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The Levy Economics Institute of Bard College, founded in 1986, is a nonprofit, nonpartisan research organization devoted to public service. Through scholarship and economic research it generates viable, effective public policy responses to important economic problems that profoundly affect the quality of life in the United States and abroad.

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Editor: W. Ray Towle
Text Editor: Cynthia Werthamer

Letter from the President

To our readers:

This issue begins with a strategic analysis by me and my colleagues Senior Scholar Anwar Shaikh and Research Scholars Claudio dos Santos and Gennaro Zezza. Our study of the U.S. economy shows that the growth rate of private sector debt is unsustainable and that the private sector will most likely not continue its deficit spending pattern. We believe the U.S. economy is headed for a period of growth recession that can be offset only by a forceful fiscal stimulus that must come from the government sector and by increasing net export demand, which would mean a significant devaluation of the U.S. dollar.

The program on distribution of income and wealth includes two working papers by Research Director and Senior Scholar Thomas L. Hungerford. The first compares the income dynamics of retired individuals in the United States and Germany and finds that retirees in the United States experience falling living standards as they age, while those in Germany do not. The difference suggests that retirement systems and state policies are important factors in the economic outcomes of the elderly. The second working paper finds that the severity of hardship in the United States persists from middle to old age and concludes that interventions to alleviate hardship should begin well before old age.

Two working papers by Institute Professor Philip Arestis and Senior Scholar Malcolm Sawyer open the program on financial markets and monetary policy. The first paper examines, and finds inadequate, various economic proposals to reinstate money in the "new consensus" macroeconomic model. The authors conclude that more research is needed before money can be assigned a causal role in the model. The second paper
studies the economic effects of the new consensus— an outgrowth of New Keynesian economics that reflects the economic features of the Third Way—on monetary policy. Arestis and Sawyer find that European governments focus on monetary policy (interest rates), which does not lead to economic equilibrium, and recommend that output and inflation be managed by fiscal policy.

A working paper by Research Associate Korkut A. Ertürk suggests that the Tobin tax on international currency transactions will slow down market traders' reactions to price changes and reduce financial volatility and speculation, which could be stabilizing. A working paper by Arestis and E. Karakitsos finds that the current secular bear equity market is caused by asset and debt deflation combined with retrenchment by the nonbank private sector. The result, they say, will be a credit crunch and deteriorating balance sheets, a double-dip recession in the United States, and a severe property crash, which will negatively affect the S&P 500. A third working paper by Arestis and Sawyer refutes the conclusion that interest rate policy can guide an economy to equilibrium and the argument that fiscal policy is ineffective because of the crowding-out of investment. They again support fiscal rather than monetary policy as a powerful tool for setting macroeconomic policy.

A working paper by Arestis, Guglielmo Maria Caporale, and Andrea Cipollini finds little contagion on developed financial markets as a result of the 1997 East Asian currency crisis, but concludes that the resulting reduction of international lending had a significant contagious effect on East Asian economies. A working paper by Arestis and Kostas Mouratidis analyzes the credibility of monetary policy in four accession countries applying for membership in the European Monetary Union and recommends gradual and unique accession procedures in light of differences in monetary policy preferences, credibility, and economic structures.

A policy note by Senior Scholar James K. Galbraith warns of the possible ineffectiveness of current U.S. government policies (tax cuts and deficit spending) and of economic chaos under the federal budget policy program. Economic growth in the United States depends on global markets' adding to their dollar holdings and dollar debts, but such support may not happen. The nation's problems can be solved, he says, by retaining state and local government spending, temporarily cutting Social Security payroll taxes, and promoting public sector investment.

In sadness we report the recent passing of our founder, benefactor, and chairman, Leon Levy. We will miss him terribly.

As always, I welcome your comments and suggestions.

