NEWS FROM THE PROGRAM FOR ECONOMIC RESEARCH

By David Weinstein

PER’s activities this year focused on the financial crisis. We have stimulated new research and dialogue to understand how businesses and policy makers reacted to the crisis, as well as its causes and consequences. We also sponsored a series of events that brought together students and faculty, as well as business and government leaders for frank and wide-ranging discussions of recent events.

The fall semester was marked by three such events – “The Last Days of Lehman” (which brought Lehman’s former General Counsel to an undergraduate class to discuss what happened at the investment bank); “Coping with Crisis: Financial Policy in the U.S. and Japan” (which brought Heizo Takenaka, the person credited with restructuring Japan’s banking sector, to talk to my undergraduate class as well as over one hundred members of the Columbia community); and “Still More Lessons from the Crisis” (which brought William Dudley, the President of the Federal Reserve Bank of New York, to a capacity crowd in Low Library).

We kicked off the spring semester with an academic conference organized by Professors Ricardo Reis and Michael Woodford entitled “Financial Frictions and Macroeconomic Modeling.” I view this as an extremely important endeavor as most of the workhorse macroeconomic models — whether they be the traditional Keynesian models or more recent real business cycle models — lack a realistic description of the financial sector and therefore were not able to adequately describe what happened in the recent crisis. Columbia, which is now recognized as one of the centers of research on monetary policy, is well-poised to be the focal point of new research on how to incorporate financial markets into macroeconomic models.

Our programs will continue this semester with two more events on the financial crisis. On April 12 we will bring together Phil Angelides (the Financial Crisis Inquiry Commission Chairman), Arthur Levitt (the Former Chairman of the US Securities and Exchange Commission), and our own Joseph Stiglitz for an event entitled “A New (dis)Order?: The Promises and Pitfalls of Financial Market Reform”. Finally, we will close out our series on the financial crisis with an address by Vikram Pandit, the CEO of Citigroup.

It has been amazing to watch how economics at Columbia is changing in the wake of the financial crisis. Not only have professors used these PER events to integrate real world experiences into the classroom, but the actual content of our classes has been rapidly changing to give students a better understanding of the events of 2008 and 2009. I did an informal poll of my colleagues and found that many professors have overhauled their classes to discuss macroeconomic stabilization policies, financial accelerators, Fannie Mae, Freddie Mac, TARP, foreign responses to the crisis, not to mention a new full semester course on crises. Indeed, the department is preparing to launch a new major in financial economics. While there may be an ivory tower out there filled with disengaged academics, I’m happy to say that’s not Columbia economics!

David Weinstein is the Executive Director of the Program for Economic Research and Carl S. Shoup Professor of the Japanese Economy.
LETTER FROM THE CHAIR

Columbia University is one of the most selective universities in the world, and its economics department in several ways stands out within the university. The undergraduate economics major is the largest and most popular major at Columbia, and it is also one of the most selective because it is very demanding. Economics also has one of the largest Ph.D. programs in Arts and Sciences, and the largest in terms of applications. So the students to whom we offer admission into the Ph.D. program are a very select group, for whom we must compete aggressively with the other top economics departments.

This year is the 130th anniversary of the founding of Columbia University’s graduate program in economics, as part of the establishment of the Graduate Faculty of Political Science in 1880. The first Ph.D. graduate in 1885 was Edwin Robert Seligman, who co-founded the American Economic Association in the same year. Seligman’s dissertation was titled “Two Chapters on the Mediaeval Guilds of England”. Seligman soon joined Columbia’s economics faculty, and was a leader of the American institutional approach to economics that was centered at Columbia for decades following. Joining Seligman on the faculty in 1892 was the famous economic theorist John Bates Clark, who developed the marginal productivity theory of income distribution, quite in opposition to the institutional approach. Apparently, the department hallways were lively from the start.

By 1900 Columbia Economics had four faculty seats and offered graduate courses with titles “Modern Industrial Problems, Money, and Labor,” “Finance and Taxation,” “Theories of Socialism,” and “Projects of Social Reform”. The graduate curriculum was a continuation of the senior year B.A. curriculum, and a Ph.D. typically was awarded after three additional years of coursework and research. The graduate program at that time numbered 75 combined economics/sociology graduate students. By 1955, perhaps when the department was reaching the peak of its prestige half a century later, there were 250 graduate students including M.A. students and 18 graduate Economics faculty. Of 36 entering Ph.D. students in 1958, only 28 were expected to pass their orals. During this time, the Department was very proud of a new workshop program it launched with funding from the Ford Foundation, to which it attributed much of the improvement in the quality of its Ph.D. program.

These days the department admits just shy of two dozen new Ph.D. students in a typical year, has a current total enrollment of 123 graduate students, and graduate faculty total just fewer than 38 full-time-equivalents. This much improved faculty-student ratio is commensurate with the much greater breadth and depth of a contemporary Ph.D. program. The department now offers almost a full array of graduate courses covering both the core fields of Microeconomics, Macroeconomics, and Econometrics, and the more specialized fields of Development Economics, Financial Economics, Industrial Organization, International Economics, Labor Economics, Political Economy, and Public Finance. There are also many venues for close interaction between faculty and students: not just in basic courses and dissertation advising, but also in colloquia, in which students present their research toward a dissertation, and in department workshops, where faculty members present their current research, and where students and department faculty alike keep abreast of current research developments from presentations by visitors. And there is still so much valuable interaction going on in the hallways.

