Levy Economics Institute of Bard College

Summary

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Contents

INSTITUTE RESEARCH

Program: The State of the US and World Economies

Strategic Analysis

6 DIMITRI B. PAPADIMITRIOU, GREG HANNSGEN, and GENNARO ZEZZA, Jobless Recovery Is No Recovery: Prospects for the US Economy

9 GREG HANNSGEN and DIMITRI B. PAPADIMITRIOU, Will the Recovery Continue? Four Fragile Markets, Four Years Later

10 JAMES K. GALBRAITH, Is the Federal Debt Unsustainable?

11 YANIS VAROUFAKIS and STUART HOLLAND, A Modest Proposal for Overcoming the Euro Crisis

12 MICHAEL HUDSON, What Does Norway Get Out Of Its Oil Fund, if Not More Strategic Infrastructure Investment?

13 JULIO LÓPEZ-GALLARDO and LUIS REYES-ORTIZ, Effective Demand in the Recent Evolution of the US Economy

14 THOMAS I. PALLEY, The Rise and Fall of Export-led Growth

15 NATHAN PERRY and MATÍAS VERNENGO, What Ended the Great Depression? Reevaluating the Role of Fiscal Policy

Program: Monetary Policy and Financial Structure

15 JAN KREGEL, Was Keynes's Monetary Policy, *à Outrance* in the *Treatise*, a Forerunner of ZIRP and QE? Did He Change His Mind in the *General Theory*?

16 L. RANDALL WRAY, Financial Keynesianism and Market Instability

18 ÉRIC TYMOIGNE, Measuring Macroprudential Risk: Financial Fragility Indexes

18 L. RANDALL WRAY, A Minskyan Road to Financial Reform

20 L. RANDALL WRAY, Money in Finance

21 L. RANDALL WRAY, Keynes after 75 Years: Rethinking Money as a Public Monopoly

22 L. RANDALL WRAY, Minsky Crisis

23 JÖRG BIBOW, Financial Markets

23 L. RANDALL WRAY, Minsky's Money Manager Capitalism and the Global Financial Crisis

25 L. RANDALL WRAY, The Financial Crisis Viewed from the Perspective of the "Social Costs" Theory

26 PEDRO LEAO and ALFONSO PALACIO-VERA, Can Portugal Escape Stagnation without Opting Out from the Eurozone?

Continued on page 3 ▸

Scholars by Program

The State of the US and World Economies

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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.

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Contents (continued)

27 DIRK J. BEZEMER, Causes of Financial Instability: Don't Forget Finance

28 DAVID FIELDS and MATÍAS VERNENGO, Hegemonic Currencies during the Crisis: The Dollar versus the Euro in a Cartalist Perspective

29 GARY A. DYMSKI, JESUS HERNANDEZ, and LISA MOHANTY, Race, Power, and the Subprime/Foreclosure Crisis: A Mesoanalysis

30 CHRISTINE SINAPI, Institutional Prerequisites of Financial Fragility within Minsky's Financial Instability Hypothesis: A Proposal in Terms of "Institutional Fragility"

Program: The Distribution of Income and Wealth

Levy Institute Measure of Economic Well-Being

32 THOMAS MASTERSON, Quality of Match for Statistical Matches Used in the 1995 and 2005 LIMEW Estimates for Great Britain

32 SELÇUK EREN, THOMAS MASTERSON, EDWARD N. WOLFF, and AJIT ZACHARIAS, The Levy Institute Measure of Economic Well-Being, Great Britain, 1995 and 2005

34 THOMAS MASTERSON, Quality of Match for Statistical Matches Used in the 1989 and 2000 LIMEW Estimates for France

35 THOMAS MASTERSON, AJIT ZACHARIAS, SELÇUK EREN, and EDWARD N. WOLFF, The Levy Institute Measure of Economic Well-Being, France, 1989 and 2000

36 ANDREW SHARPE, ALEXANDER MURRAY, BENJAMIN EVANS, and ELSPETH HAZELL, The Levy Institute Measure of Economic Well-Being: Estimates for Canada, 1999 and 2005

Program: Employment Policy and Labor Markets

37 MATHEW FORSTATER, The Freedom Budget at 45: Functional Finance and Full Employment

38 RANIA ANTONOPOULOS and KIJONG KIM, Public Job-creation Programs: The Economic Benefits of Investing in Social Care: Case Studies in South Africa and the United States

Program: Economic Policy for the 21st Century

Explorations in Theory and Empirical Analysis

39 L. RANDALL WRAY, The Dismal State of Macroeconomics and the Opportunity for a New Beginning

41 ARNELYN ABDON and JESUS FELIPE, The Product Space: What Does It Say About the Opportunities for Growth and Structural Transformation of Sub-Saharan Africa?

42 NAZIM KADRI EKINCI, Income Distribution in a Monetary Economy: A Ricardo-Keynes Synthesis

42 SUNANDA SEN, The Global Crisis and the Remedial Actions: A Nonmainstream Perspective

INSTITUTE NEWS

43 20th Annual Hyman P. Minsky Conference: Financial Reform and the Real Economy

44 The Wynne Godley Memorial Conference: Contributions in Stock-flow Modeling

44 The Hyman P. Minsky Summer Seminar

44 New Research Associate

44 New Senior Editor and Policy Fellow

PUBLICATIONS AND PRESENTATIONS

45 Publications and Presentations by Levy Institute Scholars

LETTER FROM THE PRESIDENT

To our readers:

The Levy Institute held its largest conference to date—the 20th Annual Minsky Conference—at the Ford Foundation headquarters in New York City in April. Presentations by eminent speakers from government, industry, and academia addressed the ongoing effects of the global financial crisis on the real economy, and examined policy responses at both the national and international levels. The Institute also held a conference in May in memory of Wynne Godley. It focused on the strategic prospects for the world economies and the use of stock-flow consistent accounting macroeconomic models to reveal structural imbalances. Another event was the second annual Hyman P. Minsky Summer Seminar in June. The seminar was supported by the Ford Foundation and included 48 students from 14 countries.

This issue begins with a Strategic Analysis by Research Scholars Greg Hannsgen and Gennaro Zezza and me under the State of the US and World Economies program. Using the Institute's macro model, we find that satisfactory US economic growth cannot be achieved without a major increase in net export demand, while countries with large surpluses should focus on increasing domestic consumption. Unfortunately, current account deficits will likely remain far below the levels needed to bring about a strong recovery so it is important for President Obama and Congress to negotiate a mutually acceptable fiscal expansion despite a divided legislature.

In a public policy brief, Hannsgen and I conclude that US markets cannot be counted on to solve a long-lasting macroeconomic crisis in the absence of firm monetary stimulus, jobs programs, and other public-sector initiatives. In a policy note, Senior Scholar James K. Galbraith explains why the various budget plans in circulation will not work out and that keeping the projected interest rate down completely alters the long-term dynamic of the public debt. There is no need for radical reductions in future spending plans or for cuts in Social Security or Medicare benefits, he says. In another policy note, Yanis Varoufakis and Stuart Holland argue that the euro crisis can be dealt with without fiscal transfers, taxpayer-funded bond buy-backs, or changing existing treaties, and propose a three-pronged approach to deal effectively with the sovereign-debt crisis in Greece and other countries in the eurozone.

Four working papers are also included under this program. Research Associate Michael Hudson finds that Norway's "oil fund" should focus on long-term economic development based on the experience of BRIC sovereign wealth funds, as more public investment minimizes living and business costs—and it is not inflationary. In contradiction to the conventional view, Julio López-Gallardo and Luis Reyes-Ortiz suggest that the main intuitions of John Maynard Keynes and Michal Kalecki were essentially correct: monetary conditions affect demand and output in both the short and long runs. Thomas I. Palley reinforces Ragnar Nurkse's view in replacing the global export-led growth paradigm with a new paradigm based on a domestic demand-led growth model in order to avoid asymmetric stagnation and heightened economic tensions between emerging-market and industrialized economies. And in the final paper, Nathan Perry and Matías Vernengo find that fiscal policy was central to economic recovery from the Great Depression.

The Monetary Policy and Financial Structure program begins with a policy note by Senior Scholar Jan Kregel. He reviews Keynes's *Treatise on Money* and *General Theory*, finding that the latter work was more appropriate in emphasizing the role of government spending in bringing about economic recovery. This program also includes 13 working papers. Seven papers by Senior Scholar L. Randall Wray focus on the nature of finance and a more sensible model of global finance that includes an enhanced oversight of financial institutions, a structure that promotes stability rather than speculation, a bigger role for government operating in the public interest, Minsky's employer-of-last-resort policy, and a new economic paradigm (e.g., an enhanced role for fiscal policy along with radical policy changes similar to those adopted under the New Deal). Research Associate Éric Tymoigne develops a financial fragility index based on Minsky's financial instability hypothesis (FIH) and advises the Financial Stability Oversight Council that was established by the Dodd-Frank Act to use his index to deal with systemic risk. Research Associate Jörg Bibow finds that Post Keynesian economics offers a refreshing (alternative) depiction of the role of finance in real world economies. Pedro Leao and Alfonso Palacio-Vera evaluate Europe's sovereign debt crisis and conclude that Portugal, Greece, and Spain face a decade of economic stagnation and high unemployment. They advise Portugal to exit the eurozone in the absence of

institutional reform. Dirk J. Bezemer incorporates finance (and leverage) within a dynamic stochastic general equilibrium model and determines that an economic system will survive crises under his equity scenario but not under his securitization scenario. Using a cartalist approach, David Fields and Matías Vernengo conclude that the dollar will remain the lingua franca of the international monetary system for a very long period. Gary A. Dymski, Jesus Hernandez, and Lisa Mohanty analyze the linkages between race, power, and the subprime crisis and find racial and gender inequality, as well as a reversal of fortune in wealth accumulation, that will take decades to undo. A final paper by Christine Sinapi finds that the institutional foundations of Minsky's FIH can provide the groundwork for evaluating international financial governance.

The Distribution of Income and Wealth program includes five working papers that contribute toward estimating the Levy Institute Measure of Economic Well-Being (LIMEW) for Great Britain, France, and Canada. Research Scholars Thomas Masterson and Selçuk Eren, and Senior Scholars Ajit Zacharias and Edward N. Wolff, find that the LIMEW differs considerably with the official measures of inequality; for example, the official measures do not adequately reflect the advantages of wealth ownership, while the LIMEW shows somewhat lower inequality because of the equalizing effects of public consumption, health expenditures, and household production. In addition, a report by Andrew Sharpe, Alexander Murray, Benjamin Evans, and Elspeth Hazell from the Centre for the Study of Living Standards estimates the LIMEW for Canada and finds only modest growth among Canadian households, as well as a slight increase in inequality, between 1999 and 2005.

Under the Employment Policy and Labor Markets program, a working paper by Research Associate Mathew Forstater proposes that a public-service employment program based on functional finance could guarantee full employment and provide a framework for humanistic social policy. In another paper, Senior Scholar Rania Antonopoulos and Research Scholar Kijong Kim propose that social care delivery should be a targeted work project as it results in powerful pro-poor and economy-wide employment outcomes, and promotes gender equality.

The Economic Policy for the 21st Century program includes four working papers. According to Wray, it is time to discard the Neoclassical approach in favor of the Keynesian tradition in order to get the economy back on track. Arnelyn Abdon and Research Associate Jesus Felipe note that eurozone policies that reduce unit labor inputs lead to a sharp decline in domestic demand. They support a greater role for fiscal policy and the development of more sophisticated export products. According to Nazim Kadri Ekinci, all classical approaches to distribution theory neglect the monetary nature of capitalist economies. Based on his model, money as an investment fund is truly the "widow's cruse" of modern times. Research Associate Sunanda Sen rejects the mainstream perspective on the meltdown of the global economy and the financial sector's contribution to the real economy. Higher growth rates in the real sector require expansionary public policies that include employment creation, she says.

As always, I welcome your comments and suggestions.

Dimitri B. Papadimitriou, *President*

Program: The State of the US and World Economies

Strategic Analysis

Jobless Recovery Is No Recovery: Prospects for the US Economy

DIMITRI B. PAPADIMITRIOU, GREG HANNSGEN, and GENNARO ZEZZA

Strategic Analysis, March 2011

The US current account's return toward balance has largely been a reaction against financial collapse and deep recession, not a result of successful economic policy. Using the Levy Institute's macro model, which is rooted in a consistent system of stock and flow variables, President Dimitri B. Papadimitriou and Research Scholars Greg Hannsgen and Gennaro Zezza examine a range of medium-term scenarios in order to evaluate strategic predicaments and policy options.

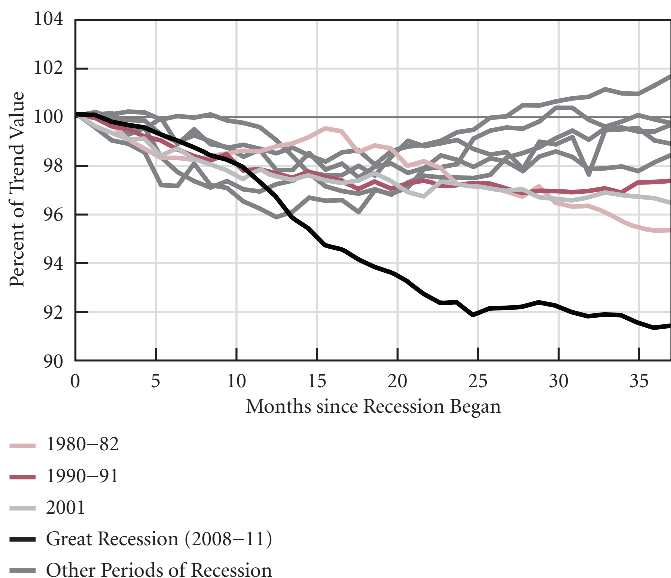
The authors find that the current US economic expansion may continue into 2013 but satisfactory growth cannot be achieved without a major increase in net export demand. They believe that countries with large surpluses should focus on increasing domestic consumption, and that aggressive domestic policy is crucial for countries with current account deficits. Although domestic monetary and fiscal stimulus measures have helped, deficits will likely remain far below the levels needed to bring about a strong recovery. And since export-led growth has the potential to reduce unemployment, it is important for President Obama and Congress to negotiate a mutually acceptable fiscal expansion—despite a divided legislature.

A widely accepted view is that most of the policy shifts under way will turn out to be ineffective and counterproductive (e.g., efforts to reduce budget deficits in Europe and bailouts that require draconian austerity measures). Moreover, the Federal Reserve's relaxed monetary strategy will not be the motor for economic growth and employment. Excess reserves in the private banking system and in sovereign portfolios have generated destabilizing bubbles in commodity and financial markets, and fiscal austerity proposals from Congress, as well as state and local governments, are misguided. We need a better basis for a broad-based and sustainable economic recovery, say the authors.

Papadimitriou, Hannsgen, and Zezza outline the economic challenges facing US policymakers. They note that the Great Recession has generated the largest increase in unemployment (from 4.4 percent to 10.1 percent), more than seven million jobs have been lost since November 2007, and approximately 19 million jobs need to be created for employment to return to its prerecession (upward) trend (Figure 1). They also note that the evolution of the US economy has been in line with their previous projections, which implied that the US economy would recover but with a high, and slowly declining, unemployment rate. This formed the basis for their argument that the US government should postpone any measures to reduce the federal deficit.

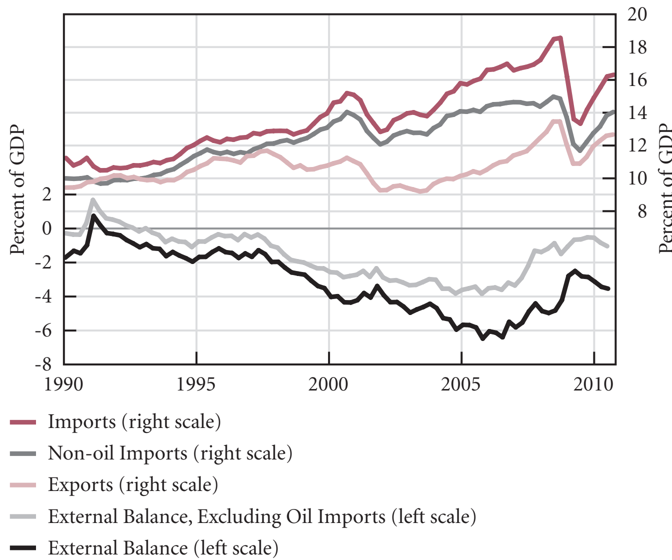
According to the authors, households have changed their spending habits, and consumption depends more on the debt burden relative to disposable income than the level of debt outstanding. Although the overall debt burden has declined steadily since the recession began, a rise in interest rates would

Figure 1 **Employment in Recessions (beginning of recession = 100)**



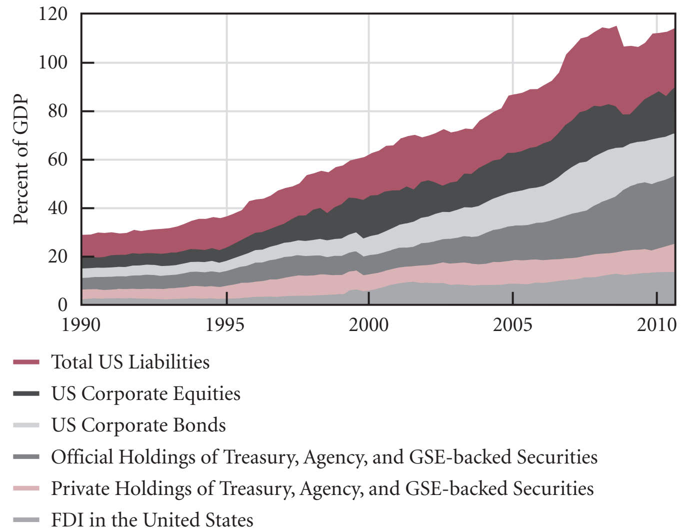
Sources: BLS; authors' calculations

Figure 2 US Balance of Payments on Current Account



Source: BEA

Figure 3 US Foreign Liabilities



Sources: Flow of Funds; BEA

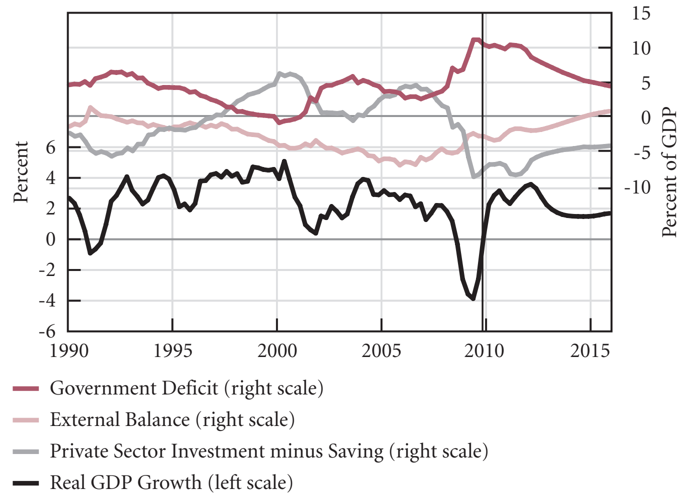
quickly reverse the downward trend. Evidence points to a modest increase in the pace of consumption, especially if real disposable income continues to rise.

The authors surmise that the recent surge in corporate profits may be an important factor in aggregate demand growth, since no stimulus can be expected from residential investment anytime soon. The effects of net exports, foreign debt, the value of the dollar, and international imbalances on the economy are also important (Figure 2). In the last 20 years, net exports have been a drag on aggregate demand, with imports systematically surpassing exports. A devaluation of the US dollar would be effective in improving the overall trade balance, but it would not necessarily reduce the cost of oil imports.

Foreign direct investment is not tied to trade imbalances or movements of the US dollar, as US companies continue to invest in foreign markets at a faster pace than foreign companies do in the United States. Moreover, foreign central banks and others are still willing to buy and hold dollar-denominated assets (Figure 3). And since the demand for safe US assets is primarily from overseas central banks rather than foreign investors, the authors challenge the notion that foreign accumulation of US assets is a consequence of an overseas "savings glut."