Dimitri B. Papadimitriou
President

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Institute Research

Strategic Analysis

Is Personal Debt Sustainable?
Dimitri B. Papadimitriou, Anwar Shaikh, Claudio Dos Santos, and Gennaro Zezza
Strategic Analysis, November 2002

The U.S. economic expansion from 1992 to 2000 saw an unprecedented rise in the private sector's debt relative to its income. Since then, the Congressional Budget Office (CBO) projections of the federal budget and economic growth have implied that private sector debt would continue to increase. According to President Dimitri B. Papadimitriou, Senior Scholar Anwar Shaikh, and Research Scholars Claudio dos Santos and Gennaro Zezza, it is unlikely that the private sector will keep expanding its net credit flow (spending). A sharp rise in government expenditure, therefore, is the only means available to sustain adequate growth in aggregate demand. The dramatic revisions in the CBO's projections, which have happened during the past two years, are bound to continue, say the authors.

The authors note that the private sector's debts and assets are fundamentally unequal and call attention to an increase in financial fragility. The U.S. economy, they say, is headed for a period of stagnation that can be offset only by a sufficiently forceful fiscal stimulus. They examine the recent patterns of the three main sectoral balances of the U.S. economy (current account, private, and government) and find that the CBO's forecasts are not plausible because they imply a continued unsustainable increase in the private sector deficit. Since there is also an unprecedented deficit in the U.S. foreign current account, the government sector and possibly the net export demand portion of the current account sector must support future growth and maintain the necessary levels of growth and employment.

At the end of 2000, the private sector swiftly curtailed its expenditures and reduced its net borrowing. As its corporate component returned to balance, the personal component stabilized at an ongoing deficit (in contrast to its normal postwar surplus). Personal debt, therefore, remains extraordinarily high and its current rate of growth is, according to the authors, unsustainable. Although the value of equity holdings has declined sharply relative to disposable income, the full effect of the personal component's fall in net worth has not yet been felt because real estate asset values have continued to rise.

The authors' analysis links the potential deflation of the financial markets to the ensuing fragility of the economy's debt structure. In the face of a high and growing current account deficit, growth in aggregate demand can be sustained only by expansionary fiscal policy. The reappearance of government deficits is at odds with the CBO forecasts.
of increasing federal surpluses. The authors note that over the past 17 months, the CBO has revised downward its projections of the federal surplus for the period 2002 to 2006 by approximately $500 billion per year. The current account and government sectors have once again become reflections of each other, and the economy is approaching a period of twin deficits comparable to those of the 1980s and 1990s.

The authors analyze the U.S. economy according to the underlying assumptions of the CBO and examine various scenarios that could achieve the CBO's growth path. They find that the private sector would have to show increasing deficits and that private indebtedness would have to reach record levels. This is unlikely to happen, they say, given the deterioration of the private sector's balance sheets. Since substantial injections of new demand to maintain unemployment at reasonable levels cannot come from the private sector, new demand must come from the government sector.

The authors examine a number of scenarios based on different assumptions about the future behavior of fiscal policy and exchange rates. Their "dream" scenario--a combination of active fiscal policy and exchange rate devaluation--has all three sectors returning to sustainable balances, while achieving the desired growth and employment levels. Net export demand is raised by devaluing the effective exchange rate of the U.S. dollar by approximately 25 percent so that the current account deficit improves to a sustainable level of 2 to 2.5 percent of GDP by 2006. The decline in net export demand implies a corresponding decline in output and employment in other countries, which also would affect the economy of the United States. The authors therefore recommend that U.S. trading partners fuel growth by undertaking their own expansionary measures at the same time, as failure to do so would lead to an extended growth recession (growth below productive potential) and a steep rise in unemployment worldwide.

Program: Distribution of Income and Wealth

Is There an American Way of Aging? Income Dynamics of the Elderly in the United States and Germany
Thomas L. Hungerford
Working Paper No. 365, December 2002

The United States and Germany have different philosophies and goals for social policy, which lead to differences in their retirement income systems. Research Director and Senior Scholar Thomas L. Hungerford compares the income dynamics of retired individuals in the United States and Germany and finds that retirees in the United States experience falling living standards as they age, while those in Germany generally maintain their living standards.

Hungerford focuses on the income dynamics of retired individuals during the first 12
years of retirement. He notes that pensions and saving combined with social security income (a multipillar system) are expected to maintain preretirement living standards in the United States, while the elderly rely more on social security income in Germany. The German social security system replaces approximately 72 percent of a worker's preretirement net earnings, compared to 53 percent in the United States. Neither system, he finds, adequately protects older women.

