Levy Economics Institute of Bard College

Summary

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DIMITRI B. PAPADIMITRIOU, President and Program Director
JAMES K. GALBRAITH, Senior Scholar
JAN KREGEL, Senior Scholar
L. RANDALL WRAY, Senior Scholar
GREG HANNSGEN, Research Scholar
MICHALIS NIKIFOROS, Research Scholar
GENNARO ZEZZA, Research Scholar
GIORGOS ARGITIS, Research Associate
MARSHALL AUERBACK, Research Associate
CLAUDIO H. DOS SANTOS, Research Associate
JESUS FELIPE, Research Associate
MICHAEL HUDSON, Research Associate
ROBERT W. PARENTEAU, Research Associate
C. J. POLYCHRONIOU, Research Associate and Policy Fellow

Monetary Policy and Financial Structure

JAN KREGEL, Senior Scholar and Program Director
DIMITRI B. PAPADIMITRIOU, President
L. RANDALL WRAY, Senior Scholar
MARSHALL AUERBACK, Research Associate
JÖRG BIBOW, Research Associate
STEVEN M. FAZZARI, Research Associate
JESUS FELIPE, Research Associate
MICHAEL HUDSON, Research Associate
ROBERT W. PARENTEAU, Research Associate
SUNANDA SEN, Research Associate
WILLEM THORBECKE, Research Associate
ÉRIC TYMOIGNE, Research Associate

The Distribution of Income and Wealth

JAMES K. GALBRAITH, Senior Scholar
EDWARD N. WOLFF, Senior Scholar
DIMITRI B. PAPADIMITRIOU, President
AJIT ZACHARIAS, Senior Scholar and Program Director
SELÇUK EREN, Research Scholar
THOMAS MASTERSON, Research Scholar and Director of Applied Micromodeling
ROBERT HAVEMAN, Research Associate
CHRISTOPHER JENCKS, Research Associate
SUSAN E. MAYER, Research Associate
BRANKO MILANOVIC, Research Associate
JACQUES SILBER, Research Associate
BARBARA WOLFE, Research Associate

Gender Equality and the Economy

RANIA ANTONOPOULOS, Senior Scholar and Program Director
DIMITRI B. PAPADIMITRIOU, President
TAMAR KHITARISHVILI, Research Scholar
KIJONG KIM, Research Scholar
NILÜFER ÇAĞATAY, Research Associate
LEKHA S. CHAKRABORTY, Research Associate
PINAKI CHAKRABORTY, Research Associate
VALERIA ESQUIVEL, Research Associate
INDIRA HIRWAY, Research Associate
EBRU KONGAR, Research Associate
EMEL MEMIS, Research Associate
IMRAAN VALODIA, Research Associate
TAUN TOAY, Research Analyst

Employment Policy and Labor Markets

DIMITRI B. PAPADIMITRIOU, President
JAMES K. GALBRAITH, Senior Scholar
JAN KREGEL, Senior Scholar
L. RANDALL WRAY, Senior Scholar
RANIA ANTONOPOULOS, Senior Scholar
GIORGOS ARGITIS, Research Associate
MARSHALL AUERBACK, Research Associate
VALERIA ESQUIVEL, Research Associate
MATHEW FORSTATER, Research Associate
FADHEL KABOUB, Research Associate
PAVLINA R. TCHERNEVA, Research Associate

Immigration, Ethnicity, and Social Structure

JOEL PERLMANN, Senior Scholar and Program Director
YUVAL ELMELECH, Research Associate
YINON COHEN, Research Associate
SERGIO DELLAPERGOLA, Research Associate
SANJAYA DESILVA, Research Associate
BARBARA S. OKUN, Research Associate
SEYMOUR SPILERMAN, Research Associate

Economic Policy for the 21st Century

JAMES K. GALBRAITH, Senior Scholar
DIMITRI B. PAPADIMITRIOU, President
RANIA ANTONOPOULOS, Senior Scholar
TAMAR KHITARISHVILI, Research Scholar
PHILIP ARESTIS, Research Associate
GIORGOS ARGITIS, Research Associate
MARSHALL AUERBACK, Research Associate
WILLIAM J. BAUMOL, Research Associate
JÖRG BIBOW, Research Associate
LEKHA S. CHAKRABORTY, Research Associate
PINAKI CHAKRABORTY, Research Associate
SANJAYA DESILVA, Research Associate
STEVEN M. FAZZARI, Research Associate
JESUS FELIPE, Research Associate
GIUSEPPE FONTANA, Research Associate
MATHEW FORSTATER, Research Associate
GREG HANNSGEN, Research Scholar
MICHAEL HUDSON, Research Associate
THOMAS KARIER, Research Associate
STEPHANIE A. KELTON, Research Associate
WILLIAM H. LAZONICK, Research Associate
MARY O'SULLIVAN, Research Associate
ROBERT W. PARENTEAU, Research Associate
C. J. POLYCHRONIOU, Research Associate and Policy Fellow
JAMES B. REBITZER, Research Associate
MALCOLM SAWYER, Research Associate
MARTIN SHUBIK, Research Associate
MICHAEL STEPHENS, Senior Editor and Policy Fellow
WILLEM THORBECKE, Research Associate
ÉRIC TYMOIGNE, Research Associate
L. RANDALL WRAY, Senior Scholar
AJIT ZACHARIAS, Senior Scholar

Equality of Educational Opportunity in the 21st Century

ELLEN CONDLIFFE LAGEMANN, Senior Scholar and Program Director
DANIEL KARPOWITZ, Research Associate

The Levy Economics Institute of Bard College, founded in 1986, is a nonprofit, nonpartisan research organization devoted to public service. It depends on the financial support from individuals, corporations, and private foundations to carry out its scholarship and economic research generating viable, effective public policy responses to important economic issues.

The *Summary* is published three times a year (Winter, Spring, and Fall) and is intended to keep the academic community informed about the Institute's research. To accomplish this goal, it contains summaries of recent research publications and reports on other activities.

Editor: Jonathan Hubschman Text Editor: Barbara Ross

The *Summary* and other Levy Institute publications are available on the Institute's website.
To comment on or inquire about publications, research, and events, contact the Institute online at www.levyinstitute.org.

Inquiries regarding contributions could be sent to Dimitri B. Papadimitriou, President, Levy Economics Institute of Bard College, Blithewood, Annandale-on-Hudson, NY 12504-5000
Phone: 845-758-7700, 202-887-8464 (in Washington, D.C.) Fax: 845-758-1149 E-mail: info@levy.org Website: www.levyinstitute.org

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LETTER FROM THE PRESIDENT

To our readers:

This issue begins with a summary of the proceedings of the Hyman P. Minsky Conference on Financial Instability, held in Berlin, Germany, in November 2012—part of the Levy Institute's continuing commitment to extending Minsky's work through scholarly research and engaging the economic policy community on timely issues. Organized by the Levy Economics Institute and ECLA of Bard with support from the Ford Foundation, The German Marshall Fund of the United States, and Deutsche Bank AG, the conference focused on the causes of financial instability and its implications for the global economy. Leaders from business, government, and academia addressed some of the main issues now confronting economic policymakers on both sides of the Atlantic, including the challenge to global growth resulting from the eurozone debt crisis; the impact of the credit crunch on economic and financial markets; the larger implications of government deficits and debt crises for US, European, and Asian economic policy; and central bank independence and financial reform.

Under the State of the US and World Economies program, Research Associate and Policy Fellow C. J. Polychroniou offers a policy note in which he recounts the origins of, responses to, and current conditions of the Greek economic crisis. He concludes that the European Union's response to the Greek crisis has been needlessly punitive and damaging.

In the first of three working papers under this program, Eckhard Hein, Berlin School of Economics and Law, presents his analysis of the current eurozone crisis as yet another episode of finance-dominated capitalism. He argues for policies to combat the current crisis, foster economic growth, and ameliorate development disparities across the eurozone. Alberto Botta, Mediterranean University of Reggio Calabria, analyzes the institutional structure of the eurozone and the role it plays in the debt crisis in the peripheral countries of the eurozone. He finds that diverging claims and conflicting interests are obstacles to creating an integrated federal entity that would implement fiscal policies and act as a lender of last resort. Research Associate Jörg Bibow argues that the European Central Bank (ECB) must be understood within the context of German history and intellectual traditions in the postwar era. He identifies a number of factors that threaten the ECB and, ultimately, the euro.

Three working papers are included under the Monetary Policy and Financial Structure program. Turning to the US economy, Research Scholar Greg Hannsgen and I present a model of what we term the "fiscal trap," and argue that spending cuts slated for implementation in early 2013 are precisely the wrong policy at the wrong time. Instead, we favor policies that will restore US economic growth. Bernard Shull, Hunter College, CUNY, and National Economic Research Associates, examines the impacts of the Dodd-Frank Act on the authority and autonomy of the Federal Reserve. He finds that while the new constraints imposed by Dodd-Frank are unlikely to constrain the Fed, its expanded monetary powers warrant reexamination. Senior Scholar L. Randall Wray outlines a new meme for money in his working paper. He observes that progressives are hobbled by the conservative meme for money and must construct a new meme consistent with their worldview.

The Distribution of Wealth and Income program includes a new public policy brief by Senior Scholars Rania Antonopoulos and Ajit Zacharias and Research Scholar Thomas Masterson. The brief presents the results of the application of the Levy Institute Measure of Income and Time Poverty in Argentina, Chile, and Mexico. Their results show that in many instances official poverty rates do not adequately identify or describe populations experiencing deprivation. The brief contains policy recommendations to improve the measurement and policy responses used to combat poverty.

The Employment Policy and Labor Markets program contains two new publications. In an interim Research Project Report, Research Scholar Gennaro Zezza, Vincent Duwicquet, Centre d'Economie de l'Université Paris Nord, and I examine the evolution of the major macroeconomic variables in the Greek economy, with emphasis on the historical sources of growth prior to and during the euro era. The report takes issue with a recent European Commission report that forecasts renewed economic growth in Greece based on exports and investment. We call for such measures as ending the austerity policies and implementing public sector–led job creation programs. In a working paper, Research Associate Pavlina R. Tcherneva examines the effectiveness of Argentina's Plan Jefes y Jefas de Hogares program. She presents the formal elements of ELR programs, evaluates Argentina's program, and concludes

that, while it was of relatively brief duration, the program provided economic benefits while serving as a vehicle for social transformation, particularly among Argentina's poorest women.

The Economic Polcy for the 21st Century program includes four new working papers. Egmont Kakarot- Handtke, University of Stuttgart, presents arguments to improve the use of the accounting approach in economic analysis. He presents a formalized theory through which he examines such topics as the investment-savings identity, a construct he finds to be spurious. In another working paper, Alessandro Caiani and Antoine Godin, University of Pavia, and Stefano Lucarelli, University of Bergamo, investigate the connection between innovation and firm financing. Using a stock-flow consistent model to frame their analysis, they show that clusters of radical innovation may contribute to instability in the financial and real sectors of the economy. In two working papers, Research Scholar Michalis Nikiforos examines capacity utilization and addresses the ongoing debate regarding the Kaleckian growth and distribution model. In the first paper, Nikiforos looks at the factors that drive capacity utilization at the level of the firm. He finds that the rate of utilization is not determined by exogenous structural characteristics; rather, in the presence of increasing demand for a firm's products and increasing production with falling returns to scale, the cost-minimizing firm will shift its capacity utilization. In a second paper, Nikiforos addresses a central criticism of the Kaleckian model. The paper includes a brief review of the literature, a discussion of data used to evaluate utilization models, presentation of micro and macro adjustment mechanism, and empirical analysis. Nikiforos offers evidence that the Kaleckian model obtains in both the long and the short run.

I hope you find our activities and papers of interest, and as always, I welcome your comments.

Dimitri B. Papadimitriou, *President*

Program: The State of the US and World Economies

Hyman P. Minsky Conference on Financial Instability

Debt, Deficits, and Unstable Markets

Organized by the Levy Economics Institute and ECLA of Bard with support from the Ford Foundation, The German Marshall Fund of the United States, and Deutsche Bank AG

Berlin, Germany
November 26–27, 2012

This two-day conference in central Berlin focused on the causes of financial instability and its implications for the global economy. Leaders from business, government, and academia addressed some of the main issues now confronting economic policymakers on both sides of the Atlantic, including the challenge to global growth resulting from the eurozone debt crisis; the impact of the credit crunch on economic and financial markets; the larger implications of government deficits and debt crises for US, European, and Asian economic policy; and central bank independence and financial reform.

Summaries of the panel discussions follow. Remarks by these keynote speakers are available in full on our website, www.levyinstitute.org: Leonardo Burlamaqui, Program Officer, Ford Foundation; Dimitri B. Papadimitriou, President, Levy Institute; Philip D. Murphy, US Ambassador to the Federal Republic of Germany; Vítor Constâncio, Vice President, European Central Bank; Steffen Kampeter, Parliamentary State Secretary, German Federal Ministry of Finance; Jan Kregel, Senior Scholar, Levy Institute; Peter Praet, Chief Economist and Executive Board Member, European Central Bank; Richard Fisher, President and CEO, Federal Reserve Bank of Dallas; and Dennis Lockhart, President and CEO, Federal Reserve Bank of Atlanta.

Session 1. Public Debt, Private Debt, and Financial Instability in the Eurozone

Moderator: JACK EWING, EUROPEAN ECONOMICS CORRESPONDENT, *INTERNATIONAL HERALD TRIBUNE*
Speakers: ROBERT J. BARBERA, CHIEF ECONOMIST, MOUNT LUCAS MANAGEMENT LP; KLAUS GÜNTER DEUTSCH, DIRECTOR, DEUTSCHE BANK RESEARCH, DEUTSCHE BANK AG; ANDREW SMITHERS, FOUNDER, SMITHERS & CO.

BARBERA began this session by contrasting the policy response in the eurozone, with its combination of fiscal austerity and (until recently, he qualified) "willful indifference" on the part of the European Central Bank (ECB), with the response in the United States. He argued that while mistakes were made, the US response, with its initial fiscal stimulus and a central bank that stepped up as lender of last resort, was more effective. The European policy reaction was understandable, Barbera allowed, given its grounding in 20 years of flawed economic theory and a set of policy lessons, derived from postwar German success under Bundesbank management, that were ill suited to the circumstances. What is less understandable, in Barbera's estimation, is why policymakers would "triple-down" on these evidently flawed policies three years into the eurozone crisis.

Barbera commented that the US response conformed, more or less, to Hyman Minsky's description of how "big government" and a "big bank" can stave off a depression. "Big government" stood by its system of deposit insurance, recapitalized banks, supported aggregate demand through automatic stabilizers, and supplemented it with fiscal stimulus, while the "big bank" flooded the markets with liquidity, facilitated government borrowing, and expanded its operations to deal with risky borrowers.

Barbera noted that over the 1980–2012 period, this "big bank / big government" crisis response blueprint transcended partisan lines in the United States. He pointed out that in the case of both the savings-and-loan crisis and the most recent financial crisis, large bailouts were initiated by Republican presidents (both named Bush, incidentally). Despite a celebration of free market rhetoric, banking crises have not been permitted to generate debt deflations. Part of the reason for this consensus, Barbera suggested, is that the "morbid fascination" the United States has with the experience of the Great

Depression strengthens policymakers' resolve to never let such a depression happen again.

The euro project was created with very different lessons in mind; in particular, with an eye to the 1970s Great Inflation and without a comprehensive sense of how central banks are supposed to operate—hence, no eurozone-wide deposit insurance, no dual mandate, and no explicit lender-of-last-resort mandate. Combine this with the fact that there is no federal borrowing capability, said Barbera, and eurozone institutions were set up in such a way as to prevent a Minskyan big government / big bank response in the event of a financial crisis.

Moreover, postwar German economic success imparted lessons to eurozone policymakers that no longer fit the circumstances. From roughly 1950 to 2000, the Bundesbank succeeded by acting as if Germany were a small open economy, keeping unit labor costs low and generating a trade surplus. However, this model of low inflation and strong export-led growth cannot be replicated by the eurozone as a whole.

Memories of the 1970s Great Inflation kept central bankers focused on wages and prices when in reality the key dynamic to watch was in financial markets, in the serial buildup of asset bubbles. Since the mid-1980s, inflation has become a mere "sideshow," as Barbera put it, and central banks have been hindered by a model that told them to focus exclusively on excesses in wages and prices. Moreover, Barbera pointed out that because John Maynard Keynes's ideas about sticky wages and prices have proven to be particularly true around the zero bound, a central bank like the ECB, with its single mandate, will not see any deflation and will therefore conclude that monetary policy is about right—despite, for example, a 25 percent unemployment rate in Spain.