The Levy Institute's macro model includes exports, imports, taxes, and public and private expenditures that are

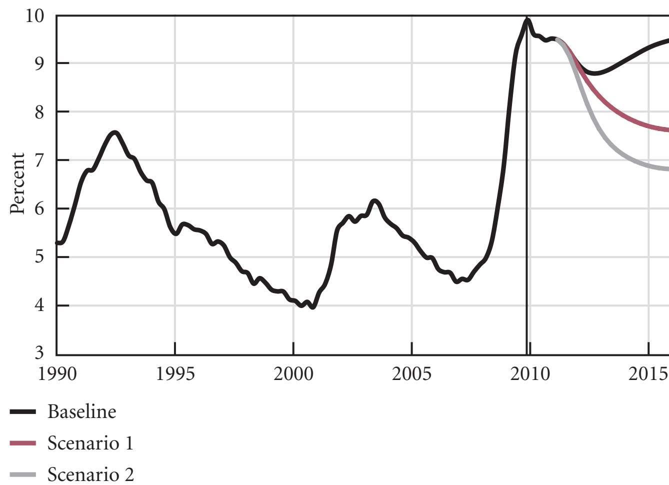
Figure 4 Baseline Scenario: US Main Sector Balances and Real GDP Growth



Source: Authors' calculations

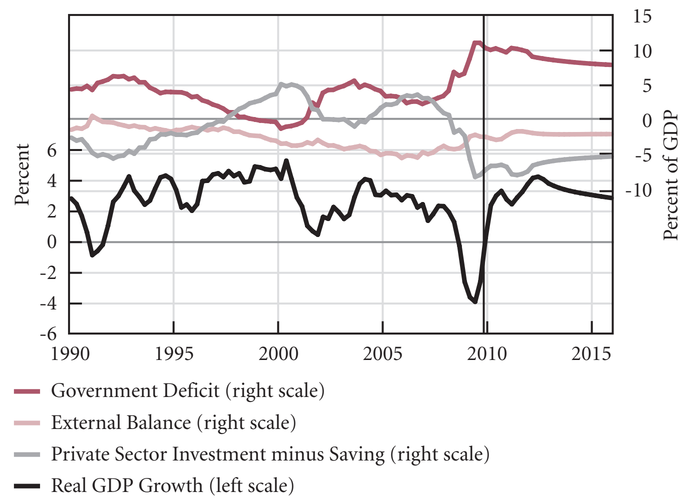
functions of world trade, relative prices, tax rates, stocks of debt, and flows of net lending. The authors project US economic performance between now and 2015 that is consistent with recent developments and the indicators outlined above. The baseline scenario uses a set of neutral assumptions derived from the International Monetary Fund (output and inflation in US trading partners) and the Congressional Budget

Figure 5 Unemployment Rate in Three Scenarios



Source: Authors' calculations

Figure 6 Scenario 1: US Main Sector Balances and Real GDP Growth



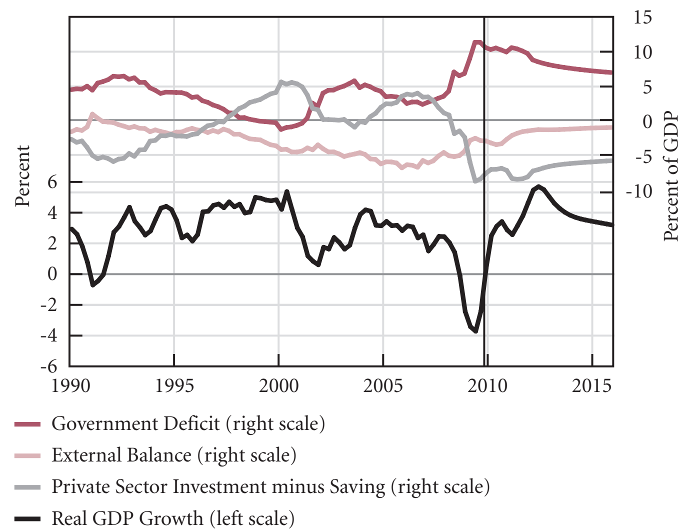
Source: Authors' calculations

Office (CBO) (fiscal policy projections under current legislation that imply a declining deficit for the federal government). They find that the main sector balances slowly move toward sustainable levels and are broadly in line with the CBO's GDP projection (Figure 4). This is a "growth recession" scenario in which unemployment declines to 8.6 percent at the beginning of 2012 before increasing to 9.4 percent (Figure 5). The private sector continues to reduce its debt and the external deficit disappears, but unemployment stabilizes at a high level. The simulations show that the current attempt to address the public deficit "problem" by cutting spending will not be successful.

The "enhanced fiscal stimulus" scenario projects the outcome of deferring the adjustment to the public sector deficits assumed in the baseline scenario. Government expenditures are assumed to continue to grow, in real terms, at its prerecession average and tax rates are kept at current levels (Figure 6). The authors find that output grows faster in this scenario, unemployment drops below 8 percent, and the (larger) foreign deficit exceeds 2 percent of GDP. In this scenario, the relaxation in the fiscal policy would have to be so large that the general government deficit would rise to more than 7.8 percent. Thus, the fiscal stimulus would have to be much larger than the one assumed in order to significantly reduce unemployment.

Three strategies can fill the gap in aggregate demand and reduce unemployment: stimulating private investment, increasing net exports, or relaxing the government's fiscal

Figure 7 Scenario 2: US Main Sector Balances and Real GDP Growth



Source: Authors' calculations

stance. The authors find that a revaluation of the currency of surplus countries, such as the euro, may be more effective in closing trade gaps than a general devaluation of the dollar. Thus, a coordinated realignment of currencies or reform of international monetary institutions would be the preferred

approach. However, exchange rate movements are a more likely option in the short term.

The authors' export-led growth scenario examines the effects of devaluating the US dollar against all other currencies (10 percent starting in the second quarter of 2011), as measured by the Fed's broad exchange rate index. The simulations show that the impact on trade would be substantial, with the United States achieving a deficit of 1 percent of GDP (Figure 7). The government deficit would also improve, to 6.7 percent of GDP, because of higher GDP growth and lower unemployment (7 percent). However, this is not sufficient to change the country's path toward stagnating growth.
www.levyinstitute.org/pubs/sa_mar_11.pdf

Will the Recovery Continue? Four Fragile Markets, Four Years Later

GREG HANNSGEN and DIMITRI B. PAPADIMITRIOU
Public Policy Brief No. 118, 2011

In this brief, Research Scholar Greg Hannsgen and President Dimitri B. Papadimitriou focus on the risks and possibilities ahead for the US economy. Using a Keynesian approach and drawing from the commentary of other observers, they analyze publicly available data in order to assess the strength and durability of the expansion that probably began in 2009. They focus on four broad groups of markets that have shown signs of stress for the last several years: financial markets, markets for household goods and services, commodity markets, and labor markets. This kind of analysis does not yield numerical forecasts of economic variables but may unearth important clues about the short-term outlook for the country's economic well-being, in the narrow sense of output and income.

Like Milton Friedman before them, most modern-day academic opponents of fiscal stimulus have argued that monetary policy easing will fail to keep real interest rates low as long as governments are putting great demands on capital markets. This theory has not been borne out in practice by the expansionary policy response to the Great Recession, which has reduced the yields of low-risk, short-term securities and resulted in lower rates for other types of issues and loans crucial to corporate bottom lines. Interest rates are at historical lows—one of many signs that monetarist scenarios leading to high inflation are not being played out—and both monetary easing and fiscal stimulus have had some impact on demand by the US sector that is financially weakest: the household sector. Inflation-adjusted measures of the volume of household expenditures, including retail sales and personal consumption expenditures, sustained positive growth rates from midsummer of 2010 to year's end. Unfortunately, the growth rate of personal consumption expenditures turned slightly negative in January, and retail sales were not strong in the first two months of this year.

In addition, seasonally adjusted industrial production was flat in February, and real earnings growth has been meager at best since the recovery began. In the aftermath of a severe recession, a modest-to-severe financial retrenchment, marked by tightened lending standards, an increased aversion to indebtedness, and more conservative investment tactics, tends to occur almost by necessity—as Hyman P. Minsky observed. Overall, consumer credit has yet to expand after stagnating in 2007–09, though the bleak picture painted by recent data on credit-card debt levels was offset by the attainment of a new record for non–credit card consumer debt—approximately $1.6 trillion.

In Europe, the banking system has been threatened by the sovereign debt crisis, and numerous institutions with large holdings of government bonds are not yet out of the woods. The banking industries in Greece, Ireland, Portugal, and Spain are surviving only by depositing securities worth hundreds of billions of euros at the European Central Bank, in return for cash. The long-run presence of financial fragility looms large, compared to the supposedly excessive demands for capital generated by high government deficits.

Although the dollar's value against the major foreign currencies still seems to be trending downward, data show that the trade deficit widened by about $6 billion in January, to $46 billion, largely due to increases in the cost of imported oil. In the broader commodities market, the prices for corn, soybeans, cotton, and cattle have made double-digit and triple-digit gains over the past year. If commodity prices climb broadly and sharply, the Fed could face the prospect of a serious episode of cost-push inflation similar to the one that occurred during much of the 1970s and early 1980s.

Unfortunately, the labor market is ill positioned to deal with a double whammy of rising commodity prices and a

monetary-policy tightening. The seasonally adjusted unemployment rate stood at 8.9 percent in February, reflecting only a tiny drop from the January level of 9.0 percent, and labor market data show every sign of a widespread and severe weakness in aggregate demand. Unless there is new resolve for effective government action on the jobs front, drastic cuts in much-needed federal, state, and local programs will be the order of the day in the United States as in much of Europe. The bottom line: markets cannot be counted on to solve a long-lasting macroeconomic crisis like ours in the absence of firm monetary stimulus, jobs programs, and other public sector initiatives.

www.levyinstitute.org/pubs/ppb_118.pdf

Is the Federal Debt Unsustainable?

JAMES K. GALBRAITH

Policy Note 2011 / 2

According to Senior Scholar James K. Galbraith, a US government default on dollar bonds is impossible, and the word "bankruptcy" does not apply. A more plausible worry is inflation, alongside depreciation of the dollar, but neither constitutes default or is intrinsically "unsustainable."

Galbraith explains why the various budget plans in circulation will not work out, and why big countries with big public debts can run large deficits and get away with it. Keeping the projected interest rate down completely alters the long-term dynamic of the public debt—there is no need for radical reductions in future spending plans or for cuts in Social Security or Medicare benefits.

The Congressional Budget Office (CBO) warns that the ratio of the US federal debt to GDP will rise relentlessly, passing 300 percent by midcentury. However, this unprecedented ratio goes along with CBO projections of steady growth, full employment, and low inflation. Why should one care about mere financial ratios if they (supposedly) produce such good results? asks Galbraith.

Galbraith's concern is simply to define when a "path" is "sustainable" and when it is not. A path that leads to uncontrolled and explosive increases in the ratio of debt to GDP is "unsustainable" (the consequences may vary according to institutional context). By the same definition, anything that can be reproduced year over year is sustainable. What matters is whether a path stabilizes or not.

Applying Willem Buiter's formula for a rising debt-to-GDP ratio, Greece in 2009 exhibited an unsustainable dynamic. Using the same formula along with the long-term CBO baseline projections, the United States is also on an unsustainable path, but one that is not as dire as that of Greece. Galbraith notes that the big primary deficit is not the dominant source of "unsustainability." Rather, any primary deficit is "unsustainable" so long as interest rates exceed growth rates. He questions the underlying CBO assumptions (e.g., a 3 percent real interest rate on US public debt) because there is no reason why a 100 percent–safe borrower that controls its own currency should pay a positive real rate of return on a liquid borrowing. A sovereign borrower controls both the short-term rate and the maturity structure of the public debt, so it can issue as much short debt at a near-zero rate as it needs to. Moreover, consistently negative average real rates on all public debt are possible today because inflation is low.

The CBO assumes that short-term interest rates will rise to 4.5 percent nominal (2.5 percent real) within five years, given its low-inflation forecast. This bizarre assumption makes its projected debt-to-GDP path "unsustainable," and it would be economically disastrous. The CBO interest rate assumptions are inconsistent with everything else in the CBO forecast, says Galbraith. If we allow an average interest rate on the public debt to remain at 1 percent, then real rates are modestly negative and the debt-to-GDP ratio no longer rises without limit (despite a primary deficit as high as 5 percent of GDP every year, forever). The ratio stabilizes at below 130 percent of GDP—not far above the highest historical value of 122 percent in 1946. And since it is stable, it is not "unsustainable."

Reducing the primary deficit from (say) 5 percent to the sustainable rate in order to avoid an increase in debt to GDP would be difficult to reach in the near future because cuts in public spending and tax increases depress the growth rate, making stability unattainable. According to Galbraith, there is no need to get there soon, since a return to high employment means that the required primary deficit would be easily achieved because tax revenues would rise. Thus, waiting would make it easier to stabilize the ratio—that is, letting the economy recover over time.

Changing the CBO's assumption that the United States must offer a real interest rate on the public debt higher than the real growth rate completely alters the long-term dynamic of the public debt. The prudent policy conclusion, therefore, is: *keep the projected interest rate down.*
www.levyinstitute.org/pubs/pn_2_11.pdf

A Modest Proposal for Overcoming the Euro Crisis

YANIS VAROUFAKIS and STUART HOLLAND
Policy Note 2011 / 3

According to Yanis Varoufakis, University of Athens, Greece, and Stuart Holland, University of Coimbra, Portugal, the governments of the eurozone are undermining Europe's credibility to resolve its sovereign debt crisis as their policies—based on triptych loans, austerity, and debt buyouts—are failing both economically and politically. The authors argue that the euro crisis can be dealt with without fiscal transfers, taxpayer-funded bond buybacks, changing existing treaties, or new institutions. The eurozone needs to reinvigorate its commitment to a European Economic Recovery Programme (EERP) by learning from the American New Deal; that is, borrowing to invest rather than cutting investments or raising taxes.

The key to what Europe needs today is a "tranche transfer": transferring a share of national debt and borrowing eurobonds held and issued by the European Central Bank (ECB). A tranche transfer of debt up to 60 percent of GDP would reduce the default risk for the most exposed member states in the eurozone by lowering their debt-servicing costs and signal to bond markets that governments have a proactive response to the crisis (rather than remaining victims of credit rating agencies). And since the member-states whose bonds are transferred to the ECB would pay interest at much lower rates, this would also strengthen the Stability and Growth Pact. Moreover, the institutional framework related to European Union (EU) bond financing for a European "New Deal" is already in place.

New terms of reference are not needed for the European Investment Bank (EIB), the investment arm of the EERP. The EIB gained a remit from the European Commission to invest in health, education, urban regeneration, environmental technology, and small- and medium-sized enterprises. Since annual lending by the EIB has grown considerably, it has macroeconomic potential, and a "New Deal" today is more tangible than Europe's leaders think. This is especially the case when the effects of investment multipliers are taken into account.

Despite measures to stabilize the eurozone economies, the crisis has intensified because it is both systemic and multidimensional, and includes a sovereign debt crisis, a banking sector crisis, and an underinvestment crisis. The reason EU policies are failing is that they address only the sovereign debt crisis, so that the immediate effect is a worsening of the banking sector and underinvestment crises, as well as debt-to-GDP ratios. The crisis is replicating itself rather than being resolved.

The authors propose four main principles for a more comprehensive solution: (1) the triple crises must be tackled together; (2) shareholders rather than depositors in the banks causing the financial crisis should share in the pain; (3) the need for structural, proactive change to exposed sovereign debt (e.g., a major share of national debt is transferred to the EU and held by the ECB as eurobonds); and (4) such a "tranche transfer" to ECB eurobonds should not count toward the national debt of member-states. They also propose three main policies. The first would stabilize the sovereign debt crisis using tranche transfers held as ECB bonds—a strategic policy that requires no change to existing treaties. The second would tackle the banking sector crisis by applying rigorous stress tests and recapitalizing by way of the European Financial Stability Fund (i.e., cleansing the banks of questionable public and private paper assets). The third would support the EERP by expanding the role of the EIB and promoting member-state debt accounts with the ECB, thus enabling the EIB to be the driver of a New Deal–modeled recovery. The ECB would become the guardian of stability, while the EIB would safeguard the recovery.

If Europe combines contraction of its own global demand with a serial default of its most indebted member-states, it risks the disintegration of the eurozone—which would in turn bring about a terrible crisis of confidence in the EU's economic governance and in the markets. This would increase the risk of a double-dip recession that would spill over to the United States and also restrain the growth of emerging economies. Sustainable development rather than GDP growth alone is central to an agenda for avoiding another recession, say the authors.
www.levyinstitute.org/pubs/pn_3_11.pdf

What Does Norway Get Out Of Its Oil Fund, if Not More Strategic Infrastructure Investment?

MICHAEL HUDSON

Working Paper No. 657, March 2011

Norway maintains the world's second-largest sovereign wealth fund (more than $500 billion). However, its "oil fund" is mainly invested in European and US stocks and bonds—meaning that foreigners receive most of the royalties and earnings on the country's domestic wealth. It also means that the fund is relying on a renewed rise in financial asset prices that can only be achieved by loading down economies with more debt.

According to Research Associate Michael Hudson, Norwegian financial managers are only interested in the short run, the financial sector has decoupled from tangible capital formation, and the country's oil fund is in jeopardy. Based on the experience of BRIC (Brazil, Russia, India, and China) sovereign wealth funds, Norway should focus on long-term planning for economic development that is in the national interest. Contrary to the tenets of Norwegian policymaking, more public investment minimizes living and business costs—and it is not inflationary.

Norwegian financial managers believe that they are spreading the risk over a wide spectrum of foreign stocks and bonds, but this is not the case in an increasingly risky global environment where money management fees absorb a large share of Norway's modest oil fund returns, prices reflect the supply of credit (contrary to the efficient market hypothesis), and the stock market has become a vehicle to replace equity with debt. It is ironic that Norway is sending its savings to the financial markets in Europe and the United States but money managers there are sending their funds to the BRIC economies, says Hudson. Moreover, the BRIC governments are investing their trade surpluses in order to buy control of key foreign technologies and raw materials; raise educational levels as well as productivity and living standards; and upgrade infrastructure, especially transportation. Such direct investment has made their economies more competitive, improved living standards, and spurred widespread prosperity.

Credit creation reduces Norway's oil fund savings to the level of bank credit that is flooding the global markets in search of investment opportunities. Such debt-leveraged speculation is distorting the world economy by leaving no retained earnings and threatening to crowd out tangible capital investment. And as economies grind to a halt, governments have no more taxing power to pay for infrastructure or social spending. The financial core encourages the sovereign wealth funds to pursue "passive" savings policies so that control is maintained by corporate offices and government agencies in Europe and the United States.

Hudson notes that US development strategy is based explicitly on public infrastructure investment and education. The aim is to subsidize the cost of living and doing business, and to make the economy more competitive—not to make a profit. He also notes that the US national income and product accounts do not recognize government investment, including public infrastructure. Free market ideology treats public spending as deadweight and counts infrastructure spending as part of the deficit, not as productive capital investment. Furthermore, the stock and bond markets aim to extract economic rent rather than earn profits from investing in tangible capital formation that employs labor, increases output, and raises living standards. In sum, financialization goes hand in hand with deindustrialization.