Over the past 130 years Columbia Economics has enjoyed an incredibly distinguished history featuring many famous graduate students and faculty members. The department’s graduate students included many Nobel Prize winners: Simon Kuznets (1971), Kenneth Arrow (1972), Milton Friedman (1976), Robert Fogel (1993), and William Vickrey (1996). Vickrey was both a graduate student and a faculty member, as was Jacob Mincer, known as the “father of modern labor economics”, and Lowell Harriss, who received his Columbia Ph.D. in 1940, remained on the faculty until his
NAVIN KARTIK AWARDED SLOAN RESEARCH FELLOWSHIP IN 2010

The Alfred P. Sloan Foundation announced Columbia Economics Professor Navin Kartik as a recipient of their research fellowship award for 2010. The award is given annually to 118 career scientists and scholars who demonstrate outstanding promise and potential to contribute substantially to their fields. Dr. Kartik will retain the fellowship for the 2010-2012 period.

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Letter from the Chair continued from page 2

retirement in 1981, and was a very active emeritus professor until his death this past year. Alan Greenspan was a Columbia graduate student. George Stigler was on the Columbia faculty from 1947-58, before he won the Nobel in 1982. Nobel winner Gary Becker (1992) was a faculty member for eleven years before going to the University of Chicago in 1968, and expectations were that faculty member Kelvin Lancaster very likely also would have won the Nobel had he lived just a little longer. And of course Columbia Economics even up to today counts many famous members on its faculty. The department has three living Nobel Prize winners in Robert Mundell (1999), Joseph Stiglitz (2001), and Edmund Phelps (2006), as well other faculty members who are giants on the world stage such as Jagdish Bhagwati and Jeffrey Sachs.

Despite its wonderful history and famous faculty, Columbia Economics declined in the 1990s both in reputation and the number of its faculty. Fifteen years ago, the department had fewer faculty members and more graduate students than today. The ratio undoubtedly put stress on the quality of the student experience, but fortunately the numbers have changed for the better. While the department produced 21 Ph.D.'s in academic year 1994-95, in the current year it sent 15 Ph.D. candidates to the job market, all of whom I am pleased to say received various good offers in academia, government, and business. And the number of Economics faculty is now about twice its 1990s low.

Over the past eight years under the leadership of President Lee Bollinger, Columbia University made big investments toward restoring the reputation and quality of its Economics Department and the Economics graduate program. The graduate program returned to where it belongs in the top ten, the size of the full-time-equivalent Economics faculty grew about forty percent, and now there is a core group of mid-career senior faculty thoroughly committed to the quality of the Ph.D. program. This increase in faculty enables the department to offer the full range of core and specialized field courses, which of course is necessary to compete for the best students with other top programs.

One of the important things top economics departments do is produce new economists. This year Columbia Economics hopes to admit to its graduate program twenty or so new students, even as it sends out its fifteen or so promising new Ph.D. economists into the world. These numbers vary from year to year, but this is a constant cycle of production by which Columbia Economics contributes to replenishing the species. Obviously, to attract the best graduate students coming in, and produce the best economists going out, the department needs to keep its graduate program on the quality frontier.

Yours truly,

Michael H. Riordan
LESSONS FROM THE CRISIS: WILLIAM C. DUDLEY


President Lee Bollinger introducing the speaker.

Professor David Weinstein welcomes the audience.

William Dudley
In close coordination with faculty in the Economics Department of Columbia University, the Program for Economic Research organized the Conference on Financial Frictions and Macroeconomic Modeling, held on February 19, 2010 at Faculty House on Columbia campus. The conference was organized with the aim of bringing together the leading academics in both macroeconomic theory and financial economics, to discuss alternative approaches to incorporating financial intermediation into dynamic macroeconomic models.

Columbia professor Michael Woodford began the discussion by describing how standard macroeconomic models of the last generation have, both for substantive and technical reasons, largely ignored the role of financial intermediation in the initiation and spread of economic shocks. Woodford emphasized the need to bring together macroeconomists and financial economists to benefit from each discipline’s strengths.

Several key topics emerged as recurrent points of interest at the conference. First, several scholars present examined the dynamics of fire sales of financial intermediaries and firms, and their relation to price volatility and excess savings, in work presented by Princeton professors Markus Brunnermeier and Yuly Sannikov.

Second, those present discussed in detail the role of central banks in the crisis, and examined the extraordinary measures taken by the Federal Reserve Bank of New York, Nicolae Gârleanu (Berkeley) and Lasse Pederson (NYU), who developed analytical models to test the effectiveness of the Federal Reserve’s Term Asset-Backed Securities Loan Facility (TALF), and presented model and survey evidence to suggest that TALF was quite effective at lowering haircuts in asset trading.

Lastly, issues of moral hazard and financial contagion were discussed in detail in the afternoon, before a panel discussion led by Michael Woodford, José Scheinkman (Princeton), and Franklin Allen (Wharton) [pictured, r to l], led to a highly spirited debate about the true causes of the current financial crisis, the historical parallels and anecdotal evidence of certain dynamics of the crisis, and the need for further exploration of the role of financial intermediaries in the real economy through macroeconomic modeling.