Barbera noted that although Italy and the United Kingdom have comparable fiscal situations, Italy borrows at much higher rates. The reason for the divergent rates is that in the case of the United Kingdom the only risk is inflation, whereas in the case of Italy there is an additional risk of default, since Italy cannot rely on a central bank with lender-of-last-resort responsibilities. If Italy were borrowing at rates similar to those of the UK, the former would not be in trouble. The problem, said Barbera, has been created by the absence of a backstop for Italy's borrowing.

Despite the evidence that the approach is not working, Barbera noted that there are still calls for fiscal austerity and assertions of the importance of central bank independence. What we are looking at here, he explained, are cases of cognitive dissonance. Those who start off from the belief that the German model of low inflation, low wage increases, and a current account surplus has been successful and must be maintained will not be willing to consider the limitations of this model at the eurozone level, all evidence suggesting that the approach is not apt will go unheeded.

DEUTSCH shifted the focus off of central banks and insisted that the resolution of the eurozone crisis will have to come from policies set at the level of the European Monetary Union (EMU), not short-term fixes from the ECB. He presented his explanation of the German approach to the crisis.

As the number one economy in the European Union (EU), Deutsch said, Germany has acknowledged a responsibility to look after euro-area economic performance as a whole. Germany has emerged, according to Deutsch, as the one stabilizer that Charles Kindelberger argued it was necessary to have in a financial crisis. Deutsch considered the argument that the EMU is a system of fixed exchange rates that cannot work, and that it ought to be abandoned like the gold standard was in the 1930s. He rejected the comparison, noting differences between the situation in the 1930s and the current EMU.

When countries joined the EMU in the late 1990s, the prevailing assumption was that economic convergence would develop over time. However, financial markets behaved differently from what was expected. Both sovereign and private debt were mispriced, and due to the absence of appropriate policy levers, said Deutsch, real estate and credit market bubbles emerged and were allowed to continue uncontrolled over a prolonged period of time, ending with a sudden stop.

Deutsch focused on a number of areas in which problems needed to be solved. First, a liquidity crisis created an urgent need to provide official schemes of liquidity in order to prevent an all-out panic. Instead of simply going to the International Monetary Fund (IMF), Deutsch noted, there was a desire to create a European approach, which resulted in a total of roughly 1.5 to 2 trillion euros being made available to fund current account adjustment. Second, some countries' fiscal policies stepped outside the boundaries of the rules set for the EMU, and the fiscal compact was created in response. Although Deutsch said it was not clear that the compact would work, given that financial markets have not been effective at

disciplining politically motivated national fiscal behavior, he expressed a hope that fiscal policy would be more "in line with macroeconomic fundamentals," as he put it, 10 years down the line. Third, real economic indicators have not converged much, he said, between the periphery and the core. Fourth, Deutsch argued that something ought to be done in the way of structural reforms to create better product and service markets and improve the quality of human capital. The German approach, said Deutsch, has been to stress that while the provision of liquidity creates a cushion, in the longer term real efforts to improve productivity and economic performance more generally are needed.

The way forward for the euro area, said Deutsch, lies with a higher level of political integration. This might include establishing a financial markets union and a centralized supervisor. Deposit insurance and the creation of a European resolution authority, which would allow a supervisory body to close banks with the aid of small amounts of capital from a fund prefinanced by the financial industry, could also be a part of a federal design for an EMU banking union that Germany could accept.

On the question of economic union, Deutsch cautioned, the matter is not as clear. There is a great deal of disagreement as to how much centralization or decentralization there ought to be in this area.

According to SMITHERS, poor economic theory and practice led to the recent financial crisis, a successful application of Keynesian and Minskyan theory helped prevent the crisis from turning into another Great Depression, and now, poor theory and practice are inhibiting a recovery.

The most serious flaws in economic theory, said Smithers, flow from bad epistemology. Economics may be a science, he allowed, but it is a science that is often pursued unscientifically. The efficient market hypothesis (EMH) played a role in dismissing concerns about financial markets in the run-up to the crisis. The EMH is testable in its "random walk" form, but when tested, this related hypothesis proved not to be robust. If the "random walk" hypothesis were true, there would be no change in the predictability of the volatility of markets looking forward, but as Smithers demonstrated, this does not hold up. Instead of throwing away the EMH and building different models, however, proponents stuck to the EMH and claimed that a revised testable version could be produced—this has yet to be accomplished, he noted. As the EMH is not currently a testable hypothesis, Smithers observed, it lies outside the boundaries of science as demarcated by Karl Popper.

While financial crises are caused by excessive debt, their triggers—falls in asset prices—are fundamentally unpredictable. Given these dynamics, if we want to avoid financial crises, Smithers suggested, we ought to have policies to control excessive debt, rather than policies designed to prevent asset price collapses. But we ought to also avoid deliberately driving up asset prices, and, unfortunately, driving up prices is what quantitative easing (QE) does. In the absence of perfect markets, he pointed out, the asset purchases that make up QE will not be matched by sellers, leading to a rise in asset prices.

Smithers argued that the postwar era, in which some countries can free-ride off of US willingness to use Keynesian policy whenever there is a downturn in the world economy, is over. The problem now is that the Keynesian countries—the United States, UK, and Japan—are much smaller in relation to the rest of the world economy, such that their "firepower" is diminished. At the same time, Smithers explained, neither Germany nor China is stepping into the role. Germany is pursuing austerity and imposing it as the standard model for the EU, while China has taken a different approach, pursuing a version of mercantilist policy focused on exports and intervention in foreign exchange markets.

Smithers then turned to the large savings surplus in the business sector. The problem, he argued, is that this surplus is structural, not cyclical. This surplus is not being driven by concerns about the future or "animal spirits," but by a change in incentives, driven by a rapidly falling share of salaries as a component of management's remuneration and a rising share of compensation in the form of bonuses and options. Companies are keeping investment low and engaging instead in buybacks because it pays to do so; they are being paid, in other words, not to invest. Smithers outlined a pair of "common myths" along these lines: that companies are holding back the economy by deleveraging, and that company balance sheets are in good shape. Neither is true, he pointed out. The misimpression that corporate balance sheets are healthy comes simply from not taking inflation into account. Pointing to the Federal Reserve's flow-of-funds accounts, Smithers noted that corporate balance sheets are very highly leveraged by historical standards.

Smithers also pointed out that profit margins are at historically high levels, even though there is a large output gap. He cautioned that one ought to be skeptical of profit reports, noting that corporate profits, as published, have become much more volatile since 2002. Smithers argued that this too can be explained by a change in incentives; in this case, he explained, when you have an option contract, volatility pays. Moving from mark-to-cost to mark-to-market has created flexibility in terms of reporting profits.

The savings surplus is a product of the bonus culture and cannot be cured by running large budget deficits, he concluded. Fiscal deficits under these circumstances are an analgesic, as he put it, not a cure. Instead, we need to reduce the business sector's savings surplus.

Session 2. Minsky's Financial Instability

Moderator: C. J. POLYCHRONIOU, RESEARCH ASSOCIATE AND POLICY FELLOW, LEVY INSTITUTE

Speakers: DIMITRIOS TSOMOCOS, READER IN FINANCIAL ECONOMICS, SAÏD BUSINESS SCHOOL, AND FELLOW, ST. EDMUND HALL, UNIVERSITY OF OXFORD; ALEXANDROS VARDOULAKIS, RESEARCH ECONOMIST, EUROPEAN CENTRAL BANK AND BANQUE DE FRANCE

In this session, TSOMOCOS presented a model of Hyman Minsky's financial instability hypothesis (FIH), formalized within mainstream neoclassical economics.

Tsomocos began by summarizing the literature on mainstream approaches to analyzing financial crises. He then outlined five main externalities associated with crises that are present in the everyday modern financial system: (1) the coordination failure that results in bank runs; (2) "fire sales" initiated when a drop in the price of collateral triggers a sale of the underlying asset, leading to default, further drops in collateral, and further fire sales; (3) pessimistic expectations due to the opacity of portfolios, which leads to a drop in financial asset prices and a resulting financial crisis; (4) Minsky's FIH, which connects investor optimism with procyclical behavior; and, finally, (5) network externalities, which are related to interbank exposures leading to contagion and default chain reactions.

Turning to the FIH, Tsomocos cited Minsky's description as follows: "over periods of prolonged prosperity and optimism about future prospects, financial institutions invest in riskier assets, which can make the economic system more vulnerable in the case that default materializes." In this conceptualization, Tsomocos noted, expectation formation varies across economic cycles, which in turn gives rise to leverage cycles and default. He stressed that he does not associate Minsky's FIH with irrationality.

The key question coming out of this analysis of the FIH is whether the solution to the "Minsky problem," as Tsomocos put it, resides in controlling and regulating leverage. Other questions include: what are the sources of excessive leverage, how do portfolio choice and risk taking vary over the leverage cycle, and can we predict the leverage cycle?

In laying out the framework of the model, one of the key features Tsomocos emphasized was that agents in the model have rational expectations. Since these rational agents have incomplete information, they observe past realizations of good and bad outcomes and modify their expectations accordingly (they are "Bayesian updaters"). Second, default is included as an endogenous variable in the model. An essential reality of financial crises, said Tsomocos, is that default is compatible with the orderly functioning of the economy. After a long run of good news, investors' expectations rise and financial institutions find it more profitable to shift to riskier assets promising higher returns; they become overleveraged. Creditors, because their expectations also improve, are willing to provide funds. When bad news appears, default rates are higher than they otherwise would be, resulting in a more severe case of financial instability.

Since overly optimistic expectations produce externalities within the financial system in this model of Minsky's FIH, the question becomes, what sort of leverage requirement can limit these externalities? Tsomocos pointed out that a classic leverage requirement, a maximum ratio of borrowing over the total investment in projects, has perverse consequences in his model. This leverage requirement delivers a result that is the opposite of that which is intended: it increases loss given default. The reason for this perverse result, explained Tsomocos, is that although aggregate borrowing will go down, banks with optimistic expectations will divert their own funds away from safer investments and put them into riskier ones.

Given those dynamics, Tsomocos recommended an alternative regulatory intervention. Instead of classic aggregate leverage requirements, this alternative would involve restricting

relative portfolio holdings, constraining the difference between riskier and safer holdings per unit of leverage. He concluded that such a regulatory approach, given the dynamics in the Minskyan model, is more likely to reduce the risk of default.

VARDOULAKIS presented a paper he coauthored that uses an econometric model to test some of the predictions of leverage cycle theories, and investigated the question of how to identify variables that can act as leading indicators for future credit conditions. He explained that the latter objective involves trying to see whether credit standards depend on the behavior of financial institutions; more specifically, on the risk-taking and leverage behavior in the financial system. Vardoulakis also sought to compare quantity-based measures, derived from the balances of financial institutions, and price-based measures, such as the TED spread or VIX index, in terms of their ability to act as leading indicators of lending standards. He presented some empirical evidence suggesting that price-based measures are not capable of capturing the leverage cycle.

The other objective of the paper, as Vardoulakis noted, is to test some of the predictions of leverage cycle theories. These theories predict an "asymmetric response" in the risk-taking behavior of financial institutions, depending on the state of the economy. In good times, financial institutions become optimistic, leverage up, and invest in riskier projects. When a negative shock hits, they start deleveraging, and deflation dynamics develop; and in bad times, an increase in leverage and risk taking signals a recovery and an improvement of credit conditions.

Vardoulakis specified the appropriate econometric model for testing these predictions and explained which data series were chosen to serve as proxies for credit conditions, risk-taking behavior, and financial leverage. He noted that the paper focuses on the US financial system, due to greater availability of data. As a proxy for credit conditions, the net tightening index from the Federal Reserve Senior Loan Officer Opinion Survey was chosen. As a proxy for risk-taking behavior and leverage, Vardoulakis used data from the New York Federal Reserve's flow-of-funds accounts to create a quantity-based measure. On the basis of the assumption that the investment banking sector is riskier than the commercial banking sector, a quantity-based measure of risk-taking behavior was formed by dividing the total liabilities of investment banks, or broker-dealers, by the liabilities of the commercial banking sector. However, because it is not just risk taking that can affect the economy, Vardoulakis and his coauthors combined this proxy of risk taking with a measure of leverage in the financial sector as a whole.

Vardoulakis argued that the combination of risk taking and leverage should affect future credit conditions, that risk-taking behavior should be less dangerous for the financial system when combined with lower leverage, and that an improvement in credit conditions during a recovery should stem from an increase in leverage and the willingness to take risk.

The paper covers a period that contained three crisis events: the 1997 Long-Term Capital Management crisis, the bursting of the dot-com bubble, and the Great Recession. When tested, the model ended up showing the predicted asymmetric response: when risk taking and leverage increase during a good financial regime, the probability rises that the good times will soon end; in a bad regime, when deleveraging is to be expected, increases in risk taking and leverage signal the likelihood of a recovery. Vardoulakis noted that neither leverage nor the selected risk-taking proxy on its own provides adequate predictions of credit conditions; combined, however, they act as statistically significant leading indicators of the credit cycle. That said, Vardoulakis cautioned, they have limitations as predictive tools; for example, they will not tell you that credit will tighten in three months. Instead, he explained, they are best used as monitoring tools that signal, on average, the probability of switching from one financial regime to another. By contrast, Vardoulakis observed, while price-based measures such as stock prices, credit default swap spreads, and so on, capture stress in the economy, they are not forward-looking within the specifications of the model; they fail to act as leading indicators of credit conditions.

Session 3. Prospects and Policies for the Eurozone Crisis

Moderator: BRIAN BLACKSTONE, EUROPEAN ECONOMICS CORRESPONDENT, *THE WALL STREET JOURNAL*

Speakers: ECKHARD HEIN, PROFESSOR, BERLIN SCHOOL OF ECONOMICS AND LAW; GEORGE STATHAKIS, MEMBER, GREEK PARLIAMENT (SYRIZA), AND PROFESSOR OF POLITICAL ECONOMY, UNIVERSITY OF CRETE; JÖRG BIBOW, RESEARCH ASSOCIATE, LEVY INSTITUTE

HEIN framed the crisis in the eurozone as a crisis of finance-dominated capitalism (FDC). FDC, Hein explained,

refers to a period of capitalism that began in the early 1980s in the United States and the UK and subsequently spread to other countries. He associated FDC with three developments: the deregulation of national and international markets in goods, labor, and finance; rising inequality and a falling labor share of income; and growing current account imbalances.

Why, Hein asked, is a general crisis of FDC that started in 2007 threatening the eurozone in particular? He suggested a pair of explanations linked to institutional deficiencies in the eurozone setup. First, because there is no explicit guarantee of member-states' public debt by the ECB, member-states do not issue debt in their own currency. Second, the eurozone setup has no institutional mechanism for fiscal transfers. There is no effective way to prevent the buildup of macroeconomic imbalances within the euro area.

Hein elaborated further on some of the main features of FDC. He pointed to data showing a fall in the labor income share since the 1990s (and suggested the trend goes back even earlier, to the 1980s). He noted that there has been an increase in inequality in pretax household income, and that this increase holds true not only for countries in the euro area, but also for almost all OECD countries for which we have data. Against this background of rising inequality, euro-area current account imbalances started to build up after the introduction of the euro in 1999 and have continued since.

Hein laid out a three-category typology of eurozone countries (excluding Luxembourg). First, there are countries that have experienced debt-led consumption booms. In these countries, a shortfall in aggregate demand caused by the upward redistribution of income was compensated for by rising household indebtedness. Hein noted that the housing price boom helped play a part in this dynamic. He identified the second group as "export-led mercantilist" countries. In this case, countries compensated for the inequality-led shortfall in aggregate demand through net exports. He included Germany, Austria, Finland, Belgium, and the Netherlands in this group. Finally, Hein grouped France, Italy, and Portugal into a "domestic demand-led" category. For these countries, and the EU 12 as a whole, aggregate demand is driven neither by net exports nor by debt-financed consumption.

In the mainstream interpretation, the eurozone crisis is a crisis of government deficits and debt. However, Hein pointed out that a simple accounting identity demonstrates that for some eurozone countries, particularly Ireland and Spain, the crisis was a *cause* rather than an effect of rising public sector deficits.

