Health and Social Issues

**Prof. Monika Bütler**, University of St. Gallen

**Dr. Yves Rossier**, Federal Social Insurance Office

#### Globalization and Openness

**Prof. Rolf Weder**, University of Basel

**Ambassador Marie-Gabrielle Ineichen-Fleisch**, State Secretariat for Economic Affairs

#### Economic Structure and the Business Cycle

**Prof. Reto Föllmi**, University of Bern

**Prof. Aymo Brunetti**, State Secretariat for Economic Affairs

#### Regulation and Competition

**Prof. Armin Schmutzler**, University of Zurich

**Prof. Walter Stoffel**, Competition Commission

#### Education and Knowledge Society

**Prof. Stefan Wolter**, Swiss Coordination Centre for Research in Education and University of Bern

**Prof. Beat Hotz-Hart**, University of Zurich and Federal Office for Professional Education and Technology

#### Environment, Energy, Land Settlement and Traffic

**Prof. Lucas Bretschger**, Federal Institute of Technology Zurich  
**Markus Maibach**, INFRAS

## NCCR FINRISK RESEARCH DAY AND DOCTORAL WORKSHOP

On June 8 - 9, 2009, the National Centre of Competence in Research (NCCR) held its 6th FINRISK Research Day at the Study Center Gerzensee. The Research Day brings together academics which present their latest research in finance. The ten individual FINRISK research projects are grouped into four modules: Asset Pricing and Portfolio Management, Corporate Finance, Risk Management, and Quantitative Methods in Finance, thus covering a wide range of topics.

The Study Center also hosted the 8th Doctoral Workshop in Finance, providing a platform for doctoral students at Swiss universities to present their "work in progress" to fellow students and international researchers within the FINRISK research community. Students also get the opportunity to discuss their work with senior academics and debate their colleagues' work.

A keynote lecture by Amit Goyal (Université de Lausanne, Swiss Finance Institute) on "Pension Funds" concluded the meeting.

## EUROPEAN SUMMER SYMPOSIA IN ECONOMIC THEORY (ESSET) AND IN FINANCIAL MARKETS (ESSFM)

During the summer, the Study Center hosted the traditional European Summer Symposia on Economic Theory (ESSET, June 29 - July 10) and Financial Markets (ESSFM, July 13 - 24) organized jointly with the Centre for Economic Policy Research (CEPR) in London. The purpose of these two symposia is to bring together leading researchers from European and American universities. During their stay at the Study Center, participants split their time between seminar presentations and independent or collaborative research.

The subprime innovation and the housing crisis was the subject of the first focus session of ESSET, organized by François Ortalo-Magné (University of Wisconsin-Madison). In the second week, Clara Ponsati (Institut d'Anàlisi Econòmica CSIC) organized a session on international conflict, bargaining and war.

As in previous years, the ESSFM program featured four focus sessions. In the first week, Stanley E. Zin (Carnegie Mellon and New York University) and Viral Acharya (New York University,

London Business School and CEPR) organized two sessions on asset pricing issues. The two focus sessions of the second week on corporate investment and governance issues were organized by Patrick Bolton (Columbia University and CEPR) and Bernard Black (University of Texas, Austin). Morning and parallel evening sessions complemented the program.

The full programs of ESSET and ESSFM are available at [www.szgerzensee.ch/research/conferences](http://www.szgerzensee.ch/research/conferences)



Patrick Bolton



Conference participants

## CONFERENCE OF THE AMERICAN SWISS FOUNDATION

In early November 2009, the Study Center hosted the American Swiss Foundation's 20th Annual Young Leaders Conference. This conference was initiated in 1990 by the then-Chairman, Ambassador Faith Whittlesey, to create a meaningful dialogue and foster understanding among the next generation of leaders in Switzerland and the U.S. Approximately 50 young Swiss and Americans were nominated to participate at the week-long event, including young politicians, members of think tanks, professors and journalists as well as middle management staff from various Swiss and U.S. corporations.

