WHAT WENT WRONG
AND HOW CAN WE FIX IT?
A look at the economic crisis
By James D. Hamilton, Ph.D.

This was no ordinary recession.
Why did the economy get so badly off track?
What needs to be done to return to solid growth?

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Published by the Department of Economics faculty and staff. Designed by UC San Diego Creative Services and Publications
Questions, comments, complaints? Have a story idea? Email us!

Full Calendar
Jan 3 Department of Economics Alumni Reception at the 2010 ASSA Meetings in Atlanta, GA
Jan 18 Hal Varian, Chief Economist at Google, speaks at the Economics Roundtable
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The right price will solve the problem
A stimulating energy policy
UCSD awarded $13 million ...
When Football Violence Turns Real
Ken Kroner: Advancing Economics and Giving Back to UCSD

By Kate Callen

Throughout his career as a global finance innovator, Ken Kroner, Ph.D., has been an academic at heart.

His economic training at UC San Diego grounded him in the scientific method, and his research on forecasting asset returns has won acclaim from university and industry peers.

"UCSD taught me how to think in structured and disciplined ways," he said. "Economics is a relatively fuzzy science. It's a lot easier when you go from assumptions to implications to decisions. That practice of scientific thought came straight from UCSD."

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Academe to Industry
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Kroner made the leap from academe to industry in 1994, when he left the faculty at the University of Arizona to join Barclays Global Investors (BGI), which merged with BlackRock Inc. at the end of 2009. At BGI, where he is the Chief Investment Officer and head of the firm's scientific active equity business, Kroner is part of what BusinessWeek called "a cadre of highly credentialed brainpower that no university finance or economics department in the land can match."

"BGI has earned that reputation," said Kroner. "We were ahead of academia in the development of the first index funds and in portfolio and pricing theory. We've had many visits from many top academics. The more time they spend with us, the more impressed they are with the strength of our research."

Kroner believes that a graduate degree in economics lays the foundation for achievement in the financial sector. "Economic training is helpful to be successful in finance because finance is economics," he said.

"Stocks outperform bonds in expansionary periods, and bonds outperform stocks during recessions. Economic forecasts of business cycles are the key to getting trades right. Our research at BGI suggests that the most valuable piece of information in asset management is to know where in the business cycle you are or where you're headed. And that's basic economics."

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Mentoring and Giving Back
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Along with the core principles of economics, UC San Diego also taught Kroner the value of mentorship. As he said in his keynote address at the UCSD June 13 commencement ceremony for graduate degree recipients, "Find somebody with gray hair, and attach yourself to him or her." In graduate school, Kroner attached himself to an outstanding mentor when he connected with Robert Engle, his Ph.D. advisor and later the recipient, along with UCSD colleague Clive Granger, of the 2003 Nobel Prize in Economics.

In 2008, Kroner and his wife, Jennifer, joined a group of noted Department of Economics alumni donors to establish endowed chairs for Engle and Granger. "It was an easy decision to make," Kroner recalled. "[Social sciences dean] Jeff Elman said there was a need and asked us to help. It was a very simple way to honor Rob and Clive. Without Rob and Clive, we wouldn't be where we are today."

Looking back on all his achievements, Kroner is certain that his greatest legacy will be the people he himself has mentored.

"When I look out through the glass wall of my office and see my team, I see what I'm most proud of," he
said. "BGI has built the strongest team and the strongest culture in the industry, and that will outlive me for many years. I can't think of anything I've accomplished that will have a more lasting effect."
Welcome to our online version of *Economics in Action*.

This new format affords us flexibility as well as the ability to expand coverage of topics important to our alumni and friends of the Department of Economics. We hope that you enjoy hearing from us electronically and will subscribe to *Economics in Action* to remain informed of new issues as they roll off the (now figurative) presses.

**Alumni**

Many of you are graduates of our undergraduate and graduate programs and we want to thank you for taking the time to complete our online survey. We in the department greatly enjoyed all the wonderful feedback. Two of the most important things we learned: (1) You love hearing about what’s going on here in the Department of Economics, and (2) you would like to hear much more about fellow alumni. Accordingly, we are relaunching *Economics in Action* as an e-newsletter and featuring alumni such as you in our new “Alumni Spotlight.” This issue’s spotlight is on Dr. Ken Kroner who has achieved great things in the business world since graduating from UC San Diego. He and his family have also given back to UC San Diego in extraordinary ways that we hope you find interesting.

**Undergraduate and Graduate Research**

We also thought you would like to hear about the exploits of our current undergraduate and graduate students. Professor Jim Andreoni describes exciting new work he, other faculty, and students are conducting in the burgeoning field of experimental economics.

**The Economy and UC San Diego**

The economy is on the mind of everybody these days. Professor James Hamilton’s feature article in this issue provides incisive commentary and his own prognosis for the economy. He and Professors Valerie Ramey, Ross Starr, and Allan Timmermann have spoken at several public events in San Diego and Orange County over the last year to help inform the public and our alumni about the economic outlook from the vanlige point at UC San Diego.