Hein observed that since the crisis erupted, the combination of financial rescue measures, austerity policies, and structural reforms have not fundamentally addressed the two previously identified institutional flaws in the eurozone design (absence of ECB backing for government debt, and lack of a mechanism for fiscal transfers) and have left Greece, Ireland, Portugal, Spain, and Italy below precrisis GDP levels. Moreover, while current account imbalances have been somewhat reduced, they persist. Government debt-to-GDP ratios have not significantly improved, Hein noted, and interest rate spreads remain.

The prevailing policy strategies have not succeeded, and we ought to abandon them, said Hein. Since this is a crisis of FDC, we ought to address the central problems of FDC through more effective financial regulation and policies to address income inequality and current account imbalances. In the eurozone, Hein added, we also need to address the institutional deficiencies that are allowing an FDC crisis to threaten the euro project. He called for the ECB to guarantee member-state public debt and to reform its monetary policy strategy so as to take distribution, employment, and growth into account. He advocated replacing the Stability and Growth Pact (SGP) with a coordinated fiscal policy along functional finance lines, and called for abandoning a labor market strategy that tries to improve competitiveness through nominal wage cuts. In order to address the euro-area imbalances, he called for more expansionary fiscal policy in current account surplus countries and the reverse in current account deficit countries; a higher euro area–wide inflation target, he suggested, would help stave off deflation for the latter.

STATHAKIS discussed the roots of the Greek problem, why the policies making up the "Greek program" implemented over the last two-and-a-half years have failed, and what ought to be done instead.

Stathakis noted that elevated Greek public debt levels are not a recent phenomenon. Greek debt has been around 120 percent of GDP since 1993, due to the expansion of the Greek state after the dictatorship. Until 1974, Greek public expenditures were around 25 percent of GDP. In the late 1970s and the 1980s, both conservative and socialist political parties established

a European welfare state in Greece, raising public expenditure levels. At the same time, while expenditures were rising, taxes were rising as well, but with one important caveat, Stathakis argued: compared to the rest of Europe, as he put it, "rich people do not pay taxes in Greece." As a result, he said, the Greek budget has had a shortfall of 4–5 percent of GDP each and every year, which is roughly where the public deficit has been since 1979.

Stathakis also pointed out that Greece underwent a neoliberal transformation in the 1990s and early 2000s. Under the government of Konstantinos Simitis, the Greek economy was adjusted according to neoliberal demands, which involved liberalization of the movement of foreign exchange and the privatization of the banks and a wide range of state assets. Greece now has a highly privatized economy and a very flexible labor market, he remarked.

After the crisis broke out, the IMF provided a rescue program with three requirements: (1) a fiscal adjustment of 20 percent of GDP within three years, in order to reach a fiscal surplus of 5 percent of GDP; (2) a privatization scheme on the order of 50 billion euros (which, Stathakis noted, has since been downgraded to 10 billion euros); and (3) improved competitiveness through cuts in salaries and wages.

The program, Stathakis argued, has been a complete failure. Since 2009, the economy has continued to contract year after year, resulting in what he described as the deepest peacetime recession aside from the 1929 crash. Unemployment has reached 25 percent, and although the balance of payments has improved slightly, said Stathakis, this is only because nobody imports anything and nobody buys anything anymore.

Stathakis commented that a reduction in large public debt levels can be effectively managed in three ways: default, growth, and inflation. Unfortunately, he observed, Greece is pursuing a program that prevents either growth or inflation. The only solution that remains, he concluded, is default. Stathakis estimated that there would have to be a haircut on Greek public debt of at least 40–50 percent.

On fiscal adjustment, Stathakis suggested an alternative approach in which public expenditure would be cut by 3 percent of GDP (from 45 percent to 42 percent) and revenues would be augmented, through tax increases, by 3 percent of GDP (from 39 percent to 42 percent) over the next three years. This more modest fiscal adjustment, Stathakis suggested, would not have such huge recessionary effects. The idea of getting a surplus of 5 percent of GDP for the next 15 years cannot work, he insisted. Finally, there needs to be a development agenda that is sensitive to Greek economic reality. The Greek economy has run a trade deficit since its foundation in 1830 and will always run a trade deficit, said Stathakis. It is an economy that produces little and relies a great deal on tourism (10 percent of GDP)—and it is unlikely this will change, he commented.

The major challenge, Stathakis concluded, is that the solution to the public debt problem needs to be a European solution. The problem cannot be solved through Greek means alone.

BIBOW began his presentation with a simple message: unless decisive policy changes are implemented, the euro is destined for a breakup. Whether it was the imbalances that were building up inside the euro area or the exposure of the European banking system to the subprime mortgage mess in the United States, eurozone policymakers, Bibow remarked, were totally unaware of what was going on. When problems emerged, the misdiagnosis converged on fiscal profligacy and policymakers reached for austerity policies, driven by the myth that austerity stimulates growth. These austerity measures, Bibow argued, along with the strengthening of the SGP and addition of the Fiscal Compact, move us in entirely the wrong direction and will assure the breakup of the eurozone.

Pointing to the fact that Euroland is in recession, and to a decline in domestic demand at a rate of roughly 2 percent per year, Bibow remarked that Europe is freeloading on the rest of the world. Since the rest of the global economy is not particularly strong, European austerity is "sucking the air out of the global recovery," as Bibow put it.

He outlined some of the major flaws in the Maastricht regime. First, a very large integrated market was created, but without demand management and without a lender of last resort. Second, national policies were not properly coordinated to avoid competitive imbalances. Keeping inflation low worked for Germany in the past because, under fixed exchange rate regimes, this meant a gain in competitiveness and a boost in exports. However, it worked on condition that everyone else behaved differently. The trouble with the Maastricht regime is that it aims to make every country behave the same, which, Bibow pointed out, actually undermines the German model.

Bibow observed that one of the primary concerns driving the creation of the eurozone was to prevent beggar-thy-neighbor exchange rate devaluations. The problem however, is that

competitiveness depends not just on exchange rates, but also on countries' unit labor cost trends relative to their trading partners'. In a monetary union, said Bibow, we have to abide by the "golden rule" of making sure that national unit labor costs are aligned with the common inflation target; in this case, the ECB's 2 percent target. If there are divergences in unit labor cost trends, current account imbalances will build up, leading to debt buildups. Germany, as Bibow demonstrated, reneged on this golden rule of monetary union by keeping its unit labor costs much lower than the ECB target. This led to intra-area imbalances in the euro area as Germany become "super-competitive" relative to the rest of the eurozone and built up large current account surpluses, while countries like Spain ran large current account deficits. Ultimately, as Bibow explained, these imbalances "blew up" and halted private capital flows.

Bibow argued that proper crisis resolution in the eurozone requires three elements: rebalancing, dealing with debt overhangs, and making the EMU a viable regime. Bibow emphasized that the one essential, but missing, precondition for successful crisis resolution is GDP growth. Rebalancing and reducing indebtedness are made much more difficult—perhaps impossible, he suggested—when GDP is shrinking. Bibow explained that what we are actually seeing on the rebalancing front is "asymmetric rebalancing," with Germany forcing the rest of the eurozone to converge to a path of zero nominal unit labor cost growth—in other words, to regain competitiveness through debt deflation.

For the eurozone as a whole, the main challenge is that if the public sector tries to run a balanced budget, this will only work if either the private sector becomes a net saver, which it is not, or the rest of the world tolerates eurozone current account surpluses. Counting on the rest of the world to stimulate eurozone exports is problematic, because Euroland is simply too big.

The only country that can teach the eurozone anything is the United States, Bibow concluded. He suggested a number of reforms along these lines; first and foremost, the creation of an entity equivalent to the US Treasury, with a right to tax and the ability to run a persistent budget deficit from the center. Only this new spending from a European treasury, based on issuing euro debt securities, will allow member-states to balance their budgets.

Session 4. Financial Reform Proposals

Moderator: JAN KREGEL, SENIOR SCHOLAR, LEVY INSTITUTE

Speakers: CHRISTINE M. CUMMING, FIRST VICE PRESIDENT, FEDERAL RESERVE BANK OF NEW YORK; MICHAEL GREENBERGER, PROFESSOR, SCHOOL OF LAW, AND DIRECTOR, CENTER FOR HEALTH AND HOMELAND SECURITY, THE UNIVERSITY OF MARYLAND

CUMMING dealt with recovery and resolution planning, focusing her presentation on efforts that are being made to improve approaches to managing the failure of a large financial institution. There is, she observed, widespread agreement on the need to solve the problem of too-big-to-fail. Cumming noted that the prospect of failure creates incentives for good management, while the belief that there is no possibility of failure creates poor incentives within organizations.

There are three obstacles that have stood in the way of the regulatory community triggering the failure of a financial institution, according to Cumming. The first obstacle has to do with powers. Since it is in the nature of a financial institution that its value decays rapidly, bankruptcy proceedings have their limits as resolution mechanisms because they can be too slow. Cumming identified the second obstacle as fear of contagion. This refers to the possibility that problems in one institution could readily spread to others, due to exposure to the failing institution or to the possibility that multiple institutions have similar risk profiles and similar dependency on short-term funding markets. Finally, she noted that financial institutions commonly operate within multiple jurisdictions, creating coordination problems in the event of a failure.

Cumming turned to the Financial Stability Board's (FSB) "Key Attributes," published in 2011, which laid out standards, principles, and best practices for all jurisdictions to follow when handling the failure of a large financial institution. The "Key Attributes" did two things, according to Cumming. First, it described the essential elements of an insolvency regime for financial institutions. These elements include having the ability to act quickly and decisively, create bridge institutions that can keep a failing institution alive for a short period of time, and transfer the assets and liabilities of a failing institution to other companies.

The second part of the FSB's "Key Attributes," and the part that Cumming noted she had been involved with, deals with

the creation of crisis management groups (CMGs). CMGs are a collection of the key regulatory and resolution authorities for a particular globally systemically important financial institution. Their purpose is to oversee the recovery plans and help draw up the resolution plans for these companies. Cumming laid out how the process works for the CMGs.

One of the crucial parts of recovery planning is developing meaningful stress tests, she explained. The prevailing view regarding how to come up with these stress tests is that one ought to avoid tying the test to some particular event based on past history, which is, Cumming said, how some stress tests had previously been developed. Instead, the point is to consider what would need to be done in more general severe economic or financial scenarios. Commenting on a paper recently published by the FSB that shared the experiences of CMGs in reviewing these stress tests, Cumming noted that the message was that the stress tests have not been stressful enough. She also cited the need for firms to develop new business plans as a key element of recovery.

Turning to resolution planning, Cumming said that one of the great hopes is to improve the powers of resolution authorities such that a failure could be coordinated across jurisdictions. She pointed to an idea put forward by the Federal Deposit Insurance Corporation (FDIC) called the "single point of entry" for resolution. The idea, she explained, is to take the holding company into insolvency, put it into a bridge institution, and leave the major subsidiaries as "going concerns" until they can be sold. This single-point-of-entry approach, Cumming pointed out, would have been helpful in the case of Lehman Brothers.

Cumming closed by citing a number of difficult issues on the horizon, chief among which relates to the structure of companies. Given the complexity of many financial institutions, the question is how they can be organized so as to facilitate breaking them up or resolving them more effectively, should the need arise. Cumming also tied this issue to the question of business plans. The structure of a company, she said, is supposed to reflect its business strategy and allow it to be managed effectively. She commented that there has not been enough emphasis on having a business structure that makes the firm easier to manage, and related this to a question that is often raised in cases of financial institution distress; namely, how well management understands what is going on within the firm.

GREENBERGER took on the question of the extraterritorial reach of the Dodd-Frank Act as it relates to derivatives regulation. He discussed a proposed interpretive guidance issued by the Commodity Futures Trading Commission (CFTC) regarding the extent of this reach. He argued that the CFTC conceded too much and that, where US interests are at stake, Dodd-Frank should have an extraterritorial reach that goes beyond that proposed by the CFTC in its guidance.

Greenberger stepped back and looked at the role of derivatives in the 2007–09 financial crisis. A key culprit, among many culprits, Greenberger said, was the use of derivatives as a vehicle for betting on whether subprime mortgages would be paid or not. He argued that if it had not been for the proliferation and layering of these bets, the subprime failure may have been better contained.

He noted that the derivatives market was nontransparent, bilateral, and entirely unregulated, with no capital or collateral requirements, and that Dodd-Frank aimed to reverse some of this. When selling these instruments in large volumes, Dodd-Frank would require that capital reserves be held and that the transaction be collateralized and cleared, and therefore priced. Moreover, Greenberger noted, the Volcker rule in Dodd-Frank places restrictions on proprietary trading, and the lesser-known Lincoln rule prevents US bank holding companies from being an intermediary of certain derivatives transactions.

Greenberger highlighted JPMorgan Chase's "London Whale" trading losses as pertinent to his topic, since it was an incident that occurred in the bank's London branch. The question is whether these trades would have fallen under the territorial reach of Dodd-Frank's derivatives regulations—whether a branch of JPMorgan Chase is subject to Dodd-Frank if it is not in the sovereign United States. Citing the language of the statute (section 722), Greenberger suggested that a branch of a US holding company would qualify, and that the London Whale trades would therefore have had to have been transparent, capitalized, and collateralized as required by Dodd-Frank. He noted that section 722 also gives the CFTC jurisdiction if it is determined that a financial institution is using a foreign affiliate to evade Dodd-Frank. Greenberger explained that this statute was intended to be very broad. He pointed to a Supreme Court ruling that had restricted the reach of a Securities and

Exchange Commission rule, with the Court stating that unless Congress explicitly intends extraterritorial reach, there is none. Congress clearly had this ruling in mind, Greenberger argued, and explicitly wrote section 722 so as to extend the reach of Dodd-Frank.

The CFTC's proposed guidance stated that, first, there would be a one-year stay of Dodd-Frank for all US persons in foreign subsidiaries of US bank holding companies and US subsidiaries of foreign banks. Second, the CFTC said, the foreign country would be allowed to regulate if they could demonstrate "substitutive compliance"—which is to say, if their regulatory scheme were similar to the United States'. The problem, Greenberger pointed out, is that the UK, for example, has said that it will not have its regulatory scheme in place until 2019 (and the EU doesn't have a definite date). As a result, there would not be substitutive compliance in most of these countries when the one-year stay runs out.

Greenberger observed that in the case of AIG, the US taxpayer ended up bailing out an institution for something that happened in a financial products subsidiary in the UK. Greenberger also pointed out that a Bloomberg News Freedom of Information Act request revealed that the Federal Reserve had given assistance to many foreign banks. In other words, US taxpayers were not only responsible for the failure of US bank holding companies, but also for keeping foreign financial institutions propped up in the interests of avoiding a depression in the world economy. Dodd-Frank, he said, is intended to protect the US taxpayer from going back to such a system, and this is why extraterritorial reach is necessary. Putting the stay in place as recommended by the CFTC's interpretive guidance, Greenberger concluded, would put US taxpayers at risk during that period.

Session 5. Financial Instability in Asia

Moderator: TAUN TOAY, RESEARCH ANALYST, LEVY INSTITUTE

Speakers: FRANK VENEROSO, PRESIDENT, VENEROSO ASSOCIATES, LLC; MICHAEL PETTIS, PROFESSOR, GUANGHUA SCHOOL OF MANAGEMENT, PEKING UNIVERSITY, AND SENIOR ASSOCIATE, CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE

VENEROSO argued that China has reached a turning point in its development and he attempted, with the aid of a Minskyan framework, to illuminate why that turning point is leading to an explosion of indebtedness.

Veneroso cited four noteworthy features of China's economic situation. It has the highest GDP growth for a large economy, the highest ratio of fixed investment to GDP on a sustained basis, the highest total factor productivity, and, over the last three-and-a-half years, he said, the biggest-ever increase in nonfinancial debt as a percentage of GDP. China has had this incredible growth, Veneroso said, because it has followed some 50-year-old lessons of development economics: raise capital per worker, modernize capital per worker, and thereby raise per capita income.

China now has a capital stock that is quite deep relative to its economy, he observed, but it has a very low capital stock per worker. Although some insist that the upward trajectory will simply continue, Veneroso argued that something has gone wrong. Migration from the rural to the industrial sector had a lot to do with Chinese growth, but much of the rural labor force has already migrated. There is a limit to this surplus labor, he said, and it is being depleted. Meanwhile, alongside residential and industrial overinvestment, Veneroso observed that China's nonfinancial debt–to-GDP ratio increased by 60 percentage points in three years. This is unprecedented, he said, and noted that the increase has not been in household or government debt, but rather corporate debt. If surplus labor is depleted and labor force growth collapses, the trend rate of growth will collapse; continuing to build the capital stock will eventually just expand unused capacity. At that point, said Veneroso, profitability collapses and borrowing needs to increase further in order to keep the investment ratio high.