This year's conference included five panels on current topics in Swiss - U.S. relations, business and economics and health care reform. Besides the panels, participants had the opportunity to visit Switzerland, including the sites of Novartis and Syngenta, as well as the Federal Building and other landmarks. Invitations by U.S. Ambassador Donald Beyer, the Vice-Chairman of the Swiss National Bank, Dr. Philipp Hildebrand, and the State Secretary at the Federal Department of Economic Affairs, Jean-Daniel Gerber, were also part of the program.

## DOCTORAL COURSES

### ADVANCED COURSES IN ECONOMICS FOR DOCTORAL STUDENTS AND FACULTY MEMBERS

Four Advanced Courses in Economics were offered in summer 2009. In each of the week-long courses, a leading international academic taught material closely related to his recent research.

Professor Joshua Angrist (MIT) taught a course on "Empirical Strategies for Applied Microeconomics", organized around core econometric ideas and empirical modeling strategies of particular interest for empirical microeconomists. Professor David K. Levine (Washington University St. Louis) taught a course on "Game Theory and Behavioral Economics", focusing on modern decision and equilibrium theory, empirical evidence of anomalies relative to that theory, and behavioral

theories designed to explain those anomalies. Professor Marvin Goodfriend (Carnegie Mellon University) taught a course on "Monetary Theory and Policy", using the new neoclassical synthesis model of monetary policy to interpret actual monetary policy and exploring topics such as the origin and nature of the recent credit turmoil. Finally, Professor Nobuhiro Kiyotaki (Princeton University) taught a course on "Liquidity, Business Cycles and Monetary Policy", focusing on the interaction between liquidity, asset prices and aggregate economic activity over the business cycle.



Marvin Goodfriend



Marvin Goodfriend, Samuel Reynard and Petra Gerlach



Nobuhiro Kiyotaki



Jennifer Arlen and Ernst Baltensperger

### COURSES FOR DOCTORAL STUDENTS AND FACULTY MEMBERS IN LAW AND ECONOMICS

The Study Center organized two Law and Economics Courses for Doctoral Students and Faculty Members, offering advanced training in law and economics.

Professor Jennifer Arlen (New York University) taught a course on "Law and Economics of Torts", analyzing the role of tort liability in deterring risk and providing redress for victims as well as the tradeoffs encountered in designing such liability. Professor Daniel L. Rubinfeld (University of California, Berkeley) taught a course on "Antitrust Law and Economics", covering topics such as merger analysis, intellectual property, and high technology.

## CENTRAL BANKERS COURSES

To deal with the global financial and economic crisis, 2009 witnessed several extraordinary measures in central banking. To some degree, this has also affected our course program for central bankers, e.g. by contributing to a high number of applications for the course on "Banking Regulation and Supervision" or our finance courses. In general, it was a challenge to trace the new developments and put them into context with existing and emerging research in monetary economics and finance. The future success of the Central Bankers' Courses will depend crucially on the abi-

lity to adapt our established "forum" for central bankers and academic economists and address pertinent emerging issues in a mutually beneficial manner. We are convinced that with the new course on "Regulatory Responses to the Financial Crisis", offered for the first time in 2010, we are in a position to continue on



Qinwei Wang, Shashidhar Lokare and Abdugaffar Meliyev

our successful path. With the marked developments regarding financial stability issues, it would be tempting to neglect more traditional issues such as the role of monetary policy to smooth the business cycle or uphold price and exchange rate stability. However, these issues remained highly relevant during the financial crisis



Course participants

and will certainly do so in its aftermath. Therefore, the core of the 2009 central bankers program has continued to deal with monetary economics, exchange rates, capital flows, and monetary policy. The steadily high number of applications for these courses and positive feedback from participants confirm this approach. To continue with it, a new course on "Inflation Forecasting and Monetary Policy" has been introduced to our 2010 program.

## WORKING PAPERS

### 09.01

Philipp Harms, Oliver Lorz and Dieter Urban  
"Offshoring along the Production Chain"

### 09.02

Philipp Harms and Philipp an de Meulen  
"The Demographics of Expropriation Risk"

### 09.03

Raphael Auer  
"The Colonial and Geographic Origins of Comparative Development"

### 09.04

Philippe Bacchetta, Eric van Wincoop and Toni Beutler  
"Can Parameter Instability Explain the Meese-Rogoff Puzzle?"