Those of you residing outside of California are no doubt aware of the financial strain in our state. It is certainly true that California’s budget troubles are worse than those of most other states, but UC San Diego is bravishing the storm as well as it can. As a sign of the campus administration’s determination to help strengthen the Department of Economics, note that in the last two years we have hired six new professors. Our faculty and student count has reached an all-time high! However, with California’s budget troubles, UC San Diego has been severely impacted and now faces budgetary difficulties unlike anything in recent memory. The campus has instituted a hiring freeze for the 2009–10 academic year, faculty and staff have been put on furlough (pay cuts), and undergraduate admission numbers have been curbed. Everyone on campus hopes and believes that the hiring and pay limits will ease next year, but forecasting state tax revenues and outlays is not easy.

**Your Support: Two New Endowed Chairs**

Given these uncertain times, we in the department are especially delighted at the outpouring of support that you have shown in the last few years. Your gifts enabled us to establish two new endowed chairs honoring our Nobel laureates Clive Granger and Robert Engle. Starting with the appointment of Professor Patrik Guggenberger as the inaugural holder of the Robert F. Engle Chair in Econometrics, these chairs will be used to recruit and retain the best and the brightest econometricians, maintaining and expanding UC San Diego’s worldwide reputation in econometrics. None of this would have been possible
without generous contributions from alumni, UC employees, and friends of the Department of Economics. Gifts such as these make a huge difference in the quality of education and research at UC San Diego, especially now. We are grateful to you all.

**In Memory of Professor Clive Granger**

On a sadder note, many of you may have learned Professor Clive Granger passed away this spring. Although retired in 2003, Clive was active in the department, doing research, attending seminars, and advising students. We continue to honor the memory of this great man with the endowed chair; the Clive Granger Research Fellowships, a permanent tribute to his life and works; and the Clive Granger Memorial Fund.

I would like to thank the many people who have helped to design our new look and to write the stories for this issue, including Devaney Kerr, Katie Magallanes, Nieves Rankin, and Briana Weisinger from the Department of Economics; Ryan Purdy from the UCSD Alumni Association; and Matt Hale and Heidi Yuen from UC San Diego Creative Services and Publications.

We hope you enjoy this issue. We would love to hear your comments on the new format for Economics in Action, as well as any ideas you have for future stories.

Sincerely,

[Signature]

Julian Betts, Chair
Department Awards

The Department of Economics honors students and faculty with awards for scholarship and teaching.

Graduate Students

Walter Heller Memorial Prize (Best Third-Year Paper)
This award is given in memory of Professor Walter Perrin Heller (1942–2001) and provides formal recognition to a graduate student who has shown the most promise for a future career in research. Professor Heller was a leading twentieth-century economic theorist and an early member of the UC San Diego faculty from 1974 to 2001. For 2008–09 the award was given to two students:

Aislinn Bohren
"Information-Processing Uncertainty in Social Learning"

Doungdao Mahakitsiri
“Endogenous Free Trade Agreements: An Impact on the Intensive and Extensive Margins of Trade”

Teaching Assistance Excellence
The department recognizes graduate students who demonstrate great efforts in their teaching as evidenced by glowing teaching evaluations from undergraduates, graduate peers, and their faculty supervisors. Nominations are solicited from the faculty, and awards are made by the graduate committee. Each of the recipients showed clear commitment to the teaching mission of UC San Diego.

Ben Backes
Undergraduate teaching

Charles Lin
Undergraduate teaching

Aren Megerdichian
Undergraduate teaching

Aaron Schroeder
Undergraduate teaching

Jaime Thomas
Undergraduate teaching

Bryan Tomlin
Graduate teaching (graduate course)

Li Zhou
Undergraduate teaching
Undergraduate Students

The Department of Economics grants three annual awards to graduating seniors from our three majors: economics, management science, and joint mathematics-economics. Recipients are chosen by faculty vote from a pool of top students in the graduating class of each major. The award is mentioned at their college commencement ceremonies, and awardees receive a total cash award of $200 from the department and the UCSD Alumni Association.

Seymour Harris Award for Excellence in Economics
Recipient: Jessica Lin
This award commemorates Seymour E. Harris, a prominent government advisor from the 1940s to the 1960s. He was a noted member of the Harvard University economics faculty and the founding chair of UC San Diego's Department of Economics.

Joel Dean Award for Excellence in Management Science
Recipient: Siqian (Yindsey) Wang
This award commemorates Joel Dean, a prominent management scientist who was also a noted faculty member of the business school at Columbia University. He was a visiting professor at UC San Diego's Department of Economics throughout the 1970s and was one of the pioneers of our management science major.

Award for Excellence in Joint Mathematics-Economics
Recipient: Devin Incerti
This award was established in 2008 and is granted to our most outstanding joint mathematics-economics student.

Faculty

Graduate Faculty Teaching Awards
Each year our graduate students select four faculty members who they feel offered the best graduate instruction of core or elective curriculum.