Veneroso pointed to some of Minsky's theoretical insights that can help us understand these dynamics. First, Minsky's financial instability hypothesis, as applied to a single cycle, tells us that when the memory of recessions fades into the past, beliefs adapt in such a way that the cash flows from a boom are expected to prevail; this leads, said Veneroso, to more investment and more investment with debt. The second Minskyan insight, according to Veneroso, is that when we reach a turning point and liquidation begins, the process can get out of hand. At this point, "big government" and the "big central bank" intervene to stabilize income and bail out institutions. Each

intervention, however, changes the psychology of economic actors, who expect continued intervention in the future and increase risk-taking behavior in response. In other words, Veneroso summarized, the moral hazard created in this process allows overinvestment and overindebtedness to grow even further than it would in a "purely capitalist economy," as he put it.

Applying this framework to Asia should work, remarked Veneroso, because of the high levels of indebtedness and fixed investment. He argued that almost all of the so-called "Minsky crises" have had nothing to do with the financing of the capital development of the business sector, which is what Minsky was talking about in his financial instability hypothesis. Instead, these crises have mostly been about household indebtednesss and the speculative finance of traded assets. In Asia, however, it has been a matter of business investment and business borrowing, and the reason, Veneroso suggested, is that the Asian economies are guided economies. Eventually, the buildup in debt and the overinvestment will become too great relative to the collapse in the trend rate of growth, leading to a Minsky crisis. This is what happened in Japan and the emerging Asian "Tiger" economies, argued Veneroso, but we may not see the same thing in China, he concluded, because it is a command economy.

According to PETTIS, since the argument for the unsustainability of China's growth model has become far more widely accepted, the common question now with respect to China is how it can rebalance its economy. The mechanisms that created rapid growth in China also created the imbalances, said Pettis. Along these lines, he noted three particularly important ones. First, the undervalued exchange is essentially a consumption tax on imports that reduces the real value of household income, with the major beneficiaries being the tradable goods sector. Second, low wage growth relative to productivity growth functions as a tax on workers' wages and a subsidy for employers. Finally, the third "tax"—and, Pettis noted, the most important of the three—is the financial repression tax. Interest rates in China are extremely low, and this is effectively a tax on net savers and a subsidy to net borrowers, including state-owned enterprises, manufacturers, infrastructure investors, and real estate developers. This financial repression tax, he stressed, is the key to understanding the Chinese economy.

Monetary growth in China is very rapid. Pettis pointed out that China accounted for 40–50 percent of total global monetary expansion over the last three to four years. But this introduces a puzzle. Normally, rapid money creation is associated with asset price inflation, potential overinvestment, and consumer price inflation. In China, however, you see the expected impact in asset prices and investment, but not in consumer prices. The solution to this puzzle, Pettis argued, lies in the dynamics of financial repression.

He explained that repression creates a bifurcation of monetary growth that amounts to a transfer of wealth from the depositor to the borrower. There is a different level of monetary growth for net savers (the household sector) than there is for net borrowers. Pettis outlined some of the logical consequences of this model, with the first being a strange relationship between interest rates and savings and consumption. Normally, raising rates would mean that consumption rates decline and savings rates increase. But with the bifurcation in monetary expansion, raising interest rates reduces the effects of financial repression: it reduces the transfer from net savers to net borrowers.

Under these circumstances, raising interest rates in China means that the savings rate should decline and the consumption rate should rise (and he noted that there has been some empirical confirmation of this positive correlation between interest rates and consumption). Pettis also pointed out that if his model is correct, then the central bank does not have to raise rates to combat a rise in inflation. The reason is that rising inflation actually lowers monetary growth on the net savings side and raises monetary growth on the net borrowing side; in other words, he explained, it increases the financial repression tax. As inflation goes up in China, consumption should go down and production should go up, which would ultimately put downward pressure on inflation. This is part of the reason why, Pettis said, inflation never seems to get out of hand in China.

By subsidizing the production side of the economy and penalizing consumption, financial repression forces up the domestic savings rate. This implies, said Pettis, that one of the things that must be done to rebalance China's economy is to reduce the financial repression tax. He noted that this had begun to happen in 2012, with real interest rates effectively rising; as a consequence, he said, we have finally started to see

some rebalancing in the Chinese economy. However, if China rebalances it could have even lower growth rates (not exceeding 3 percent, according to Pettis) over the next decade than the pessimists are expecting.

Another implication of financial repression is that, while consumer price inflation is self-correcting (as long as people leave their money in the banking system, Pettis qualified), monetary expansion will accelerate asset price inflation even more than normal. We see this, said Pettis, in the dramatic expansion of debt in China. If China does not change its growth model, he remarked, it is only four or five years away from a debt crisis.

Session 6. Financial Reform and Financial Instability

Moderator : DIMITRI B. PAPADIMITRIOU, PRESIDENT, LEVY INSTITUTE

Speakers: ÉRIC TYMOIGNE, RESEARCH ASSOCIATE, LEVY INSTITUTE; L. RANDALL WRAY, SENIOR SCHOLAR, LEVY INSTITUTE

TYMOIGNE shared the results of his work on developing a measure of financial instability and macroprudential risk using a Minskyan framework. Financial fragility, in this framework, means a high risk of a debt deflation, and he stressed that this does not simply refer to the risk of an initial disturbance such as a default, but also to the risk that a disturbance will be amplified. Financial fragility can increase because of a change in underwriting standards, such as the move away from income-based lending to collateral-based lending. This is what we saw in the housing market, Tymoigne explained, when there was a move toward loans for which repayment would come, not from the borrower's income, but from a rise in home prices. The goal of his project is to measure financial fragility when default rates and foreclosures are low, profitability is high, net worth is rising, and economic growth is strong.

Tymoigne laid out Minsky's typology of "hedge," "speculative," and "Ponzi" finance. In hedge finance, there is an expectation that the borrower's income will be sufficient to cover debt service—in other words, that debt service will be met without the borrower needing to refinance or sell assets. In speculative finance, the borrower's income is sufficient to service the interest component but not the principal component of the debt. Some position-making operation—refinancing or selling assets—is necessary to cover the principal payment. Hence, Tymoigne explained, although the net cash flow generated by position-making operations will be positive in speculative finance (whereas it is expected to be zero in hedge finance), it will be constant or declining relative to liabilities. In Ponzi finance, the borrower's income is not sufficient to pay either principal or interest. There are two forms of Ponzi finance, Tymoigne noted: one in which there is a period of time during the life of the loan in which the borrower can pay neither principal nor interest, and another in which the borrower can *never* pay the principal or interest—essentially, collateral-based lending. In Ponzi finance there is a growing need for position making. As the ratio of Ponzi finance grows, the financial structure becomes more fragile and the risk of debt deflation increases.

Fraud can add to financial fragility, said Tymoigne. It can occur in all three stages, and makes it more difficult to measure financial fragility because it undermines the reliability of available data. Tymoigne also emphasized that these stages do not measure the existence of bubbles. The main difference between the three stages relates to the expected reliance on position-making operations and the type of underwriting (income-based or collateral-based) involved in lending. The empirical implications of this theoretical framework are that, as the economy moves from hedge into Ponzi finance, the debt burden should rise (i.e., the ratio of debt service to income should go up), defensive refinancing and/or asset-based lending should rise, asset prices should rise, and the amount of liquid assets relative to liabilities should decline.

Placing this approach to financial fragility in the context of the housing crisis, Tymoigne demonstrated that, prior to the crisis, the proportion of exotic mortgages in both the prime and nonprime sector (e.g., interest-only mortgages) grew. By 2006, 50 percent of the loans originated in the United States were "low-doc" or "no-doc" mortgages. There was, in other words, a general decline in underwriting in mortgage lending. And this was all happening, Tymoigne pointed out, at a time (i.e., before 2006) when default rates were actually declining.

Tymoigne then laid out the list of variables that were weighted and combined to create his financial fragility indexes for residential housing (three indexes for each country, using three different weighting structures) and discussed the challenges in putting the data together for the United

States, the UK, and France. For all three countries, the indexes showed rising financial fragility beginning in 2000 and more dramatic increases starting in the mid-2000s (2004 for the United States).

According to WRAY, we need a financial system that can be regulated and supervised effectively, and financial institutions that can be resolved in case of a crisis. Right now, he said, we have neither. The kind of financial system that Minsky envisioned, Wray argued, could deliver both.

Turning to an account of the causes of the 2007–09 global financial crisis (GFC), Wray observed that none of the more recent financial crises have conformed to the financial instability hypothesis Minsky developed in the 1960s, since these recent crises had little to do with investment finance. However, Wray pointed out that, starting in the early 1980s, Minsky changed the way he looked at financial crises. The GFC, Wray argued, was actually a crisis of "money manager capitalism"—a concept Minsky developed, as part of his "stages" approach in the 1980s and '90s, to identify the new phase of capitalism he thought we had entered. The main features of money manager capitalism include: a rising share of profits going to the financial sector; shadow banks capturing a larger and larger share of assets; a layering of debt on debt; and, finally, positions in assets being financed by very short-term borrowing. Overall, there is a rise of managed money (in which category Minsky included pensions) and a decline in commercial banking.

Wray examined the question of whether the GFC was a liquidity crisis or a solvency crisis. The answer matters, he noted, since each crisis demands a different response. We know what to do in a liquidity crisis, said Wray: following Walter Bagehot, we ought to lend without limit against good collateral, and at a penalty rate. Wray suggested that the crisis can best be characterized as primarily a solvency crisis that then created liquidity problems. Through the creation of special facilities, the Federal Reserve eventually gave us an approximation of Bagehot's policy prescription; namely, the Fed lent without limit but without necessarily doing so against good collateral or at a penalty rate. And, Wray noted, the fact that this lending continued for as long as it did indicates that this was not just a liquidity crisis.

He referenced a project under his direction in which the loans and asset purchases of the Fed's special facilities were tallied up according to several measures (including a cumulative measure that amounted to $29 trillion). This project is ultimately focused on questions of democracy, oversight, and accountability with regard to the Federal Reserve, he explained. The crisis response was largely conducted "behind closed doors" by the Fed and the Treasury, Wray observed. By contrast, the bailout of the auto industry was submitted to public debate and approved by Congress.

Wray then turned to a project Minsky began in the 1990s on the question of how to reconstitute the financial system. The overriding view is that finance needs to be reformed so that it supports the capital development of the economy. Wray outlined five main things Minsky said a financial system should provide in order to promote a successful form of capitalism: (1) a safe and sound payments system; (2) short-term loans to households and firms (and possibly to state and local governments); (3) a safe and sound system of housing finance; (4) a range of financial services, including insurance, brokerage, and retirement savings services; and (5) long-term funding of positions in expensive capital assets. Wray noted that, in Minsky's view, there is no reason why we need private financial institutions to provide all of these services, and no reason why all five functions need to be provided by a single institution.

According to Minsky, a safe and sound payments system requires access to the central bank and 100 percent government backing of deposits. If payments services are provided by private banks, these banks are "playing with house money," as Wray put it, and in reality that makes them public-private partnerships that require close supervision and regulation.

For short-term lending, Minsky thought that small banks are better for financing small loans. Small businesses need access to bank finance, while big firms do not necessarily depend on such access for financing, but big banks are not interested in lending to small firms. In order to create incentives for good underwriting, banks need to hold loans to maturity, and we need to move toward relationship banking. In the Minskyan perspective, said Wray, finance is not a scarce resource—good borrowers are.

For housing finance, if there is a social commitment to high levels of homeownership, underwriting becomes less important. Wray shared his view that, for the United States, mutuals were the best form of providing housing finance; that adding intermediaries in the case of housing finance or

student loans distracts from the public purpose; and that the stability of long-term mortgages requires that the central bank keep interest rates low.

Regarding the range of financial services, Wray remarked that the only synergy we get when we combine many services in the same "financial megastore" is fraud. One alternative, he suggested, is Minsky's idea of a community development bank in which a small institution (no branching allowed) would provide a range of financial services to the local community.

On the role of pension funds in long-term funding of investment, Wray noted that we have too much money chasing too few good investments. The financial part of the economy, said Wray, is too big relative to the productive part of the economy. Finance needs to be not only redirected so as to serve the productive part of the economy, as Minsky thought, but also downsized. Wray explained Minsky's observation that capital development can be "ill done" in a Smithian way (the wrong investments) and in a Keynesian way (too little investment), and that for both reasons the socialization of investment in some form is unavoidable.

Greece's Bailouts and the Economics of Social Disaster

C. J. POLYCHRONIOU

Policy Note 2012/11

In this policy note, Research Associate and Policy Fellow C. J. Polychroniou recounts the run-up to Greece's economic crisis, the effects of the European Union (EU) and International Monetary Fund (IMF) bailouts, and Greece's prospects for the future. In short, the EU and IMF policies of the last two and a half years have been an economic and social disaster for Greece. If these policies continue, the author concludes, Greece's economy and society will be left in ruins.

Between 2003 and 2007, the domestic Greek economy grew by an average of 4 percent, but this growth was largely fueled by heavy private consumption that relied on credit growth and large-scale public consumption and investment in advance of the 2004 Olympic Games. Greece's economic growth took place within the context of economic and political structural weaknesses (e.g., malfunctioning domestic markets, growing fiscal deficits, and widespread corruption and waste). When the global financial crisis struck, these underlying weaknesses exploded. Global markets quickly pushed Greek bond yields to previously unimaginable levels. Shut out of the global credit markets, Greece had no alternative but to rely on the EU and the IMF.

Greece's sovereign debt crisis quickly spread to the south and outer periphery of the eurozone. The spread of the sovereign debt crisis was, the author and others have argued, a reflection of the flawed design of the euro system itself. In this respect Greece's experience speaks to the wider experience of eurozone countries. However, Greece has had a number of persistent economic and political problems that many other countries do not share to the same degree. For example, Greece has had a debt-to-GDP ratio of over 100 percent as far back as 1992, and basic government functions, such as tax collection, have not functioned adequately. This does not, in the author's estimation, justify the manner in which the bailouts have been executed.

The EU and IMF bailouts have been, the author observes, both slow and punitive. Brussels waited months to act. When it did finally act, the austerity policies imposed on Greece put an already weak economy into free fall. The social costs of the austerity measures have been large, and they continue to rise. Polychroniou suggests that the harsh treatment Greece received was intended to send a message to other EU member-states: if you fail to put your fiscal affairs in order, EU and IMF assistance will come with a heavy price.

In May 2010, Greece accepted a massive debt bailout package from the EU and IMF. The package was driven by a neoliberal structural reform agenda that was supposed to spur economic growth. The measures applied to Greece were nothing more than the standard IMF structural adjustment policies that have been applied to South American, African, and Eastern European communist-bloc nations over the past 35 years—except that currency devaluation was not an option for Greece, as it is a member of the European Monetary Union.

In exchange for the bailout, Greece was required to implement austerity measures at lightning speed under the direction of the European Commission, IMF, and European Central Bank (ECB)—the "troika." Typical of the IMF's flawed approach, the imposition of sudden and severe austerity measures was carried out with callous indifference to their consequences for the Greek people. Deficits under the bailout

policies have, indeed, declined, but employment, tax revenues, investment, and human and social services have all declined faster. The price paid by Greece to ensure that their creditors were paid has been monstrously high. The costs of the bailout were visible within a few months of the implementation of the financial adjustment program.