The financial crises of Iceland, Ireland, and Greece are not anomalies but the result of neoliberal tax ideology and central bank policy that steer savings and credit to inflate real estate and stock market prices rather than expand direct investment in the means of production. The best way for Norway's oil fund to maximize returns related to its liquid savings surplus is full equity ownership in place of borrowing. Norway should use its surplus to invest directly in domestic and regional enterprises that will prosper over the next half-century by modernizing its railway and transport system, expanding its fishing industry, subsidizing its education, reintroducing classical free-market policies that minimize FIRE-sector overhead, and maintaining a low-interest infrastructure. And it may be time to establish a Norwegian Futures Institute, says Hudson.
www.levyinstitute.org/pubs/wp_657.pdf

Effective Demand in the Recent Evolution of the US Economy

JULIO LÓPEZ-GALLARDO and LUIS REYES-ORTIZ

Working Paper No. 673, June 2011

The dominant view among mainstream economists explaining the evolution of capitalist economies is based on so-called "dynamic stochastic general equilibrium models," which refute the claim that monetary policy has a lasting influence on output and employment. The recent crisis, however, has compelled authorities to sustain demand with expansionary policies, including deficit spending. Thus, there has been a return to evaluating the role of effective demand and the teachings of John Maynard Keynes and Michal Kalecki.

Using the principle of effective demand, Julio López-Gallardo, Universidad Nacional Autónoma de México, and Luis Reyes-Ortiz, Université Paris 1, Panthéon-Sorbonne, study the evolution of the US economy before the crisis. Using econometric procedures, they test the significance of money and the interest rate, as well as the opinions of Keynes and Kalecki. They also test the role of fiscal policy. The authors find that monetary conditions affect demand and output in both the short and long runs, thus contradicting the conventional view.

The findings support Keynes's hypotheses that larger credit availability has a positive impact on demand, and that higher interest rates tend to depress demand. They also confirm Kalecki's hypotheses that government expenditure financed via taxes on profits has a positive effect on demand and output, and that a shift from profits to wages expands demand. The findings corroborate that government expenditure raises effective demand and support Kalecki's hypothesis about the impact of taxing profits in order to finance that expenditure. The shift from wages to profits in the US economy (a "wage-led" regime) has caused a short-term fall in effective demand and also discouraged demand and output in the long run. Thus, the main intuitions of Keynes and Kalecki were essentially correct.

It is apparent to the authors that previous studies support the hypothesis that monetary variables have a real effect on output but the statistical assumptions within the models were not tested. They note that both profit-led and wage-led regimes claim that their regime stimulates output and employment. They also note that the effect of a rising wage share on effective demand and output differs between studies, and that the respective authors did not use misspecification tests to assess the validity of their findings.

Using a vector auto regression (VAR) specification and system-based cointegration methods, the authors estimate an error correction model and a cointegrated structural VAR to carry out an impulse-response analysis. They focus on how the fiscal, monetary, and distribution variables affect US GDP and consider the importance of a new factor: the dramatic rise in private credit outstanding.

The quarterly data sample is for the period 1980–2008. The data appear to support the notion that demand-side variables strongly influence the economy. The data also appear to validate Keynes's conjecture about the importance of credit and the interest rate, Kalecki's hypothesis regarding the expansionary role of the wage share, and the two economists' hypotheses about the relevance of government expenditure on demand and output.

Model testing showed that greater output is associated with higher OECD GDP, a greater share of wages in value added, and larger government expenditure financed either by higher taxes on profits or by other government revenues. A higher interest rate, however, is associated with lower output. Shocks to the wage share, government expenditure, world output, and credit have positive impacts on output and demand. Moreover, government expenditure financed by taxing corporate profits has a much greater impact than that based on other government revenues.

The results suggest that the main channels through which Keynes thought monetary developments affect the macro economy have played a significant role in the recent evolution of the US economy. The availability of loans, combined with low interest rates, explains much of the growth in the United States prior to the crisis. The results also confirm the argument that growing household indebtedness compensated for the negative effects when the economy shifted from wages to profits, and contributed to sustaining effective demand.

www.levyinstitute.org/pubs/wp_673.pdf

The Rise and Fall of Export-led Growth

THOMAS I. PALLEY

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The export-led growth paradigm is a development strategy aimed at growing productive capacity by focusing on foreign markets. It rose to prominence in the late 1970s and became part of a new consensus among economists about the benefits of economic openness.

According to Thomas I. Palley, this paradigm is no longer relevant because of changed conditions in both emerging-market (EM) and developed economies. He outlines the stages of the export-led growth paradigm leading to its adoption worldwide, as well as the various critiques of this agenda that have become increasingly prescient. He concludes that we should abandon strategies aimed at attracting export-oriented foreign direct investment (FDI) and institute a new paradigm based on a domestic demand–led growth model. Otherwise, the global economy is likely to experience asymmetric stagnation and increased economic tensions between EM and industrialized economies.

Export-led growth was purported to generate a win-win outcome for developing and industrialized economies based on the principle of comparative advantage. Arguments about the benefits of trade and economic openness played an important role in propelling the new agenda of international economic integration because they dovetailed with the economic interests of large corporations—globalization. This alliance drove the expansion of the General Agreement on Tariffs and Trade and the establishment of the World Trade Organization.

The export-led growth model evolved to fit changing global circumstances and the conditions of individual countries. The various stages relied on undervalued exchange rates, the need for foreign technology, export-production platforms for foreign multinationals, the suppression of wages and social standards, and partnerships between countries and multinational corporations, as well as the managed undervaluation of exchange rates (capital controls), higher import tariffs, and joint ventures, in order to build an indigenous (national) technological base.

The North American Free Trade Agreement (NAFTA) created a free-trade production zone that unified developed and developing economies for the first time. However, its template damages the developed economies via deindustrialization, creates international financial imbalances, and undermines the wage-productivity growth link. In effect, the NAFTA model has created a divided world, with consumers in the North and producers in the South.

The financial crash and accompanying Great Recession has created a global demand shortage and stagnation in the industrialized economies. Moreover, the positive factors related to export-led growth strategies are likely to prove temporary. There are several structural problems such as the debt saturation of US consumers and the fact that EM exports are sabotaging the recovery of the industrialized economies.

According to Palley, China is unlikely to become the global engine of growth because its export-growth model is that of an assembler who focuses on supplying consumers in industrialized countries. And because of its size, China is siphoning FDI and demand away from other EM economies. Thus, its entrance onto the global stage has introduced South-South competition to the traditional dynamic of North versus South. In addition, multinational corporations have created a "race to the bottom" dynamic where developing countries undermine one another to gain competitive advantage. As a result, Palley concludes, no single country or region can act as the global engine of growth, so all countries and regions must pull together.

A domestic demand–led strategy includes building social safety nets, raising and linking wages to productivity growth, increasing public infrastructure investment (as well as public goods such as health care and education), and rebalancing tax structures. In addition, the international economy needs to end undervalued exchange rates and adopt a system of managed rates aimed at avoiding global trade imbalances; implement labor, environmental, and social standards; and limit incentives to attract export-oriented FDI. However, agreement on such rules and standards is unlikely, says Palley, given the political and structural obstacles.

www.levyinstitute.org/pubs/wp_675.pdf

What Ended the Great Depression? Reevaluating the Role of Fiscal Policy

NATHAN PERRY and MATÍAS VERNENGO

Working Paper No. 678, July 2011

Conventional wisdom suggests that the Great Depression was caused by restrictive monetary and fiscal policies. Moreover, the theoretical macroeconomic framework provides little scope for fiscal policy as an anticyclical policy instrument. According to Christina D. Romer (1992), monetary expansion based on gold inflows (associated with political instability in Europe) was central to economic recovery from the Depression, while fiscal policy and the employment-creation policies of the New Deal were secondary.

Nathan Perry, Mesa State College, and Matías Vernengo, University of Utah, analyze Romer's evidence and determine that the effects of the New Deal were misrepresented in the literature, and that fiscal policy was central to economic recovery. Incorrectly emphasizing the effects of monetary policy promotes the anti–New Deal agenda of the conservative movement, the authors say.

Conventional interpretations of the causes of (and recovery from) the Great Depression emphasize monetary factors; in particular, those associated with the international monetary system—the gold standard, Federal Reserve policies, and the failure of the monetary authorities. In some cases, causality was seen to progress from money to prices and output. The belief was that monetary policy was sufficient to return the system to equilibrium, and a moderate amount of fiscal policy was necessary only because of short-term rigidities. Based on Romer's fiscal multiplier analysis, fiscal policy was insufficient to bring the US economy back from the brink of disaster.

The authors believe that any results based on Romer's formula to assess the relative influence of monetary and fiscal policies on the level of activity (changes in output) are flawed. Her calculations presume that the money supply caused changes in the rate of interest and these changes, in turn, led to an increase in investment and consumption. The money supply, however, is only one influence on the rate of interest. Two other important variables are the discount rate (determined by the Fed) and open market operations, including quantitative easing. Hence, Romer's equation tends to confound the effects of money on income. Besides the conceptual issues in Romer's multipliers, the authors took issue with the calculation of "narrow" multipliers derived for different time periods, since these do not represent "broad" multipliers or the impact of government spending and monetary policy during the entire period of the Depression and World War II.

The authors proceed to derive a simple supermultiplier measure in order to quantify the direct impact of the government and external sectors—two main elements of autonomous spending during the recovery. They also apply a structural vector autoregression model to capture the endogeneity between government spending and GDP, and to measure the fiscal and foreign trade multipliers. In addition, a basic instrumental variable approach is used to calculate the fiscal multiplier, where defense spending represents an instrumental variable of government spending.

Perry and Vernengo find that the fiscal multipliers are larger than assumed by conventional wisdom, and that monetary policy is a subsidiary policy needed to sustain the fiscal expansion. Moreover, the effectiveness of fiscal expansionism is confirmed when estimating the impact of the federal government's fiscal policy on employment, including the job creation programs of the New Deal. When the recession allowed the Keynesians within the administration to dominate the policy debate and World War II made the efforts for balancing the budget a moot point, fiscal expansion was large enough to bring the economy to full employment.

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Program: Monetary Policy and Financial Structure

Was Keynes's Monetary Policy, *à Outrance* in the *Treatise*, a Forerunner of ZIRP and QE? Did He Change His Mind in the *General Theory*?

JAN KREGEL

Policy Note 2011 / 4

John Maynard Keynes was considered the true father of the unorthodox monetary policies introduced by the Bank of Japan (zero interest rate policy, or ZIRP) and the Federal Reserve

(quantitative easing, or QE). Senior Scholar Jan Kregel evaluates *A Treatise on Money, Vol. II: The Applied Theory of Money* (1930) and *The General Theory of Employment, Interest, and Money* (1936) in terms of Keynes's belief in the power of monetary policy to counter financial crisis. He finds that the optimism displayed in the *Treatise* was misplaced, and that the *General Theory*'s more nuanced position was more appropriate—in particular, Keynes's emphasis on the need to provide an external source of demand through government expenditure. If Keynes had taken into account such factors as the impact of capital loss on the inducement to invest and the propensity to consume, he would have placed even greater emphasis on the role of government spending in bringing about recovery, says Kregel.

It appears that the Bank of Japan experimented with Keynes's recommendation that interest rates be set as low as possible, and that the US Federal Reserve followed his recommendation in full by purchasing long-term securities to bring down the long-term rate of interest and satiate the desire to hold deposits. It also appears as if Keynes's expectation that the public would become willing buyers of government securities upon a sharp reduction in short rates, thereby aiding the policy of lowering the long-term rate, was accurate. What has not been borne out is the expected impact on the rate of investment. Although businesses have increased their borrowing and the spread between corporate junk bonds has fallen to near-historic lows, these funds are not being used to finance new investment. Similarly, banks have accumulated record levels of reserves in their deposit accounts at the Fed, earning the short-term interest rate. Thus, the policy has been successful in influencing the interest rate in the way Keynes predicted, but it has not had the impact on investment that he outlined in the *Treatise*.

A novel feature of the *General Theory* is its emphasis on the conditions of a monetary economy as "one in which changing views about the future are capable of influencing the quantity of employment and not merely its direction" (i.e., the state of long-term expectations upon which decisions are based and the confidence with which forecasts are made). Keynes modifies his prior belief in the positive impact of lower interest rates on the rate of investment, as well as his position on the ability of the central bank to influence the lending practices of financial institutions through a reduction in interest rates. He also modifies his *Treatise* analysis of the impact of "extraordinary" monetary policy on the long-term rate of interest and his belief in the efficacy of monetary policy to influence the rate of investment.
www.levyinstitute.org/pubs/pn_4_11.pdf

Financial Keynesianism and Market Instability

L. RANDALL WRAY
Working Paper No. 653, March 2011

Hyman P. Minsky foresaw the development of the current economic and financial crisis based on his "financial Keynesian" approach. He argued that the strongest force in a modern capitalist economy operates toward an unconstrained speculative boom, and that crisis (including debt deflation) is a natural outcome of money manager capitalism—highly leveraged funds seeking maximum returns in an environment that systematically underprices risk.

In spite of recent Keynesian attempts to mitigate the crisis, Senior Scholar L. Randall Wray believes that Minsky would recommend more radical policies and that true reform is unlikely until the financial system and economy collapse a second time. He recommends a system with enhanced oversight of financial institutions, a structure that promotes stability rather than speculation, and policies that promote rising wages and employment rather than transfer payments. The proper role of monetary policy is to stabilize interest rates, to prevent runaway speculation using direct credit controls, and to supervise. Also, fiscal policy needs to provide a larger share of aggregate demand.

Minsky understood the true potential of securitization, which contributed to the globalization of finance and to the relative decline in the importance of banks in favor of "markets" and "managed money" (e.g., pension, hedge, and mutual funds) that were not subject to the costs of relationship banking. Banks and thrifts responded by earning fees for loan origination and by moving mortgages off their books in order to escape reserve and capital requirements. The competition between managed money and banking helped to produce the current crisis.

Not enough attention has been given to the role played by pension funds in fueling the asset price boom and bust,

says Wray. Pension funds are examples of managed money that is also subsidized and protected by the government. Deregulation allowed pension managers to invest in commodities and this opportunity was enhanced by the notion that commodity and equity prices were uncorrelated. However, when managed money flows into an uncorrelated asset class, that asset class becomes correlated. Although pensions allocated a small proportion of their portfolios toward the commodity indexes, it represented a huge volume relative to the size of the commodity markets and created one of the biggest commodities price bubble that collapsed along with everything else. Moreover, managed money, including pensions, need to speculate in new kinds of assets and create new bubbles in order to restore funding levels.

Wray also addresses the flip side of asset management—the massive growth of private sector debt (to 120 percent of GDP), including the increase in leveraging and credit availability. The virtuous cycle of leveraging, easy credit, and (higher) asset prices ensured the financial system would transition through structures that Minsky labeled hedge, speculative, and Ponzi. Most mortgages originating in the 2000s were Ponzi and ultimately collapsed with the inevitable rise in interest rates and decline in prices when the subprime markets unraveled.

In spite of government attempts to resolve the liquidity crisis and prop up financial institutions, the banks are worse off today than in 2007, says Wray. Closer scrutiny shows that their (fake) profits are based on trading rather than lending, and that the true value of assets is plummeting because of exploding delinquency and default rates. If the United States and Euroland collapse, China is the only country that is prepared to deal with the problems created by another crash.

The global financial crisis put to rest the belief in the "efficient markets" myth and the notion that the central banks can "fine-tune" the economy through "quantitative easing" (lowering interest rates). The US fiscal stimulus package put a floor on the economic downturn, but it was too timid for the task at hand. The right way to incur deficits is by proactive fiscal stimulus policies (as opposed to the destruction of tax revenues in a recession) of the appropriate size that create enough jobs that will do some good (e.g., 300,000 per month on a sustained basis).

Wray expects that continuing price deflation in the United States will wipe out an additional several trillion dollars of wealth, so we will need further household debt relief such as Minsky's proposal in the wake of the savings-and-loan fiasco; that is, an institution, modeled on the Reconstruction Finance Corporation, to purchase and hold mortgages until the real estate sector recovers. Another measure is to nationalize Fannie Mae and Freddie Mac, with the Treasury explicitly guaranteeing their debts and ensuring that they operate in the public interest. Moreover, Congress needs to rethink the role played by government-sponsored entities, whereby these entities support rather than compete with private lenders in the home-finance sector.

The biggest policy challenge relates to money manager capitalism. The only way to constrain risky practices is to reregulate and downsize the financial markets. It is in the public interest to maintain the soundness of a portion of the banking, student loan, and home mortgage sectors, including pension and insurance funds. Reform should make it more difficult for banks to participate in the next speculative boom and bust by, for example, ensuring that all liabilities show up on their balance sheets. In addition, commodity price pressures could be relieved by removing all tax advantages for funds purchasing commodities and by drawing down the US Strategic Petroleum Reserve. A promise by the Obama administration to stop pursuing a cheap-dollar mercantilist policy would also help.

This is an ideal time for the federal government to increase spending and rebuild US (public) infrastructure, notes Wray. This measure in association with a permanent employer-of-last-resort program would generate numerous jobs and stimulate consumer demand to keep the economy close to full employment for the next decade. As argued by Minsky, a high-employment, high-wage, high-consumption economy is more stable and also supports democracy and security. And since the Big Bank cannot do more, the rest is up to Big Government, operating in the public interest.
www.levyinstitute.org/pubs/wp_653.pdf

Measuring Macroprudential Risk: Financial Fragility Indexes

ÉRIC TYMOIGNE

Working Paper No. 654, March 2011

The Financial Stability Oversight Council was established by the Dodd-Frank Act to deal with systemic risk, so it needs to develop a financial-fragility framework. Research Associate Éric Tymoigne uses the analytical framework of Hyman P. Minsky's financial instability hypothesis to develop an index that captures the growth of financial fragility in macroeconomic sectors of the US economy; that is, the propensity of financial problems to generate a debt-deflation process. Minsky's Ponzi-finance position is taken as a point of reference to construct the index. Tymoigne finds that there should have been much earlier interventions by financial supervisors and regulators when default rates on mortgages were very low, wealth was rising, and banks were highly profitable.

The main purpose of measuring financial fragility is to allow regulators to understand the financial practices that promote financial instability so that they can intervene in a proactive fashion. Tymoigne notes that financial market data may not be reliable in capturing the risk of financial instability beforehand, and that we should focus on the growth of financial fragility during periods of economic stability. He also notes that the index suggests the need for a specific research agenda in order to improve our understanding of the funding practices of economic units and to help regulators closely monitor particular economic activities. For example, homeownership growth in the past decade was unsustainable because the funding supporting it was unsustainable.

The two main datasets that use macroeconomic variables related to funding methods are the Federal Reserve's Flow of Funds and the Bureau of Economic Analysis' National Income and Product Accounts. Given that Ponzi finance is the point of reference, more weight is given to variables that directly reflect refinancing and liquidation pressures (e.g., debt-service ratios, refinancing volume, and the proportion of liquid assets relative to debt). Tymoigne notes that net worth as a variable indicating financial fragility is of limited usefulness. Rather, the detection of Ponzi finance is based on rising net worth, which allows borrowing on the expectation of the availability of refinancing sources or asset liquidation to meet debt-service costs. Thus, Ponzi finance is based on expectations of the future—a notion within the internal dynamics of Minsky's financial instability hypothesis.

At the macroeconomic level, financial fragility increases over time because of compounding and volume effects that cause interest payments to grow exponentially. Tymoigne's index captures these effects and changes in funding methods, including increases in Ponzi finance. The use of Ponzi finance stops when there is a crisis, as refinancing and liquidation risks lead to a debt-deflation process (economic units try to "simplify debts"). Thus, the index indicates the strength of the debt-deflation risk, given the duration and volume of Ponzi finance prior to a crisis. This means that Ponzi financial practices in underwriting procedures occur before they are captured in the actual data, so it is important to understand these procedures (traditional bank supervision is crucial, he says). The index should be used as a regulatory and supervisory tool, but not for fine-tuning.