Hungerford compares the Panel Study of Income Dynamics, a U.S. sample of more than 7,000 households for the period 1980 to 1997, and the German Socioeconomic Panel, a national sample of more than 6,000 households for the period 1984 to 1997. Both longitudinal data sets use similar methods for following households over time. Hungerford's study also uses a cross-national equivalent file prepared by the Department of Policy Analysis and Management at Cornell University, which contains equivalently defined variables on income, employment, and demographic information. Persons born between 1911 and 1929 and retiring in the 1980s (982 U.S. retirees and 765 German retirees) were included in the study. After 12 years, about half of the retirees had left the sample because of death or other reasons.

The author notes that there is no clear-cut definition of when retirement begins for U.S. workers, who often extend the retirement process by working fewer hours as they age. In Germany, however, retirement usually begins with complete withdrawal from the labor force and receipt of retirement income. Retirement is based on hours of work (less than 500 hours in the first year of retirement) and receipt of retirement income from public and private pensions (at least $600 or DM1,395 per year).

The income measure for the groups in both countries is post-transfer, post-tax family income adjusted for inflation by the consumer price index. The implicit assumption is that income is equally shared by all family members. Although the unit of analysis is the individual, household income is used as the measure of economic well-being and adjusted to reflect household composition (real income is divided by an equivalence scale).

The focus of the study is how equivalence-adjusted real income changes over time, starting at retirement. Separate regressions are estimated for men and women in each country, and the unemployment rate in the first year of retirement is included to capture any cyclical effects. The results are reported for total income, social security income, and income from other sources. The author finds that the total equivalence-adjusted real income remains fairly constant over the first four years of retirement for individuals in both countries. The trends subsequently diverge as the income of U.S. retirees declines and the income of German retirees rises. Over the 12-year period, real income falls by more than 20 percent in the United States, but grows, by 15 percent for men and 10 percent for women, in Germany.

Hungerford finds that there is a steady increase in retiree income from social security in Germany, while the U.S. social security income trend displays an inverted U-shaped pattern and ultimately stays the same in value. The proportion of total income from social security increases, from 40 percent to more than 60 percent in the United States and from approximately 80 percent to more than 90 percent in Germany. However,
equivalence-adjusted real income from other sources declines by 40 percent in both countries and shows a linear decline in the United States and a six-year decline, which subsequently flattens out, in Germany.

The differences between the two countries suggest that retirement systems (public and private) and state policies are important factors in the economic outcomes of the elderly. The major difference is the source of retirement income and the fact that the U.S. system does not prevent the deterioration of living standards over time. Hungerford speculates that the different retirement income systems are a result of differences in attitudes toward poverty. German social security appears to compensate retirees for the loss of other income, whereas the U.S. system does not. The author notes that the public social security systems in both countries face long-term financial problems due to changing demographics, and that these systems will have to be modified if they are to be sustainable.
is considered to suffer from chronic hardship if he or she experiences one or more of these measures at least 40 percent of the time between the ages of 40 and 49. For old-age chronic hardship, Hungerford adds a fifth measure: health. Death between the ages of 49 and 66 is another outcome considered in the analysis.

Hungerford divides the four middle-age hardship measures listed above into chronic and nonchronic groups. He then compares the groups in terms of the old-age hardship measures. He employs this procedure for the total sample and for various subsamples based on sex, race, and education. An additional empirical strategy consists of a multivariate analysis (logit estimation) of the probability of old-age hardship and includes such independent variables as geographic location, state unemployment rates, state average fair-market rents, state marriage ratios, and household composition. These variables control for differences in the business cycle, cost of living, marriage ratios, and family composition. Combining the four middle-age hardship measures and the five old-age hardship measures also establishes two severity-of-hardship indices.

The study shows that 37.5 percent of the middle-age chronic group was still poor by age 66, compared to 6.9 percent of the nonchronic group. Differences between the chronic and nonchronic groups were statistically significant for each demographic variable. Similar patterns were found in all the hardship measures: Individuals who experienced middle-age chronic hardship were much more likely to experience old-age hardship (or to die by age 66). Although hardship persisted, the author found that it varied widely among demographic groups. Women, African Americans, and the poorly educated were much more likely to experience both middle-age and old-age hardship.