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<th>Julie Cullen, Ph.D.</th>
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<td>Core course teaching</td>
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Brendan Beare: Discovering Applied Economics

By Katie Magallanes

To me, academic economics is applied analysis. You prove a theorem, and then try to interpret the assumptions and conclusions in a way that might improve our understanding of real world phenomena.
— Brendan Beare

Brendan Beare, Ph.D., who joined the Department of Economics at UC San Diego as an assistant professor in fall 2008, spent his early years far from the halls of academia. “I grew up in a town of two thousand people on the southeast coast of Australia,” says Brendan. “It was a big surfing area. I was a major bookworm and preferred to stay at home reading fantasy novels or studying mathematics rather than going surfing or bike riding with other kids. I was exceptionally studious and loved mathematics. In my final year of grade school, I was the only student in my school to take the highest level course in mathematics offered in the state curriculum. Going to math class each day involved one-on-one tuition with a wonderful mathematics teacher, Peter Szota. He taught me about differential and integral calculus, basic complex analysis, and a variety of other areas of mathematics. I could never have received the same level of personal attention at a larger school with more students.”

Brendan’s interests at an early age included not only mathematics, but also economics. “My other favorite subject in grade school was economics. For a class project in my final year, I created an online economic policy simulator called Econoventure. I took the choose-your-own-adventure format of the fantasy books I had grown up reading, and used it to create a Web page where you could follow different links to apply different economic policies to a fictional island economy called Herbia. It was a rather sadistic affair. I would bait the user into applying Keynesian economic policies, and then punish them with consequences I had learned from studying more freshwater-style economics. One day I received an e-mail from Professor John B. Taylor of Stanford University asking me if he could use Econoventure in the online supplement to his Principles of Economics text. I had no idea who Taylor was or what Stanford University was, but agreed. My Web site was used to illustrate to students the ‘crowding-out’ effect that occurs when fiscal stimulus crowds out private investment. So, I suppose it is fair to say that my involvement in the education of American college students began at the age of seventeen.”

Trading Law School for Economics

Eventually, Brendan left small-town Australia and moved to Sydney to study at the University of New South Wales (UNSW). He began his university life as a law student. “Going to law school turned out to be a rather bad choice. In Australia, it is typical to commence a law degree in the first year of undergraduate study, concurrently with another degree. My second degree was a bachelor of economics. I soon realized that not specializing in mathematics was a major error. I also decided that I wanted to move away from Australia when I finished college, as I had gradually grown to loathe the culture and climate of the country during my eighteen years living there. A degree in Australian law would not help me overseas, so I quit the law degree and focused on studying economics.”

Unfortunately, Brendan ran into more trouble in his undergraduate studies after quitting law school. “My economics classes were boring me horribly. I wanted to study real analysis in the math department. But when I asked their undergraduate director if I could enroll in their real analysis course, he said that I first needed to take their introductory courses on calculus. I refused to take those courses as I felt that I had...
already learned the material, and he refused to allow me to enroll in real analysis. So, I borrowed some real analysis texts from the library and learned the material in my own time. Meanwhile, I was skipping almost all of my economics classes, and receiving fairly awful grades. I was also working around twenty hours each week at the local 7-Eleven, which did not help much."

Introduction to UC San Diego

Things changed for Brendan at the end of his third year in college. "I took a course in time series econometrics taught by Ron Bewley. Ron was the first really fantastic teacher I had during my college years. I went from thinking econometrics was a boring and ugly subject to seeing how beautiful it could be when done properly. Ron taught me about nonstationary time series and cointegration, concepts that had been developed by Rob Engle and Clive Granger at UC San Diego in the 1980s. I found this material fascinating. In my final year at UNSW, Ron was my primary advisor. He had also advised Graham Elliott a number of years earlier. At around this time, I read two books on econometrics that influenced me greatly. One was *Asymptotic Theory for Econometricians* by Hal White, and the other was *Time Series Analysis* by Jim Hamilton—two more UC San Diego econometricians. My senior thesis concerned a recent *Econometrica* paper by Hal called ‘A Reality Check for Data Snooping.’ The paper proposed a way to test whether any of a large collection of forecasting models contained genuine predictive power. In my thesis, I developed a minor variant of Hal's approach, and used it to test whether technical trading rules were of any use in predicting an Australian stock market index. They weren't."

Graduate Study at Yale University

Brendan’s interest in time series econometrics eventually led him to Yale University. He explains: “Reading Jim’s time series book, my favorite section was the discussion of how spurious regression and cointegration could be understood in terms of Brownian motion and stochastic integrals. This theory was largely developed at Yale by Peter Phillips and coauthors. I told Ron that I wanted to pursue a doctorate at Yale under Peter’s supervision. I think that Ron probably realized that my grades at UNSW were not high enough to get me into Yale without some extra help, so he paid to fly me to Auckland and meet Peter at a meeting of the Econometric Society that was being held there. This ended up being a rather good strategy, and Peter ensured that I was admitted to the Yale economics program the following year. Studying under Peter at Yale was a wonderful experience and a true honor. I regard him as the greatest academic to have specialized in econometrics, living or dead."

Brendan continues: “At Yale, I was able to enroll in university-level math courses for the first time. My first class was the graduate measure theory course. I went on to take other courses in probability theory, stochastic calculus, empirical process theory, functional analysis, and so forth. I also studied general equilibrium theory under Don Brown, John Geanakoplos, and Truman Bewley. And of course there were the econometrics courses taught by Peter, Don Andrews, and many others. It was a great time in my life."