Tymoigne constructs indexes for three sectors: household; nonfinancial, nonfarm corporate; and financial business. He creates two indexes for the household sector: household funding and home funding. They show that fragility grew rapidly over the past two decades but has declined today as households pay down debts and save, leading to a significant decline in home prices (however, the level of fragility remains high). The most striking aspect of the nonfinancial, nonfarm corporate and financial business indexes is that the latter sector is much more prone to financial fragility—as predicted within the Minskyan framework. The financial business index provides a signal to financial regulators that there is trouble despite appearances based on traditional supervisory and economic indicators, such as low default rates and risk premiums, and high profitability.

www.levyinstitute.org/pubs/wp_654.pdf

A Minskyan Road to Financial Reform

L. RANDALL WRAY

Working Paper No. 655, March 2011

Senior Scholar L. Randall Wray examines Hyman P. Minsky's approach to reforming the economy and financial system. According to Minsky, the system should create a financial

structure conducive to economic development that improves (broadly defined) living standards. Minsky believed that "industry" should dominate "speculation," and that the most dangerous instability in the capitalist economy was the runup to a euphoric boom. If policymakers understood this, they could formulate appropriate policy and deal with a crisis when it occurred, says Wray. Moreover, Minsky's employer-of-last-resort policy would ensure (tight) full employment, set a base compensation package, and reduce inequality—and it would not be inflationary.

The current crisis represents a failure of the Big Government / neoconservative model that promotes deregulation, reduced supervision and oversight, privatization, and consolidation of market power. In addition, monetary and fiscal policy is biased against both full employment and adequate growth to generate rising living standards. Thus, we must return to a more sensible model, with enhanced oversight of financial institutions, a financial structure that promotes stability rather than speculation, and policy that promotes rising wages and employment. The proper role of monetary policy is to stabilize interest rates, to enact direct credit controls to prevent runaway speculation, and to provide supervision. In addition, we need short-term economic stimulus spending plus long-term commitments by the federal government to improve infrastructure, create jobs, and reduce inequality. As argued by Minsky, a private sector–led expansion increases financial fragility as tax revenues rise, the government sector deficit falls, and the current account deficit worsens (especially for a country like the United States that has a high propensity to import).

Minsky preferred a high-consumption society to an economy that grew by encouraging investment, since investment must rely to some degree on external finance, while a sustained investment boom creates euphoria and rising asset prices that increase indebtedness (and therefore fragility). Moreover, when investment represents a rising share of GDP and is supported by policy, there is an inflationary bias, followed by a policy move that suppresses an economic expansion prior to full employment. In Minsky's view, growth promoted by government consumption and public infrastructure investment would improve private sector balance sheets and be financially stabilizing. And in place of welfare, Minsky advocated an employer-of-last-resort program (a universal job guarantee funded by the federal government) as a preferred antipoverty strategy that would achieve full employment without generating inflationary pressures.

Minsky emphasized six main points: (1) a capitalist economy is a financial system; (2) neoclassical/mainstream economics is not useful because it denies that the financial system matters; (3) the financial structure has become more fragile; (4) fragility makes it likely that stagnation or a deep depression is possible; (5) a stagnant capitalist economy will not promote capital development; and (6) stagnation can be avoided by apt reform of the financial structure in conjunction with apt use of the government's fiscal powers. The essential functions of a financial system are a safe and sound payment system (e.g., deposit insurance to prevent bank runs, and close regulation and supervision of asset purchases); short-term loans to households and firms (and to state and local governments); a safe and sound housing finance system; a range of financial services, including insurance, brokerage, and retirement savings services; and long-term funding of positions in complex and expensive capital assets. Policy reform should favor small institutions over large ones, as economies of scale in banking are reached at a very small size. Minsky proposed a network of local community development banks that engaged in a wide range of services, while prohibiting all large chartered banks from diversifying across the range of financial services.

Finance has played an outsized role over the past two decades, says Wray. It's time to put global finance back in its proper place as a tool to achieving sustainable development through downsizing and reregulation. No institution whose mandate is to serve the public interest should be allowed to do business with the investment banks on Wall Street. And these investment banks should be reoriented toward a long-term horizon where good underwriting is rewarded and compensation is tied to long-term returns. Also, we must wean society from its reliance on private pension plans and retirement savings. Instead, the Social Security leg of the retirement stool must be enhanced and government support for private savings (tax advantages) reduced. The government, says Wray, should invest more in taking care of retirees.
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Money in Finance

L. RANDALL WRAY

Working Paper No. 656, March 2011

Senior Scholar L. Randall Wray defines, and distinguishes between, money and finance; addresses alternative ways of financing spending; and examines the role played by financial institutions (e.g., banks) in the provision of finance. He also explores the role of government as both regulator of private institutions and provider of finance, and related topics such as liquidity and saving. Wray concludes with a look at some of the new innovations in finance, and their relevance to the global financial crisis.

The term "money" is used to designate the money of account (such as the US dollar) and in reference to specific money-denominated assets that fulfill important functions such as medium of exchange, means of payment, and store of value. The development of a wide variety of substitutes for bank demand deposits, including credit and debit cards, makes it difficult to define money with precision. According to Hyman P. Minsky, anyone can create things that can be used as money, but the problem lies in getting these "money things" accepted.

In terms of a hierarchy of "money things," the government's IOUs (central bank notes and reserves, and Treasury coins) are at the top of the pyramid, followed by the deposit liabilities of financial institutions (including banks) with access to the central bank, the short-term liabilities of financial institutions and nonfinancial corporations, and, finally, the short-term liabilities of households and small businesses. Wray notes that liquidity declines further down the pyramid, and that the US dollar has been at the apex of the pyramid since the abandonment of the gold standard. He also notes that economic agents use the liabilities of those above them in the pyramid for payment.

The two universal laws of credit and debit (the two sides of an IOU) are that they are denominated in a unit of account (e.g., the US dollar) and that the issuer of an IOU must accept its own IOU back in payment (often intermediated by banks). A default arises when a debt-issuing economic entity refuses to redeem its own IOU when submitted in payment. All "money things" and "debt things" are IOUs denominated in the money of account, and all things are "redeemable" (accepted in payment of debts held by the issuer).

Aside from a sovereign currency-issuing government that makes payment by issuing its own IOU, there are three options for financing a transaction: income, assets, or debt. All options use "money things" in financing expenditures and because "money things" are debt, monetary purchases always involve debt. Minsky observed that debt represents a prior commitment of future cash flows that will be generated through income receipts or by selling assets (and the debtor may be unable to meet its commitments). The key insight behind Minsky's financial instability hypothesis is that using external finance in place of internal finance is risky for both borrower and creditor.

Government spends by issuing debt, while taxes cancel government debt. Taxes do not really "finance" government spending—it is actually financed by issuing liabilities. Moreover, government deficit spending is the source of net nongovernment sector financial wealth. Furthermore, saving is increased by spending more on investment, which increases income. Wray points out that saving can never be a net source of finance at the aggregate level, since new finance requires new debt. He also points out that banks do not lend central bank reserves, and that providing more reserves will not encourage bank lending (banks need good borrowers). Access to the central bank as lender of reserves (and as lender of last resort) is essential to keeping bank liabilities liquid and to converting them to high-powered money on demand.

Although economists have traditionally focused on a very narrow definition of money (high-powered money plus checkable deposits), all economic agents can be treated as "banks"; that is, taking positions in assets by issuing liabilities. Bank liabilities are highly liquid, while those issued by other firms can be enhanced by a variety of methods developed over the past 40 years (e.g., commercial paper). Recent innovations such as the securitization of home mortgages have added layers of complexity, but consumer loans are low on the money pyramid. Mortgage origination got separated from holding the debts (the "originate to distribute" model) when mortgages were "securitized" (packaged and sold), "sliced and diced" in complex ways, and resecuritized into virtual financial instruments (e.g., synthetic collateralized debt obligations). Mortgages have served as collateral behind all sorts of securities, to the extent that each dollar of US income serviced five dollars of debts and securities, and unknown amounts of derivatives. As a result, finance's superstructure began to collapse in 2007.

The point is that it is a mistake to focus on banks and narrow definitions of "money supply," says Wray, as all kinds of debts were securitized and most were outside normal banking. Debt ratios have risen over time due to changes in attitude, as households relied on debt to finance higher living standards when inflation-adjusted median wages stopped rising (after the early 1970s) and state and local government commitments rose faster than revenues. Thus, income and output were expected to service an ever-larger financial superstructure, as reliance on external finance grew and the financial system became much too large relative to the size of the economy. The last time the US economy was financialized to a similar extent was in 1929. This ultimately led to the Great Depression, and to substantial financial reforms and government controls.
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Keynes after 75 Years: Rethinking Money as a Public Monopoly

L. RANDALL WRAY
Working Paper No. 658, March 2011

Economists and government policymakers fail to recognize that money is a public monopoly. The result of this misunderstanding is unemployment and inflation, says Senior Scholar L. Randall Wray. We need to analyze money and banking from the perspective of regulating a monopoly by setting the "price" and letting the "quantity" float, as exemplified by Hyman P. Minsky's universal employer-of-last-resort program.

Understanding how a monopoly money works would advance public policy formation a great deal, says Wray. And since banks are given the power to issue government money, failure to constrain what they purchase fuels speculative bubbles that are ultimately followed by a crash. The real debate should be over the proper role of government—how it should use the monetary system to achieve the public purpose.

Wray provides an overview of alternative approaches to money and focuses on two main categories: the orthodox approach (money is an efficiency-enhancing innovation of markets) and the Chartalist approach (money is a creature of the state). Three notable economists who openly embraced the importance of money are Karl Marx, Torstein Veblen, and John Maynard Keynes. Their monetary theory of production asserts that money is the *object* of production. If we recognize that the money of account is chosen by the state and that only the state can issue domestic currency, then "money" should be viewed as a public monopoly, says Wray. Furthermore, the Chartalist view of money is consistent with the historical record of the origin of money—money predates markets, as does governmental authority and institutionalized behaviors.

Wray's hypothesis is that the monetary system was invented to mobilize resources to serve the government's (perceived) public purpose. Thus, there is no "natural" separation of a government and its *fiscus* from its money, and the supposed independence of the modern central bank is a myth. Money is the currency of taxation, with the money of account denominating one's social liability. Only the sovereign can impose tax liabilities to ensure its sovereign money things will be accepted (the government has pricing power). The US government's currency (dollar) monopoly consists of high-powered money (coins, green paper money, and bank reserves) plus US Treasuries (bills and bonds). If the government emits more in payments than it redeems in taxes, currency is accumulated by the nongovernment sector as financial wealth.

Bank money is privately created when a bank buys an asset such as a mortgage, or even securitized toxic waste. We have effectively given banks the power to issue government money (since they have access to the central bank and Treasury), and by removing government regulation and supervision, we invite private banks to use the public monetary system to pursue private interests. Unbridled lending for speculative purposes invites excess and rewards fraud, leading to a crash. Private, for-profit institutions can play a role in mobilizing resources for the public purpose, but there is no reason to believe that self-regulated private undertakers will do so (private lending and spending are strongly procyclical).

According to Keynes, an increase in liquidity preference cannot keep labor employed in the production of money. His proposition is that money prevents the economy from operating at its efficient, full-capacity (full employment) level. He endorsed George Friedrich Knapp's state money approach and A. Mitchell Innes's observation that what "stands behind" currency is the state's obligation to accept it in payment of taxes. Thus, banks must hold (or have ready access to) reserves for clearing, and a central bank cannot refuse to provide reserves if it wishes to maintain an orderly payments system with par

clearing. (The central bank must accommodate the demand for reserves in order to hit its interest-rate target.)

When a crisis hits, only the government is prepared to offer its liabilities. There are three lines of defense: (1) the central bank lends reserves without limit to financial institutions facing a run on their own liabilities; (2) the central bank purchases illiquid and risky financial assets that the nongovernment sector is trying to unload; and (3) fiscal—the sovereign government spends by issuing currency, which simultaneously satisfies liquidity preference and props up aggregate demand. In spite of recent large-scale interventions and the fact that a sovereign government cannot run out of its own liabilities, many potential problems have been created with respect to incentives, transparency of central bank activities, democratic accountability, and unemployment.

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Minsky Crisis

L. RANDALL WRAY

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Hyman P. Minsky's insight that stability is destabilizing underlies his analysis of the transformation of an economy over the entire postwar period. Senior Scholar L. Randall Wray argues that the causes of the current crisis resulted from a slow transformation that began in 1951. Thus, the collapse of "money manager capitalism" should be termed the "Minsky half-century" as opposed to a "Minsky moment."

Wray notes that economic crises became more frequent and severe, so that another Great Depression and debt deflation were possible. Policymakers removed New Deal regulations and institutions, and substituted "self-regulation" in place of government oversight. He calls for a return to a more sensible model of global finance, one designed to achieve sustainable development. This model would include enhanced oversight of financial institutions, a structure that promotes stability rather than speculation, a bigger role for government, and a new economic paradigm.

Minsky's basic thesis is that the dynamic forces of the capitalist economy are explosive, so they must be contained by institutional ceilings and floors. He analyzed the financial innovations of profit-seeking firms that were designed to subvert New Deal constraints. For example, he foresaw the development of securitization (moving interest rate risk off bank balance sheets, while reducing capital requirements) that would be behind the global financial crash in 2007. Therefore, policy must adapt as the economy is transformed.

Wray outlines Minsky's financial theory of investment—success during an economic expansion generates a greater willingness to borrow, commits a rising portion of expected gross profits (gross capital income) to servicing debt, and exposes the firm to greater risk. This leads to Minsky's famous categorization of financial positions as hedge, speculative, and Ponzi units. Moreover, government itself could be both stabilizing and destabilizing based on its budget allocations during economic booms and slumps. Furthermore, the Federal Reserve's interest rate policy is not a strong stabilizing force. Rather, an essential element is lender-of-last-resort policy that would stop a bank run and place a floor on asset prices, attenuating the debt deflation process. The combination of a Big Bank and Big Government helps to prevent a financial crisis from turning into a deep economic downturn.

Explanations for the causes of the current global crisis do not fully recognize its systemic nature, says Wray. The problem is money manager capitalism—highly leveraged funds seeking maximum returns in an environment that systematically underprices risk. Contrary to economic theory, markets generate perverse incentives for excess risk (highly leveraged funding drives up prices for the underlying assets) and punish the timid with low returns. Wray believes that we may be experiencing the end of money manager capitalism.

Total US debt reached a record five times GDP in 2007, mainly a result of private debt (households and firms). And total financial derivatives reached perhaps $600 trillion (many times world GDP). Subprime mortgages represented only a small part of the problem, which included riskier practices combined with a lack of regulatory oversight, and fraud by most of the big institutions. The financial sector grew relative to GDP and became too large relative to the size of an economy's production and income. The crash was the market's attempt to downsize finance.

According to Minsky, consumption out of income is a very stable component (unlike investment, which is unstable) and does not worsen private sector balance sheets. However, union power has declined over the past four decades, policy

has favored investment and saving over consumption, and the federal government has stopped growing relative to the size of the US economy, while spending has shifted away from public infrastructure investment. Meanwhile, inequality has grown on trend, surpassing its record in 1929.

Wray reviews various policy responses that will help to reformulate global capitalism along Minskyan lines. He suggests a return to a more sensible model, with enhanced oversight of financial institutions and a financial structure that promotes stability rather than speculation. The proper role of monetary policy is to stabilize interest rates, use direct credit controls to prevent runaway speculation, and supervise. An employer-of-last-resort program could provide jobs when they are not found in the private sector. This approach would help to achieve a high-employment economy with decent wages to finance consumption.
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Financial Markets

JÖRG BIBOW
Working Paper No. 660, March 2011

In mainstream economics, saving finances investment, competitive markets are efficient, and fundamentals anchor well-behaved financial markets. According to Research Associate Jörg Bibow, there is little concern that mainstream economics may provide an altogether flawed depiction of the role of finance in real-world economies. He notes that the financial markets are at the heart of the flaw in neoclassical economics diagnosed by John Maynard Keynes in his *General Theory* (1936).

Post Keynesian economics is inspired by Keynes's insights into the role of liquidity and finance in "monetary production economies." Money and finance condition and shape real economic performance. Public policy anchors asset prices and secures financial stability. The central bank is the key public policy tool, while the banks' pivotal role is to create the liquidity required for the real economy to function and grow. Capitalism depends on external finance to sponsor growth in spending. This perspective offers a refreshing alternative to mainstream economics, says Bibow.

The *General Theory* focuses on the issue of satisfying "liquidity preference" through financial markets and how this affects full employment. Thus, a crucial public policy matter is how society chooses to deal with fundamental uncertainty and cope with important uninsurable risks. The challenge of monetary policy is to guide financial conditions in a way that is conducive to achieving public policy goals and anchoring the financial markets. Regulation of financial instruments and supervision of financial intermediaries are essential public policy functions. Otherwise, endogenous processes of credit creation and asset-market play may feed bubbles and lead to financial fragility.

In monetary production economies, both the money of account function and the property of money as liquidity par excellence are central to the functioning of the financial system and the economy at large. The importance of money essentially flows from its link between the present and the future. For example, the lure of short-term profit in an industry that literally deals in bridging an uncertain future has produced a history of finance that is scattered with fraud, instability, and crises.

Under Keynesian uncertainty, the idea of uniquely correct asset prices determined by fundamentals is philosophically fallacious, said Bibow. Money and finance condition the real economy—not the other way around. The financial system has command over the money units needed to meet money contracts, and the price at which it does so is the money rate of interest.
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Minsky's Money Manager Capitalism and the Global Financial Crisis

L. RANDALL WRAY
Working Paper No. 661, March 2011

Notions that an economic recovery is imminent or under way are not shared by Senior Scholar L. Randall Wray. He believes that we are in round 3 of a nine-round bout with financial institutions cooking the books in the aftermath of a liquidity crisis and a wave of insolvencies. Round 4 should begin later this year, he says, when another wave of defaults by borrowers forces institutions to recognize losses. This round could deliver a knockout punch that brings on a full-fledged debt deflation and the failure of most large-scale financial institutions.

Such a knockout punch might provide the impetus for a thorough reformation of the international financial system, says Wray. The only way out of this deep recession is fiscal policy, but it is constrained by deficit hysteria. Radical policy changes no less significant than those adopted under the New Deal will be required to get us out of this mess.

Minsky argued that the New Deal promoted a Big Government / Big Bank model that was highly successful for financial capitalism. Spending during World War II ended the Great Depression and set the stage for a stable economy that included high consumption (higher wages created demand), countercyclical government deficits, a central bank ready to intervene, low interest rates, and a heavily regulated financial sector. Recessions were mild and crises were easily resolved through prompt government response. This changed after the mid-1970s, when crises became more frequent and severe.

Wray outlined four important transitions that led to the current crisis. The first transition was the rise of "managed money," where funds, endowments, and other savings were placed with professional money managers seeking maximum returns (yield plus price appreciation). Money managers took on riskier assets, innovated new products, created "shadow banks," engaged in securitization, and (fraudulently) overstated earnings in order to show higher returns. For example, the hedge fund Magnetar packaged the worst subprime mortgage-backed securities (MBSs) as collateralized debt obligations (CDOs) and then used credit default swaps (CDSs) to bet that the CDOs would default. In another example, Goldman Sachs sold its Abacus CDO to investors without informing them that it had allowed a hedge fund run by John Paulson to select the underlying (toxic-waste) MBSs and then short the CDO. Wray notes that the Service Employees International Union estimates that state and local governments have paid $28 billion in termination fees over the past two years to get out of bad deals sold to them by Wall Street.

The second transition is that the investment banks went public, allowing top management to profit from rising share prices—the same pump-and-dump short-term incentives that drove the boom in 1929. For example, trading and investing represent 80 percent of Goldman Sachs's revenues, compared to 28 percent before it went public. Thus, Goldman is really a huge hedge fund that also holds a bank charter enabling it to borrow at near-zero interest rates from the Federal Reserve. The incentive structure of investment banking has changed from placing equities and bonds of industrial corporations to trading in complex financial instruments whose values are set by the seller in over-the-counter, unregulated, and opaque markets.

The third transition is deregulation and self-supervision. Financial institutions were allowed to take riskier positions, and their functional separation was replaced by one-stop financial supermarkets that were mostly free of government intervention. This transformation was complete with the collapse of Lehman Brothers, Bear Stearns, and Merrill Lynch, and the granting of commercial banking charters to the two remaining investment banks: Goldman Sachs and Morgan Stanley. Now the riskiest financial institutions are playing with "house money" (i.e., government-insured deposits).