REMEMBERING COLUMBIA, CIRCA 1938

By C. Lowell Harris

College Walk was a public street when I began teaching at Columbia College in 1938. Security, day and night, was never a concern. Saturday classes were common. A good lunch at the Faculty Club cost 75 cents and a man’s haircut 54 cents. In social sciences and the humanities, nine or 10 hours teaching a week was the rule. The subway cost five cents.

Saturday afternoons in the autumn at Baker Field were a pleasure. Freshmen all took CCA and Humanities A (now Contemporary Civilization and Literature Humanities) and three other courses. The top students were as good as the best anytime, anywhere. But we had more than a few who would not meet today’s admission requirements.

It would be presumptuous to compare students then with their counterparts today. You have equipment for study and recreation that put you in a world very different from theirs. The vast expansion of knowledge has enlarged opportunity beyond measure. How do financial pressures compare? The dollar magnitudes you face far exceed those of 1938 (adjusting for general inflation), but the Great Depression was still pervasive. The early New Deal recovery turned into a deep, deeply discouraging, reversal in 1938, and the outlook was poor.

Nicholas Murray Butler was President. Frequently around 9 a.m. one would see him walking up the steps of Low Library. He spoke with beautiful fluency at the lighting of the Christmas tree and at Commencement.

In the sophomore year every student took, I believe, six field trips in and around New York City, chosen from a large list and integrated, more or less, into Contemporary Civilization. The area between today’s College Walk and Butler Library was a non-grass playing field, almost always in use when weather permitted, chiefly for touch football and softball. A few members of the faculty joined in the play.

College enrollment has doubled since 1938, and administrative staff has grown at a far higher rate. I cannot presume to compare the services to students today with those of 1938. I do remember well the dean standing behind his desk with the door open, facing the Hamilton Hall entrance, at various hours during the week. Anyone was welcome.

My interest in public affairs brought me into contact with students with similar interests. The most articulate were left-wing. A few were very “left,” and their words, printed and spoken, got public attention and were, I fear, widely assumed to represent the whole Columbia community. I enjoyed matching wits, but often had difficulty avoiding the loss of patience.

In 1993 we know far more about the evils of dictatorships than one could 55 years ago. There was then not only toleration of Communism but articulate support. Some on Morningside favored Franco over his opposition (which we now know to have been directed from Moscow). Mussolini’s Italy undoubtedly had supporters, but I remember no campus defense. There was certainly no good word for Hitler, but Stalin and Communism had their advocates. And Marxists, occasionally with missionary zeal, appeared frequently. A college group today would include what was missing then: persons who could and would speak intelligently for freedom, including the economics of free markets.

World War II was approaching. What were opinions on the campus? My memory is not reliable enough to warrant generalization about the relative importance of various sets of opinions. But after Hitler and Stalin made their pact in August 1939, the “left-wingers” repeatedly and vociferously opposed aid to Britain. Somewhere among my unorganized papers I have many of the handbills of that era. Their message, I believe, was not that Hitler deserved support but that Britain did not.

Classes had ended when the Nazis attacked the Soviets in June 1941. But we saw an immediate about-face here, as everywhere the Communists tried (and tried relentlessly) to influence opinion. I recall no polls of student attitudes about the war in Europe, but views probably ranged widely until Pearl Harbor.

From my first days at Columbia as a graduate student in 1935, I felt that there should somehow be more contact between students and teaching staff. I wondered in 1938 and later why students so rarely accepted my open invitation to meet in office hours to get acquainted—as distinguished from meetings to deal with specific problems. But if there is one thing that has remained the same at Columbia, it is the school’s fine students and faculty, persons with whom it has always been a privilege to associate.

C. Lowell Harris was a Professor Emeritus of Economics. A lively and ever-present figure in the Department, he passed away on December 19, 2009. This article originally ran in the Columbia Daily Spectator on March 22, 1993.
RECENT DISCUSSION PAPERS

The department sponsors a discussion papers series for faculty, co-authors, and visitors. Download the full text of these papers at: http://www.columbia.edu/cu/economics/

Can eliminating school fees in poor districts boost enrollment? Evidence from South Africa, 0910-06 — Evan Borkum

The charging of school user fees is a much-debated policy issue in developing countries. In this paper, I evaluate the impact of a South African fee elimination program that was targeted at the poorest two quintiles of schools based on a community poverty score. Fixed effects estimates find that the program increased enrollment by almost 2% in treated secondary schools, an increase concentrated in earlier secondary grades. There is substantial heterogeneity in the estimated secondary school effect: it is driven entirely by an increase of around 3.5% in the poorer of the two treated quintiles. Regression discontinuity estimates confirm that the relatively wealthy schools near the treatment cutoff did not experience any effects on enrollment. Overall, the abolition of fees seems to have been reasonably effective in increasing secondary school enrollment in particularly poor communities. This is despite the fact that the eliminated fees were relatively low, comprising only around 1.5% of annual household income (per child) in these communities.