Research at UC San Diego

Now twenty-nine years old, Brendan joined the Department of Economics at UC San Diego after completing his doctorate at Yale and spending a year at Oxford University as a postdoctoral researcher. Regarding his future research agenda, Brendan says, "I try not to think of myself as an econometrician. What is econometrics, anyway? Is it really distinct from statistics? To me, academic economics is applied analysis. You prove a theorem, and then try to interpret the assumptions and conclusions in a way that might improve our understanding of real world phenomena. My current research has a lot more to do with financial theory than econometrics, and in future I would like to return to the study of general equilibrium theory that I began at Yale. The mathematical tools used in all these different areas are broadly similar, so I don’t see much use in forcing our research into narrow categories."
Davide Debortoli: A Passion for Numbers

By Briana Weisinger

Being exposed to professors with different views and approaches to economics was crucial for me to think critically about the literature and to stimulate my research interests.
— Davide Debortoli

From a young age Davide Debortoli, Ph.D., held mathematics near and dear to his heart. In elementary school, numbers sparked a passion within, and he could often be found eagerly doing his homework in hopes of understanding the “simple” math of the past. But as an Italian born and raised in Verona, a town famous as home of Romeo and Juliet, it was impossible for Davide to not be influenced by the classics. At the end of high school, after studying ancient Greek and Latin, he was sure he wanted to become an engineer. However, humanistic traditions had sunk deep into his psyche and emerged in his chosen field of economics. The way economists fuse humanism with mathematically intensive social science made sense for Davide. He believes “studying ancient Greek and Latin ... was certainly helpful in learning to combine rigorous rules with personal interpretation, which I think are the fundamentals of economics.”

From Verona to Austin
At the age of nineteen, Davide discovered a world outside the Verona walls when he moved to Milan to study at Università Bocconi. He was initially drawn to financial institutions and markets but quickly changed his mind after his first taste of micro- and macroeconomics. With his interest in economics solidified, Davide headed to the U.S. for the first time in 2001 to study in Austin at the University of Texas. A few months later, he researched the impact of the Argentinean economic crisis, which led to the devaluation of the peso and the country’s subsequent default on sovereign debt. This research was the foundation of his undergraduate thesis. His analysis of the increase in money supply in the aftermath of Argentina’s crisis, and its failure to lead to economic recovery, helped him complete his B.S. in economics with honors from Università Bocconi.

Graduate Study and Loose Commitment
After graduating, Davide joined an investment bank in Milan. The practical work experience was enjoyable, but Davide declares, “It certainly helped me clarify that I wanted to do research.” Six months later, Davide was back at Università Bocconi as a research assistant. During his year as research assistant, Davide acquired invaluable skills, including programming and data analysis, before heading off to graduate school in Barcelona at the Universitat Pompeu Fabra (UPF). Davide was happy to share some of his thoughts on admission: “I was glad to receive their offer, since they had, and still have, one of the best economic departments in Europe. Since the beginning of the 90s, the UPF made a terrific job in reversing the brain drain from the U.S., being able to attract several renowned professors from top schools like Harvard, MIT, Columbia, Minnesota, NYU, etc. I had a great time during my five years in Barcelona. Being exposed to professors with different views and approaches to economics was crucial for me to think critically about the literature and to stimulate my research interests. In addition, given the friendly environment, I learned a great deal by collaborating with other graduate students.”

During his time at UPF, Davide’s research focused on the inability of policymakers to credibly commit to fulfill their promises and how that impacts policy design. Situations such as these are often the result of political turnover, and thus are quite common in countries like Italy where the government changed sixty-two times in the last fifty-four years. While working on his thesis, Davide and Ricardo Nunes from the Federal Reserve Bank developed the “loose commitment” approach to evaluate these types of situations.
Their approach is currently being incorporated into economic models used at central banks both in Europe and the U.S., which to Davide “came as quite a surprise … It’s encouraging to see that sometimes our work can have some practical use.”

At UC San Diego
Davide’s research at UPF positioned him in high demand on the job market after graduating. He chose to join UC San Diego’s Department of Economics because of our reputation for excellence across many fields, as well as our friendly and collaborative environment. Now Davide is living in San Diego with his wife, Barbara, and teaching ECON 110A with the very book that sparked his interest in macroeconomics and introduced him to the field ten years ago: *Macroeconomics* by Olivier Blanchard.
Karthis Muralidharan: Economist Dedicated to Human Development

By Briana Weisinger

The world is an uneven playing field … and providing a quality education to every child is the best place to start leveling it.
— Karthis Muralidharan

Combining his love for economics and his commitment to improving the possibilities for millions of children around the world, Karthis Muralidharan, Ph.D., has dedicated himself to leveling the playing field through his research on improving education and health in developing countries. In countries like India, it’s impossible to be blind to the differences between the haves and the have-nots. Inequalities at birth impact the life prospects of children from the moment they are born. Karthis’s highly cited study on teacher and medical worker absence exposed the abysmal quality of service the poor and underprivileged receive in developing countries. His subsequent studies in India and Indonesia examined the impact of policies designed to improve the quality of education in developing countries, including policies such as school choice; performance pay, contracts, certification, training, and salary increases for teachers; and health programs and cash grants for schools. The relevance of his research has made Karthis a frequent consultant and advisor on education policy and research to international bodies such as the World Bank and the Inter-American Development Bank.