After controlling for individual characteristics and the economic and social environment, the multivariate analysis showed similar but smaller differences between the chronic and nonchronic groups. These differences related more to individual factors (e.g., living in overcrowded housing in old age) than to middle-age hardship.

The study confirms that middle-age chronic hardship and its severity are positively related to old-age hardship, and that middle-age economic hardship is related to old-age health outcomes, while social hardships (e.g., being unmarried, renting) are not.

Hungerford notes that old-age hardship is defined for only one year (age 66) and recommends that alternative hardship measures should also be examined. However, sufficient longitudinal data are not available for that purpose.

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Program: Financial Markets and Monetary Policy

Does the Stock of Money Have Any Causal Significance?
Philip Arestis and Malcolm Sawyer

The stock of money does not play any causal role in the "new consensus" macroeconomic model of the economy. As central banks focus on price stability, they pay less attention to money. This stance appears to coincide with low inflation. According to Institute Professor Philip Arestis and Senior Scholar Malcolm Sawyer of the University of Leeds, attempts to reinstate money in current macroeconomic thinking either contradict the theoretical properties of the new consensus model or do not solve the problem. The authors conclude that more research is needed before money can be assigned a causal role in the new consensus model.

Arestis and Sawyer outline three equations with three unknowns (output, interest rates, and inflation) that underpin the new consensus model. The first is an aggregate demand equation, where current output is determined by past and expected output and the real rate of interest. The second is a Phillips-curve equation, where inflation is based on the current output gap, lagged inflation, and expected inflation. The third equation includes a monetary policy operating rule, where the nominal interest rate is based on the equilibrium real rate of interest, the expected inflation rate, the output gap, the deviation of inflation from the target inflation rate, and the lagged interest rate. This equation replaces the LM curve used in discussions of monetary and fiscal policy.

The equations used in the new consensus model do not account for the stock of money, since money is a residual outcome and is neutral. Equilibrium values for the variables in the equations are independent of the money supply, and inflation is determined by monetary policy (the rate of interest). The new consensus model retains the key conclusion that central banks ultimately determine the inflation rate. Two propositions associated with monetarism, however, are embedded in the model: (1) monetary policy determines inflation, and (2) potential output is not affected by monetary policy.

The authors examine four proposals by economists to reinstate money in the new consensus model. The first and second proposals introduce a fourth equation and a fourth variable: the stock of money. A third proposal includes an active-money view of endogenous money, which retains the traditional causal significance of the money supply with respect to output and inflation and plays an active role in the transmission mechanism of money. A fourth proposal includes credit-market factors in a credit-market frictions model, but it does not explicitly discuss the stock of money and includes only bank deposits. The stock of base money can be viewed as endogenously determined by the demand for money.

The belief of the new consensus is that the demand for money is unstable, so monetary policy in the form of monetary targeting becomes uncertain. According to the authors, the first proposal does not offer a satisfactory solution, but merely restates the problem. Large shocks to money demand produce volatile interest rates when a monetary aggregate is used as a policy instrument rather than as an interest rate instrument. Most central bank models, they note, do not include a monetary aggregate.

A key assumption in the second proposal is the tight relationship between the stock of money and the size of transaction costs. The link between the rate of interest and the
stock of money is expected to come from the Fisher identity among nominal interest rates, real interest rates, and the expected rate of inflation. This proposal implies that the role of nominal interest rates (endogenous) and the stock of money (exogenous) can be reversed. The authors note, however, that the proposal already treats the stock of money endogenously.

The third proposal treats money as an active variable in the transmission mechanism of monetary policy. When banks create money by granting loans, however, the stock of money is independent of demand and there is an adjustment to reconcile supply and demand. The stock of money does not remain higher unless the demand for loans also remains higher. Borrowers will not retain money (a barren asset), but will dispose of it in some way (e.g., spending, repaying other loans). Money can play an active role only in a limited way.