The Long-Term Impact of Job Displacement in Germany During the 1982 Recession on Earnings, Income, and Employment, 0910-07 — Johannes F. Schmieder, Till von Wachter and Stefan Bender

The authors show that workers displaced from their stable jobs during mass layoffs in 1982 recession in Germany suffered permanent earnings losses of 10-15% lasting at least 15 years. These estimates are obtained using data and methodology comparable to similar studies for the United States. Exploiting advantages of the German data, the authors also show that while reduction and recovery in time worked plays a role in explaining earnings losses during the first ten years, the majority of the long-run loss is due to a decline in wages. The authors also show that even the generous German unemployment insurance system replaced only a small fraction of the total earnings loss. These findings suggest that job displacements can lead to large and lasting reductions in income even in labor markets with tighter social safety nets and lower earnings inequality.

The Effects of Unemployment Insurance on Labor Supply and Search Outcomes: Regression Discontinuity Estimates from Germany, 0910-08 — Johannes F. Schmieder, Till von Wachter and Stefan Bender

This paper evaluates the impact of large changes in the duration of unemployment insurance (UI) in different economic environments on labor supply, job matches, and search behavior. The authors show that differences in eligibility thresholds by exact age give rise to a valid regression discontinuity design, which the authors implement using administrative data on the universe of new unemployment spells and career histories over twenty years from Germany. The authors find that increases in UI have small to modest effects on non-employment rates, a result robust over the business cycle and across demographic groups. Thus, large expansions in UI during recessions do not lead to lasting increases in unemployment duration, nor can they explain differences in unemployment durations across countries. The authors do not find any effect of increased UI duration on average job quality, but show that the mean potentially confounds differential effects on job search across the distribution of UI duration. However, it appears that for a majority of UI beneficiaries increases in UI duration may lead to small declines in wages.

Simple Analytics of the Government Expenditure Multiplier, 0910-09 — Michael Woodford

This paper explains the key factors that determine the effectiveness of government purchases as a means of increasing output and employment in New Keynesian models, through a series of simple examples that can be solved analytically. Delays in the adjustment of prices or wages can allow for larger multipliers than exist in the case of fully flexible prices and wages; in a fairly broad class of simple models, the multiplier is 1 in the case that the monetary authority maintains a constant path for real interest rates despite the increase in government spending. The multiplier can be considerably smaller, however, if the monetary authority raises real interest rates in response to increases in inflation or real activity resulting from the fiscal stimulus. A large multiplier is especially plausible when monetary policy is constrained by the zero lower bound on nominal interest rates; in this case real interest rates fall as a result of the inflationary effect of the stimulus, and a multiplier well in excess of 1 is possible. In such a case, welfare is maximized by expanding government purchases to at least partially fill the output gap that would otherwise exist owing to the central bank’s inability to cut interest rates. However, it is important in such a case that neither the increased government purchases nor the increased taxes required to finance them be expected to persist beyond the period over which monetary policy is constrained by the zero lower bound.

Correlated Disturbances and U.S. Business Cycles, 0910-10 — Vasco Cúrdia (Federal Reserve Bank of New York) and Ricardo Reis February 2010

The dynamic stochastic general equilibrium (DSGE) models that are used to study business cycles typically assume that exogenous disturbances are independent autoregressions of order one. This paper relaxes this tight and arbitrary restriction, by allowing for disturbances that have a rich contemporaneous and dynamic correlation structure. The authors’ first contribution is a new Bayesian econometric method that uses conjugate conditionals to make the estimation of DSGE models continued on page 8
Recent Discussion Papers continued from page 7

with correlated disturbances feasible and quick. Their second contribution is a re-
examination of U.S. business cycles. The authors find that allowing for correlated
disturbances resolves some conflicts between estimates from DSGE models and
those from vector autoregressions, and that a key missing ingredient in the models is
countercyclical scalar policy. According to their estimates, government spending
and technology disturbances play a larger role in the business cycle than previ-
ously ascribed, while changes in mark-ups are less important.

Imperfect Information and Aggregate
Supply, 0910-11
— N. Gregory Mankiw (Harvard University) and Ricardo Reis

This paper surveys the research in the past decade on imperfect information
models of aggregate supply and the Phillips curve. This new work has emphasized
that information is dispersed and disseminates slowly across a population of
agents who strategically interact in their use of information. The authors discuss
the foundations on which models of aggregate supply rest, as well as the micro
foundations for two classes of imperfect information models: models with partial
information, where agents observe economic conditions with noise, and models
with delayed information, where they observe economic conditions with a lag. The
authors derive the implications of these two classes of models for: the existence
of a nonvertical aggregate supply, the persistence of the real effects of monetary
policy, the difference between idiosyncratic and aggregate shocks, the dynamics
of disagreement, and the role of transparency in policy. Finally, the authors present
some of the topics on the research frontier in this area.

Interpreting the Unconventional U.S.
Monetary Policy of 2007-09, 0910-12
— Ricardo Reis

This paper reviews the unconventional U.S. monetary policy responses to the
financial and real crises of 2007-09, divided into three groups: interest rate policy,
quantitative policy, and credit policy. To interpret interest rate policy, it compares
the Federal Reserve’s actions with the literature on optimal policy in a liquidity
trap. This comparison suggests that policy has been in the direction indicated by
theory, but it has not gone far enough. To interpret quantitative policy, the paper re-
views the determination of inflation under different policy regimes. The main danger
for inflation from current actions is that the Federal Reserve may lose its policy
independence; a beneficial side effect of the crisis is that the Friedman rule can be
implemented by paying interest on reserves. To interpret credit policy, the pa-
per presents a new model of capital market imperfections with different financial
institutions and a role for securitization, leveraging, and mark-to-market account-
ing. The model suggests that providing credit to traders in securities markets is a
more effective response than extending credit to the originators of loans.