International Education and Experience

Educated at some of the most prestigious institutions in the world, Karthis began his journey in the Indian city of Ahmedabad and has had many successes. In 1998 he received a B.A. in economics (summa cum laude) from Harvard University, and in 1999 he completed his M.Phil. in economics (first in class) at Cambridge University. Before heading back to Harvard to ultimately complete his Ph.D. in 2007, Karthis joined Asian-based Bain & Company as a management consultant. There he gained invaluable private-sector experience working with developing countries. However, his heart lay in academia and he returned to Harvard where he was awarded the Justice, Welfare, and Economics Fellowship; the Bradley Foundation Fellowship; the Spencer Foundation Dissertation Fellowship; and the Derek Bok Center Certificate for Excellence in Teaching while pursuing his Ph.D. In 2008, Karthis received the Exemplary Dissertation Award from the Spencer Foundation for his dissertation and research on teacher performance pay, “Essays on the Economics of Education in Developing Countries.”

Research and Teaching at UC San Diego

After completing his Ph.D., Karthis was highly recruited. In March 2007 he accepted a position with the UC San Diego Department of Economics but delayed his role in the department until summer 2008 to expand on his dissertation research as a postdoctoral scholar at the Harvard Graduate School of Education. In July 2008, Karthis fully assumed his role as an assistant professor at the UC San Diego Department of Economics.

In addition to his research on education and health around the world, Karthis teaches undergraduate and graduate courses in development economics at UC San Diego. He loves teaching and looks forward to passing on his excitement for development economics to his students. Last spring, Karthis regularly hosted lunches for his undergraduate students. At these popular gatherings, they would sit and discuss a broad range of topics. Recently, he had the pleasure of taking a group of students to India to participate in his research, and he is looking for future opportunities to engage well-prepared, highly motivated students.
As a proud husband and new father, Karthik is laying down roots in San Diego. He and his wife recently bought a home, and they are looking forward to raising their son in sunny San Diego where Karthik maintains his passion for development economics here in the Department of Economics at UC San Diego.
As the unemployment rate climbed to the highest levels in a generation and the nation’s output fell in an eighteen-month dive, it became clear that this was no ordinary recession. Why did the economy get so badly off track? What needs to be done to return to solid growth?

Bad Loans Lead to Lending Freeze

There was almost $8 trillion in new U.S. household mortgage debt issued between 2004 and 2006. A significant number of these loans had poor documentation of the borrowers’ incomes, required little or no money down, and called for huge increases in the borrowers’ monthly payments a few years into the loan.

As long as house prices continued to skyrocket, few of even the most dubious loans went bad because the borrower enjoyed a big enough capital gain to be able to refinance at a profit. And precisely because lenders were diverting such huge sums of money into housing, U.S. house prices continued to climb rapidly, doubling between 2000 and 2005.

But house prices could not continue to rise forever, and the recession that began in December 2007 helped to set the process into reverse. Rising oil prices reduced consumer spending and clobbered important sectors like the auto industry in early 2008. Then unemployment from the recession tipped many of the mortgages into default, and house prices began to fall rapidly. As house prices fell, more borrowers found themselves underwater and unable to refinance their loans or to meet their monthly payments. The many derivative financial instruments constructed from U.S. mortgage debt suffered a big loss in market value. This precipitated a classic bank run on financial institutions that counted on being able to roll over short-term debt in order to finance their long positions in mortgage-related securities. The result was a freezing of the interbank lending market and a severe contraction in credit that brought the world economy to its knees.

Moral Hazards Encourage Unsound Lending

What were the market failures that led to the destabilizing expansion of credit in the early part of the decade? The institutions that originally made the loans sold them off to private banks or to the...
government-sponsored enterprises Fannie Mae and Freddie Mac. This system created moral hazard incentives for the originators, encouraging them to fund unsound loans. When private banks bought the loans, they packaged them into complex securities that were in turn sold off to private investors, an additional step that permitted the securitizers to profit, even if the loans were poor quality. In the cases of Fannie and Freddie, the government created an asymmetric payoff structure in which the profits went to private investors while the losses were picked up by the taxpayers. Compensation schemes gave the individuals within the financial institutions that authorized unsound gambles a “heads I win, tails you lose” incentive structure that also favored excessive risk taking. Entities like the insurance giant AIG were allowed to write huge volumes of credit default swaps that purportedly would insure the holders of these mortgages against losses, even though AIG did not remotely have the financial ability to fulfill all the commitments it made.

**New Fed Policies Not Enough**

What can be done to address the problems that came out of this mess? Aggressive fiscal stimulus has been implemented in the hopes that an increase in federal spending would make up for the decline in demand from the private sector. So far, the economic performance has been significantly worse than the architects of that fiscal stimulus had originally anticipated. Our monetary stimulus gun ran out of bullets when the Fed funds rate was pushed essentially to the zero lower bound. The Fed also pursued less conventional tools of monetary policy, creating a huge volume of new types of loans and purchasing assets, such as mortgage-backed securities. The new Fed policies make sense for addressing the bank run aspect of the crisis. But to the extent that the low market prices on these securities represent a rational assessment of their true value, the Fed may have simply absorbed some of these losses onto an account that ultimately will be paid by the taxpayers.