The fourth transition is the rise of fraud as normal business procedure. For example, Lehman Brothers engaged in a variety of potentially prosecutable practices and hid debt similar to the practices of Goldman Sachs when it hid Greek debt. According to Wray's colleague, William Black, we have a criminogenic environment fueled by the worst kind of fraud—control fraud—where top management turns a firm into a weapon of fraud in the interest of enriching itself. But in spite of rampant fraud, there has been almost no investigation and no prosecution of top officials at any of the big banks.

The problem is money manager capitalism, says Wray, where the economic system is characterized by highly leveraged funds seeking maximum total returns in an environment that systematically underprices risk. "Finance" has become too big, capturing 40 percent of all corporate profits and 20 percent of value added–to-GDP. This compares to 1929, and apparently represents a practical maximum and a turning point at which the economy collapses.

We need to protect jobs, wages, insured deposits, and retirements but not financial institutions, says Wray. We also need a massive fiscal stimulus and a permanently larger fiscal presence to allow growth without relying on private sector debt. In addition, we need to reduce the role of Wall Street and eliminate government subsidies for managed money. It is time to put global finance back in its proper place as a tool to achieving sustainable development.

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The Financial Crisis Viewed from the Perspective of the "Social Costs" Theory

L. RANDALL WRAY

Working Paper No. 662, March 2011

Rather than operating "efficiently," the financial sector has been imposing huge costs on the economy. Senior Scholar L. Randall Wray observes that the continuing crisis makes it clear that "finance" matters, and that the efficient markets hypothesis does not work. Moreover, the various bailouts have actually strengthened the financial sector by increasing concentration in a small number of massive institutions that appear to control government policy.

The rescue of Wall Street displaces other fiscal policy that would lead to recovery, says Wray. Reduced government regulation and supervision of the financial sector (and self-supervision for private profit) generated huge social costs rather than serving the public interest. He hopes that the current crisis will lead to a transformation of the economics discipline similar to the creation of Keynesian economics during the Great Depression, and a reorientation of financial institutions toward serving the public purpose.

Wray outlines William K. Kapp's theory of social cost presented in *The Social Costs of Private Enterprise* (1971 [1950]). Kapp's notion is that market competition does not lead to a socially efficient allocation of resources. Instead, competition promotes the pursuit of private profit in a manner that shifts benefits to entrepreneurs and costs to society. For example, market discipline did not lead to good underwriting because bank liabilities were guaranteed and the costs of poor underwriting, including predatory mortgages, were shifted to society. In addition, managed money drove up commodity prices, causing a speculative fervor that ultimately created huge social costs when grain and oil prices rose, and when prices collapsed. Hyman P. Minsky's financial instability hypothesis provides an endogenous, rational explanation of the possible volatile behavior of asset prices that is not self-equilibrating. In particular, financial institutions find it rational to increase leverage, and rising leverage plays a crucial role in the hypothesis.

Finance itself is not a limited resource, says Wray, and it did not contribute to what Minsky referred to as "the capital development of the economy." Minsky, as well as John Maynard Keynes, Thorstein Veblen, and Kapp, rejected the notion of an equilibrium-seeking system, and saw money and finance as the major source of problems in capitalist systems. Minsky called this a "preanalytic vision" of the operation of financial markets, whereby rational behavior leads to systemically irrational results. This behavior is based on a model that is known to be incorrect, and thus subject to revision; when the model changes, behavior changes.

Wray reviews the transformation of the financial system as fragility rose, and refers to some specific examples of social costs resulting from "innovative" financial practices (e.g., the hedge fund Magnetar and Goldman Sachs's Abacus deals). He notes that finance capital played an uncommonly small role for some decades after World War II. This was a stable period characterized by low debt, high wages, high consumption, and Big Government as a result of such measures as the Glass-Steagall Act, which separated investment banks from commercial banks, and various New Deal reforms, which protected market share for the heavily regulated portions of the financial sector. Thereafter, the development of an array of financial institution liabilities circumvented New Deal constraints, as finance responded to profit opportunities and adopted new practices to protect institutions from interest rate risk (e.g., securitization of mortgages, derivatives for hedging, and "off balance sheet" operations to evade reserve and capital restraints). The key mistake leading to the crisis was not the demise of Glass-Steagall but rather the demise of underwriting over a run of good times, when a trader mentality triumphs, says Wray. Thus, calls for a return to Glass-Steagall or forcing banks to put more "skin in the game" are both wrongheaded.

The implicit guarantee given by the Treasury to the mortgage and student loan markets, as well as the Greenspan "put" and the Bernanke "Great Moderation," gave the impression that the government would never let markets fail. Moreover, the Fed extended lender-of-last-resort facilities to virtually all financial institutions, as well as automobile companies and so on. Furthermore, the largest partnerships went public to enjoy the advantages of issuing stock in an economic boom.

The problem now is that total financial liabilities in the United States amount to about five times GDP (versus three times in 1929). Every dollar of income must service five dollars of debt. And the trend toward concentration of income and wealth at the top makes it more difficult to support the

weight of the debt. Furthermore, when income flows take a back seat, acceptable capital leverage ratios are much higher. Thus, the extensive and unknown linkages among financial institutions (e.g., layering of debts upon debts) means that one counterparty failure would bring down the whole house of cards.

In terms of recent examples of managed money and control fraud that contributed to the current crisis, see also Working Paper no. 661.

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Can Portugal Escape Stagnation without Opting Out from the Eurozone?

PEDRO LEAO and ALFONSO PALACIO-VERA
Working Paper No. 664, March 2011

The sovereign debt crisis of eurozone countries such as Portugal has highlighted rising heterogeneity, macroeconomic imbalances, and high levels of private and public sector indebtedness. According to Pedro Leao, ISEG, Technical University of Lisbon, Portugal, and Alfonso Palacio-Vera, Universidad Complutense de Madrid, Spain, there is no clear pattern of economic integration among eurozone countries. Peripheral eurozone countries have financed their large current account deficits by increasing their indebtedness vis-à-vis core countries—Germany in particular. According to the authors, Portugal, Greece, and Spain face a decade of economic stagnation and high unemployment. In the absence of institutional reform of the European Monetary Union (EMU), Portugal's best way forward is to exit the eurozone.

This paper reviews the literature on intra-eurozone current account imbalances, analyzes the evolution of the Portuguese economy, discusses various economic policy strategies, and proposes institutional changes that may help to correct the macroeconomic imbalances. The dominant view is that these imbalances reflect a rising divergence in relative competitiveness. Some scholars suggest that imbalances are closely related to differences in GDP per capita and will disappear over time, provided there is real convergence among eurozone countries. However, there has been a steady divergence in terms of relative competitiveness, inflation, and current account balances since the launch of the euro in 1999.

By participating in the process of financial and monetary integration in Europe, southern eurozone countries ran large current account deficits whereas northern eurozone countries ran large current account surpluses. And since current account deficits reflected mainly increases in private consumption in anticipation of higher future incomes, not upsurges in investment that were supposed to increase relative competitiveness, productivity in the south drifted below that of the north. Moreover, most of the increase in investment in the south went into nontradable sectors. Furthermore, inflation in the south rose relative to the north so competitiveness declined.

Portugal entered the eurozone with an overappreciated real exchange rate. Its current account deficit (8.5 percent of GDP) at full employment represented a deficit in the trade balance (11.9 percent of GDP) that was partially offset by surpluses in the balance of services and in net remittances. Since then, the Portuguese economy has experienced four adverse trends: (1) a decline in the surplus of remittances; (2) an increase in the energy deficit; (3) a growing external debt service; and (4) greater direct competition from China and the European Economic Community. The combined effect increased the current account deficit and pushed the real effective exchange rate further above its initial equilibrium level.

The authors note that the potential costs to members of the EMU have been underestimated and that persistent divergences in growth and inflation have not been given sufficient attention by policymakers. In particular, real exchange rate adjustment can only occur through changes in domestic prices but this requires a long period of economic stagnation. Economic policy alternatives available to Portugal include an increase in the private saving rate, an increase in public saving, and a boost to net exports. The first two alternatives would lower output and increase unemployment. The third, however, would boost domestic output and lead to smaller private sector and budget deficits, and lower unemployment.

An upsurge in net exports can only be achieved through cutbacks in unit production costs—increasing productivity or reducing input prices through competitive disinflation or across-the-board cuts in nominal wages (e.g., 30 percent). However, Portuguese workers are reluctant to accept lower nominal wages, even when faced with a prolonged period of high unemployment, so zero nominal wage growth is the most that can be expected. This would only slowly improve Portugal's

relative competitiveness in the eurozone. Thus, Portugal would have to endure a decade of high unemployment before competitiveness improves, the current account deficit decreases, and vigorous output growth resumes.

A decline in nominal wages (and nontradable goods prices) would reduce unit costs in the tradable sector and substantially increase relative competitiveness and boost net exports. However, the decline in wages (and prices) could adversely affect domestic consumption and investment, since many indebted households and firms would be unable to honor their fixed-debt payments. In turn, this could offset the demand stimulus from expansion of the tradable sector. According to a 2007 stock-flow consistent analysis by Wynne Godley and Marc Lavoie, decreases in unit labor costs in individual eurozone economies will tend to be offset by nominal appreciations of the euro, leaving the real exchange rate roughly constant. The decline in nominal wages in an individual eurozone economy does not lead to an increase in the GDP of the eurozone as a whole, but merely redistributes a given level of output between eurozone economies.

The authors suggest two solutions: imposing a ceiling on the current account imbalances (either deficits or surpluses) of individual eurozone countries, and raising the inflation target of the European Central Bank (ECB). Restrictive fiscal policy in the south, coupled with expansionary fiscal policy in the north, could curb the present current account imbalances without depressing output and employment. Unfortunately, this solution is unlikely to be adopted, say Leao and Palacio-Vera, because Germany has recently adopted the "debt brake" (federal government budget deficits will be limited to no more than 0.35 percent of GDP from 2016 on). The second solution is also unlikely, because the ECB determines the quantitative definition of price stability enshrined in the Treaty of Lisbon and will probably not revise its inflation target upward to "grease the wheels" of labor markets in the troubled eurozone economies.

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Causes of Financial Instability: Don't Forget Finance

DIRK J. BEZEMER

Working Paper No. 665, April 2011

One reason that dynamic stochastic general equilibrium (DSGE) models fail to model the macroeconomy is that finance is treated inadequately. Dirk J. Bezemer, University of Groningen, explores the methodological shift toward agent-based models where complex behavior and sudden transitions arise from the economy's financial structure (as reflected in its balance sheets), in addition to heterogeneous interacting agents.

The author develops a simple balance-sheet model to demonstrate that nonlinear behavior and sudden transition may arise from the economy's balance-sheet structure in the absence of microfoundations. He explores two types of leverage and finds that an economic system survives crises in the equity scenario but not in the securitization scenario. A promising avenue of future research is combining flow-of-funds and agent-based models.

The ruling paradigm of macroeconomics rests on two fundamental building blocks. The behavioral underpinning of neoclassical economics is methodological individualism combined with optimization. The system view is the notion that an economy is in equilibrium: deviations are due to outside shocks and there is no endogenous instability. Bezemer notes that general equilibrium models dominated macroeconomics after the demise of Keynesianism in the late 1970s, but they exclude the possibility of financial instability. In principle, DSGE models cannot incorporate the financial sector and credit creation, so they cannot anticipate a credit crisis.

Bezemer points out that the current crisis was anticipated by scores of nonorthodox economists such as Wynne Godley and his collaborators at the Levy Institute. Godley's predictions were based on a flow-of-funds framework that was built upon theorists (such as John Maynard Keynes and Hyman P. Minsky) who considered true finance-induced macroeconomic instability—the "accounting approach" tradition in economics (i.e., an emphasis on the economy's financial nature reflected in balance sheets). This strand of theorists locates the economy's instability not only in its financial structure but also in the behavior of its agents. The key features of credit-cycle theories are: (1) "free" credit flows not

determinately linked to real-sector growth; (2) assets distinguished from money; (3) debt as the counterpart of credit; and (4) an economy shaped by accounting constraints implied in its financial nature.

Realistic models require a dual economy, with finance explicitly modeled and distinct from the real economy, and assets distinguished from money. And since balance-sheet identity credit is also debt, the economy is subject to an overarching accounting constraint, which is key to the peaking of a credit boom and the real-sector consequences of a debt deflation. This accounting approach captures the financial nature of modern capitalism that is neglected in neoclassical macroeconomics.

There are two organizing principles that explain how finance induces instability: a balance-sheet approach to the economic system, and distinction between money and other types of credit. A simple balance-sheet identity from the financial sector's viewpoint is that loans plus securities (assets) equal deposits plus wealth (liabilities). Securities include both equity investment and securitization, which has future repayment implications. Bezemer notes that the growth of lending to the nonfinancial sector is subject to the growth of aggregate economic activity (GDP). Moreover, flows of "free" credit issued by US banks (i.e., the FIRE sector) have risen five-fold in proportion to the US economy since the 1950s. Thus, the bulk of the economy's financial flows (what Minsky termed "managed money") are left out of DSGE models. And the key to understanding finance-induced instability is leverage, which is the ratio of the real sector's IOUs (the sum of debt-financed wealth and securities) to its deposit base. Each postwar US business cycle started with a higher level of leverage.

The key point in Minsky's work is that financial instability arises from the structure of financial capitalism, not from variations in its financial parameters. Thus, sophisticated financial markets mean financial fragility and instability, which arise from the structure of leverage (the key element of capitalist finance), not interest rate movements. Dynamics are shaped by five parameters: nominal interest rates, loan maturity, securitization, the economy's nominal growth rate, and the nominal wealth–growth rate. While the values for economic growth and wealth growth evolve endogenously, parameters for securitization, maturity, and interest rate are given constant values according to Minsky's key insight.

Bezemer creates a simple four-variable, five-parameter model that retains the necessary features of stock-flow consistency (Godley) and nominal values for assets and debt that are among the financial causes of cycles and crises (Minsky). His model properties also generate endogenous cycles and cycle instability due to increasing leverage. Simulations of the model show that the timing and severity of instability depend on the nature of securitization. Peak values for financial sustainability rise much more than trough values fall, so average values continue to rise until the crash. The peaks reflect the skyrocketing asset values typical of the last phase of a credit boom. Leverage and financial flows to the economy also peak before they turn negative and the system collapses. In the short run, securitization-led growth is very profitable but financially unsustainable.

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Hegemonic Currencies during the Crisis: The Dollar versus the Euro in a Cartalist Perspective

DAVID FIELDS and MATÍAS VERNENGO

Working Paper No. 666, April 2011

This paper suggests that most analysts are incapable of understanding the resilience of the dollar; for example, they ignore the theories of monetary hegemonic stability. According to the Cartalist (Chartalist) approach, the key to a currency's standing (as a secure asset) is the role of economic and political power—the hegemonic country sets the global social, political, and economic conditions.

David Fields and Matías Vernengo, University of Utah, conclude that the dollar will remain the lingua franca of the international monetary system for a very long period (neither the euro nor the renminbi is a credible challenger). The dollar has served as the risk-free asset since the rise of global capitalism, and its resilience stems from the fact that, for the first time, a hegemonic currency is fully the creature of the dominant international state and divorced from gold.

Once a particular asset becomes the dominant means of exchange, inertia leads markets to adopt it as a reserve currency and unit of account. According to the conventional or Metallist view, confidence is essential, so it is necessary to reduce political power from directly controlling the money

supply. It infers that a separation of monetary and fiscal policies is the trademark of good policymaking. This view of the existence of money in a domestic setting also applies to international markets where governments must convince the markets that they are well behaved. The hegemon must maintain a credible macroeconomic stance to avoid a run on its currency.

In contrast to the Metallist view, the Cartalist approach emphasizes that the role of economic and political power is key to a currency's standing. Today, the power of the state is more important than the confidence of the markets. In this context, the monetary functions are intrinsically connected with the fiscal matters of the state. Money derives its properties from the state's guarantee, and the monetary authority ensures the creditworthiness of the state by keeping its fiscal solvency. The power to coerce other countries is central for monetary hegemony. For example, the hegemonic country can provide credit on an international basis to expand global demand. The national state is always creditworthy in its own domestic currency and default is impossible, since the central bank can always buy government bonds and monetize the debt.

The authors note that the hegemon in previous international monetary systems suffered from one particular constraint: debt was ultimately redeemable in an asset that was not directly controlled by the monetary authority, so default was possible. Power, not credibility, was at the center of the international monetary system. The hegemon was not only a source of global stability, acting as a lender of last resort, but also the crucial source of global demand. These features have intensified since the collapse of Bretton Woods and the dollar's ascendance as the first world fiat money. There is no balance-of-payments constraint for the hegemonic country, and the principles of functional finance apply on a global basis. In this case, the United States is the global debtor that (1) provides a default risk-free asset to facilitate global accumulation and (2) can stimulate global effective demand. This situation would only be inflationary and lead to a run on the dollar if there were currency substitution on a massive scale. But it would require a credible alternative to the dollar.

The long-term devaluation of the dollar after Bretton Woods and the appearance of the euro have been interpreted as the end of dollar hegemony. According to Fields and Vernengo, the data do not provide an obvious scenario in which the euro would overtake the dollar as the main international currency. The reserve position of the dollar (60 percent of central bank holdings) has not changed much, the use of the dollar in international trade transactions remains very high (95 percent of US exports are invoiced in dollars, compared to 30 percent of European exports invoiced in euros), and the dollar remains the leading transaction currency in the foreign exchange markets. Furthermore, European banks have been heavily exposed to the financial crisis, there has been a lack of coherent fiscal framework in the eurozone, and the European Central Bank has been unwilling to act as lender of last resort and expand effective demand at the regional level. In contrast, the Federal Reserve has bought great quantities of US Treasuries (keeping bond prices stable and interest rates low) and thus, providing assurances that the bonds remain secure. This action allows the US Treasury to sustain high fiscal deficits.

The essential feature of the key currency is that there is no possibility of default. The reason the dollar will remain the key currency is because the United States does not incur debt in other currencies, while the institutions that manage macroeconomic policy guarantee that a default in dollars cannot take place (and key commodities are priced in dollars). This allows the United States to incur international debt without any reasonable limit.

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Race, Power, and the Subprime/Foreclosure Crisis: A Mesoanalysis

GARY A. DYMSKI, JESUS HERNANDEZ, and LISA MOHANTY

Working Paper No. 669, May 2011

This paper outlines the difference between two approaches used to explain the subprime/foreclosure crisis: the inclusion of race by many social scientists and the exclusion of race by most economists. The first overlooks market mechanisms; the second, the effects of market mechanisms on households and communities.

Gary A. Dymski, University of California, Riverside; Jesus Hernandez, University of California, Davis; and Lisa Mohanty, Trident University International, show how subprime lending arose from a coevolutionary process involving banking strategy, minority communities, and financial markets. They find that competition did not reduce the proportion of minority

(exploitative) loans. They also find a strong link to racial inequality through the systemic market power of lenders. Such power will lead to a reversal of fortune in wealth accumulation that will take decades to undo, the authors say, and have substantial implications for gender inequality.

The "meso" level of analysis concerns itself with the structures that mediate between individuals and the (whole) economy. This level is missing in most writings on racial inequality in the credit markets. As a result, this paper attempts to recenter the political economy of the subprime crisis by identifying the missing links between racial inequality and market mechanisms; that is, focusing on the social construction of the institutional mechanisms used to create and distribute subprime loans, and on the mechanisms that govern foreclosure processes.

The authors show that minorities were systematically disadvantaged in mortgage markets for reasons unrelated to racial/ethnic differences in creditworthiness. The pervasive effects of racial inequality in multiple markets, combined with ineffective regulation, created incentives for banks to maximize short-term profits by pushing subprime lending in minority communities. Banks' use of market power has been built on the legacy of race and the creation of segregated urban space in the mid-20th century, and, more recently, on financial exclusion. High information costs led profit-maximizing banks to use race as a form of informational shorthand.