The media have often portrayed the Greek leadership as reluctant to live up to the terms of the bailout agreement. In fact, the Greek government has met its obligations to the letter. Greece made deep cuts to public wages, hospitals, and education, but the economy, and therefore tax revenues, continues to shrink. This led to more pressure to cut spending and the downward spiral of the Greek economy continued. Nearly two years after the May 2010 bailout, eurozone finance ministers approved a second bailout package, with even more cuts across the board, a reduction in public employment, and a massive privatization project. Polychroniou describes these requirements as nothing short of a massive neoliberal attack on the public goods and public enterprises of Greece. Most observers expect that Greece will need yet another bailout. If the EU and IMF policies of the last two and a half years continue, Polychroniou observes, the economics of social disaster will leave Greek society in ruins, and the shame will be Europe's alone.
www.levyinstitute.org/pubs/pn_12_11.pdf

The Crisis of Finance-dominated Capitalism in the Euro Area, Deficiencies in the Economic Policy Architecture, and Deflationary Stagnation Policies

ECKHARD HEIN

Working Paper No. 734, October 2012

In this working paper, Eckhard Hein, Berlin School of Economics and Law and Institute for International Law, Berlin, offers his analysis of the recent crises in the eurozone as yet another episode of finance-dominated capitalism. The paper includes an analysis of 11 initial euro-area countries covering the major characteristics of finance-dominated capitalism. Hein gives specific attention to the fall in the labor income share, increasing inequality in income distribution, and rising imbalances in the current accounts within the euro area. Within this context, the author then examines the euro crisis and the economic policy reactions of European governments and institutions. He concludes with an alternative macroeconomic policy approach tackling the basic contradictions of finance-dominated capitalism and the deficiencies of European economic policy institutions and economic policy strategies.

Hein identifies the major characteristics of finance-dominated capitalism that have developed in the past three decades, to different degrees, in euro-area countries. These characteristics include the deregulation of national and international goods, labor, and financial markets, in particular, the redistribution of income at the expense of (low) wages; and rising imbalances of current accounts at the global and regional levels, particularly within the euro area since the introduction of the euro in 1999. The latest crisis of finance-dominated capitalism began with the collapse of the subprime mortgage market in the United States in 2007, which led to the Great Recession of 2008–09. The euro crisis that began in 2010 is the most recent episode.

The author argues that the crisis threatens the further existence of the euro because of two major deficiencies in the specific architecture of economic policymaking in the euro area. First, the explicit guarantee of public debt of member-states by the monetary authority of the currency union, the European Central Bank (ECB), is excluded from the treaties and regulations of the European Union (EU). Therefore, member-country governments issue debt in a common currency, the euro, but not in their own currency. Second, stable and sustainable fiscal transfers among member-states have also been ruled out by the treaties, so that the government debt of a single member-state is not guaranteed by the community of member-country governments as a whole. In the course of the crisis, these two institutional deficiencies became obvious.

The author provides an overview of the development of income distribution in the important initial 11 euro-area countries (the EU-12, excluding Luxembourg): Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, and Spain. Hein identifies three channels through which finance-dominated capitalism has contributed to greater income inequality: the sectoral composition of the economy, overhead costs for top management and interest payments, and reduced bargaining power of workers and trade unions. He shows that the labor income share tended to fall in all of the countries analyzed from the late 1990s to 2007.

Against this background, Hein presents two main types of capitalism, and a third type between these two extremes, that have arisen under financialization and fed the current account imbalances in the euro area. These are the "debt-led consumption boom" type and the "export-led mercantilist" type—and one, the "domestic demand–led" type, between the two extremes. He finds that debt-led consumption-boom economies were the euro-area demand engines in the period before the Great Recession. However, these countries had current account deficits. Export-led mercantilist economies (i.e., Austria, Belgium, Finland, Germany, and the Netherlands) benefited from the regional demand generated by the debt-led countries. However, the export-led economies had both lower GDP growth than the debt-led countries and current account surpluses. Among the domestic demand–led economies, real GDP growth remained low in Italy and Portugal, but France grew at a rate comparable to that of Belgium. Current account balances were mixed in these countries.

When the Great Recession hit the European economies in 2008–09, real GDP declined in all of the countries analyzed. Government deficits increased as a result of efforts to stabilize their economies, and gross debt-to-GDP ratios rose. Because many policymakers have interpreted the crisis as a sovereign debt crisis caused by the irresponsible behavior of some member-country governments, instead of focusing on private deficits and current account imbalances, policy prescriptions have focused on constraining government deficits and debt by means of tighter rules and deflationary policies. These deflationary stagnation policies in the euro area since 2010 have led to massive real GDP losses in the debt-led consumption-boom countries. The risk of a further recession for the euro area as a whole, and an increasing threat of a final collapse of the euro as a currency, continues. While steps have been taken to address the crisis, the author finds that these steps fall short of addressing the root causes of the crisis because they misunderstand the source of the crisis.

Hein argues that economic policies in the euro area must be constructed to combat the current economic and financial crisis, foster economic growth, and avoid large economic development imbalances across the euro area. Toward these ends, he calls for the creation of an improved ECB to prevent a worsening of the crisis in the euro area. The ECB should act as the lender of last resort, guarantee public debt of euro-area member-states, and allow member-states to issue debt. The ECB should modify its monetary policies to create an environment that is conducive to real investment and growth, with an emphasis on financial stability. Member-states should address imbalances in economic development. Also, fiscal policies along functional finance lines would have to be applied and coordinated across the euro area, using the author's criterion for long-run acceptable current account deficits (and surpluses). Next, the author calls for wage and income policies that will contribute to nominal stabilization, prevent mercantilist strategies and the related imbalances, while promoting stable income shares. Hein concludes active industrial and regional policies will have to be applied in order to facilitate sustainable growth to help the less developed countries and regions within the euro area catch up to the larger euro area.
www.levyinstitute.org/pubs/wp_734.pdf

At the Crossroads: The Euro and Its Central Bank Guardian (and Savior?)

JÖRG BIBOW

Working Paper No. 738, November 2012

In this working paper Research Associate Jörg Bibow investigates the role and shortcomings of the European Central Bank (ECB) within the context of the Economic and Monetary Union (EMU). He emphasizes the role of German intellectual and historical traditions as they serve to explain the structure of the ECB. The author begins by contrasting Keynes's chartalist view of money with the outlook and policy preferences of the Bundesbank in the post–World War II period. Based on this analysis, Bibow identifies several sources of weakness that may undermine the ECB and, ultimately, the euro. He provides three examples that illustrate these weaknesses. The paper then turns to a discussion of the ECB's role in combating the crisis, with emphasis on the limitations of the ECB as compared to state-backed central banks. The author concludes with observations and recommendations to reform what he terms "the dysfunctional Maastricht regime."

Keynes's chartalist view of money and the role of central banks stands in sharp contrast to the postwar Bundesbank perspective, which was informed by a fear of the fiscal dominance of monetary policy. Keynes viewed central banks as an

extension of the state and vehicle for public policy to ensure public control of the currency and public finances, as well as financial and economic stability. For Keynes, the activities of central banks were clearly an element of larger economic policy goals set by government. Among Keynes's critics is Walter Eucken, leader of the "ordo-liberalism" school, who, among others, may have provided the inspiration for the Bundesbank's, and later the ECB's, stability-oriented monetary policies. Eucken's views, the author observes, were close to those of Milton Friedman and included the idea of "an automatically working monetary stabilizer." Today, most central banks follow Keynesian policies (i.e., they adjust rates in response to changing conditions). In contrast, conservative (neoclassical) ideas of how the economy functions are often predominant.

Bibow recounts that the German view of the Bundesbank is and has been that it must be independent and primarily focused on price stability for the currency to be protected. These features become more important when one understands the extent of German influence on the design of the Maastricht regime of the EMU. The author argues that the EMU is largely a German product because of the role it played in the creation of the EMU. The desire to end Germany's regional hegemony and regain some measure of monetary sovereignty, albeit through the shared currency of the euro, created strong incentives for other countries to create conditions that would entice Germany to participate. Thus, the EMU incorporated much of what Bibow refers to as the "Bundesbank mythology" into its structure. The work of Otmar Issing, and his reading of Eucken, provides a window into the Bundesbank's ideas of independence and its preoccupation with price stability. Closely related is the revision of German monetary history that created a near-universal phobia of inflation in Germany, with very little concern about deflation. This, in Bibow's view, explains the Bundesbank's, and later the ECB's, "price stability only" approach to monetary policy.

Finally, this mythology includes the proposition that price stability leads to growth. In fact, by keeping inflation lower than its trading partners' during the pre-EMU years, Germany was able to increase its competitiveness and exports, resulting in economic growth. Germany achieved this stability through budgetary and wage discipline. Herein, the issue of independence (i.e., the separation of public finance and monetary policy) shows a clear lineage between the German "mythology" and how the ECB was formed. In essence, Bibow concludes, the (Bundesbank-inspired) approach of the ECB could not be more different from Keynes's chartalist perspective. That this essentially mercantilist approach worked for Germany in the past in no way implies that it is suitable given the needs of Europe today.

Bibow then surveys some of the Maastricht Treaty provisions. The separation between monetary and fiscal systems was designed to be extraordinarily strong to ensure that fiscal priorities did not become dominant or lead to abuse of the printing press. However, while member-states face strong controls on their actions, there is relatively little control of the ECB governing body itself. Building on these disparities, the author notes three sources of potential weakness in the ECB: maintaining the support of the European populace for its policies (specifically, anti-inflation); its inability to fight inflation and deliver economic growth simultaneously; and, perhaps fatally, the absence of a government counterpart with which to resolve crises. Bibow then examines three instances in which ECB policies have failed to address economic challenges: the euro's plunge in 1999–2000, the emergence of "tax-push inflation" in 2001–05, and the crisis of 2008–09.

While the ECB can provide short-lived stimulus or relief to markets, it cannot solve the underlying euro debt crisis, which is both a banking and an intra-area balance-of-payments crisis. Bibow suggests that refocusing the ECB on growth and price stability is just as important as reorienting area-wide fiscal policy on growth and investment. The problem remains that Europe's economic constitution is only concerned with price stability. This approach may have worked for Germany in the past, but it represents an intellectual trap for Europe as a whole.

www.levyinstitute.org/pubs/wp_738.pdf

Conflicting Claims in the Eurozone? Austerity's Myopic Logic and the Need for a European Federal Union in a Post-Keynesian Eurozone Center–Periphery Model

ALBERTO BOTTA

Working Paper No. 740, November 2012

In this working paper, Alberto Botta, Mediterranean University of Reggio Calabria, analyzes the role of the current eurozone institutional structure in the ongoing sovereign debt crisis in the periphery countries. His analysis is informed by a Modern Money Theory approach. He argues that the lack of a eurozone federal fiscal authority, with the power to engage in countercyclical fiscal policy, coupled with the loss of monetary sovereignty by eurozone member-states and the absence of a central bank to act as the lender of last resort, has amplified and lengthened the current crisis. Botta presents a post-Keynesian center–periphery model. His analysis shows how diverging trends and conflicting claims have emerged between the center and periphery countries following the 2007–08 crisis. These differences may, he argues, pose the greatest obstacle to creating a federal entity for the eurozone. Further, austerity policies as enacted thus far do not get at the heart of the eurozone crisis. Europe requires a federal fiscal authority that can enact expansionary fiscal policies *and* a central bank to act as lender of last resort. The recent bond purchasing program of the European Central Bank (ECB) is a positive, if timid, step in the right direction.

Botta observes that, prior to 2007, the periphery and center countries appeared to be on the path to convergence, at least in terms of interest rates. This trend changed abruptly following the 2007–08 crisis. The author identifies the incomplete nature of the euro structure as crucial to understanding the origins of the crisis. Eurozone member-states must act alone to counteract recessionary forces because there is no federal fiscal entity. Member-states surrendered their currency authority when they adopted the euro and must now pay debts in a currency they do not control. These conditions create an environment in which center and periphery eurozone economies diverge, and in which conflicting interests arise. The periphery is experiencing protracted financial instability, while countries in the center benefit from low interest rates. The former is scrambling to implement austerity measures while the latter can pursue financial stabilization due to the aforementioned interest rates. Further, while the periphery would benefit from expansionary, even inflationary, spending, the central countries strongly oppose policies that might reduce their external competitiveness.

The author uses a simple eurozone center-periphery model to examine how the unraveling of the euro project would harm all member-states. Botta specifies a two-country model with a well-developed central country and a relatively less-developed peripheral country. They share a common currency and each sets their own fiscal policy. Each country can issue national treasury bonds denominated in the common currency. Developing this model, the author shows the interconnected nature of the central and large peripheral countries. He also examines the evolution of the debt-to-GDP ratios and country-specific risk factors that follow broadly similar adjustment rules in the center and the periphery.

In addition, the author reveals important asymmetries in the way the two countries respond to economic shocks. He examines the consequences of such a shock by modeling two cases: a "big center – small periphery" case and a "big center – big periphery" case. He finds that economic shocks affect countries in the periphery, depending on their condition and the intensity of the shock, to a greater degree than countries in the center. Financial markets' fears of default may contribute to a new and lower equilibrium for the peripheral country. Broadly speaking, the central country experiences the opposite results.

The big center – big periphery case is much more complicated due to stronger trade relationships and the scale of the central economy's asset holdings. The intertwined nature of "big center" and "big periphery" countries can easily give rise to a perverse cycle between bankruptcies in the periphery and financial dislocation in the center. This implies that bonds issued by the countries in the central eurozone may experience pressure if international investors fear a disorderly euro-system collapse. Botta observes that it is the interconnectedness of big peripheral and central countries that allows economic shocks to spread.

The author analyzes the value of a fiscal compact. According to his analysis, closer coordination of fiscal policy will not address the core eurozone difficulties. Indeed, he finds that all of the center-to-big-periphery feedback mechanisms that can deepen a recession and spread it to the rest of

the eurozone continue to operate in the presence of a fiscal compact. For example, automatic fiscal-correction mechanisms envisioned as part of a fiscal compact might not help to stabilize debt-to-GDP ratios. Restrictive fiscal policy could exacerbate an economic recession and thereby hinder fiscal consolidation itself. Further, a recession in the entire eurozone would lead all countries to implement fiscal corrections regardless of the soundness of their public balances. The linkages between center and periphery still obtain. The desire for generalized fiscal austerity, the author finds, could lead to a center-periphery lose-lose game.

Botta concludes that the current crisis is a result of the institutional structure of the eurozone. Given the shared dangers inherent in the current system, a European federal union with full monetary sovereignty and a central bank with lender-of-last-resort powers is needed. Under such a system, the cost of countercyclical measures would move from national public balances to the European federal budget. The perverse feedback mechanisms would no longer take hold during periods of economic turmoil. The author recognizes that fiscal deficits might emerge at the federal level, but these would be less vulnerable to speculative attacks since a European federal government would be backed by the full support of the ECB.
www.levyinstitute.org/pubs/wp_740.pdf

Program: Monetary Policy and Financial Structure

Fiscal Traps and Macro Policy after the Eurozone Crisis

GREG HANNSGEN and DIMITRI B. PAPADIMITRIOU
Public Policy Brief No. 127, 2012

The United States is rapidly approaching what is widely referred to as the "fiscal cliff." If automatic public spending cuts and tax increases are allowed to take effect, the US economy will, according to Congressional Budget Office forecasts, likely fall back into a recession. As the eurozone confronts another round of economic contraction in late 2012, policymakers and pundits continue to debate the merits of European-style austerity measures in the States.

In this policy brief, Research Scholar Greg Hannsgen and President Dimitri B. Papadimitriou briefly survey the results of austerity policies in the eurozone and the UK. They then offer an explanation of the dynamics of what they term the "fiscal trap"—a spiral of spending cuts that reduces economic activity which in turn lowers tax revenues and leads to demands for more cuts. The experience of Greece in 2009 provides ample evidence of how quickly the fiscal trap can take hold. For sovereign-currency countries, the fiscal trap can be avoided, if one understands the nature and role of central banks in times of economic turmoil. This understanding, the authors point out, appears to be lacking among the economic policy leaders of the eurozone and perhaps the United States. In closing, they present their case against the US budget sequester that will cut $500 billion in public spending and call for fiscal policy that will return the country to economic growth.

The eurozone has implemented austerity policies in an effort to create economic stability and growth. Instead these policies have led to economic contraction, high unemployment, and, in some countries, profound social upheaval. In short, austerity policies have not worked. The UK, which is not tied to the euro, has elected to implement its own spending cuts. The results have been no better. Given the dismal results, why would these countries continue their austerity policies? Further, why would the United States contemplate imitating European economic policy when the results have been so disastrous? The authors offer a two-part answer.

Fiscal policy is often procyclical—governments tend to spend more when the economy is expanding and cut spending when the economy contracts. This may be a result of political pressure or legal requirements to maintain a balanced budget. In both cases, this approach can lead national economies into a "fiscal trap." The process of economic contraction followed by spending cuts that leads to lower tax revenues and more pressure for cuts is the first part of the trap. If the downward spiral continues, these same countries will experience increased transfer payments, and higher borrowing costs that will increase their deficits, raise their borrowing costs further, and intensify this vicious cycle, ultimately locking the economy into a full-blown fiscal trap.