NBER WORKING PAPERS

“Home Computer Use and the Devel-
opment of Human Capital,” by Ofer
Malamud and Cristian Pop-Eleches.
NBER Working Paper #15814

“Human Capital Development Before
Age Five,” by Douglas Almond and Janet
Currie. NBER Working Paper #15827

“Public vs. Private Provision of Charity
Care? Evidence from the Expiration of
Hill-Burton Requirements in Florida,”
by Douglas Almond, Janet Currie and
Emilia Simeonova. NBER Working Paper
#15798

“Let them Have Choice: Gains from
Shifting Away from Employer-Spon-
sored Health Insurance and Toward
an Individual Exchange,” by Leemore
Dafny, Katherine Ho and Mauricio Varela.
NBER Working Paper #15687

“Interpreting the Unconventional U.S.
Monetary Policy of 2007-09,” by Ricardo
Reis. NBER Working Paper # 15662

“Correlated Disturbances and U.S.
Business Cycles,” by Vasco Cúrdia and
Ricardo Reis. NBER Working Paper
#15774

“Imperfect Information and Aggregate
Supply,” by N. Gregory Mankiw and
Ricardo Reis. NBER Working Paper
#15773

“Economics of estate taxation: a brief
review of theory and evidence,”
by Wojciech Kopczuk. NBER Working
Paper #15741

“African Poverty is Falling...Much Faster
than You Think!” by Xavier Sala-i-Martin
and Maxim Pinkovskiy. NBER Working
Paper #15775

“Can Mentoring Help Female Assis-
tant Professors? Interim Results from a
Randomized Trial,” by Francine D. Blau,
Janet M. Currie, Rachel T.A. Croson and
Donna K. Ginther. NBER Working
Paper #15707

“Equilibrium Fictions: A Cognitive
Approach to Societal Rigidity,” by Karla
Hoff and Joseph E. Stiglitz. NBER Working
Paper #15776

“Risk and Global Economic Architec-
ture: Why Full Financial Integration
May Be Undesirable,” by Joseph E.
Stiglitz. NBER Working Paper #15718

“Globalization, Markups, and the U.S.
Price Level,” by Robert C. Feenstra and
David E. Weinstein. NBER Working
Paper #15749

“Optimal Target Criteria for Stabiliza-
tion Policy,” by Marc P. Giannoni and
Michael Woodford. NBER Working
Paper #15757
MONETARY POLICY DURING THE CRISIS
by Ricardo Reis

The recent crisis has changed both the U.S. economy and the study of economics. One of the areas in which this change occurred most rapidly was in monetary policy; already by the end of 2008 the Federal Reserve System looked nothing like what it had ever been over the past near-century of its existence.

So many changes have occurred in this short time span that a simple description requires first organizing them in meaningful categories. In my recent research I have proposed three main categories within which to interpret the recent policy changes, and through these I have tried to predict their implications for both the immediate response to the crisis as well as to the risks and opportunities in the future.

Interest-rate policy
Interest-rate policy refers to the interest rates that the Federal Reserve sets directly or controls very closely. The most famous is the Federal Funds rate, and it has been set between 0% and 0.25% since December of 2008, the lowest value since data on this interest rate were first consistently published starting in 1982.

While zero is the lowest that this nominal interest rate can be (approximately), there is a general consensus that this may not be low enough. This is based on two premises. First, Fisher’s law states that nominal interest rates equal real interest rates plus expected inflation. Second, there is a widely-shared impression that the economy needs significantly negative real interest rates to boost consumption and investment, but inflation expectations are low and stable. Combining the two implies that even with nominal interest rates at zero, the current real interest rates may actually be too high.

A few years back, when Japan faced this problem, Columbia’s Michael Woodford together with Gauti Eggertsson, noted that the problem could be solved by committing to keep interest rates at zero for a prolonged period of time, potentially even after the crisis is over. There are two equivalent ways to see how this would work. The first, going back to Fisher, is to note that a commitment to persistently low nominal interest rates is a commitment to higher inflation than average in the future. Higher inflation expectations lower real interest rates as desired. The second is to realize that long-term interest rates are a weighted average of short-term interest rates, so that the commitment lowers the long-term nominal and real interest rates.

The Fed has only partly followed this advice. On the one hand, it has announced it will keep interest rates at zero for an extended period. On the other hand, it has not suggested it would tolerate higher inflation than average. Looking forward, this problem could be avoided in the future if the Fed were to commit to a price-level target. If that were the case, then periods of unexpected low inflation like the current one would automatically imply higher than-average expected future inflation to get back on target. But the Fed does not seem close to embracing this institutional reform.

The other significant change in interest-rate policy is that the Fed can now pay interest on the reserves that banks hold in its vault. While that rate has been close to zero thus far, this opens possibilities for the future that I will discuss below.

Quantitative policy
Quantitative policy refers to an increase in the size of the Fed’s balance sheet. Focusing on the (simpler) liabilities side, these liabilities are today, as in the past, dominated by currency in circulation plus bank reserves. This sum, the monetary base, went from being 6% of GDP in December of 2007, to 14% of GDP two years later. This increase is not just significant, it is much larger than anything in the past 50 years: in nominal terms, the percentage increase in the monetary base is almost six times larger than the maximum observed since 1959.