Economic analyses of the subprime crisis overlooked racial discrimination, redlining (the systematic denial of home mortgages to urban areas with high proportions of minority residents), and predatory lending. Their attention centered on the bad behavior of participants, inadequate government regulation of market relations, or unwanted government interference. They failed to identify racial inequality or exploitation as a cause of the subprime crisis because economists consider predatory racial behavior and the systematic vulnerability of loan applicants to be outside the boundaries of their analysis. And since variables correlated with race and creditworthiness are ruled out of bounds, there is little empirical evidence to meet the double discrimination threshold of intent to harm and unfair treatment.

The authors outline several key points contributing to their analysis: (1) subprime loans in minority neighborhoods were already growing rapidly in the 1990s; (2) subprime lending continued to grow in "subprime zip codes" even as income levels declined in the 2002–05 period; (3) subprime lending accounted for 43 percent of the increase in homeownership by blacks and 33 percent of the growth in ownership within minority neighborhoods during the 1990s (a pattern that continued through the 2007 subprime crisis); and (4) mortgage-payment pressures led to foreclosure problems in minority neighborhoods well before the housing bubble peaked in late 2006.

The meso level of analysis permits the authors to include households with gender and racial/ethnic characteristics directly into their analytical framework so that the interplay between minorities and market institutions (for credit and financial services) is visible. Many households used subprime loans to generate cash flow rather than to acquire homes, and there was weak wealth accumulation for minorities during the subprime lending period. Moreover, the disadvantages remained in place during the boom due to the complex interaction of subprime lending with structures of social and market power. For example, households in minority areas were disproportionately targeted for subprime loans even when they could have qualified for prime loans. Market forces did not push loan brokers to offer better terms and conditions because they earned higher fees from subprime mortgages than conventional mortgages (due to the small number of financial channels). Furthermore, restrictive racial property convenants and government policies of mortgage redlining drew on, and reinforced, popular prejudices. There is also evidence that women were systematically more disadvantaged than men across racial/ethnic lines and degrees of racial/ethnic segregation.
www.levyinstitute.org/pubs/wp_669.pdf

Institutional Prerequisites of Financial Fragility within Minsky's Financial Instability Hypothesis: A Proposal in Terms of "Institutional Fragility"

CHRISTINE SINAPI

Working Paper No. 674, July 2011

Institutional mechanisms play a key role in the works of Hyman P. Minsky; in particular, his financial instability hypothesis (FIH). According to Christine Sinapi, Burgundy School of Business, Dijon, France, the institutional foundations of the FIH are inadequately addressed in the literature. She outlines three main limitations: (1) the absence of a clear

definition of institutions; (2) the absence of a global approach to the institutional mechanisms underlying the FIH; and (3) the intuitive character of Minsky's institutional framework.

Sinapi proposes a definition of institutional forms of financial systems consistent with the Minskyan approach, summarizes Minsky's main institutional mechanisms and integrates them within the endogenous dynamic described by the FIH, and interprets the results in light of the relevance and modernity of Minsky's intuitions. She finds that Minsky's institutional approach is grounded in the works of the American Institutionalists (in particular, John R. Commons). She also finds that the institutional processes driving the FIH in the presence of "institutional fragility" initiate the endogenous clockwork that leads to crisis. Another finding is that the institutional mechanisms intuitive in Minsky's work are partially justified in recent discussions of asymmetric information, cognitive bias, and procyclical risk taking.

The study emphasizes the relevance and modernity of the FIH, and provides a robust theoretical framework for the FIH—including its prediction that financial fragility increases over protracted periods of good times. Moreover, the study suggests complementary ways to examine the causes of the current international financial crisis and provides the groundwork for analyzing international financial governance.

The author endeavors to define the role of institutions within the FIH in order to establish a clear framework and mitigate any avenues for interpretation. One function relates to cure, which involves public intervention during a crisis in the form of a lender of last resort (Big Bank) and the socialization of investment (Big Government). The aim is to restart the economy and influence agent expectations in order to halt self-sustaining, debt-deflation mechanisms. Another function is preventive, whereby institutions act on the destabilizing forces of financial systems (i.e., the process of financial fragility underlying the FIH). It appears that the endogenous character of the renewal of crisis episodes depends on the actions of the institutional system in place, observes Sinapi.

Minsky does not sufficiently address the definition of institutions, so Sinapi combines the ideas contained in his works with the approach of American Institutionalists to yield a consistent characterization of institutional forms. As defined by Commons in his *Institutional Economics* (1931), institutions are collective actions that guide (or control) individual actions. These actions correspond to two institutional forms: "unorganized customs," or informal institutions such as social practices and customs; and "going concerns," or formal institutions such as government and central banks. Similar institutional features are provided by Minsky: the authorities ("legislation") that lay down the law; "administrative actions" that control enforcement; and "the institutions and usage that are due to the past behavior of market participants." As an extension of Minsky's three categories, Senior Scholar Philip Arestis et al. in Levy Institute Working Paper no. 377 identify five components of the institutional structure of financial systems in order to clarify Minsky's definition of institutional forms: norms, incentives, rules, oversight, and regulatory organizations.

Minsky identified five stages in the development of capitalism when studying the changing economic systems in the United States between 1929 and the 1990s. His "in history" approach is consistent with the lineage analyses of the American Institutionalists. It articulates the development of capitalism, institutional forms, financial innovation, and the dynamics at work in financial systems. Identifying the significant changes in financial systems points to the institutional adjustments required to counter the dynamics of financial fragility.

Two complementary processes of institutions are behind financial fragility: the internal dynamics of capitalist economies, and the system of interventions and regulations. The first process corresponds to "spontaneous" mechanisms and to the action of informal institutional forms. The combination of the incentive to take risk and relaxation of prudential usage in good times is an inherent (endogenous) force of the capitalist system. The second corresponds to "intentional" mechanisms and to the action of formal institutional forms. An institutional system can only be effective if it is constantly adjusting to the development of the financial system and innovation.
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Program: The Distribution of Income and Wealth

Levy Institute Measure of Economic Well-Being

Quality of Match for Statistical Matches Used in the 1995 and 2005 LIMEW Estimates for Great Britain

THOMAS MASTERSON

Working Paper No. 663, March 2011

This paper by Research Scholar Thomas Masterson describes the construction of synthetic datasets to estimate the Levy Institute Measure of Economic Well-Being (LIMEW) in Great Britain. Since no single dataset includes all the required data, Masterson creates a synthetic data file by combining various sources for information about demographics, income, transfers, taxes, time use, and wealth. He finds that the quality of his overall statistical matching is good. Therefore, the LIMEW should be able to adequately portray the distribution of household production and wealth, given the data limitations.

The Office of National Statistics' Family Resources Survey (FRS) is used as the basic dataset. It contains information on demographics, income, transfers, and taxes for a regionally representative sample of UK households. The British Household Panel Survey (BHPS) is used for the wealth data. Time-use data for 1995 is derived from the Office of Population Censuses and Surveys (OPCS) Omnibus Survey, time-use module, while that for 2005 is derived from the 2000 United Kingdom Time Use Survey.

Masterson discusses the method used to produce estimates of household wealth, describes the various datasets, compares demographic characteristics, and reviews the quality of match for each item. The matching unit for wealth is the household, and the source datasets for the LIMEW estimates are the FRS and BHPS. Missing values in the BHPS data were replaced in two stages: hot-decking for individuals, and multiple imputations with chained equations for households. In order to perform a successful match, the candidate datasets must be well aligned in the strata variables used in the match procedure. The strata variables for the wealth match are homeownership, age, educational attainment, family type, and household income.

In terms of the 1995 LIMEW estimates, Masterson finds that the distribution of homeownership is closely aligned in the two surveys, while that for education shows the largest discrepancy, due to differing questions between the two surveys. Masterson also finds that most of the wealth records are assigned to records that are similar to their donor records in age, education, family type, homeownership, and income. This bodes well for the quality of match. For all seven variables, the difference between the means of the matched and source files is less than 4.5 percent. His examination of the quality of the match within population subgroups also shows generally good results.

The datasets for the 1995 LIMEW estimates of the time-use match are the FRS and the OPCS, and the matching unit is the individual. The strata variables are sex, parental status, employment status, and marital status. Since the two surveys were conducted at approximately the same time, it is expected that the data are well aligned, but some differences are apparent as a result of the differing sampling frame. In spite of limitations in terms of the marital and employment status categories, the quality of the match within population subgroups shows generally good results and the distribution of household production is well preserved in the matching process.

Masterson proceeds with a similar approach to derive the 2005 LIMEW estimates. He also finds that the overall match quality is good respecting the distribution of household production and wealth in Great Britain, given the limitations of the data. For additional information about measures of economic well-being in Great Britain, see Working Paper no. 667.
www.levyinstitute.org/pubs/wp_663.pdf

The Levy Institute Measure of Economic Well-Being, Great Britain, 1995 and 2005

SELÇUK EREN, THOMAS MASTERSON, EDWARD N. WOLFF, and AJIT ZACHARIAS

Working Paper No. 667, April 2011

Research Scholars Selçuk Eren and Thomas Masterson, and Senior Scholars Edward N. Wolff and Ajit Zacharias compare the LIMEW with two official measures of economic well-being in Great Britain. The LIMEW is a more comprehensive measure

of economic well-being, differing in scope and method from the official measures. The authors find that the level and distribution of well-being in Great Britain differ considerably between the measures.

The LIMEW suggests that the government played a greater role in promoting middle-class well-being, and that the elderly are better off because of the advantages of wealth ownership. In addition, the LIMEW's lower Gini coefficient stems from the equalizing effects of public consumption, health expenditures, and household production. The authors also find that there was a notable decrease in the redistributive effect of net government expenditures between 1995 and 2005.

The unit of analysis for the LIMEW is the household. The LIMEW is constructed as the sum of base income, income from wealth, net government expenditures (both cash and noncash transfers, and public consumption), and household production. The authors distinguish between owner-occupied homes and other forms of wealth when measuring the economic well-being from wealth holdings, and estimate the benefits from nonhome assets using a lifetime annuity method. Net government expenditures represent the difference between expenditures incurred on behalf of households and taxes paid by households, and are estimated using a social-accounting approach. Expenditures by functional category are distributed among households using the government-cost approach.

The imputed value of household production is based on three broad categories of unpaid activities: core production such as cooking and cleaning, procurement such as shopping, and care such as babysitting and reading to children. The strategy for imputing the value of household production is to value the amount of time spent by individuals on the basis of its replacement cost, as indicated by the average earnings of domestic servants or household employees. The replacement-cost procedure is modified according to how the individual ranks in terms of a performance index. Three key factors that affect efficiency and quality differentials are household income, educational attainment, and time availability.

The estimation procedure for the LIMEW consists of two main steps. The first is the creation of a core synthetic microdata file that contains the various sources of money income, components of household wealth, and time spent on household production. This step involves the statistical matching of an income and demographic survey with wealth and time-use surveys. The second step uses a variety of sources (e.g., administrative data and national accounts) in conjunction with the variables contained in the income survey to estimate government transfers, taxes, public consumption, and household production.

The basic sample for the 1995 and 2005 LIMEW estimates is the public-use files of the Family Resources Survey published by the Department for Work and Pensions of the National Centre for Social Research and the Office for National Statistics. The source data for household wealth are the British Household Panel Survey (BHPS) published by the University of Essex. The source data for time spent on household production are the 1995 Office of Population Censuses and Surveys (OPCS) Omnibus Survey and the 2000 United Kingdom Time Use Survey (UKTUS). The matching unit for the time-use match is the individual. Missing values in the BHPS data were replaced in two stages: hot-decking for the individual records and multiple imputation with chained equations for the household records. Missing values in the OPCS were replaced by the method of multiple imputation with hot-decking, while missing values in the UKTUS were replaced using multiple imputation with chained equations. Other data sources include the Public Expenditure Statistical Analyses published by HM Treasury and the Annual Abstract of Statistics published by the Office for National Statistics.

The two official measures of economic well-being in Great Britain are the Redistribution of Income (ROI) analysis from the Office for National Statistics and the Households Below Average Income (HBAI) annual report from the Department for Work and Pensions. The LIMEW includes additional types of public consumption, such as public transportation (in addition to education and housing), as well as the value of household production.

The LIMEW and official measures differ considerably in their assessment of economic well-being in Great Britain. For example, income from wealth in the LIMEW is almost three times the reported property income in the HBAI and ROI measures. In addition, base money income accounted for most growth in the official measures and only half the growth in the LIMEW, where more than one-quarter of the growth is explained by the increase in the value of household production. Moreover, overall economic inequality declined in the 1995 to 2005 period according to the LIMEW but increased according to the official measures.

The authors suggest that it would be worthwhile to examine the relative importance of different components of the LIMEW in shaping subgroup disparities and to assess alternative assumptions using sensitivity analyses within the LIMEW framework. Information about the quality of match for statistical matches used in estimating economic well-being in Great Britain is the subject of Working Paper no. 663 by Masterson.
www.levyinstitute.org/pubs/wp_667.pdf

Quality of Match for Statistical Matches Used in the 1989 and 2000 LIMEW Estimates for France

THOMAS MASTERSON
Working Paper No. 676, July 2011

This paper by Research Scholar Thomas Masterson describes the construction of synthetic datasets to estimate the Levy Institute Measure of Economic Well-Being (LIMEW) for France. Since no single dataset includes all the required data, Masterson creates a synthetic data file by combining various sources for information about demographics, income, transfers, taxes, time use, and wealth. He finds that the quality of his overall statistical matching is good. Therefore, the LIMEW should be able to adequately portray the distribution of household production and wealth, given the data limitations.

The base dataset is the Enquête Budget de Familie, which contains good information on demographics, income, transfers, and taxes for a regionally representative sample of French households. Wealth data for 1989 come from the 1992 Enquête sur les Actifs Financiers, while that for 2000 comes from the 2004 Enquête Patrimoine. Time-use data come from the 1985 and 1999 Enquête Emploi du Temps (EDT). All of these datasets were carried out by the Institute National de la Statistique et des Études Économique. Missing values were replaced using the method of multiple imputation with chained equations.

The paper details four statistical matches—wealth and time-use matches for 1989 and 2000. Masterson describes the source datasets and compares their demographic characteristics prior to reviewing the quality of each statistical match. In order to perform a successful match, the candidate datasets must be well aligned in the strata variables used in the match procedure.

In terms of the 1989 wealth match, the strata variables are homeownership, age of the household head, educational achievement of the household head, family type, and household income. The largest differences between the surveys used in this match were in terms of the income and education categories. These misalignments resulted in five rounds prior to matching 92 percent of the records and, ultimately, 22 rounds to match all donor records. Nevertheless, the quality of match within population subgroups shows generally good results, and the overall quality of match is good in spite of limitations in terms of household income.

The strata variables for the 1989 time-use match are sex, parental status, employment status, marital status, and spouse's employment status. While the wealth-matching unit is the household, the time use–matching unit is the individual. The variable with the most troubling alignment between surveys is marital status, but the bulk of the matches (92 percent) occurs in the first round, ensuring a high-quality match. Thus, the quality of match within population subgroups shows generally good results (including marital status) and the distribution of household production is well preserved in the matching process.

In terms of the 2000 wealth match, the distribution of household income is also poorly aligned, and there is some discrepancy between surveys in terms of homeownership. Nevertheless, the characteristics of the matching process indicated that the quality of the match should be good, and this result was confirmed. The differences were small enough not to affect the outcome of the final analysis of the LIMEW.

The source datasets for the 2000 time-use match are only one year apart and, therefore, are shown to be well aligned. The difference in parental status was the greatest cause for concern in terms of potential match quality, but only seven rounds were required to complete the matching process. In sum, the reproduction of the weekly hours of household production in the EDT in the matched file is very good. And since the remaining differences are small, they will not greatly impact the final LIMEW estimates for France.

For additional information about France, see Working Paper no. 679.
www.levyinstitute.org/pubs/wp_676.pdf

The Levy Institute Measure of Economic Well-Being, France, 1989 and 2000

THOMAS MASTERSON, AJIT ZACHARIAS, SELÇUK EREN, and EDWARD N. WOLFF

Working Paper No. 679, July 2011

Research Scholars Thomas Masterson and Selçuk Eren, and Senior Scholars Ajit Zacharias and Edward N. Wolff, construct and compare the LIMEW and disposable income (DI) measures for France in terms of the overall population, as well as several subpopulation and income groups. They find that the LIMEW reveals a starkly different picture of the change in inequality over the 1989–2000 period—that is, no change, whereas conventional analyses conclude that inequality has declined. This result is crucially dependent on the fact that DI does not adequately reflect the advantages of wealth ownership.

The authors also find sharp differences in terms of the redistributive effects of government social expenditures and taxation. On balance, these effects have an inequality-reducing effect in DI but an inequality-enhancing effect in LIMEW. The main reason is the lower redistributive impact of taxes in the LIMEW, which includes household production and nonhome wealth components that are not subject to taxation. In contrast to the standard DI measure, the LIMEW indicates that the government played a smaller role in promoting middle-class well-being (i.e., the third quintile). Moreover, the economic well-being of families headed by single females worsened much more, and that of elderly households relative to nonelderly households improved more, than indicated by DI. In addition, the economic well-being of households headed by college graduates did not outstrip that of less-educated household heads.

DI is the standard measure of economic well-being used in most academic and official studies: gross money income minus income and the employee portion of payroll taxes. The LIMEW is a more comprehensive measure of a household's command over resources than DI. It includes (imputed) estimates of public consumption and household production, as well as the long-run benefits of wealth ownership, in addition to base money income and other government expenditures (cash and noncash transfers). While base money income is identical in the LIMEW and DI, there are a number of differences between the measures, such as a broader definition of the household tax burden (consumption and property taxes) and imputed values of noncash transfers (most important, health) in the LIMEW.

Estimating the LIMEW for France consists of two main steps. The first involves the statistical matching of income and demographic surveys with wealth and time-use surveys (see Working Paper no. 676, p. 33). The second estimates government transfers, taxes, public consumption, and household production from a variety of sources, in conjunction with the variables contained in the income survey.

For the overall French population, the major difference between the DI and LIMEW measures consists of the relative contributions to growth in terms of income from wealth and base money income. The latter component is the principle driver of growth in DI, while both components play major roles in the LIMEW. The deterioration in the relative economic well-being of single females between 1989 and 2000 is driven by their disadvantage in terms of income from wealth and the unfavorable shift in government transfers. The improvement in the well-being of the elderly is mostly a result of expanding government transfers and income from wealth that offset the gap in base income. The gaps in base income, income from wealth, and household production between college graduates and those with less education are offset, to some extent, by net government expenditures (after taxes).

Using the LIMEW and DI measures, the gain in economic well-being between 1989 and 2000 for the average French household is 15 percent and 20 percent, respectively. The relatively slower growth in the LIMEW is partly explained by the fact that the median value of DI is less than half that of the LIMEW. Most of the change in middle-class well-being is attributed to the income from wealth component of the LIMEW and the base income component of DI.

France is characterized as a country that experienced declining inequality over the 1990s. This view is based on conventional analyses that neglect the role of wealth in shaping economic inequality. However, the share of income from wealth in overall well-being increased sharply over the 1989–2000 period, especially for those on the top rungs of the LIMEW distribution, and this offset the lower contributions of base income and net government expenditures. The LIMEW takes wealth into account, and it shows practically no change in inequality.

The authors note that they will compare the trends in France and the United States in a forthcoming companion paper, and include a sensitivity analysis based on alternative assumptions used to construct measures of economic well-being.

This work was carried out for a project supported by the Alfred P. Sloan Foundation to produce international comparisons of economic well-being.

www.levyinstitute.org/pubs/wp_679.pdf

The Levy Institute Measure of Economic Well-Being: Estimates for Canada, 1999 and 2005

ANDREW SHARPE, ALEXANDER MURRAY, BENJAMIN EVANS, and ELSPETH HAZELL

Working Paper No. 680, July 2011

This report from the Centre for the Study of Living Standards (CSLS) estimates the LIMEW for a representative sample of Canadian households in 1999 and 2005. The authors strive to make their analysis compatible with the 2000 and 2004 LIMEW estimates for the United States as presented by Levy scholars in Working Paper no. 556 (2009). They find only modest growth in the average LIMEW among Canadian households because substantial growth in the base income and income from wealth components was offset by a decline in household production. They also find that the median LIMEW for Canada was approximately 9 percent lower than that for the United States, and that inequality increased slightly over the period.