The fourth proposal posits that money can alleviate frictions in the financial markets and provide liquidity for the financial system. According to Arestis and Sawyer, this proposal does not state how the change in money stock occurs, and appears to resort to an exogenous money argument. However, when considering credit market frictions, it seems that monetary policy affects real economic activity in both the short and long run. Credit rationing influences expenditures and investment decisions, so monetary policy influences future productive capacity. Monetary policy in the form of interest rate changes has a stronger impact on investment than other types of expenditure, say the authors. Their analysis suggests that monetary policy influences inflation, as well as long-run output, by affecting investment. Therefore, the new consensus theory may have to be reformulated to account for the theoretical implication that potential output can be influenced by the stock of money.

The credit market frictions proposal is promising, say the authors, because it implies that monetary policy can have both real and nominal effects. They note that recent developments in monetary policy consider money to be endogenous without always labeling it as such and without advancing relevant theoretical arguments. They therefore advocate the development of theoretical arguments based on endogenous money and the study of the creation of credit and bank deposits (as opposed to modeling the stock of money simply as a residual). The authors also suggest an analysis of the credit system and how the demand for loans is satisfied by the banks.

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"New Consensus," New Keynesianism, and the Economics of the "Third Way"
Philip Arestis and Malcolm Sawyer

The "Third Way" is closely related to New Keynesian economics. It emphasizes the nonaccelerating rate of unemployment, neglects aggregate demand and fiscal policy,
elevates monetary policy, and adopts the assumption of rational expectations. The "new consensus" on monetary policy is an outgrowth of New Keynesian economics and reflects the economic features of the Third Way. According to Institute Professor Philip Arestis and Senior Scholar Malcolm Sawyer of the University of Leeds, the ideas behind the Third Way and New Keynesian economics continue to influence European governments. However, by focusing on monetary policy (interest rates) rather than fiscal policy, government policies are ineffective in controlling inflation, recession, or unemployment. Therefore, the monetary policy implications of the new consensus do not have the expected impact on output and inflation.

The authors study the economics of the new consensus using a simple model with three equations and three unknowns (Arestis and Sawyer, Working Paper no. 363). Economic fluctuations in the model come from stochastic (external) shocks rather than endogenous forces (e.g., investment expenditures). The three equations summarize the new consensus, embody relationships that summarize the New Keynesian approach to macroeconomics, and contain the essential elements of the theoretical macroeconomic framework of the Third Way.

In the model, private demand is derived from the intertemporal optimization of a utility function, which leads to current consumer expenditures being based on expected future expenditures and the real rate of interest (there is no explicit mention of government expenditures or fiscal policy). The model allows for sticky prices and full price flexibility in the long run. It also claims to indicate central bank credibility with respect to the bank's intention to maintain low inflation rates, which affect price expectations and results in even lower inflation. The model's monetary operating rule--Taylor's rule--relates interest rate decisions to the inflation target and the output gap and implies that monetary policy systematically adjusts to economic developments. The interest rate is raised when inflation is above the target and when a positive output gap is expected to influence the inflation rate. The model's monetary operating rule--Taylor's rule--relates interest rate decisions to the inflation target and the output gap and implies that monetary policy systematically adjusts to economic developments. The interest rate is raised when inflation is above the target and when a positive output gap is expected to influence the inflation rate. The model contains the neutrality of money property, i.e., equilibrium values of real variables are independent of the money supply and inflation is determined by monetary policy (the interest rate).

Setting the interest rate in terms of Taylor's rule is significant because it occurs without reference to international considerations (e.g., the exchange rate, interest rates in other countries) and is adjusted in response to the output gap (and the inflation rate). The economy, it appears, can be guided to a state of equilibrium with constant inflation (where the interest rate is equal to the target rate) and a balance between aggregate supply and aggregate demand. However, according to Arestis and Sawyer, three factors may prevent this state of equilibrium from happening: mistakes may occur in setting interest rates (the central bank has imperfect information about the equilibrium real rate of interest); domestic interest rates may be at odds with international interest rates or have severe implications for the capital account (Taylor's rule neglects exchange rate effects); and the real rate of interest may be negative.