The authors observe that this approach to "managing" economic turmoil is the result of a fundamental misunderstanding of the appropriate and traditional role of central banks. One perspective, often referred to as "metallism," operates on the principal that the supply of money is fixed; as with a gold standard, for example. For this group, the fiscal trap is unavoidable once the process begins. Such countries do not control their currency and must "live within their means." In contrast, "chartalism" argues that since sovereign-currency countries are not constrained in their ability to issue debt so long as they allow exchange rates to vary, it is possible to escape the worst effects of the fiscal trap. Governments can spend in a countercyclical fashion and exit the fiscal trap. This is a prudent and proven course of action. The United States, the authors recall, has in many cases managed its debt effectively and, as a result, has never faced any danger of defaulting on its debts.

Despite the dismal record of austerity policies in the eurozone and the UK, the United States continues to approach the "fiscal cliff." Under the Budget Control Act of 2011, spending cuts will be implemented across the board, and are expected to be in the range of 12 to 15 percent for all affected items. The cuts will also include the expiration of the Bush tax cuts, the payroll tax cut, and emergency unemployment benefits, as well as a 2 percent reduction in Medicare payments for physicians. In total, the spending cuts amount to $500 billion in deficit reduction in 2013. The authors point out that these cuts come on top of US GDP growth that has been below trend for many years. The possibility that government stimulus spending could overshoot the trend is, the authors conclude, hard to imagine.

The sequester, the authors conclude, is precisely the wrong prescription for the US economy. Cutting public spending and raising taxes in a time of sustained economic weakness will serve only to move the US closer to a recession. The calls for deficit reduction are misguided economic policy. The authors call on policymakers to turn away from the fiscal cliff by repealing the sequester, and to adopt policies that will promote economic growth.

www.levyinstitute.org/pubs/ppb_127.pdf

The Impact of Financial Reform on Federal Reserve Autonomy

BERNARD SHULL

Working Paper No. 735, November 2012

In recent years, the Federal Reserve has found itself at the center of a number of controversies. The failure of the Fed to anticipate and prevent the financial crisis of 2008–09 by approving mergers that gave us "too big to fail" banks, and its bailout of these banks following the crisis, have increased public awareness of the Fed. In this working paper, Bernard Shull, Hunter College, CUNY, and National Economic Research Associates, examines the new constraints placed on the Federal Reserve under the Dodd-Frank Act and the expansion of the Fed's authority. The paper reviews the historical origins and development of the Fed, examines the provisions of the Dodd-Frank Act, and offers an analysis of the provisions' likely impact on the Fed. The author finds that the new constraints are unlikely to have much impact but that the Act's expansion of the Fed's authority constitutes a significant increase in its power and influence, inviting questions about the organizational design, governance, and traditional autonomy of the central bank.

European central banking practices in the late 19th and early 20th centuries, the author observes, were concerned primarily with protecting gold reserves through interest rate adjustments and providing emergency assistance in times of financial crisis. They were not generally concerned with issues such as resource allocation, income distribution, or the survival of individual firms. Nonetheless, the founders of the Fed saw European central banks as having too much influence concentrated in one place. The Fed was therefore given a highly decentralized structure and organized in a manner that gave it a high degree of independence, within certain limits. The Fed was not tied to the congressional budget and its leadership was selected by member banks and the Fed Board of Governors itself. Thus, the Fed had three main constituencies: Congress, because it performed oversight; the President of the United States, who selected board members; and the bankers who owned the reserve banks. This structure has been modified somewhat, but the Fed maintains a high degree of independence.

Initially, the Fed's role as a regulator was modest. However, with the Banking Act of 1933 and subsequent legislation, the Fed assumed oversight of bank holding companies—the organizational structure of choice for all major banks. As a result, the Fed became the dominant bank regulator. In recent decades, the Fed has, with minimal interference from the courts or Congress, approved a radical degree of consolidation in the banking industry. This has resulted in the creation of the "too big to fail" banks of ill repute. Over the years, there have been several calls to modify the Fed's authority but they have generally failed. The most recent legislation, the Dodd-Frank Act, both constrains and extends the Fed's authority.

Dodd-Frank created the Financial Stability Oversight Committee (FSOC) and the Office of Financial Research to identify and monitor systemic threats from the financial system and make legislative proposals for their redress. Both of these new entities report to Congress. The Fed has been given authority to supervise all bank holding companies that are systemically important and to impose "enhanced prudential standards" on the same. The Fed also oversees orderly resolution plans and, through the FSOC, can place limitations on the actions of the banks it regulates.

Under Dodd-Frank, the Fed is subject to limits on emergency lending. It is subject to audits by the Government Accountability Office (GAO). The selection of reserve bank presidents and the members of their boards has also been modified. The Fed is also required to consider the systemic risks associated with mergers and acquisitions among banks. Dodd-Frank prohibits any merger that would create an entity with 10 percent or more of total national liabilities.

Shull examines the likely results of Dodd-Frank, noting that legislative intent cannot guarantee outcomes. He observes that the relationship between the Fed and the newly formed FSOC has yet to be defined in practice. The role and resources of the Fed make it difficult to imagine it as anything less than the dominant agency in assessing risk and proposing remedies. Likewise, in exigent circumstances it seems likely that the recommendations of the Fed will trump its emergency lending constraints.

The author concludes that the effects of GAO audits of the Fed are difficult to assess. The GAO has conducted audits of the Fed in the past. The likely effect of GAO audits in the future is widely debated. The author's appraisal of the change in voting procedures for reserve bank presidents is that it is not likely to have much, if any, effect. Likewise, the requirement to analyze the systemic risk associated with individual mergers is unlikely to function as a clear constraint on Fed decisions, since such mergers can be approved if risks are found to be offset by benefits. Shull also finds that the new 10 percent constraint is unlikely to affect the Fed's autonomy materially. On balance, the author concludes, none of the constraints are likely to limit the Fed's independence.

In contrast, the Fed extended its monetary influence during the last crisis. It gained the authority to pay and alter interest on reserves, developed a program on forward guidance, and developed a number of nontraditional programs to support the financial system. During this time, it expanded its portfolio through purchases to an extraordinary degree. The author notes that during the same period the general public became much more aware of the Fed's power and influence. Shull concludes that the new constraints of Dodd-Frank are unlikely to affect the Fed dramatically. However, the Fed's expanded monetary powers require a reexamination of its organizational design, governance, and traditional autonomy.
www.levyinstitute.org/pubs/wp_735.pdf

A Meme for Money

L. RANDALL WRAY
Working Paper No. 736, November 2012

In this working paper, Senior Scholar L. Randall Wray proposes a new meme (i.e., an idea, behavior, style, or usage that spreads from person to person within a culture) for money. He argues that policy debates in recent years have been dominated by the conservative meme for money. Progressives have bought into this meme, and are trapped by it. In this paper, Wray offers a first step toward an alternative meme for money, one that provides a frame that is consistent with a progressive social view and based on Modern Money Theory (MMT).

The orthodox money meme begins with the false story of money we have all heard. It is a story that frames the discussions of economists, politicians, and the general public; as such, it is enormously powerful. Money grew out of the barter system, so the conservative meme goes, as a kind of value-neutral market "lubricant." This money meme is closely tied to the

market meme, which teaches that markets are where we find individuality, choice, and freedom. Therefore, government, taxes, and regulations are "the problem." The conservative meme sets the individual against society, and treats government as an obstacle rather than a collective solution.

The conservative meme is as seductive as it is false. However, judging by the policy discourse, Wray observes, the conservatives have a more persuasive meme than the progressives do. Wray argues that progressives must craft a new meme for money if they hope to change the direction of American politics. To do this, they must take the moral high ground from conservatives with a meme that reflects our best values and uses an MMT approach.

A progressive meme for money would reframe the origins of money as an instrument for creating social harmony, not as an instrument for private gain. It would emphasize our social, not individual, nature. It would focus on the positive role of government, not only in terms of the creation of money but also in terms of ensuring its proper, social uses. The progressive meme for money would describe how money promotes positive relations between the individual and the state.

Instead of accepting the orthodox meme, which tells us that the purpose of taxes is to "pay for" government, a progressive meme would explain how taxes create a demand for state money and thus ensure that there will be willing sellers of goods and services. Taxes are also used to regulate demand, to prevent the accumulation of wealth across generations, and to advance public purposes. We need a new meme for taxes and spending, says Wray. So long as taxes are framed as "paying for" government, progressives will lose. Taxes drive money, prevent excess demand, and discourage undesirable activities.

The progressive meme would emphasize the social over the individual. The social safety net should be recast in terms of values like "we take care of our own," not the proposition that one person pays for another or that our social benefits are somehow a savings account that we "own." Wray's money meme tells us that we pay taxes to keep our currency strong. With a strong currency we can take care of our own. We need good public services and infrastructure to keep our country strong. This is the point of government spending, Wray argues.

The new money meme tells us that inflation can be avoided if government purchases are designed in a way that does not create price pressures. It can also use patriotic propaganda, rationing, and taxes to control price pressures. Further, when government spends more than it takes in from taxes, we get both the goods and the services it purchases, and we accumulate net financial wealth. The new meme should emphasize the savings and wealth that comes from government spending, not deficits and debt.

A new meme for the monetary system would emphasize how this system allows for individual choice and gives government the resources to create a better society. The monetary system is one of the primary tools governments have to accomplish public purposes. While far from perfect, it is the best tool we have so far to induce private interests to serve their own interests and the public interest. Progressives should continue to push for a better government, says Wray. They stand a better chance of succeeding if they discard conservative economic memes and put forward their own.
www.levyinstitute.org/pubs/wp_736.pdf

Program: The Distribution of Income and Wealth

Levy Institute Measure of Time and Income Poverty

It's About "Time": Why Time Deficits Matter

RANIA ANTONOPOULOS, THOMAS MASTERSON, and AJIT ZACHARIAS
Public Policy Brief 126, 2012

Senior Scholar Rania Antonopoulos, Research Scholar Thomas Masterson, and Research Scholar Ajit Zacharias address one of the fundamental issues in our approach to poverty: how we define and measure it. If our measures of poverty do not adequately describe the poor, we cannot develop or evaluate policies to alleviate poverty. Most poverty-reduction policies are informed by the notion that poverty is simply a lack of income. Consequently, poverty reduction typically focuses on increasing income through employment or cash transfers. But this approach ignores an important dimension of economic well-being; namely, the

connection between income, the time needed for household production (e.g., cooking meals, cleaning, and so on), and living standards. If people lack the time they need to engage in household production, or lack sufficient income to purchase substitutes for household production, their standard of living falls. Most income-based measures of poverty assume that everyone has the time needed for household production. This, the authors demonstrate, can lead to flawed measurements of the scope and depth of poverty.

With the support of the United Nations Development Programme and the International Labour Organization, the authors specify and apply a two-dimensional measure of income and time poverty, the Levy Institute Measure of Income and Time Poverty (LIMTIP). Traditional measures of poverty address income deficits but they do not include any accounting of "time deficits." The authors begin with an accounting identity. Broadly stated, individuals and households suffer from time deprivation if the number of hours in an individual's week is less than the number of hours he or she must commit to paid work, personal care, and household production. The authors' household time-deprivation calculations take into account the diversity of household composition and therefore the different time requirements of households. After describing the elements of LIMTIP, the authors present a four-category classification using time and income poverty to describe the status of individuals and households: income- and time-poor, income-poor and time-nonpoor, income-nonpoor and time-poor, and income-nonpoor and time-nonpoor.

Households and individuals with income above the official poverty level but with time deficits and income insufficient to purchase substitutes for household production represent the "hidden" (i.e., unmeasured) population in poverty. Using this approach, the authors compared the official poverty rates in Argentina, Chile, and Mexico to the LIMTIP rate. In all three countries, the rate of poverty was shown to be higher when time poverty was included in the calculation. The LIMTIP poverty rate in Argentina was 11.1 percent, compared to the official rate of 6.2 percent. In Chile, the LIMTIP rate was 17.8 percent, compared to the official rate of 10.9 percent. Finally, in Mexico, the LIMTIP rate of 50 percent was significantly higher than the official rate of 41 percent. The difference between the official and LIMTIP poverty rates makes the hidden poor visible for the first time. The authors apply the LIMTIP approach to investigate various demographic groups.

The results also provide a more detailed portrait of the groups in poverty and their specific needs. For example, the most frequent cause of time poverty is long hours of employment. Thus, increasing income through additional employment has the potential to create time poverty that may overwhelm the positive effects of additional income. Specifically, women experience the greatest degree of time poverty because of long hours of housework; in some cases, women face time deficits even before employment hours are included. Similarly, among employed households, hidden poverty is highest among dual-earner households. The largest degree of hidden poverty was found among employed households with children, especially children below the age of six.

The authors conducted a full-employment simulation to measure the impacts on time and income poverty using the LIMTIP approach. The simulation involved a hypothetical scenario in which all unemployed or part-time employed adults moved to full-time employment. The simulation showed that while some groups would benefit overall from increased hours of employment, other groups would experience new or increased time deficits if their hours of employment grew. The authors conclude that employment-creation strategies must be matched with policies designed to offset the poverty-inducing effects of time deficits—an integrated policy agenda that cuts across class and gender lines and addresses the deficits in jobs, earnings, and access to social care.

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Program: Employment Policy and Labor Markets

Current Prospects for the Greek Economy: Interim Report

DIMITRI B. PAPADIMITRIOU, GENNARO ZEZZA, and VINCENT DUWICQUET

Research Project Report, October 2012

The Greek economy remains in the worst recession of the postwar period. The eurozone crisis began with Greece's difficulties rolling over its maturing debt in 2009. Portugal, Spain, and Italy soon fell prey to the crisis as the contagion spread. The Greek government sought and received substantial financial support, but with requirements for severe austerity measures and structural changes attached. The premise of the bailouts was that reducing Greek debt would lead to economic stability and recovery. Thus far, the policies required by the "troika"—the European Union (EU), European Central Bank, and International Monetary Fund (IMF)—have not been effective.

President Dimitri B. Papadimitriou, Research Scholar Gennaro Zezza, and Vincent Duwicquet, Centre d'Economie de l'Université Paris Nord, present a preliminary report on the evolution of major macroeconomic variables in the Greek economy. The goal of the report is to examine the historical sources of growth in the Greek economy and its prospects for future growth. They examine the sources of growth before and during the euro era as well as the causes and consequences of the ongoing recession, and review the likely results of the policies currently being implemented. Their analysis is conducted using the "financial balances approach" of Wynne Godley. Thus, the report focuses on the components of aggregate demand and analyzes the financial balances of the main sectors. The report includes sections on the growth and decline of the Greek economy; financial balances; the external balance; government accounts; savings, profits, and investment; the impact of the bailouts and Greece's prospects according to the troika; and the authors' policy recommendations.

Prior to 2008, Greece was the country that benefited the most from joining the eurozone. It saw real GDP per capita rise by 30 percent between 2000 and 2008. For a time, Greece closed the gap between itself and some of its richer eurozone partners. These gains have been completely erased since the crisis began. In fact, only Germany has recovered, while all of the other eurozone countries remain below 2007 levels in terms of real output. Prior to the crisis, Greek GDP growth had progressed at a positive pace since 1995. Since 2008, Greece's GDP has fallen, and it is expected to be 20 percent lower in 2012 than it was in 2007.

The authors report that starting in the second half of the 1990s, investment began to increase relative to private sector savings, which implies that when the private sector balance turned positive in 1999, the private sector became a net borrower against the rest of the world. Put another way, the private sector balance reflected a decrease in the external balance, which deteriorated in the years leading up to 2008. Strong growth in Greek real GDP was based on debt-fueled private sector demand.

In terms of the external balance, the authors observe that historically there have been underlying problems with the Greek current account. These problems were largely manageable, due to offsetting property income and net transfers. However, these began to decline in the 1990s. When Greece joined the euro, its trade balance deteriorated. The authors show that export prices rose faster in Greece than in the rest of the eurozone, which contributed to further weakening of the external balance. The authors examine the composition of trade to better describe the trade imbalance.