Multiple datasets were statistically matched by household or individual in order to calculate the income, wealth, and household production components of the LIMEW. Microdata are drawn from Statistics Canada surveys such as the Survey of Labor and Income Dynamics (SLID; demographic and income variables), Survey of Financial Security (SFS; household assets and debts), Survey of Household Spending (property taxes), and General Social Survey (GSS; time use for household production). The SLID is considered the base or "recipient" database, while the SFS and GSS serve as "donor" files that augment the recipient file. A detailed discussion of the matching procedure and the quality of statistical matches can be found in Working Paper no. 615 (2010).

The authors note that economists have not reached a consensus for valuing household production, so they compromise by using a modified general-replacement-cost approach, as outlined in Working Paper no. 556. This approach is based on the wages of domestic workers in Canada and subsequently modified by a performance index to account for differences in the productive capacity of workers. They also note an interest in the distributional effect of the Canadian national health care system, given that its structure is different from the US system. In order to make Canada's LIMEW compatible with the US LIMEW, a large portion of government expenditure on health is included in government noncash transfers.

The mean value of the LIMEW is shown to increase 1.08 percent per year during the 1999–2005 period. The benefits of government transfers and public consumption were largely offset by taxes. Moreover, significant growth in base income and income from nonhome wealth was offset by a decline in household production. Thus, the "nontraditional" elements of the LIMEW make a significant difference in assessing both the level and growth of household economic well-being.

The authors also find a larger share of household production in Canada's LIMEW (32 percent in 1999 and 28 percent in 2005) than in the US LIMEW (21 percent in both years). Thus, part of the US advantage in economic well-being is due to declining household production in Canada. Additional findings include a shift from larger to smaller households, higher growth rates in the top two quintiles, and a greater share of income from wealth relative to total LIMEW at the top of the distribution. In contrast, net government expenditure represents 18–19 percent of total LIMEW in the bottom quintile, while the top quintile is a net loser. This suggests that the fiscal system, on balance, is progressive. The inequality measures show that economic well-being is more equally distributed in Canada than in the United States.

The large equivalent LIMEW values for elderly households are driven by government and the "nontraditional" components. Although the tax and transfer system closes the gap, the elderly remain worse off than every other age group. This result highlights the importance of using a comprehensive measure, and of using government transfers to level economic well-being across groups.

By region, British Columbia and the Prairies experienced the fastest growth of mean LIMEW. In contrast, Atlantic Canada declined by 0.62 percent per year as a result of a large decline in income from wealth.

A counterintuitive result is that household production contributes a larger share of total well-being at the top of the LIMEW distribution than at the bottom. An analysis of various factors reveals that the impact of the performance index increases the hourly value of household production in the top quintile by 32.3 percent relative to the base wage in 2005, but decreases the value by 14.0 percent in the bottom quintile. Moreover, there is a positive correlation between household production and the other large components of the LIMEW (base income and income from wealth). Furthermore, household production shows substantially greater inequality across quintiles than other income quintiles, as well as significant inequality across households.

It is clear from the alternative LIMEW estimates that more standard measures of income such as base income and aftertax income substantially underestimate the growth in inequality between 1999 and 2005. In addition, alternative methods of valuing household production demonstrate not only lower inequality relative to the standard LIMEW and other income measures, but also more growth in inequality over the time period. These results highlight the importance of household size and the performance index, which builds a substantial degree of inequality into the household production component. The authors recommend reconsidering the approach to valuing household production, given the crude performance index and a lack of direct data on individual productivity.

The authors suggest that it would be useful to compare the LIMEW with other comprehensive indicators of well-being—for example, the Index of Economic Well-Being developed by the CSLS. They also suggest further technical improvements, such as excluding defined-benefit pension plans from household wealth (for consistency) and reconsidering the use of long-run average interest rates for the rates of return on assets (given the structural changes in recent decades). In addition, better data are needed to allocate some categories of public expenditure to the household sector and across households.

www.levyinstitute.org/pubs/wp_680.pdf

Program: Employment Policy and Labor Markets

The Freedom Budget at 45: Functional Finance and Full Employment

MATHEW FORSTATER

Working Paper No. 668, May 2011

This year marks the 45th anniversary of the Freedom Budget—a policy program developed by A. Philip Randolph and Bayard Rustin in association with New Deal Keynesian economists that proposed full employment and a job guarantee. The main components were the government acting as an employer of last resort, and public works. The program recognized that there was both Keynesian unemployment, which is associated with conventional fiscal stimulus, and structural unemployment, which requires public service employment (and on-the-job training). The Freedom Budget was never officially introduced as legislation but was superseded by the Full Employment and Balanced Growth Act (1978), which was stripped of the job guarantee.

This paper by Research Associate Mathew Forstater proposes a "New Freedom Budget" for full employment. He compares three paradigms for understanding government budget deficits and the national debt: the deficit hawk, deficit dove, and functional finance perspectives. Forstater determines that economies operating with a fiat currency should manage their budget according to the principles of functional finance. A public-service employment program based on functional finance could guarantee full employment and provide a framework for humanistic social policy. Moreover, the huge economic and social costs of unemployment could be eliminated.

According to Forstater, a primary roadblock in the way of true full employment policy is public perception of the costs and its impact on the government budget and national debt. Hawks align themselves with the basic neoclassical view that deficits and debt are negative for the economy and society. They believe that the market economy has a built-in tendency toward full employment of resources, including labor, and that savings determine investment through variations in the interest rate (e.g., a loanable funds model). In their view, deficits cause inflation and high interest rates, and crowd out private

spending. In addition, the national debt is a burden on future generations.

The deficit dove perspective follows the basic Keynesian view of the operation of a macroeconomy. Unemployment and excess capacity are normal features of a modern capitalist economy, and investment determines savings through changes in income. One should examine the "full employment deficit" because much of the deficit is due to unemployment. Thus, the "true" deficit is the real value of the full employment deficit on the current account, net of government debt purchases and state and local transfers. Doves argue that the budget should be balanced over the business cycle rather than one year, debt does not burden future generations because it creates assets, and deficits do not cause high interest rates. Moreover, government owns assets, the federal government does not keep a capital account, and state and local budgets are often overlooked in the (overall) government budget balance.

The functional finance perspective was originally formulated by Abba Lerner in 1943. According to this view, managing the government budget requires a Chartalist or state money system (i.e., a flexible exchange rate). The federal government is the monopoly issuer of the currency (e.g., the United States); taxation creates a demand for, and gives value to, an unbacked currency; the purpose of government bond sales is to drain excess reserves created by deficit spending (and maintain positive short-term, or overnight, interest rates); printing money independent of fiscal operations has no effect on the economy; deficits generate savings; and the national debt does not burden future generations. Understanding modern money and macro balance sheets enables a society to use the government budget for achieving economic and social policy goals.

Economic prosperity is the only long-term solution to the challenges of the 21st century, says Forstater. Do we prefer a pool of unemployed to hold prices down, or a flexible system of public service to maintain stability?

www.levyinstitute.org/pubs/wp_668.pdf

Public Job-creation Programs: The Economic Benefits of Investing in Social Care: Case Studies in South Africa and the United States

RANIA ANTONOPOULOS and KIJONG KIM

Working Paper No. 671, May 2011

Public job-creation programs and employment guarantee schemes are government initiatives that aim to redress joblessness for the poor. Examples include the New Deal programs in the United States, the Mahatma Gandhi National Rural Employment Guarantee Act in India, and the Expanded Public Works Programme (EPWP) in South Africa. Expanding public service delivery and analyzing its effects on employment and income, however, have been overlooked in the literature.

Senior Scholar Rania Antonopoulos and Research Scholar Kijong Kim analyze both direct and indirect job creation and the distributional impacts of expanding the domain of social services in South Africa and the United States. They find that shifting unpaid care to paid work results in powerful pro-poor and economy-wide employment outcomes. Mobilizing unused domestic labor resources also promotes gender equality. Thus, social care delivery should be a targeted work project.

Using input-output analysis, social accounting matrices, and microsimulation techniques, the authors analyze the policy and distributional impacts on disaggregated subgroups of households and industries at the macro and micro levels. This approach makes it feasible to incorporate a flexible job-targeting scheme in order to maximize the reduction of poverty, and to account for the direct and indirect (multiplier) impacts of stimulating external demand. It may be desirable to develop a computable general equilibrium model with detailed industry classifications that allows for supply bottlenecks and market failures when there are slack conditions and underemployment of resources in factor markets.

The EPWP provides labor-intensive projects for unskilled, unemployed, poor individuals. This (public) program invests in three main sectors—physical infrastructure, the environment, and social services, which focuses on home- and community-based care, as well as early childhood development. In an earlier study (2008), Antonopoulos and Kim proposed a massive scaling-up of the EPWP in order to reduce unemployment.

In the case of South Africa, a new hypothetical sector (i.e., the EPWP social sector) is inserted into a social accounting matrix. The policy simulation increases the final demand for social care services in 2000 by approximately 1 percent of GDP. It shows that most of the direct unskilled jobs are allocated to ultrapoor households living in the ex-homelands (rural tribal regions) and that 95 percent of jobs are allocated to unskilled workers. The authors also find that an additional job is created for every three jobs created by expanding social care, and that job creation for women is greater than that for men across both skilled and unskilled categories. By comparison, investing in infrastructure construction generates slightly more than half the number of (direct and indirect) EPWP jobs. And since most indirect jobs are assigned to workers from nonpoor households, there is a need for direct intervention in the labor market to ameliorate perpetual inequalities in the South African economy. The simulation also shows that spending on social care produces more GDP growth (0.8 percent) than that for infrastructure investment (0.68 percent). Although wages and tax revenues are higher in the construction sector, the results show that social care expansion is a viable policy tool that addresses unemployment among the poor, while improving macroeconomic conditions.

The authors note that the hallmark of the Great Recession is a jobless recovery in the United States and that unemployment hysteresis has settled into the labor market. They estimate a multinominal probit regression by industry and occupation, and predict the probabilities for each independent variable (e.g., age, marital status, sex, and race) in order to estimate the likelihood of employment per individual. Investing in the social care sector ($50 billion) generates slightly more than twice the number of jobs (1.2 million) than investing in the infrastructure-construction sector, and 8 of 10 new jobs are within the care sector. In addition, more than 90 percent of the jobs created in the social care sector went to women, while more than 80 percent of the jobs created in the construction sector went to men.

Social care investment in the United States is more inclusive because it not only provides employment for people with less than a high school diploma, but it also provides more opportunities for people with some higher education (e.g., preschool teachers). The authors also find a stronger equalizing effect of social care investment relative to infrastructure-construction investment. The social care sector hires more managers and professionals, and these workers receive comparable wages to those in the construction sector. Furthermore, social care investment generates significantly more jobs for workers with less than a high school diploma. Thus, investment directed toward caring for the elderly and children is effective employment policy.

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Program: Economic Policy for the 21st Century

Explorations in Theory and Empirical Analysis

The Dismal State of Macroeconomics and the Opportunity for a New Beginning

L. RANDALL WRAY

Working Paper No. 652, March 2011

What passed for macroeconomics on the verge of the global financial collapse had nothing to do with reality. As a result, the ensuing crisis exploded the reigning orthodoxy—rational expectations and continuous market clearing, New Classical and real business cycle approaches, neutral money, the New Monetary Consensus, the Taylor rule, the Great Moderation, the efficient market hypothesis, Ricardian equivalents and other versions of the policy irrelevance doctrine, and claims made by advocates of deregulation and self-regulation. None of these ideas should be taught in any serious economics course, says Senior Scholar L. Randall Wray. It is time to throw out Neoclassical theory and update John Maynard Keynes's theory so that it is relevant to the world we now live in.

Keynes revolutionized economic thought in the aftermath of the Great Depression, but his important insights were never incorporated into mainstream macroeconomics. Rather, "synthesizers" borrowed only the less revolutionary aspects of Keynes's theory and integrated them into the old Neoclassical approach, which is applicable to an imaginary world (i.e., an economy focused on market exchange based on a barter paradigm) where money and finance do not really matter.

Economists working in the Keynesian tradition did see "it" (another Great Depression) coming, and they have offered policy advice and reform measures to get the economy back on track.

Keynes did not rely on sticky wages, monopoly power, disappointed expectations, or economic instability to explain unemployment. According to the author's summary of the *General Theory*'s central proposition, "*Entrepreneurs produce what they expect to sell, and there is no reason to presume that the sum of these production decisions is consistent with the full employment level of output either in the short run or in the long run*" (Introduction to Mathew Forstater and L. Randall Wray, eds., *Keynes for the Twenty-First Century: The Continuing Relevance of* The General Theory, New York: Palgrave Macmillan, 2008: 2).

Keynes required only three conditions to ensure the possibility of equilibrium with unemployment: historical time, autonomous spending, and the existence of a nonproducible store of value. The preference for money (under uncertainty) creates a barrier to expanding production to the point of full employment. According to Keynes, no one in a Neoclassical world would hold money because there could be no value to holding a riskless (low-return) asset.

Wray points out that mainstream macro models cannot incorporate the real-world features used by Keynes, such as animal spirits and degree of confidence, market psychology, and liquidity preference. By contrast, Keynes's basic model is easily extended to account for heterogeneous credit ratings, to allow default to affect expectations, and to include "contagions" and other repercussions when a large economic entity defaults on its commitments. The best example of an extension is Hyman P. Minsky's financial instability hypothesis. When debts built up and fragility grew on trend throughout the postwar period, the economy evolved toward instability and made another Great Crash possible. Minsky extended Keynes's stability issues when he argued that an economy with full employment would generate destabilizing forces and restore unemployment. He believed that the main instability in a modern capitalist economy was the tendency toward explosive euphoria, while the main circuit breakers (interventions) were the Big Bank (the central bank as lender of last resort) and Big Government (countercyclical budget deficits).

When postwar "Keynesian" economics translated the *General Theory* into algebra, it became too simplistic and specific to be relevant in a complex world. And the methodology adopted by orthodoxy was precisely the opposite of Keynes's (general) methodology, which was also institution specific. There were no forces to drive a capitalist (entrepreneurial) economy to the full-employment level of effective demand. The dynamics of full employment engendered an unstable equilibrium that changed expectations in a destabilizing manner.

The heterodox approach based on Keynes and Minsky is skeptical that the private sector can be a reliable engine of growth and that government policy should incorporate a "pump-priming" approach. Rather, policymaking should be specific with well-formulated regulations to constrain private firms, and well-targeted government spending. The wholesale abandonment of regulation and supervision of the financial sector proved to be a tremendous mistake, and fundamental reform is required to restore the US economy. Moreover, policy should address America's inadequate public infrastructure and global warming (cleaner energy production), and increase government spending (by taking on projects directly or subsidizing private spending).

Minsky argued that only the federal government can offer an infinitely elastic demand for workers at a decent wage. Program creation and administration (to provide public services), and worker supervision, could be decentralized to local not-for-profit agencies, community development organizations, and state and local governments. Policymakers should stop worrying about the "affordability" of necessary programs and government spending should be well targeted and not too large (e.g., Abba Lerner's functional finance approach). The goal should be to use the government's "purse" to achieve the public purpose, and to budget in order to reduce waste, graft, and corruption.

www.levyinstitute.org/pubs/wp_652.pdf

The Product Space: What Does It Say About the Opportunities for Growth and Structural Transformation of Sub-Saharan Africa?

ARNELYN ABDON and JESUS FELIPE

Working Paper No. 670, May 2011

Economic development appears to overlook Sub-Saharan Africa (SSA). Arnelyn Abdon, Asian Development Bank, Manila, Philippines, and Research Associate Jesus Felipe evaluate SSA in the context of structural transformation ("product space"), and find that the majority of SSA countries are in a "low-product" trap that makes the process of transformation difficult. Exports are not sophisticated, and they are poorly connected in product space.

The authors are adamant that governments must implement policies and provide public inputs that will incentivize the private sector to invest in new and more sophisticated activities, in order to jump-start and sustain growth. The real turning point will materialize when countries become less reliant on natural resource exports by upgrading and diversifying their export baskets.

Developed economies show that economic development (fast and sustained growth) is not only a process of continuously improving the production of the same goods but also requires structural transformation; that is, accumulating the capabilities needed to upgrade production toward activities associated with higher levels of productivity. The product space is a network representation of all products exported globally. It is based on two ideas: the ability of a country to export a new product depends on its ability to export similar products, and commodities requiring similar capabilities are more likely to be exported together. Products in the periphery are less sophisticated and have a lower income elasticity of demand for exports than those in the core (implying that products do not have the same consequences for economic development).

Since 1962, the number of products exported from SSA countries with revealed comparative advantage (RCA) has increased, but the increase represents almost exclusively "nearby" products in the garment sector and other peripheral products, rather than core products that are more sophisticated and connected. The export structure of resource-rich SSA countries barely changed, while the landlocked countries exported some new products in the periphery but not in the core. In contrast, coastal SSA countries, on aggregate, acquired revealed comparative advantage in a number of new nonperipheral products (e.g., the garments sector) and have successfully ventured into some core products. However, this is mainly attributed to South Africa, since the product space of other coastal countries resembles the landlocked economies. Thus, the standardness and poor diversification of SSA exports underlie the low sophistication of its export basket.

Complexity is another measure of product sophistication. It is associated with the set of capabilities required by a product. The authors find that more than half of SSA exports (excluding South Africa) are among the least complex products. As a result, 29 of 38 SSA countries are in a "low-product" trap, and only two countries (Seychelles and Sierra Leone) are relatively well-positioned. The key challenge is to exit the trap by venturing into new, more sophisticated, and less standard products—not an easy process, and one that may involve information and coordination externalities. Accumulating new capabilities requires human capital, diversification, greater sophistication (embracing a realistic industrial vision), and better organizational abilities.

In previous studies, the authors developed an Index of Opportunities based on a country's accumulated capabilities to undergo structural transformation and the country's potential to upgrade, grow, and develop. Most SSA countries are ranked in the lower half of non–high income countries. Abdon and Felipe show how product space can be used to identify products requiring capabilities that are most similar to those already present in a particular country. The products that a country exports without RCA comprise the opportunity set for further structural transformation.

The authors develop two different opportunity sets for Ethiopia, Mozambique, Nigeria, and Senegal. Compared to Ethiopia, Nigeria exports very few products with RCA. This implies that it would be easier for Ethiopia to take advantage of its opportunities. The authors also find that the countries have similar peripheral export structures that are unsophisticated and poorly connected. This implies that relying on shifts to nearby products alone would do little to improve SSA's growth prospects. And since structural transformation in the garment sector is typical for developing countries, the authors are adamant that Ethiopia, Mozambique, and Senegal take

advantage of the tight linkages and spillover effects of the garment sector.

www.levyinstitute.org/pubs/wp_670.pdf

Income Distribution in a Monetary Economy: A Ricardo-Keynes Synthesis

NAZIM KADRI EKINCI

Working Paper No. 672, May 2011

According to Nazim Kadri Ekinci, Dicle University, Diyarbakir, Turkey, the Kaldorian (Post Keynesian) approach to income distribution misses important aspects of both Ricardian and Keynesian theory. Moreover, all classical approaches to distribution theory neglect the monetary nature of capitalist economies.

The author's central proposition is that, in the absence of uncertainty, money and capital become indistinguishable and are perfect substitutes in a monetary economy, and no useful distinction can be drawn between profit and interest. Using one-sector and two-sector models, he illustrates how the amortization equation may be solved for the price level, given the money wage rate and the interest rate structure. The two-sector extension illustrates how the solution based on closing the circuit of fixed capital may be applied in general. Money as an investment fund is truly the "widow's cruse" of modern times, he says.