A powerful insight that undergraduates in economics learn is that, typically, an increase in the growth rate of the monetary base leads to an increase in the amount of money in circulation (currency plus demand deposits, also known as M1), and this leads to an increase in inflation. Given the numbers above, this may lead you to expect hyper-inflation soon. It turns out that this is wrong. With zero nominal interest rates, both of these links are broken.

On the first link, with zero nominal interest rates, banks are indifferent between lending or keeping reserves. Because loans by banks lead to deposits in other banks (the money multiplier), when banks choose to keep excess reserves, they are effectively breaking the link between the monetary base and M1. In fact, in the past two years, M1 only increased by 23% unlike the 142% increase in the monetary base, and not out of line with other episodes in the post-war. On the second link, when nominal interest rates are zero, people no longer rush to exchange new money for goods, pushing inflation up, since the opportunity cost of just keeping that money in your pocket is zero.

continued on page 10
Rather than posing a danger for inflation, the increase in the amount of money may actually be one of the enduring positive changes triggered by the crisis. Now that money takes the form of digits in electronic accounts, it costs society nothing to create it. If the liquidity services it provides are useful, then it is desirable to flood the economy with dollars. While this happens naturally when nominal interest rates hit zero, one way to maintain it is to keep the interest on reserves equal (or slightly below) to the Federal Funds rate, since this ensures that banks are holding as many reserves as they wish. The amount of money can then fluctuate as people want to hold more or less of it: as long as it is not costly to hold money, any amount of money in circulation is just fine.

Credit policy

Credit policy refers to the composition of the assets in the Fed’s balance sheet. Typically, the Fed holds mostly U.S. Treasuries, plus small amounts of gold and foreign currency. The Fed therefore carries almost no risk of default in its assets and only buys and sells them from a very small number of financial institutions. The Fed’s balance sheet has traditionally taken less than a page, with few changes from year to year.

Today, the Fed’s balance sheet takes many pages and has been changing so quickly that by the time this note comes to print, it will likely already be outdated. In response to the crisis, the Fed started holding three new types of assets.

The first type is a series of liquidity programs by which the Fed, for the first time ever, lent money directly to banks, primary dealers, money market funds, and foreign central banks. The motivation for these loans was the funding problems that these financial institutions felt in the past two years, jeopardizing the functioning of markets where they are central. Most of the loans were relatively short-term, against very good collateral, and at relatively onerous terms. By now, most of them have expired.

The second type of assets was more unusual, as it involved the Fed lending to non-financial companies against some particular types of collateral — student, auto, credit card, and small business loans, and some commercial bonds. The motivation was again to promote financial stability. While this is not an explicit objective of the Fed, there is a widely shared presumption (justified by the Great Depression) that the collapse of financial markets can turn a recession into a depression. The amounts involved in these operations were very large just one year ago, but they are quickly on their way down.

Even after they disappear though, they leave a lurking danger for the future. In some of these actions the Fed has ventured into domains that were previously seen as the realm of Congress and the Treasury. The independence of central banks from these other branches of the government in setting interest-rate policy has been partly responsible for the success in keeping inflation low in the past 20 years. But once the Fed starts intervening in many markets, other branches of the government will find it legitimate to ask how and why some were chosen and others not. In my own work, I have developed a theory to determine where should liquidity be injected during a financial crisis, but this is still a mostly open question.

The third type of change was the purchase of assets directly. The Fed bought mortgage-back securities (MBS), with the goal of providing some liquidity to that market and preventing an increase in mortgage rates, and it purchased assets from Bear Sterns and AIG as part of the government-led bail-out of these companies.

While public attention has focused more on the bail-out, the extents involved are small relative to the more than $1,000 billion that the Fed plans currently holds of MBSs. (This amount is larger than the total size of the Fed’s balance sheet before the crisis.) One risk is that the price of these securities falls significantly, as it sometimes has in the past. The Fed could lose considerable sums in these investments, and while technically, the Fed cannot go bankrupt, it may have funding needs that interfere with its goals for monetary policy. Another risk, perhaps more subtle, but equally relevant, is that the Fed has become such a large player in this market, that political pressure on how it manages its portfolio is almost inevitable. The mortgage market has been one of the most politicized in the United States, and now that the Fed holds approximately 10% of outstanding securities, the temptation for political actors to pressure the Fed will be irresistible.

A final risk from these credit policies is that, now that the Fed has shown that sometimes it may intervene directly in financial markets, it has opened a new possible strategy to investors in these markets: lobby the Fed directly or via Congress to cover potential losses. While the Fed has been firm in rejecting this possibility, only the future will tell.

Conclusion

Most of the changes of the past two years were not planned, nor decided after years of studies, debates or conferences. They were the necessary, perhaps the only possible, reaction to the real and financial crisis of the past two years. In this note, I have partly described how modern monetary theory can explain what has happened and suggest its likely consequence, while also partly noting some of the areas where our knowledge is scarce. Many of the faculty members and thesis writers in macroeconomics at Columbia are actively working on this broad topic, and we look forward to the rich contributions Columbia affiliates will offer to this field of inquiry in the years to come.