The origins of the trade imbalance are analyzed in terms of the composition of exports and imports. By 2010, manufactures and food exports were 50 and 25 percent, respectively, of total exports. In terms of imports, manufactured goods have historically been a large share, as has fuel. By 2010, fuel was 25 percent of total imports. The authors find that Greece experienced the greatest deterioration in its trade imbalance with countries pursuing export-led growth, fuel-exporting countries, and countries with lower income-growth rates. The authors also report that while tourism has risen, it has not been adequate to offset the decline in manufactures. Likewise, declines in net migration and net property income from abroad have contributed to the deterioration. The continued growth of the current account deficit, the authors conclude, implies an explosive path for external debt. The authors show that Greek external debt began to explode with the widening of the external deficit that began when Greece joined the eurozone.

While it has been widely reported that the sovereign crisis in Greece was due to profligate government spending, the authors find this explanation inadequate. Prior to the crisis, the size of Greece's government was below that of France, Germany, and Italy. In the 1990s, Greece and Italy led the eurozone in the reduction of interest payments on government debt. These levels declined further with the adoption of the euro, only to reverse course with the unraveling of the "debt crisis."

The authors note that the increases in government revenues required under the Maastricht criteria were achieved through higher social contributions. Historically, the size of the Greek government was not large in comparison to other eurozone countries, but Greece, at least before the euro, lagged behind other countries in its ability to raise revenues through taxation.

In terms of government debt–to-GDP ratios, the authors find that Greece's debt load remained relatively stable at the beginning of the euro years and only rose to unmanageable levels when the sovereign debt crisis took hold. The authors conclude that the increase in Greek debt has been caused by how the crisis was managed, not the level of debt itself.

The private sector financial balance is, in the authors' view, the major problem Greece currently faces. Both the public and the private sector have a net debt against foreigners. Therefore, any attempt by Greece to quickly reduce the stock of debt implies a transfer of real, rather than financial, assets from Greece to foreigners. The authors review the determinants of the private sector financial balances and find that Greek investment in the 1990s favored construction rather than investments that create productive capacity. They also report that savings dropped, falling from 28 percent of GDP in 1988 to 10 percent in 2002; household savings then stabilized but has since turned negative, according to the latest data. The authors conclude that Greece, like the United States, financed much of its consumption by running down households' financial assets. It was this unsustainable trend, not government deficits, that put Greece on an unsustainable path.

The report includes a review of the European Commission's (EC) outlook for Greece. The EC forecasts that the bailouts, in combination with fiscal austerity measures, will return Greece to economic growth in 2014. The EC expects the recovery to come from increases in investment and exports, while imports will remain mostly stable. The authors remain skeptical of the EC forecast. The Commission's expectations for growth seem implausible when considered from the standpoint of a financial balances approach.

Ruling out a substantial increase in net exports, the authors suggest returning nominal GDP to positive growth by suspending the austerity program and implementing public sector–led job creation policies. Another option, the authors conclude, involves a larger amount of foreign assistance, again directed at stable job creation, with Greek debt rolled over at sustainable interest rates.

www.levyinstitute.org/pubs/rpr_10_12.pdf

Beyond Full Employment: The Employer of Last Resort as an Institution for Change

PAVLINA R. TCHERNEVA

Working Paper No. 732, September 2012

In this working paper, Research Associate Pavlina R. Tcherneva examines the effectiveness of Argentina's Plan Jefes y Jefas de Hogares as the only real-world employer-of-last-resort (ELR) program implemented to date. The author takes up an issue in the ELR literature that has received little attention. Namely, there is concern that even when ELR policies deliver full employment and price stability, they do so by further denigrating the poor with "low-paying" or "dead-end" jobs. In fact, the author finds, ELR programs have the potential to simultaneously address unemployment and serve as transformational programs.

The author begins by articulating the characteristics of a formalized ELR model drawn from the contemporary literature. She identifies 11 characteristics of an ELR program, which she then uses to evaluate Plan Jefes. The author first assesses the results of Plan Jefes in terms of macroeconomic stabilization and employment. Relying on the narrative of Plan Jefes participants, the author finds that ELR programs, while not a panacea, can have a transformational impact on issues such as poverty and gender disparity. She concludes with five lessons drawn from her evaluation of Plan Jefes.

Contemporary scholarship has formalized the ELR proposal as follows: ELR ensures full employment regardless of the business cycle; it is not a depression solution; it is a bottom-up approach that closes the demand gap for labor; ELR's most important countercyclical feature is its ability to create a buffer

stock of labor; ELR stabilizes wages and prices by creating a minimum wage-benefit standard for the economy; ELR spending is always at an appropriate level (i.e., the cost of an ELR program is equal to the cost of creating enough jobs for those people who are willing to work); ELR programs operate flexibly to allow people to enter and leave the program as the private sector demand for labor varies; ELR programs are financially sustainable in sovereign-currency countries and, some advocates claim, stabilize the value of the ELR country's currency; ELR programs, unlike cash transfers, spend money on maintaining and enhancing human potential while performing socially useful work; and ELR programs prevent unemployment from developing rather than waiting for unemployment to rise and then making policy interventions. Finally, ELR programs can be used to target problems in addition to unemployment. It is potentially a vehicle for social transformation. Having defined the major elements of the ELR model, the author turns to an evaluation of the Plan Jefes program.

Tcherneva finds that Plan Jefes was clearly implemented as a solution to economic depression. The program accepted people regardless of their job history, skills, or educational attainment but it was not universal, in that it did not offer employment to everyone who needed it. However, since the vast majority of program participants came from the bottom quintile of the population, Plan Jefes did work from the bottom up. In general, the program operated in a countercyclical manner, with people moving in and out of the program as private sector demand waxed or waned. In terms of wage and price stability, the author cautions that one would need to study a truly universal, long-term program. However, the evidence suggests that Plan Jefes contributed to the establishment of a wage floor for workers who transitioned from Plan Jefes work to the private sector.

Insofar as spending went to direct employment and did not leak into private sector profits, the author concludes that overall program spending was at the right level. However, it is important to emphasize that the program did not hire all of the unemployed, only designated heads of households. In terms of the effects on labor markets, Plan Jefes participants moved in and out of the program without major disruptions to public sector projects. The program lasted for only 4.5 years, despite the fact that it was not very expensive. It is, therefore, difficult to assess how the program would have performed in terms of financial sustainability or as a preventative measure over the long term. Tcherneva observes that an important benefit of Plan Jefes was providing an alternative to forced idleness, and that the program enhanced human capital through such things as health checkups and vaccinations. In terms of performing socially useful work, no less than 87 percent of the Plan Jefes projects targeted communities directly.

The author examines the last criterion—ELR as a vehicle for social transformation—in detail. She finds that people at the bottom of the socioeconomic ladder, particularly women, benefitted the most from the Plan Jefes. The author concludes with five lessons regarding the ELR's impact on poverty and gender disparities drawn from her examination of the Plan Jefes program, particularly from the narratives of program participants.

Public employment gave Plan Jefes participants an opportunity to work for the benefits they received. For women, the primary benefit of Plan Jefes was a profound transformation in their sense of self-worth. While ELR benefits all participants, it is among the poorest segments of the population, especially among women, that Plan Jefes produced material as well as emotional benefits. Tcherneva observes that women continued to go to their Plan Jefes places of work even when Plan Familias offered a cash benefit for poor mothers with no work requirement. Social mores, the author observes, dictate that genuine empowerment comes from earned income, not charitable contributions. The author concludes that reconceptualizing work and the domain of the public sector is critical to implementing sustainable and gender-aware ELR programs.
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Program: Economic Policy for the 21st Century

Explorations in Theory and Empirical Analysis

The Common Error of Common Sense: An Essential Rectification of the Accounting Approach

EGMONT KAKAROT-HANDTKE

Working Paper No. 731, September 2012

In this working paper, Egmont Kakarot-Handtke, Institute of Economics and Law, University of Stuttgart, observes that economists who used accounting, or flow-of-funds, macroeconomic models rather than equilibrium models were better armed to anticipate the credit crisis and the economic recession. Comparing equilibrium and accounting models shows why the latter were in some cases more effective tools for anticipating the crisis. Kakarot-Handtke thus takes the superior explanatory power of an integrated monetary approach for granted. However, he argues that the accounting approach can be improved by discarding certain ideas, such as GDP, that it inherited from the equilibrium approach. National accounting as such is not a model of the underlying economy but rather (in the ideal case) "the unbiased numerical reflex of the underlying theory." It is this underlying theory that the author sets out to analyze, correct, and ultimately replace.

The author relies on the work of Wynne Godley and Marc Lavoie for an integrated approach to credit, money, income, production, and wealth. This approach, observes the author, is the common ground, where there is no difference between "economics" and "accounting." Economic theory and national accounting must be fully integrated. The accounting approach, he continues, is not simply a matter of gathering and interpreting market transaction data. There must be an underlying theory that frames the approach. For example, production and income accounts necessarily rely on a theory of factor remuneration and profit.

To arrive at such a theory, Kakarot-Handtke proposes an abstract set of first (a priori) principles about the economy as a whole and abandons the easily grasped, small-scale phenomena in which commonplace economics trafficks. The first step in Kakarot-Handtke's analysis is the formalization of his theory using the minimum number of premises possible. However, formalization per se, he notes, is not sufficient. For example, general equilibrium theory is formalized but rests on a set of behavioral axioms. Therefore, the author employs a set of structural axioms rather than behavioral axioms. He employs objective structural relationships as his axioms; the familiar behavior hypotheses are not discarded, but merely put aside.

Kakarot-Handtke sets out the economic elements of his argument and specifies how they relate to one another. He then defines the smallest-possible elementary economic configuration including money, credit, debt, profit, distributed profit, and the market clearing price at any level of employment. The distinction between profit and distributed profit is crucial to his argument. Raw transaction recording makes this distinction visible in the accounting matrix. In contrast, "cooked" transaction recording produces a spurious equality of income and valued output. The author then extends his analysis to the investment economy, and shows that the investment-saving (IS) identity cannot be satisfactorily derived from national accounting.

The further results of his analysis show that the value of output is greater than factor income. Citing the work of Godley and Lavoie, the author reminds us that the fundamental error of value theory is that it proceeds from the premise that the value of the output of goods and services is always equal to the sum of factor incomes. He observes that classical, neoclassical, and Keynesian economic theorists have all wrestled with the ideas of income and profit unsuccessfully. The author turns to the accounting approach to develop a more rigorous assessment of income and profit. He observes that the chief merit of the accounting approach resides in the absence of "black holes" (i.e., the zero-sum rule for each sector ensures nothing is lost). Having clarified the formal properties of the pure consumption economy, he turns to the task of including investment expenditures in his analysis.

Kakarot-Handtke concludes that the accounting approach could be a valuable tool for economic analysis. At present, the accounting approach is formally hampered by "cooked" transaction recording and redundant definitions. The rectified accounting approach has, he argues, a critical role to play in the falsification of dubious identity assertions. Common sense will eventually come around to the conclusion that investment is not equal to savings. A similar conclusion awaits the spurious

national income identity. Rigorous accountants need only take the next step and deliver the proofs.

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Innovation and Finance: An SFC Analysis of Great Surges of Development

ALESSANDRO CAIANI, ANTOINE GODIN, and
STEFANO LUCARELLI

Working Paper No. 733, October 2012

In this working paper, Alessandro Caiani and Antoine Godin, University of Pavia, and Stefano Lucarelli, University of Bergamo, investigate the connection between innovation and firm financing. Joseph Schumpeter's analysis stressed the fundamental role played by finance in fostering innovations. However, this is an area of economic theory that has here-to-date received scant treatment in the literature, even by neo-Schumpeterians.

The authors undertake an analysis of the long-term structural changes engendered by technological innovation and the financial dynamics that accompany them. More precisely, they seek to explain the dynamics underlying Juglar medium cycles and Kondratieff long cycles following Schumpeter's taxonomy. They employ a stock-flow consistent (SFC) model to frame their analysis. Their model consists of a multisectoral economy. The authors investigate the dynamics of prices, employment, and wealth distribution across sectors and groups. The interaction between finance and the real economy is emphasized throughout the analysis.

According to Schumpeter, every time a cluster of radical innovations emerges, it creates structural changes in the wider economy. This is "creative destruction." The authors cite recent scholarship that appears to confirm the relevance of Schumpeter's analysis of the relationship between innovation and finance, though financial markets may play a larger role today than bankers did in Schumpeter's original theory. Given the process of financialization during the past several decades, this paper addresses an urgent need for a perspective that elucidates the role played by financial markets in shaping economic systems.

Building on the work of Wynne Godley and James Tobin, the authors adopt an SFC methodology. They define a multisectoral economy with two household sectors (wage earners and capitalists), consumption and capital goods industries, and a banking sector. Banks play a role by assessing the risk associated with each productive sector and setting interest rates.

The simulations capture two fundamental processes: (1) the replacement of old capital with new, more productive capital; and (2) financial instability arising from the emergence of a new sector. The authors explore the time dynamics, distributive impacts, and the choices made by innovative firms.

The model reveals important connections between finance and innovation in shaping the long-term business cycle. The authors' simulations show that the manner in which an economic system absorbs radical clusters of innovation may contribute to instability in the financial and real economy. These do not include any psychological or behavioral factors (e.g., irrational exuberance, frenzy, gregarious behavior, and so on) that are often suggested as explanations for boom-and-bust phenomena. Instead, the process of creative destruction itself, as old and innovative technologies contend for dominance, accounts for instability.

The authors offer that their approach represents a good point of departure for developing a consistent approach to the study of technological dynamics. This approach is capable of linking the evolution of real and financial variables and analyzing the complex feedback effects between these two dimensions. However, the authors conclude that their model, while valuable for the present analysis, remains a first step. The simulations rely on a number of simplifying assumptions that were necessary to reduce complexity. Also, the use of a highly aggregate perspective was useful to highlight certain dynamics but should be refined to reflect a more realistic description of how technological innovation unfolds. Improvements to the model might include a secondary wave of innovators drawn from old capital producers (i.e., imitators); the role of incremental innovation patterns in the short-to-medium run are absent from the present model; and history shows that waves of innovation overlap and rely on the previous wave, so that a steady state is never achieved. The authors suggest that a more flexible approach that maintains the same rigor of the SFC approach may prove fruitful. They suggest that the agent-based micro-founded model is a promising next step as these models avoid the simplifying assumptions in the foregoing

model and allow for complex feedback effects between micro and macro levels.

http://www.levyinstitute.org/pubs/wp_733.pdf

The (Normal) Rate of Capacity Utilization at the Firm Level

MICHALIS NIKIFOROS

Working Paper No. 737, November 2012

In this working paper, Research Scholar Michalis Nikiforos examines an important but often neglected economic variable: capacity utilization. Many studies have shown that firms keep their capital idle most of the time. At the macro level, the author observes, capacity utilization is also relevant to the study of economic cycle theory, growth accounting, development economics, and taxation theory and policy. Capacity utilization has figured prominently in recent debates on the Kaleckian model of growth and distribution. The author examines the factors that drive capacity utilization decisions at the firm level, and concludes that economies of scale allow for an endogenous desired rate of utilization. He shows that a firm tends to utilize its capital more as the demand for its output grows, providing the rate of returns to scale decreases.

The paper includes a brief review of the debates raised in the utilization of capital literature. Nikiforos summarizes some of the early contributions to the idea of capacity utilization, including Karl Marx, John Stuart Mill, and Alfred Marshall. He then turns to more recent scholarship, which concerns itself with the determination of capital utilization. The optimal level of ex ante capacity utilization has been explained in terms of barriers to entry or as a response to rhythmic variations in the price of inputs. Based on this discussion, the author moves to a simple model to show how technology, the cost of capital, wages, the rhythmic variation in wages, and the level of demand determine the normal utilization rate.

Nikiforos begins with a two-dimensional model that includes one production technique and two systems of operation (i.e., a single and a doubt shift). The model could be extended but is kept simple for the purposes of exposition. He shows that if the returns to scale decrease as the scale of production increases, an increase in the demand for a firm's product will tend to increase the utilization of its capital, and the firm will choose to employ a second shift.

The addition of a second technique of production allows the author to model the firm's decision in selecting the optimal technique of production and system of production. He finds that the utilization differential leads to the selection of a more capital intensive production technique. The utilization differential comes into effect under the double shift system. The author then extends his model to include an infinite number of techniques of production.

Nikiforos concludes the entrepreneur will tend to choose a double-shift system of operation over a single-shift system of operation as the scale of production increases, if the rate of returns of scale decreases as the scale of production increases. He therefore demonstrates that the level of capacity utilization for a cost minimizing firm depends on the level of demand for its product.