**Systemic Reforms Are Needed**

Whatever the success of these fiscal and monetary measures, part of the response to the problems must come in the form of fundamental reforms to the financial system. The Treasury has recently proposed a number of ideas that make sense:

- Introduce a legal mechanism whereby large financial institutions that are not commercial banks (such as AIG or Bear Stearns) can be liquidated in an orderly manner without bankruptcy or bailouts, analogous to the authority that the FDIC currently has to take over failing banks.
- Subject the banklike functions of investment banks and structured investment vehicles (that is, the activity of borrowing short and lending long) to the same capital requirements as standard banking.
- Require either mortgage originators or the mortgage securitizers to retain 5 percent of the product they create. I would take that idea a step farther, endorsing Princeton Professor Alan Blinder’s proposal that originators and securitizers should each hold 5 percent.
- Move the trading of financial derivatives, like credit default swaps, to centralized exchanges where they would be subject to a robust regime of regulation including conservative capital requirements, margins, and reporting requirements. To the Treasury’s proposal, I would also recommend adding stop-loss provisions that regulators could use to limit the promises made and losses suffered by systemically important financial institutions as a result of their trading in financial derivative contracts.
- Set guidelines for individual compensation systems at systemically important financial institutions in order to better align the personal rewards of traders with the interests of shareholders and the public.

It appears that the worst of the recession of 2007–09 is now behind us. But that should not cause us to lose interest in ensuring that this costly tragedy is never repeated.
Economists’ Big Problem and Experimental Economics’ Solution:
What We Do in the UCSD EconLab

By James Andreoni, Ph.D.

Economists have a big problem.

Suppose we want to make predictions about financial markets or housing prices? To do this well, we need to know critically important things about how individuals view risky choices. We have to ask how people make the trade-offs between splurging today versus taking on a big thirty-year mortgage. Perhaps most important, we need to understand how they process and react to new information about the risks they’ve taken and commitments they’ve made.

Our problem? We can’t observe or measure any of these in the real world—in reality there are too many unknowable influences on choices. So, instead, we do what economists do best: We make assumptions.

Testing Is Crucial

Wouldn’t it be nice if we could test these assumptions? In the past thirty years, economists have been developing techniques to do just that. In 2002, Vernon Smith and Danny Kahneman shared the Nobel Prize for pioneering experimental and behavioral economics. Now UC San Diego is one of the nation’s hubs for this exciting and growing area of research.

At UC San Diego’s Economics Laboratory we are asking fundamental questions about how people face risk, how they value the future compared to today, and how they incorporate—or ignore—good news and bad news about the things they want to believe. Our work is solving many important puzzles that have long haunted economists.

EconLab’s Contribution

One of our key findings (by Charles Sprenger, a UC San Diego graduate student, and myself) reveals the difference between how people feel about a hundred dollars when they are given it versus how they feel about it when they win a hundred dollars by chance. They like sure money a lot more. That is, how you get your money affects how happy the money makes you feel. This is a subtle difference, but we measure it with great precision and use it to explain a host of otherwise vexing findings from laboratory experiments. We can explain, for instance, why when asked by a researcher about taking money now or saving it for the future, people tend to demand an interest rate on that savings that far exceeds rates at banks. The reason, we discovered, is that banks are safe but if an absent-minded professor promises to pay you a hundred dollars in six months, you’ll feel lucky to get it. When we account for this, we can say that people actually make pretty good economic decisions.

Another finding comes from two other UC San Diego graduate students David Eil and Justin Rao. They show that when people get good news about a personal attribute they care about—for instance, “Am I a savvy investor?”—they pay appropriate attention to good news but tend to largely ignore bad news. That is, people are not overly optimistic during good times, but they do bury their heads when bad news comes. The consequence? Holding losing stocks too long and ignoring early warning signs of trouble. Sound familiar?

The EconLab studies a variety of other issues: altruism and giving, design of auctions, the effects of social pressure, self-governing institutions, cooperation versus competition, and many more.

Overall, the UC San Diego EconLab is a dynamic and exciting fixture on campus. Last year we had more
than 1,200 student participants in studies that paid out nearly $20,000 in incentives. We involved numerous graduate students in our research and presented our results at forums in Harvard, Stanford, Paris, Korea, Australia, and a dozen places in between. Members of the lab published numerous articles in top journals. In the future, we'll keep testing our core assumptions and working to solve economists' big problem.
Inaugural Holder of Engle Endowed Chair Selected

By Briana Weisinger

Robert F. Engle Endowed Chair in Econometrics

After a long and grueling search, we are pleased to announce that we’ve hired associate professor Patrik Guggenberger, Ph.D., as the inaugural holder of the Robert F. Engle Endowed Chair in Econometrics. Professor Guggenberger, chosen for this position by a five-person committee chaired by Professor Hal White, became part of the econometrics group here at UC San Diego in July 2009, and he brings an impressive econometric tool kit to the department. After earning his Ph.D. in economics and econometrics from Yale University, he joined the UC Los Angeles faculty in 2003, and his subsequent work was published in top econometrics journals such as Econometrica, Econometric Theory, the Journal of Econometrics, and the Journal of Time Series Analysis.