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GULATI’S TWO WORLDS – THE CONVERGENCE OF ECONOMICS AND SOCCER

Dr. Sunil Gulati, Lecturer in Discipline at Columbia University, holds an outside position quite unusual to his profession. While many other economics professors can be found primarily conducting empirical research, expanding the bounds of theoretical economics or consulting central banks and NGOs, Professor Gulati serves as president of the United States Soccer Federation.

Gulati is widely considered to have been a driving force behind the scenes in broadening the appeal of soccer in the United States over the past three decades. Among other trends for which he receives at least partial credit are the explosion of youth soccer, the U.S.-hosted 1994 World Cup, and the strong show of the U.S. team in World Cup events in the ’90s and into the first decade of this century.

This would seem to be a pursuit largely separated from Professor Gulati’s duties teaching development economics at Columbia. Yet Gulati sees a deep connection between his two interests. Regarding his diligent work to expand the popularity of the game in the United States, he considers the challenge to have both historical and economic roots that place the United States in a unique category among other nations. “The roots and spread of the sport of soccer across the globe largely find their genesis in England and their colonial reach in the late nineteenth and early twentieth century,” he says. “While the game crossed the Atlantic within minority populations of immigrants in small pockets in the United States, it failed to expand significantly beyond those areas while other sports gained prominence and received financial as well as other resources.”

Audiences for professional soccer may still be expanding in the United States, but the sport has been established as a major activity with global reach for some time – with corresponding economic significance. This is especially pertinent in 2010, when the FIFA World Cup will be hosted by South Africa, the first time it has been hosted on the African continent. “History suggests that hosting the World Cup and other major events delivers an economic impact in the years leading up to the event and throughout the competition,” he says. “The question that always needs to be monitored is whether that impact is temporary or leads to a lasting legacy of growth for the sport as well as the local economy. It is certainly the hope of FIFA that the 2010 World Cup will bring greater investment opportunities for South Africa. It’s also the case, for all such events, that public expenditures have to be weighed against potential and realized benefits. That’s a tougher hurdle to clear. For South Africa, where an important part of the story is one of ‘brand building,’ that cost-benefit analysis will be trickier.”

And what of the broader social and cultural implications of hosting the 2010 World Cup in South Africa, and more generally speaking in Africa, for the first time in history? Gulati’s position is that FIFA’s commitment demonstrates its belief that South Africa is ready and able to host such a large tournament. “It also delivers a vote of confidence to the continent and sends a message to the countries in Africa that the world is prepared to see them play a bigger role in the global community in the twenty-first century,” he says. “And it represents a desire by the FIFA to make sure that the world’s game is truly shared by the entire world.”
Making Innovative Use of Historical Data – Examining Exogenous Shock to the British Economy During the U.S. Civil War

by William Walker Hanlon

Hanlon, a Ph.D. candidate, describes his most recent research, for which he has won numerous awards and grants including a Wuelle Award, a National Science Foundation Dissertation Improvement Award, and an Economic History Association Exploratory Data and Travel Grant.

For two months this spring I have been in England gathering the data necessary for my research project, entitled “Industry Clusters, Trade, and Growth, With Evidence from an Exogenous Shock in 19th Century England,” and I will likely return for another month this summer. This project uses a large exogenous shock to the economy of England in the nineteenth century to investigate how trade shocks to one industry can affect long-run growth in other industries. Alfred Marshall and others have suggested that firms may benefit from knowledge spillovers generated by other firms. If spillovers between firms in different industries exist, then this implies that trade shocks to one industry may affect productivity growth in other industries.

To investigate this effect, I consider a large exogenous shock to the English economy generated by the U.S. Civil War, and in particular, the blockade of Southern ports by the Union Navy. This blockade virtually halted shipments of raw cotton from the southern U.S., the main source of raw cotton to England’s enormous cotton textile industry. Nowhere was this effect more important than in Lancashire County, where most of England’s great cotton textile mills were concentrated. The result of this shock was the Lancashire Cotton Famine.

Because the shock appears to have only directly affected the cotton textile industry, observing the subsequent effects on other industries allows us to learn about how shocks are transmitted between industries. These subsequent effects should be strongest in Lancashire County, where England’s cotton textile industry was concentrated, so I will compare outcomes in Lancashire to two of England’s other leading industrial districts, London and Yorkshire.

Data on industry employment and patent applications, running from the 1850s to as late as 1901, will be used to measure the effects of the shock on each industry. I will then compare these effects to four measure that are commonly used to approximate the pattern of spillovers between industries; input-output flows between industries, the geographic coagglomeration of industries, patents that span multiple industries, and patent inventors who work in multiple industries.

Three features differentiate my study from existing work on this topic. First, I use a large exogenous industry-specific shock to help me identify the connections between industries. Second, I am able to look over a period of several decades, much longer than previous work. Third, I consider several different measures of the pattern of spillovers between industries.

A rich set of data is available for this time period, but because the data are found only in the old census and patent reports, little use has previously been made of them. As part of my project, I have digitized over 2000 pages of data on employment, occupations, and patent applications. Most of the data has come from the British Library, the London School of Economics Library, Oxford University’s Bodleian Library, and the National Archives. The project is possible thanks to funding from the Wuelle Award from the Columbia Economics Department, as well as a National Science Foundation Dissertation Improvement grant and support from the Economic History Association. Once complete, these data will provide more detailed view of England’s economy during this period than was previously available.