The authors outline six scenarios that could negate the conclusion that interest rate policy can result in economic equilibrium: (1) the equilibrium interest rate is too low and, therefore, unattainable; (2) interest rates may have little effect on investment and saving; (3) the linkage between the central bank's key discount rate and the interest rate, which
influences economic decisions, may be uncertain; (4) the equilibrium interest rate may be incompatible with the foreign exchange balance; (5) the central bank cannot attain the equilibrium interest rate (because, for example, it lacks information); and (6) the central bank may set the interest rate to meet another objective (e.g., a target exchange rate).

The authors outline three ways to study the effectiveness of monetary and fiscal policy. The first uses the model to explore the effectiveness of interest rate changes in offsetting shocks that change output and inflation. There are constraints to a permanent change in the interest rate, since interest rates affect aggregate demand, and the effect of interest rate changes on the inflation rate is rather modest. The authors suggest that, in the event of large and highly serially correlated shocks, it may be better to approach monetary and fiscal policy based on shifts in the parameters of the model (e.g., an analysis based on the downward shift in demand).

The second determines the effectiveness of monetary policy in combating a fall in autonomous demand. The new consensus model portrays a stable macroeconomy and suggests that shocks are stochastic, small, and uncorrelated (depressions and recessions cannot occur). The authors note that Keynes addressed the possibility of major recessions, and that three significant recessions have occurred in the United Kingdom in the past 30 years.

The third concerns output fluctuating around its trend level, as a result of stochastic shocks, and the effect of output on unemployment. The new consensus model suggests that it is desirable to achieve the trend rate of output, since the resulting inflation rate is constant. However, the trend rate of output can correspond to high rates of unemployment, say the authors.

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**Why the Tobin Tax Can Be Stabilizing**

Korkut A. Ertürk  

The main purpose of the Tobin tax on international currency transactions is to curb currency speculation and reduce the frequency of exchange rate crises worldwide. Support for the tax is based on the belief that it will reduce the degree of financial volatility and speculation. Critics believe the tax will create more instability by reducing the volume of transactions. According to Research Associate Korkut A. Ertürk of the University of Utah, the Tobin tax will slow down market traders' reactions to price changes, which are independent of the volume of transactions. Delaying decisions, he says, could be stabilizing.

According to orthodox financial theory, prevailing asset prices are the best estimate of true values. By exploiting the risk-free arbitrage opportunities created by noise traders
(misinformed traders who buy when prices are rising and sell when prices are falling), speculators bring actual prices into conformity with expected future prices, which are equal to their true values. The change in prices is a function of the difference between actual spot prices and expected future prices, and of the speed of trading. Ertürk notes that the deviation of actual prices from their true values seldom creates riskless arbitrage opportunities. The fear of loss limits the initial position taken by speculators and prevents them from driving prices toward their true values.

As opposed to the notions that noise trading in financial markets has little effect and that the market is efficient (actual prices are the best estimate of true values and stock prices exhibit a random walk), successful speculators act like noise traders and, in the short run, inflate rather than deflate the economic bubble. Consistent with Keynes's observations, both noise and information about fundamentals move prices so that resale prices are uncertain. Whether speculation is stabilizing or not depends on the extent to which traders expect future prices to vary relative to changes in present prices. Ertürk's formula shows that stability depends on both the elasticity of traders' expectations of future prices in response to changes in present prices and the reaction speed. If a transaction tax delays the decisions of traders in the face of asset price changes, then, ceteris paribus, the Tobin tax is stabilizing.

The Tobin tax can also have a stabilizing effect, says the author, by lowering the elasticity of expectations. The market perception of systematic risk, and thus the risk premium, is reduced by the transaction tax. Therefore, even if the Tobin tax increases transaction costs and reduces market liquidity, it could have the net effect of lowering risk premiums by diminishing traders' perceptions that other traders' sentiment in the currency markets is unpredictable.

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**How Far Can U.S. Equity Prices Fall under Asset and Debt Deflation?**

Philip Arestis and E. Karakitsos

*Working Paper No. 368, January 2003*

According to Institute Professor Philip Arestis and E. Karakitsos of Trafalgar Asset Managers Ltd., London, the current secular bear equity market is caused by asset and debt deflation combined with retrenchment by the nonbank private sector (increased saving and decreased spending). Poor prospects and imbalances in the corporate and personal sectors will result in a credit crunch and deteriorating balance sheets for the commercial banks. The U.S. economy, they say, is headed for a double-dip recession, which will trigger a severe property crash of approximately 25 percent.