In addition to being widely published in the most well-respected econometrics journals, Professor Guggenberger is a recipient of the prestigious Alfred P. Sloan Foundation Fellowship, a member of the Econometric Society, and the principle investigator on a National Science Foundation grant studying errors inherent in statistical analyses. Professor Guggenberger’s work encompasses several areas within econometrics, including hypothesis testing in statistical models where the limit distribution of the test statistics is discontinuous, long memory processes in time series data, and instrumental variables. His work, which is highly technical in nature, abounds in practical uses by applied social science researchers and has become highly influential within the econometrics field. However, the faculty in our department who are not theoretical econometricians are impressed by his ability to derive general results from his research and then tease out guidelines for practitioners who use many of these statistical tools on a daily basis. This ability has also led to Professor Guggenberger’s growing influence among those who use econometric tools as part of their studies of individual markets (firms, labor, etc.).

Professor Guggenberger’s expertise and experience will go a long way to further the development of our already top-ranked econometrics group, which has long been a world-renowned powerhouse of econometric theory. After an intensive campaign for the Robert F. Engle Endowed Chair in Econometrics, which became a reality in late 2008 thanks to the generosity of many UC San Diego Department of Economics alumni, staff, and friends, we are happy to be able to have Professor Guggenberger as the inaugural holder.

Endowed chairs are a time-honored tradition of the greatest universities for more than 500 years. These chairs are intended to support a university’s mission by providing funding to attract and retain distinguished faculty and to support their teaching and research efforts. At UC San Diego, endowed chairs are created in honor of colleagues who have made exemplary contributions to their specific fields. The Robert F. Engle Endowed Chair is the first of its kind in the field of economics, and there is no doubt that the achievements of Professor Engle merit this honor. We are quite pleased that it has come to fruition.

Robert F. Engle, Ph.D.

A graduate from Cornell University, Professor Engle joined our faculty from MIT in 1975. He was the department chair for several years and held the Chancellor’s Associates Chair in Economics. Part of his many contributions to department life were the twenty-three doctoral committees he participated in during his tenure at UC San Diego, sixteen of which he either chaired or cochaired. In addition to the profound impact that he’s had on his many students—including Ken Kroner ’88, who was one of his Ph.D. students—Professor Engle’s work with Professor Clive Granger in the 1980s here at UC San Diego resulted in the 2003 Nobel Prize in Economics for his work on ARCH (autoregressive conditional
heteroskedasticity) model and Granger’s work on cointegration. With this ARCH approach, Professor Engle was able to capture the properties of many time series and to develop accurate methods for statistical modeling of time-varying volatility. His groundbreaking research resulted in tools that quickly became indispensable for researchers and market analysts who use these tools to evaluate portfolio risk and asset pricing.

Festschrift
Although he retired from the department in 2003, Professor Engle’s contributions to the department live on and can still be seen in the strength of the econometrics group that he helped assemble. To commemorate his legacy and to honor his sixth-fifth birthday, the department hosted a Festschrift conference in June 2008. The culmination of the conference was the banquet on the last night where Rob and Marianne Engle received a standing ovation and, quite literally, several generations of Rob’s students and coauthors got to know one other. Festschrift co-organizers and UC San Diego alumni Tim Bollerslev ’86; Jeffrey Russell ’91, ’96; and Mark Watson ’80, presented Rob with a tree-shaped sculpture; each leaf was inscribed with the name of a thesis advisee and his or her thesis title. Several leaves were left bank for future use in reference to Rob’s continued energetic work! As midnight neared, after rounds of impromptu testimonials to the extraordinary contributions Rob has made as a coauthor and thesis advisor, the conference ended as a wonderful tribute to the life, achievements, and future endeavors of Professor Engle.

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Professor and Nobel laureate Sir Clive Granger made countless contributions to the Department of Economics over his decades of service and was a main contributor in establishing our department’s dominance in the field of econometrics.

Sir Clive W. J. Granger Endowed Chair in Econometrics

The Department of Economics is proud to announce the establishment of the Sir Clive W. J. Granger Endowed Chair in Econometrics. Each Granger Endowed Chair appointee will be a distinguished econometrics faculty member tasked with recruiting and retaining the finest young minds to ensure that Clive’s legacy continues. This endowment was made possible by the support of many donors, including UC San Diego alumni Kim ’87 and John Iorillo ’88, Jennifer and Ken Kroner ’88, and the W. P. Carey Foundation of New York (see the complete list of donors below).

Clive Granger Research Fellowships

In addition to the generous donations that funded the Granger Endowed Chair, the Department of Economics Graduate Program Committee will also honor Clive with the inaugural Clive Granger Research Fellowships to be awarded in fall 2010. Sir Clive was a pioneer, so these fellowships are designed to reward the pioneering spirit in outstanding graduate students pursuing the most compelling research in each of the following fields: econometrics, macroeconomics, microeconomic theory, trade and development economics, applied economics, and environmental economics.