Turning to a discussion of the causes of returns to scale, the author finds that, if all of the variables that affect returns to scale are taken into account, as well as the additional cost burdens that come with increased production, one may convincingly argue for a rate of returns to scale that, at the level of the firm, decreases as demand for the firm's output and scale of production increase. Thus, the rate of utilization for the individual firm is not determined by exogenous structural characteristics. On the contrary, the cost-minimizing firm tends to adjust the level of its capacity utilization based on changes in demand for its product.

The results presented in this working paper do not, the author cautions, settle the debate between advocates of the Kaleckian model and its critics. More work remains to be done on, for example, the links between the micro and macro levels, extension of the model, and empirical investigations of capacity utilization.

www.levyinstitute.org/pubs/wp_737.pdf

On the "Utilization Controversy": A Theoretical and Empirical Discussion of the Kaleckian Model of Growth and Distribution

MICHALIS NIKIFOROS

Working Paper No. 739, November 2012

The Kaleckian model of growth and distribution continues to be a standard analytical tool for modern heterodox macroeconomists. However, despite its many advantages, the model remains controversial. In this working paper, Research Scholar Michalis Nikiforos addresses one of the primary critiques of this model: namely, that the rate of capacity utilization must return to its desired (normal or target) rate in the long run. Nikiforos takes up this argument beginning with a review of the Kaleckian model and the debate surrounding it; he then examines the Federal Reserve Board (FRB) capacity utilization data, which are often used to test the model, and finds that these data are, by definition, ill suited to judge the model. Nikiforos reviews the literature on other efforts to measure utilization. He proposes an alternative approach that reconciles the micro and macro dimensions of the model and provides an empirical analysis supporting the Kaleckian model.

Nikiforos summarizes the critique of the Kaleckian model: in the long run, utilization cannot be different from the desired rate; the desired rate is determined by the cost minimization principle; and the desired rate that minimizes cost for a firm is exogenously determined. Therefore, critics argue that the Kaleckian model only works in the short run. For the model to hold in the long run, it must be shown that the actual level of utilization adjusts to the exogenous desired level of utilization. Absent a long-run dimension for the model, its long-run Keynesian features will not obtain, leaving no room for the paradox of cost or the paradox of thrift. If a mechanism cannot be found by which the actual level of utilization adjusts to the exogenous desired framework, Nikiforos explains, then the model must be abandoned in favor of other formulations.

Proponents of the Kaleckian model agree that in the long run the two rates must equalize. However, they argue that it is the desired rate of utilization that adjusts to the actual rate, not the reverse. While this argument stands on a strong formal basis, it lacks a coherent economic rationale. Nikiforos provides empirical and formal evidence for such an adjustment mechanism.

The critique of the Kaleckian model appears to be confirmed by empirical capacity utilization data collected by the FRB. These data show that for the last six decades, capacity utilization has gravitated around a desired rate of approximately 80 percent. However, Nikiforos finds that these data are inappropriate because of how the survey instrument, and therefore the data, is constructed. The data in the survey, the author argues, gravitate toward a structural exogenous level of utilization and are also stationary by definition. Rather than providing the means to assess whether or not the desired rate of utilization is endogenous in the long run, these data measure how much capacity is utilized compared to the desired rate of utilization. Nikiforos reviews attempts by other economists to measure utilization and reports that utilization, aside from procyclical fluctuations, is far from stationary and has an upward trend over time. This stands in stark contrast to the FRB data and does little to disprove the Kaleckian model. He suggests that the Survey of Plant Capacity Average Workweek of Capital (AWC) data are more appropriate to evaluate the model. The author then takes up the question of how to link cyclical fluctuations of utilization with its trend.

As stated above, the critique of the Kaleckian model originates at the level of the firm. The author shows that as long as the rate of economies of scale is decreasing, entrepreneurs will have an incentive to meet increased demand for their product, not by expanding their plants, but by increasing their utilization (i.e., adjusting their desired rate upward). The connection between the change in the utilization rate at the macro and micro levels is explained, the author argues, by a firm-level mechanism by which the desired utilization rate becomes endogenous due to the influence of returns to scale. Firms will tend to increase capital utilization as output grows in the presence of increasing returns to scale and a decreasing rate of returns to scale. In this manner, the author demonstrates the compatibility of micro behavior with an adjustment mechanism for utilization at the macro level. Nikiforos then discusses the linkage between the long-run micro and macro levels.

The author further examines the proposed adjustment mechanism empirically using an auto-regressive distributive lag (ARDL) model. The desired rate of utilization is derived from the AWC series and regressed against the FRB data on utilization. The approach allows the author to confirm that the average workweek of capital adjusts to the deviations of the

actual from the desired rate of utilization. Thus, Nikiforos refutes an important critique of the Kaleckian model and provides evidence of the robustness of the Kaleckian model in both the short and the long run.
www.levyinstitute.org/pubs/wp_739.pdf

INSTITUTE NEWS

Upcoming Events

22nd Annual Hyman P. Minsky Conference

Building a Financial Structure for a More Stable and Equitable Economy
Ford Foundation, NYC
April 17–19, 2013

In 2008–09, the world experienced its worst financial and economic crisis since the Great Depression. Global employment and output collapsed, and an estimated 84 million people fell into extreme poverty. Given the fragility and uneven progress of the economic recovery, social conditions are expected to improve only slowly. Meanwhile, austerity measures in response to high government debt in some of the advanced economies are making the recovery even more uncertain.

It's time to put global finance back in its proper place as a tool to achieving sustainable development. This means substantial downsizing, careful reregulation, universal social protections, and an active, permanent employment-creation program.Therefore, the 2013 Minsky Conference will address both financial reform and poverty in the context of Minsky's work on financial instability and his proposal for a public job guarantee. Panels will focus on the design of a new, more robust, and stable financial architecture; fiscal austerity and the sustainability of the US economic recovery; central bank independence and financial reform; the larger implications of the eurozone debt crisis for the global economic system; improving governance of the social safety net; the institutional shape of the future financial system; strategies for promoting poverty eradication and an inclusive economy; sustainable development and market transformation; time poverty and the gender pay gap; and policy and regulatory challenges for emerging-market economies.

The 2013 Hyman P. Minsky Summer Seminar

Levy Economics Institute of Bard College
Annandale-on-Hudson, New York
June 14–22, 2013

The Levy Institute will hold the fourth annual Minsky Summer Seminar in 2013. The Seminar will provide a rigorous discussion of both the theoretical and applied aspects of Minsky's economics, with an examination of meaningful prescriptive policies relevant to the current economic and financial crisis. Organized by Jan Kregel, Dimitri B. Papadimitriou, and L. Randall Wray, the Seminar program will be of particular interest to recent graduates, graduate students, and those at the beginning of their academic or professional careers. The teaching staff will include well-known economists concentrating on and expanding Minsky's work.

Applications may be made to Susan Howard at the Levy Institute (howard@levy.org) and should include a current curriculum vitae. Admission includes provision of room and board on the Bard College campus, and a small number of travel reimbursements ($100 for US fellows and $300 for foreign fellows) will be available to participants. Due to limited space availability, the deadline for applications is March 31, 2013.

For additional information, visit our website, www.levyinstitute.org

New Research Scholars

The Levy Institute is pleased to announce the appointment of two new research scholars.

Michalis Nikiforos joins the Institute as a research scholar working in the State of the US and World Economies program. Nikiforos's research interests include macroeconomics, institutions and economic development, political economy, the theory of production, economics of monetary union, and development economics. His dissertation, "Essays on Distribution of Income, Capacity Utilization, and Economic Growth" (2012),

emphasized the implications of possible nonlinearities in the behavior of distribution along the business cycle, and why the concept of a wage- and profit-led economy needs to be redefined.

A former adjunct professor at The New School for Social Research and St. Francis College, Nikiforos also served as a research assistant at the New School's Bernard Schwartz Center for Economic Policy Analysis, and in the Policy Integration Department of the International Labour Organization. His publications include "On the Desired Rate of Capacity Utilization" (2011), part of the New School's working paper series in economics; and "Distribution and Capacity Utilization: Conceptual Issues and Empirical Evidence" (with D. K. Foley), in *Metroeconomica*'s forthcoming special issue on the Kaleckian model of growth and distribution.

Nikiforos holds a BA in economics and an MS in economic theory from Athens University of Economics and Business, and an MS and a Ph.D. in economics from the New School.

Tamar Khitarishvili has been appointed a research scholar in the Gender Equality and the Economy program. Her research interests include human capital and economic development, gender economics, and the economics of transition countries. She is the coauthor (with G. Pederson) of "Trade and Macroeconomic Policy: What Does It Mean for Farmers and Lenders?" in *Agricultural Outlook Forum* (2001), and "Farm Real Estate Lending: A Survey of Midwest Bankers," *Journal of Agricultural Lending* (Winter 1999), among other articles. She previously taught economics at Bard College.

Khitarishvili holds a BS from the University of Georgia, Athens, and an MS and a Ph.D. in applied economics from the University of Minnesota.

New Research Associate

Giorgos Argitis has joined the Levy Institute as a research associate working in two program areas: the State of the US and World Economies, and Employment Policy and Labor Markets. He is an associate professor of macroeconomics at the University of Athens, Greece, where he teaches macroeconomics, Post Keynesian economics, and international political economy. Argitis's research interests include Post Keynesian – Minskyan macroeconomic and monetary theory and policy, and old-institutionalist/evolutionary theory. He has published four books about the Greek economy and is the author or coauthor of academic papers that have appeared in the *Journal of Post Keynesian Economics*, *Cambridge Journal of Economics*, *Contributions to Political Economy*, *European Journal of Economics and Economic Policies*, and *Review of Political Economy*, among other publications.

Argitis holds a BA in economics from the University of Athens, an MS from the University of London, and a Ph.D. from the University of Cambridge.

New Editor

Jonathan Hubschman has joined the Institute as an editor, with primary responsibility for the *Summary* and the *Levy News*.

Hubschman holds a master's degree in public policy from the University of North Carolina, Chapel Hill, has worked as a public policy research consultant on state-level issues, and served as director of research projects for the Minnesota Office of Strategic and Long-Range Planning. Most recently, he worked as an editor at KPMG, Stockholm, primarily in the areas of international finance, private equity, and financial regulatory reform.

PUBLICATIONS AND PRESENTATIONS

Publications and Presentations by Levy Institute Scholars

JAMES K. GALBRAITH *Senior Scholar*

Publications: "We Told You So," *The Baffler*, No. 19, 2012; "Why Obama Has a Tricky Tightrope Act to Pull Off in His Big Speech," *AlterNet*, September 5.

Presentations: Panelist, "Development Strategies in a Globalized World," Fifty-Ninth Session of the Trade and Development Board, UN Conference for Trade and Development, Geneva, Switzerland, September 17–28, 2012; keynote lecture: "What Is to Be Done?" Outlaw Economics 2.1 Workshop sponsored by Jobs Now! Coalition and the University of Missouri–Kansas City, Kansas City, Mo., September 28–29; opening address, "The Global Crisis: The Challenges Ahead," 2012 Money and Banking Conference, Central Bank of Argentina, Buenos Aires, October 1–2; guest speaker, Workshop on Inequality and Macroeconomic Performance, OFCE and SKEMA Business School, Paris, France, October 17; panelist, "The Causes and Effects of Increasing Economic Inequality," 9th Annual "Mind the Gap" Symposium sponsored by Mass Humanities, Boston College, Northampton, Mass., November 3; guest speaker, "The Bleak Past and the Grim Future," Clinton School of Public Service, University of Arkansas, Little Rock, November 5.

GREG HANNSGEN *Research Scholar*

Presentation: "Fiscal Policy, Unemployment Insurance, and Financial Crises in a Model of Growth and Distribution," 11th International Post Keynesian Conference, "Reclaiming the Keynesian Revolution," Kansas City, Mo., September 27–29, 2012.

ELLEN CONDLIFFE LAGEMANN *Senior Scholar*

Presentations: "Civic Education: What, Where, How, and Why?" Brodie Family Lecture, Bowdoin College, Brunswick, Me., October 25, 2012; "Education, Citizenship, and Democracy," Netter Center 20th Anniversary Conference, University of Pennsylvania, Philadelphia, November 12.

THOMAS MASTERSON *Research Scholar and Director of Applied Micromodeling*

Presentations: "International Comparisons of Economic Well-Being: The Levy Institute Measure of Economic Well-Being (LIMEW)," International Association for Research on Income and Wealth Conference, Boston, Mass., August 10, 2012; "Capacity Building for Use of Statistical Methods for Poverty Assessment Training," Ankara University, Ankara, Turkey, October 31 – November 2; "Why Time Deficits Matter: Implications for Understanding Poverty," Kadir Har University, Istanbul, Turkey, November 7; "Why Time Deficits Matter: Implications for Understanding Poverty," Istanbul Technical University, Istanbul, Turkey, November 9.

DIMITRI B. PAPADIMITRIOU *President*

Publications: "The Eurozone Crisis and the Collapse of Greece," *Naftemporiki*, September 21, 2012; "Romney Will Strengthen Plutocracy," *Ethnos*, November 4; "Avoiding the US Fiscal Cliff" (with G. Hannsgen) *Naftemporiki*, November 5; "Fiscal Cliff: Reality Show or Morality Play?" *The Huffington Post*, November 6; "A Marshall Plan for Growth," *Imerisia*, November 11.

Presentations: Interviews regarding Ben Bernanke's speech at the Jackson Hole Economic Symposium with Ivan David Ryngelblum, *Agencia CMA*, August 28, and Rosalyn Retkwa, *Institutional Investor*, September 4; interview regarding the impact of the loss of public sector jobs with Brian Ianieri, *The Press of Atlantic City*, September 6; speaker, Women's Economic Round Table, "Risk and Reward in the Financial System: What Keeps You Awake at Night?" New York, N.Y., September 20; interview regarding the monetary policy of the world's major central banks with Dimitri Leontiev, Russia 24 TV, September 26; interview regarding the reasons we should not worry about the deficit with Saki Knafo, *The Huffington Post*, October 2; interview regarding whether bailouts will help Europe with Rick Santelli, *Squawk on the Street*, CNBC, October 26; interview regarding the US fiscal cliff by Andy Robinson, *LaVanguardia*, November 7.

JOEL PERLMANN *Senior Scholar and Program Director*

Publication: "Ethnic Inequality in Education among Immigrants and their Children in Israel: A Reevaluation" (with Y. Elmelech), *Megamot: Journal of Behavioral Science*, Vol. 48, No. 3–4, 2012 (in Hebrew).

Recent Levy Institute Publications

STRATEGIC ANALYSIS

Back to Business as Usual? Or a Fiscal Boost?
DIMITRI B. PAPADIMITRIOU, GREG HANNSGEN, and GENNARO ZEZZA
April 2012

Is the Recovery Sustainable?
DIMITRI B. PAPADIMITRIOU, GREG HANNSGEN, and GENNARO ZEZZA
December 2011

PUBLIC POLICY BRIEFS

Fiscal Traps and Macro Policy after the Eurozone Crisis
GREG HANNSGEN and DIMITRI B. PAPADIMITRIOU
No. 127, November 2012

It's About "Time"
Why Time Deficits Matter for Poverty
RANIA ANTONOPOULOS, THOMAS MASTERSON, and AJIT ZACHARIAS
No. 126, November 2012

POLICY NOTES

Greece's Bailouts and the Economics of Social Disaster
C. J. POLYCHRONIOU
2012/11

Six Lessons from the Euro Crisis
JAN KREGEL
2012/10

WORKING PAPERS

Conflicting Claims in the Eurozone? Austerity's Myopic Logic and the Need for a European Union in a Post-Keynesian Eurozone Center–Periphery Model
ALBERTO BOTTA
No. 740, December 2012

On the "Utilization Controversy": A Theoretical and Empirical Discussion of the Kaleckian Model of Growth and Distribution
MICHALIS NIKIFOROS
No. 739, November 2012

At the Crossroads: The Euro and Its Central Bank Guardian (and Savior?)
JÖRG BIBOW
No. 738, November 2012

The (Normal) Rate of Capacity Utilization at the Firm Level
MICHALIS NIKIFOROS
No. 737, November 2012

A Meme for Money
L. RANDALL WRAY
No. 736, November 202

The Impact of Financial Reform on Federal Reserve Autonomy
BERNARD SHULL
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The Crisis of Finance-dominated Capitalism in the Euro Area, Deficiencies in the Economic Policy Architecture, and Deflationary Stagnation Policies
ECKHARD HEIN
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EGMONT KAKAROT-HANDTKE
No. 731, September 2012

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