Capital as a fund can only exist as money, giving rise to two circuits: the direct circuit of money, and the circuit of money as fixed capital. If there is no uncertainty in closing the circuits, equilibrium results when there is nothing to be gained by shifting a dollar from the direct circuit to the other circuit. It follows that the imputation for fixed capital must be the capital recovery cost obtained from the direct circuit of money, adjusted for the normal rate of profit. Although the capital recovery cost is not the same across industries, the marginal efficiencies of all assets (adjusted for differences in normal profit rates) are equal, and there is no incentive to shift capital in or out of any sector.

When prices replenish (amortize) the cruse over a time period shorter than the useful life of the capital assets, the economy continues to grow, as the capital assets accumulate pure rent. What appears to be "profitable" in the case of older capital assets is in fact a reflection of their rent-earning potential, and the price of these assets is simply the present value of their rent earning potential. Moreover, as shown by John Maynard Keynes, money as an investment fund determines the rate at which the accumulated stock can be utilized through the multiplier. This is a fragile process, since money can be hoarded to the extent that the cruse is not replenished in full, leading to slower economic growth.

www.levyinstitute.org/pubs/wp_672.pdf

The Global Crisis and the Remedial Actions: A Nonmainstream Perspective

SUNANDA SEN

Working Paper No. 677, July 2011

The mainstream perspective on the meltdown of the global economy is based on the theory and policy prescriptions of the efficient market hypothesis. Research Associate Sunanda Sen contests this perspective by focusing on market uncertainty. She finds that policies to mend the financial system have not addressed two major issues: speculative investments in the market for financial assets and higher returns on such investments relative to those backed by real assets.

A boom in the financial sector creates little opportunity for expansion in the real economy where growth tends to be demand constrained and marked by underconsumption. Thus, higher growth rates in the real sector require an expansionary strategy of public policy that includes employment creation. In addition, there is a need to curb short-term speculation and contain volatility in the financial markets.

The disruptions in the financial sector and underperformance in the real sector are related to the framework of neoliberal growth models. The efficient market hypothesis postulates full information and rational agents in the capital markets, so the mainstream literature dispenses with the notion of uncertainty. Sen offers an alternative interpretation of the deepening slump in real activities, along with the bursting of financial bubbles, based on the theoretical foundations of the post-Keynesian structuralist framework (stagnation due to underconsumption) and Hyman P. Minsky's financial instability hypothesis. Since uncertainty and easy access to credit can be held responsible for financial crises under deregulation,

there is need for a credible market maker to anchor market psychology.

Sen outlines the structural transformations in the global economy that have led to chronic underconsumption (e.g., deregulation, securitization, and leverage in the financial sector). The unprecedented economic boom over the last two decades was a major force driving the crisis, she says, including the changing character of money. Under uncertainty, investors move from long-term to short-term financial assets that are relatively liquid. And when there is a financial boom, the sources of demand come from outside the real sector. As for developing countries, inadequate domestic demand often leads to export-oriented strategies. Thus, the global economy was subject to a lopsided pattern of expansion, where growth in the real sector fell behind unprecedented growth in the financial sector. The efficient market paradigm failed to deliver growth as promised.

Sen describes the sequence of events leading to crisis in the real and financial sectors of the advanced economies, and how the crisis spread to other regions. She notes the relatively low growth rates and rapidly rising unemployment rates in the advanced economies worldwide, the new investment channels for banks and other financial institutions, the unrestrained derivative markets, the rise of Ponzi finance, and the declining confidence in the value of financial assets held by lenders. By 2009, the gross market value of outstanding over-the-counter derivatives represented 60 percent of global GDP (more than $35 trillion). The creation of debt-financed assets through leveraging could only continue as long as there was trust and confidence in these new assets. Repackaging mortgage-based assets proved to be the Achille's heel, impairing the credentials of the entire US financial system. The crisis of confidence subsequently spread to the real and financial sectors of all advanced countries, including the eurozone, leading to financial crises in Greece and Ireland and the risk of further contagion.

Sizable rescue plans were designed to inject liquidity into the financial system in a bid to avoid a credit squeeze. Responses to mitigate the crisis included a series of regulatory proposals to address such matters as consumer protection, executive pay, capital requirements for banks, expanded regulations of the shadow banking system and derivatives, and quantitative easing. Regulators of the Dodd-Frank Wall Street Reform and Consumer Protection Act, however, completely ignored Minsky's insight into the need to shift investment from capital-intensive production to job creation, which ensures both stability and an equitable income distribution. And according to Minsky, the state should operate as a permanent employer of last resort.

Meanwhile, there was a government policy shift in terms of an expansionary strategy where monetary policy (e.g., tax hikes and expenditure cuts in Europe) is favored over fiscal deficits. Efforts on the part of monetary authorities to rejuvenate their ailing economies have had rather limited results because the measures did not remedy the structural weaknesses of the system—shortsightedness and speculation in the financial markets.

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INSTITUTE NEWS

20th Annual Hyman P. Minsky Conference

Financial Reform and the Real Economy

April 13–15, 2011

Ford Foundation, New York City

A Conference Organized by the Levy Economics Institute of Bard College with Support from the Ford Foundation

The 20th Annual Minsky Conference—with 300 participants, the Institute's largest conference to date—addressed the ongoing effects of the global financial crisis on the real economy, and examined proposed and recently enacted policy responses. Moreover, the European, Latin American, and Asian responses to the crisis were compared, and proposals for reforming the international financial architecture were reviewed. Central bank exit strategies, both national and international, were also considered. In addition to Federal Reserve Bank Presidents Charles Evans and Charles Plosser, Gary Gensler of the CFTC, and former PIMCO managing director Paul McCulley, keynote speakers included Sheila Bair, then head of the FDIC; the FCIC's Phil Angelides; Paul Tucker, Bank of England; Argentine central bank president Mercedes

Marco Del Pont; Asia specialist Stephen Roach, Morgan Stanley; and Brookings scholar Martin Mayer.

Full conference proceedings are available on our website, www.levyinstitute.org.

The Wynne Godley Memorial Conference

Contributions in Stock-flow Modeling
May 25–26, 2011
Levy Economics Institute of Bard College
Blithewood, Annandale-on-Hudson, N.Y.

The late Levy Distinguished Scholar Wynne Godley's work focused on the strategic prospects for the US, UK, and world economies, and the use of accounting macroeconomic models to reveal structural imbalances. This conference provided scholars profoundly influenced by his work the opportunity to celebrate his contributions to the field of economics. Topics included fiscal policy and stock-flow consistent models; unsustainable processes and the role of the dollar in fostering global imbalances; stability and convergence programs; trade and current account imbalances and international currencies; financial integration, intrazone credit, and stabilization in a monetary union; debt-deflation traps within small open economies; and the UK and US private expenditure function. A full list of participants is available at www.levyinstitute.org.

The Hyman P. Minsky Summer Seminar

June 18–26, 2011
Levy Economics Institute of Bard College
Blithewood, Annandale-on-Hudson, N.Y.

The Levy Institute held its second annual Minsky Summer Seminar in June, with 48 students from 14 countries attending. Organized by the Institute with support from the Ford Foundation, the Seminar provided 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. For more information, visit www.levyinstitute.org.

New Research Associate

Jesus Felipe has joined the Levy Institute as a research associate working primarily in the State of the US and World Economies program. The lead economist in the Central and West Asia department of the Asian Development Bank (ADB), Manila, Philippines, Felipe works on issues relating to long-run growth in Asia, productivity, and technological progress. He has held academic positions at the Hong Kong University of Science and Technology and the Georgia Institute of Technology, Atlanta, and is a research associate at the Cambridge Centre for Economic & Public Policy and the Center for Full Employment and Price Stability, among other institutions. Felipe is co-author and co-editor of *Labor Markets in Asia: Issues and Perspectives* (Palgrave Macmillan, 2006), named a noteworthy book in industrial relations and labor economics by Princeton University. He is the author of *Inclusive Growth, Full Employment, and Structural Change: Implications and Policies for Developing Asia* (Anthem Press, 2009) and the forthcoming *Aggregate Production Function and the Measurement of Technical Change: A Critique and Evaluation*. His work has also appeared in the *Cambridge Journal of Economics*, *Journal of Comparative Economics*, *Eastern Economic Journal*, *Journal of Income Distribution*, *International Review of Applied Economics*, *Journal of Development Studies*, and *Oxford Development Studies*. He also serves on the editorial board of the journal *Metroeconomica*.

Felipe holds an undergraduate degree in economics from the Universidad Autonoma de Madrid, master's degrees from the International University of Japan and the University of Pennsylvania, and a Ph.D. in regional studies from UPenn.

New Senior Editor and Policy Fellow

Michael Stephens has joined the Institute as senior editor and policy fellow, with primary responsibility for the *Report* and the Institute's blog, Multiplier Effect (www.multiplier-effect.org).

Stephens holds a BA from McGill University and will receive his Ph.D. from the University of Chicago. His dissertation,

titled "The Limits of Work," is an examination of arguments surrounding policies addressing the work-life balance. Most recently, he was a consultant for Georgetown University's "Workplace Flexibility 2010" project, which concerns the creation of a national social insurance program supporting time off for health and caregiving purposes.

PUBLICATIONS AND PRESENTATIONS

Publications and Presentations by Levy Institute Scholars

PHILIP ARESTIS *Senior Scholar*

Publications: "European Integration and the Euro Project" (with M. C. Sawyer), in J. Michie, ed., *The Handbook of Globalisation*, 2nd ed., Edward Elgar Publishing, 2011; "Keynesian Economics and the New Consensus in Macroeconomics" and "European Economic and Monetary Union Policies from a Keynesian Perspective," in E. Hein and E. Stockhammer, eds., *A Modern Guide to Keynesian Macroeconomics and Economic Policies*, Edward Elgar Publishing; *New Economics as Mainstream Economics* (edited with M. C. Sawyer), Palgrave Macmillan; *The Financial Crisis: Origins and Implications* (edited with R. Sobreira and J. L. Oreiro), Palgrave Macmillan; "A New Paradigm for Macroeconomic Policy" (with M. C. Sawyer), *International Journal of Public Policy*, Special Issue on Economic Policy: In Search of an Alternative Paradigm, P. Arestis and O. Onaran, Guest Editors, Vol. 7, Nos. 1/2/3 (2011); "Inflation Targeting in Brazil" (with L. Fernando de Paula and F. Ferrari-Filho), *International Review of Applied Economics*, Vol. 25, No. 2 (March); "The Design Faults of the Economic and Monetary Union" (with M. C. Sawyer), *Journal of Contemporary European Studies*, Vol. 19, No. 1 (March); "The Persistence of Inequality?" (with R. Martin and P. Tyler) and "Inequality Adjusted Growth Rates in Latin America" (with A. Angeriz and S. P. Chakravarty), *Cambridge Journal of Regions, Economy and Society*, Vol. 4, No. 1 (March); "Moral Hazard Requires Targeting Wealth" (with E. Karakitsos), Brazilian Keynesian Association, Short Papers, March 11; "The Economic Policies of the Political Economy of the Australian Patriot and Cambridge Economist," *Intervention: European Journal of Economics and Economic Policies*, Vol. 8, No. 1 (Spring); "Fiscal Policy is Still an Effective Instrument of Macroeconomic Policy," *Panoeconomicus*, Vol. 58, No. 2 (June); "Time to Say Farewell to the Euro?" (with M. C. Sawyer), *WSI Mitteilungen*, Vol. 64, No. 6 (June).

Presentations: "The EMU and Euro Future," conference on "Competitiveness of the Cyprus Economy after Adopting the Euro," Cyprus Labour Institute (INEK-PEO), Nicosia, Cyprus, March 29–30, 2011; interview regarding the future of the euro, Cypriot state radio and television (RIK) and Sigma TV, Cyprus, March 30; "The 'New Economics' and Policies for Financial Stability" (with M. C. Sawyer), conference on "Economic Policies of the New Thinking in Economics," St Catharine's College, Cambridge, England, April 14; "New Consensus Macroeconomics: A Critical Assessment," "Distinguished Lectures" series, Centre for Planning and Economic Research (KEPE), Athens, Greece, May 5; "Estimating Monetary Policy Preferences of the ECB" (with M. Karoglou and K. Mouratidis), 15th Annual Conference of the Department of Economics, University of Crete, Greece, May 26–28; "New Consensus Macroeconomics: A Critical Assessment," staff seminar, Economics Division, Nottingham Trent University, England, June 8; "Moving from Inflation Targeting to Incomes Policy" (with M. C. Sawyer) and "Identity Economics Meets Financialisation: Gender and Race Stratification in the US Labour Market" (with A. Charles and G. Fontana), "Conference in Honour of G. C. Harcourt: The Future of Capitalism," Robinson College, Cambridge, England, June 25–26; "Modelling Accumulation: An Empirical Application of the Acceleration Principle Under Uncertainty" (with O. Dejuán and A.R Conzález), "Keynesian Economics and the New Consensus Macroeconomics," "The US Dimension of the Euro Area Debt Crisis" (with E. Karakitsos), and "Can the Euro Survive after the European Crisis? (with M. C. Sawyer), 8th International Conference on Developments in Economic Theory and Policy, Bilbao, Spain, June 29–July 1.

JAMES K. GALBRAITH *Senior Scholar*

Publications: "Early Retirement as a Fix for Unemployment," *The American Prospect*, February 17, 2011; "Why Not Keynes?" *The American Conservative*, June 8; "Hawk Nation: A Guide to

the Catastrophic Debt Ceiling Debate," *The Huffington Post*, July 7; "Unless It's Reformed, Europe's Project Is Doomed," *Deutsche Welle*, July 8.

Presentations: "The Final Death and Next Life of Maynard Keynes," 5th "Dijon" Post-Keynesian Conference, Copenhagen, Denmark, May 13, 2011; "Is There a European Crisis," conference on "Challenges of Europe: Growth and Competitiveness—Reversing the Trends," organized by the University of Split Faculty of Economics, Bol, Croatia, May 26.

JAN KREGEL *Senior Scholar and Program Director*

Publications: "Sraffa, Keynes e la scuola anglo-italiana di Cambridge: Quel flusso continuo e fecondo," *L'Indice*, No. 2 (2011); "Uscire dalla crisi finanziaria statunitense: La politica domina l'economia nella Nuova Economia Politica," *Moneta e Credito*, Vol. 64, No. 253; "Resolving the US Financial Crisis: Politics Dominates Economics in the New Political Economy," *PSL Quarterly Review*, Vol. 64, No. 256 (March); "Evolution versus Equilibrium: Remarks upon Receipt of the Veblen-Commons Award," *Journal of Economic Issues*, Vol. 45, No. 2 (June).

Presentations: "A Schumpeter/Evolutionary Economics?" Building Bridges: Keynes-Minsky/Macrofinance Meeting, Ford Foundation, New York, February 3, 2011; "Homogeneity and Complexity in Economic Theory," Seminar in Economic Methodology, New School University, New York, February 24; "Was Keynes's Monetary Policy, *à outrance* in the *Treatise*, a Forerunnner of ZIRP and QE? Did He Change His Mind in the *General Theory*?" 7th International Keynes Conference (IKCS), "Whither the Capitalistic World? Dialogue in 'Keynes's Spirits,'" Sophia University, Tokyo, Japan, March 1–3; "The Multicurrency System, including Internationalization of the Renmimbi," conference on "Reforming the Global Monetary System," School of Finance, Central University of Finance and Economics, Beijing, China, March 18–19; "Putting It Together: Financial Institutions, Innovation, and Development in Brazil and India," conference on "Financial Institutions for Innovation and Development: The Cases of Brazil and India," organized by the Multidisciplinary Institute for Development and Strategies (MINDS), Rio de Janeiro, Brazil, March 22–23; "How Did Financial Regulation Influence Brazil's Response to the 2008 Financial Crisis?" workshop on "Financial Stability and Financial Governance in Brazil—Assessing the Landscape and Drawing Policy Implications," Structuralist Development Macroeconomics Center, The São Paulo School of Economics at the Getulio Vargas Foundation, São Paulo, Brazil, March 24–25; "Implications of the Single Currency on Sovereign Risk," conference on "European Financial Systems: In and Out of the Crisis," Faculty of Economics, University of Siena, Italy, April 1–2; "Regulaciónes financieras y macroeconomía en América Latina," seminar organized by CEDES, CEFID-AR, and CCC, Buenos Aires, Argentina, May 13; "How to Be More Effective in Communicating the Importance of Financial Issues and Concepts to Non-experts," conference on "Financial Liberalization and Global Governance: The Role of International Entities," organized by IBASE and the Ford Foundation, New York, May 17–18; "Diversity and Uniformity in Economic Theory as an Explanation of the Recent Economic Crisis," J. Fagg Foster Memorial Lecture, University of Denver, Colo., May 20; "Regulation of Proprietary Derivatives Trading," conference on "Where to Direct Proposals and Action to Make Financial Reforms More Effective," Paolo Sylos Labini Foundation, Rome, Italy, June 1–2; "Economic and Political Subsidiarity," roundtable on "Rethinking Governance after the Global Economic Crisis," International Association of Schools and Institutes of Administration Annual Conference, Rome, June 15; "The Case for Global Collective Action in Financial Regulation," workshop on "A Global Architecture for Effective Financial Regulation," Global Economic Governance Programme, University College, Oxford, England, June 30.

DIMITRI B. PAPADIMITRIOU *President*

Publications: "The International Economic Crisis: The U.S. and Its International Rivals," in A. Vlachou, N. Theocarakis, and D. Milonakis, eds., *Economic Crisis and Greece*, Gutenberg, 2011; "To Restore Jobs, U.S. Has to Ramp Up Exports," *Los Angeles Times*, May 13; "Diagnosing New Inflation Symptoms," *New Geography*, May 26.

Presentations: Speaker, workshop on "Towards Harmonization of Time Use Surveys at the Global Level with Special Reference to Developing Countries," organized by CFDA/UNIFEM, New Delhi, India, April 6–8, 2011; interview regarding California's weak job growth and whether it may be holding back the overall US recovery with Chris Palmeri, *Bloomberg News*, April 12; interview regarding the market's estimates around the FOMC

meeting with Ivan David Ryngelblum, Agência Leia, April 20; interview regarding the state of the Greek economy, policies of the current administration, and EU macroeconomics with C. J. Polychroniou, *Episilon (Eleftherotypia Sunday Magazine)*, May 8; interview regarding the US unemployment rate with Marina Trombin, Agência Leia, May 30; interview regarding *Will the Recovery Continue? Four Fragile Markets, Four Years Later* (Levy Institute Public Policy Brief no. 118) with Moe Ansari, *Market Wrap*, June 6; interview regarding the US economic recovery with Wanger Arrais, Agência Leia, June 13; interview regarding Minsky and the role of the economist in society with Dan Monaco, *The Straddler*, June 25; interview with Jessica King regarding the controversy surrounding negotiations on the US debt ceiling, *Financial Times*, July 6; interview with Andy Robinson regarding the eurozone crisis, *La Vanguardia*, July 17; speaker, conference on "From the Breakdown of the Bretton Woods System to a New Era of Macro Prudential Oversight?" organized by the Reinventing Bretton Woods Committee and the Central Reserve Bank of Peru (BCRP), Cusco, Peru, July 18–19; interview regarding the US economic recovery and potential changes in the Fed interest rate with Marília Ávila, Agência Leia, August 5; interview regarding the spreading debt crisis in the eurozone and China's reaction to the shakeup in global markets with Mike Wereschagin, *Pittsburgh Tribune-Review*, August 11.

EDWARD N. WOLFF *Senior Scholar*
Publications: "Recent Trends in Household Wealth in the U.S.: Rising Debt and the Middle Class Squeeze" and "The Distribution of Wealth in the United States from 1983 to 2004: Inequality and Polarization" (with C. D'Ambrosio and D. Fiaschi), in J. M. Gonzales, ed., *Economics of Wealth in the 21st Century*, Nova Science Publishers, 2011; "Level and Distribution of Global Household Wealth" (with J. Davies, S. Sandström, and A. Shorrocks), *The Economic Journal,* Vol. 121, No. 551 (March).
Presentation: "US 2010 Conference: America after the First Decade of the New Century," "The Asset Price Meltdown and the Wealth of the Middle Class," Russell Sage Foundation, New York, May 12–13.

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