Recipients will be selected by faculty members supervising the Graduate Research Presentation Workshops (ECON 286), and decisions will be based on students’ presentations in ECON 286 as well as the intrigue, dynamism, and groundbreaking aspects of their thesis research. Each recipient will be awarded a $3,000 research stipend in hopes of encouraging the best and brightest of our students to make more rapid progress in their research.

Sir Clive Granger (1934–2009)

Sir Clive Granger passed away on May 27, 2009. We hope these tributes underscore the fact that mere words cannot express the place he held in our hearts, or the intellectual contributions he made over his more than three decades at UC San Diego. We were greatly saddened by his passing, and we feel a deep gratitude to Sir Clive for his significant contributions to help build our department from its humble beginnings to one of the most stellar economics departments in the world.

Born in Swansea, Wales, in 1934, Clive received many awards and accolades. His early interest in mathematics pushed him to the University of Nottingham where he received both his B.A. (1955) and Ph.D. (1959) in statistics. After starting his academic career at his alma mater, Clive arrived at UC San Diego in 1974. Over the
subsequent thirty-five years, he recruited faculty and continued his groundbreaking research in time series. His research on forecasting, causality, and cointegration revolutionized how academics in economics, statistics, biology, and engineering analyze data, and established more accurate methods for examining how variables change over time. In the 1980s, Clive worked closely with then UC San Diego Department of Economics professor Robert Engle, and in 2003 their research culminated in the highest honor granted to economists: the Nobel Prize. In 2005, Sir Clive Granger was inducted as Knight Bachelor by Queen Elizabeth II.

Colleagues, coauthors, and former graduate students of Clive gathered at the UC San Diego Ida and Cecil Green Faculty Club on July 31 in celebration of his life. Speakers—including fellow Nobel laureate Rob Engle, and Clive’s son, Mark Granger—painted a touching and humorous picture of a person whose intellect we all greatly respect and whose spirit touched all who worked with and knew him.

The department is grateful to Clive’s wife, Patricia Granger, for sharing memorabilia, helping to plan the celebration, her generosity to the department, and her strength, good cheer, and sense of humor. We encourage you to visit Clive’s memorial page for a summary of his life, contributions to the department and the world, remembrances from students and colleagues, and information on the Clive Granger Memorial Fund.

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By Theodore Groves, Ph.D.

The newly established Center for Environmental Economics is focused on getting the word out about environmental economics research.

Environmental economics is not simply a subfield of economics confined within the Department of Economics. It is a subject investigated by a diverse group of scholars and students from across UC San Diego and beyond. In addition to researchers within the Department of Economics, there are faculty, graduate students, and other researchers working on various environmental economic issues on campus at the School of International Relations and Pacific Studies, the Rady School of Management, and Scripps Institution of Oceanography, as well as off campus at the Southwest Fisheries Science Center (SWFSC).

Goal and Programs

Because of the far-flung locations of this community, there has been little awareness of the extensive activity going on at UC San Diego in this field, even among the members of the community itself. The Center for Environmental Economics was recently established to help correct these problems and to provide greater visibility for this community. The center’s goal is to promote environmental economics research that is organized by various programs under the umbrella of the center. Current research programs at the center include Water Economics, the Global Ocean Commons, Climate Change, Energy and the Economy, and Development and the Environment.

Collaboration and Outreach

Launched in fall 2008 and formally approved by the university that December, the Center for Environmental Economics grew out of four years of weekly departmental workshops that had brought environmental economists together from different areas on campus. These weekly workshops served as a forum for scholars and graduate students to collaborate and share their research.

Since its establishment, the center has begun to attract interest both on and off campus. In the past year, we have received requests from scholars interested in visiting from Norway, Spain, Italy, the Azores, and China. These requests stem from working papers and information posted on our Web site by the center’s members about their research on the management of fisheries, the economics of climate change, energy and pollution, and conservation projects involving endangered species and vanishing natural resources.

Future Conferences

For more information on the Center for Environmental Economics, please visit our Web site.
In our inaugural year, the center received no funding; however, at the start of this year, some funding became available through teaching environmental economics courses to masters students. This funding has enabled us to invite outside speakers to our weekly workshop, to provide lunches at the workshop, and to support graduate students’ travel to conferences where they can present their work. In the near future, we plan to sponsor mini-conferences in several areas, including development and the environment, the nature of conservation contracts between nongovernmental organizations (NGOs) and local communities, and the allocation of catch shares within the tuna Regional Fishery Management Organizations.

**Interdisciplinary Programs and Undergraduate Research**

The center’s faculty members are also active in interdisciplinary programs on the environment within other units on campus, including the [Scripps Institution of Oceanography Center for Marine Biodiversity & Conservation](http://oceans.ucsd.edu/marine-biodiversity-center), the National Science Foundation's Integrative Graduate Education and Research Traineeship Program for Ph.D. and M.A.S. students, and various programs with the campus [Sustainability Solutions Institute](http://sustainability.ucsd.edu). Additionally, this winter the center will support an undergraduate-directed research project investigating the economics of water in San Diego County. This project is designed as a way to reach out to undergraduates and to offer them an opportunity to research environmental economics issues.