### 09.05

Raphael Auer  
"Product Heterogeneity, Within-Industry Trade Patterns, and the Home Bias of Consumption?"

## NEW DIRECTOR

Effective January 1, 2010, Prof. Dirk Niepelt takes over as director of the Study Center. Dirk Niepelt has been with the Study Center for five years and has served as its deputy director since 2007. He holds a Ph.D. from MIT and has academic affiliations with the University of Bern and the Institute for International Economic Studies at Stockholm University.

## FOUNDATION COUNCIL

Prof. Thomas Jordan, Vice-Chairman of the Governing Board of the Swiss National Bank, is the new chairman of our foundation council. He replaces Philipp Hildebrand, who has been named President of the Swiss National Bank. Also elected as new member of the foundation council was Dr. Michel Peytrignet of the Swiss National Bank, replacing Ulrich Kohli.

## VISITORS' PROGRAM

Martín Gonzalez-Eiras (Universidad de San Andrés, Buenos Aires) visited the Study Center in May to work with Dirk Niepelt on politico-economic theories of the effect of demographic change on government budgets, productivity growth and retirement.

## COURSE PROGRAM 2010

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

### CENTRAL BANKERS COURSES

- |                 |                                                                                 |
|-----------------|---------------------------------------------------------------------------------|
| 08.02. – 19.02. | Advanced Topics in Monetary Economics I                                         |
| 01.03. – 18.03. | Monetary Policy, Exchange Rates and Capital Flows                               |
| 22.03. – 02.04. | Inflation Forecasting and Monetary Policy (jointly with Swiss National Bank)    |
| 19.04. – 30.04. | Capital Flows and Monetary Policy (jointly with Joint Vienna Institute)         |
| 09.08. – 20.08. | Advanced Topics in Monetary Economics II                                        |
| 30.08. – 16.09. | Instruments of Financial Markets (jointly with Swiss Finance Institute)         |
| 27.09. – 08.10. | Regulatory Responses to the Financial Crisis (jointly with Swiss National Bank) |

### PROGRAM FOR ADVANCED DOCTORAL STUDENTS IN ECONOMICS

- |                 |                                                                                     |
|-----------------|-------------------------------------------------------------------------------------|
| 02.08. – 06.08. | Theory<br>Prof. Stephen Morris, Princeton University                                |
| 09.08. – 13.08. | Macro Theory<br>Prof. Ivan Werning, MIT (to be confirmed)                           |
| 16.08. – 20.08. | Behavioral Finance<br>Prof. Harrison Hong, Princeton University                     |
| 23.08. – 27.08. | Causal Inference and Program Evaluation<br>Prof. Alberto Abadie, Harvard University |

### PROGRAM FOR DOCTORAL STUDENTS IN LAW AND ECONOMICS

- |                 |                                                                                                        |
|-----------------|--------------------------------------------------------------------------------------------------------|
| 17.05. – 21.05. | Introduction to Law, Economics and Business<br>Prof. Robert Cooter, University of California, Berkeley |
| 07.06. – 11.06. | Introduction to Empirical Legal Studies<br>Prof. Kathy Zeiler, Georgetown University                   |

## STAFF NEWS

Several changes in the staff occurred in 2009. Filippo Brutti (Ph.D. Universität Pompeu Fabra) joined the Study Center as lecturer last September. Roland Hodler (Assistant Professor University of Melbourne) will start as lecturer next April. Tobias Menz obtained his doctoral degree from the University of Bern and left the Study Center in spring. Dennis Reinhardt spent three months at the IMF, Washington. Katsiaryna Svirydenka left the Study Center at the end of December. Samuel Müller started as assistant in January 2010.

Teodora Ruiz Sancho was on maternity leave since mid June. She was replaced by Susanne Senn-Graf. Starting in January, Teodora Ruiz Sancho and Susanne Senn-Graf share the position of administrative assistant for our doctoral programs.

## DISSERTATION

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