In related theoretical work, I consider the relationship between trade and growth in economies characterized by spillovers between industries, and in particular, by clusters of industries with significant mutual spillovers. Previous theoretical work on this topic suggested that trade increases growth in some countries while decreasing it in others. In contrast, my theory suggests that trade can increase growth in all trading economies, if it acts to strengthen existing industry clusters, but also that trade can reduce growth in all trading economies, if it acts to break apart industry clusters. The implication for trade policy is that countries should consider the set of industries in their economy, and how these industries are related, when choosing trade policies.
**NEWS FROM THE GRADUATE PROGRAM**

In November 2009, Dmitriy Sergeyev was announced as the recipient of the first annual Harriss Prize, awarded for best paper by a second-year Ph.D. student, in honor of Professor C. Lowell Harriss. Sergeyev’s paper, entitled “Oil shocks and zero interest rates,” tests the assertion made by Eggertsson (2008) that, in an economy facing the zero interest rate bound, negative shocks to aggregate supply can be expansionary. Sergeyev’s paper makes creative use of the similarity between the oil price shocks that he considers, and the proportional tax shocks considered by Eggertson, to show that in fact a decrease in oil prices can lead to decreases in marginal costs. Thus, he finds that as firms start to decrease their prices, this activity results in deflationary pressure which in a zero-bound situation necessitates higher real interest rates, and thus reduces output.

Two runner-up prizes were also awarded. One went to Sarena Goodman and Lesley Turner (jointly) for their paper, “Group incentives for teachers: The impact of the New York City school-wide bonus program on educational outcomes.” The other runner-up prize went to Anukriti for her paper “Effects of increasing sex ratios: Evidence from India.”

Jae Bin Ahn, a fifth year Ph.D student, received a research grant from the Jerome A. Chazen Institute of International Business, and research support from the Center for International Business Education and Research for a research proposal, “The Great Trade Collapse and Trade Finance Premium.” This research plans to be the first study that provides a theoretical foundation of the role of trade finance in explaining observed excess sensitivity of trade over business cycles. The model embodies the endogenous fluctuation of trade finance premium that affects firms’ exporting activity via marginal cost channel. Countercyclical trade finance premium is predicted to generate 3-5% larger drops in export relative to domestic sales under plausible settings.

Jae Bin also presented his paper “The Role of Intermediaries in Facilitating Trade” co-authored with Amit Khedwal and Shang-Jin Wei (both at Columbia Business School) at the NBER China Working Group Meeting on October 17, 2009. In this paper, using a database that records the census of firm-level trade by Chinese firms, the authors show that intermediaries play an important role in facilitating trade across borders. Based on the model that predicts intermediaries play a relatively more important role in markets that are more difficult to penetrate, the authors provide empirical confirmation for this prediction and generate new facts regarding the activity of intermediaries.

**RECENT FACULTY BOOKS**

**Freefall: America, Free Markets, and the Sinking of the World Economy**

By Joseph E. Stiglitz (W. W. Norton & Company, January, 2010)

*Freefall* delivers an incisive look at the global economic crisis, our flawed response, and the implications for the world’s future prosperity. Ranging across a host of topics tied to the crisis, the book lays out a broad examination of the roots of the crisis. It then proceeds to argue convincingly for a restoration of balance between markets and governments, and the means through which we can achieve a prosperous economy and moral society for the future.


Jagdish Bhagwati, Alan S. Blinder, and Benjamin M. Friedman (MIT Press, September 2009)

With the emergence of China, India and other developing nations, the labor supply has doubled in size in our newly integrated economy. Bhagwati explores free trade and globalization, while Blinder addresses the significance of the labor market adjustment caused by trade. The two authors then respond to the specific issues raised by their areas of inquiry. Overall, this excellent volume provides a significant contribution to the debate on outsourcing.

**Finance & Sustainable Development: Opposition or Partnership?**

Pierre-André Chiappori (Editor), Jean-michel Lasry (Editor), Damien Fessler (Editor) (Brookings Institution Press, April 2009)

Too often, environmental concerns are considered to be at odds with financial and economic concerns. The authors of this volume attempt to enact a reconciliation between the two fields, a task which they consider imperative to the future of economic growth. This book aims to provide a better understanding of long-term issues that should be considered when confronting shorter term issues, and emphasizes the growing importance of sustainable development in the discourse on broader macroeconomic topics.
FEBRUARY 19, 2010
*Conference on Financial Frictions and Macroeconomic Modeling*
Organized by Ricardo Reis and Michael Woodford

MARCH 2, 2010
*Health Care Reform in the U.S.: Where To From Here?*
Panel Discussion with Janet Currie and Jonathan Gruber (MIT).
Faculty House, Presidential Room, 6 p.m.

APRIL 12, 2010
Co-sponsored by the Committee on Global Thought and the World Leaders Forum
Low Memorial Library, Rotunda, 6 p.m. – 7:30 p.m.

APRIL 28, 2010
*Address by Vikram Pandit, Chief Executive Officer, Citi.*
Low Memorial Library, Rotunda, 6 p.m. – 7 p.m.
Co-sponsored by the World Leaders Forum