The authors note that there have been three asset- and debt-deflation recessions in the past two centuries--two in the United States, one in Japan--and that elimination of serious imbalances in the economy, usually corrected by a fall in asset prices, took more
than a decade after each recession. They also note that traditional measures of equity market valuation in this type of recession are inappropriate, so they measure the deviation of net wealth from its mean to determine imbalances in the personal sector. They further note that when asset prices rise more than anticipated, the personal sector more easily meets its target real wealth and relaxes efforts to save. Therefore, a negative relationship exists between real wealth (expressed as a percent of disposable income) and the saving ratio.

The authors analyze the value of equities under the condition that net wealth returns to its historical mean. They find that at the peak of the telecommunications and Internet bubble, in March 2000, the S&P 500 was overvalued by 111 percent. Moreover, it was still overvalued by 32 percent at the end of the first quarter of 2002. Following the summer market crash of 2002, the S&P 500 was fairly valued, they say, but whether this event heralded the beginning of a new bull market was questionable. Although the ratio of financial assets and debt to disposable income fell (from 520 percent to 414 percent), debt continued to soar to over 100 percent of disposable income. A widespread belief that the fall in equity prices was merely temporary bolstered property prices.

A rising saving ratio triggered by falling net wealth is already evident, say the authors, so further retrenchment will result in a double-dip recession. The forthcoming recession will be much deeper than the last one, and there is a serious possibility that the property market will collapse. The 2001 recession was caused by excessive inventories rather than monetary tightening, so lower interest rates have fueled the property bubble and increased the lag between the equity crash and the property market crash. The property market crash will be triggered by a substantial fall in the growth of real disposable income.

The authors outline a macroeconomic and financial model of the U.S. economy and assess the impact of a significant fall in property prices, caused by a double-dip recession, on the equilibrium value of the S&P 500. They use monthly data for the period from February 1988 to August 2002 and simulate three scenarios: (1) a severe property market crash with a deep recession, (2) a typical property market crash with a relatively shallow recession, and (3) a mild double-dip recession with no property market crash.

In the first scenario, real estate falls from 175 percent to 140 percent of disposable income (the historical mean is 151 percent) as net wealth falls from 522 percent to 425 percent of disposable income (close to its all-time low) within a year following the shock in property prices. The decline in net wealth triggers a rise in the saving ratio from 4 percent to 7.7 percent, which deepens the recession and reduces GDP by about 2.5 percentage points. Industrial production, investment in equipment and software, and corporate profits fall. The dollar depreciates by 30 percent and inflation decreases to zero. The growth in the money supply declines by 6 percent as the banks' deteriorating balance sheets force them to cut lending. Price-earnings ratios and dividend yields return to their mean values, while credit risk remains high (3.25 percent) and Treasury yields fall. The S&P 500 equilibrium value is estimated to be 641.

A sensitivity analysis shows that industrial production, the exchange rate, and credit risk
mainly affect the equilibrium value of the S&P 500, and that this value may change by plus or minus 10 percent. The authors note that this scenario is based on neutral rather than pessimistic assumptions and that a huge dollar depreciation is necessary to increase profitability and to stimulate the economy.

The second scenario results in an equilibrium S&P 500 value of 723 (a 13-percent improvement) based on the assumption that lower interest rates will cushion the property market crash. The recession is milder (GDP falls 2 percentage points), and credit risk declines 0.5 percent from current values.

The third scenario results in an equilibrium S&P 500 value of 833 (a 30-percent improvement) based on the assumptions that corporate sector weakness will cause a mild recession, the personal sector does not retrench because of low interest rates, and there is no property market crash.

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**On the Effectiveness of Monetary Policy and Fiscal Policy**

Philip Arestis and Malcolm Sawyer  

Economic theory and macroeconomic policy have increasingly supported the use of monetary policy, and of interest rates as the key policy instrument, to target inflation. According to Institute Professor Philip Arestis and Senior Scholar Malcolm Sawyer of the University of Leeds, empirical evidence shows that monetary policy is ineffective, while fiscal policy is a powerful tool for setting macroeconomic policy.

The "new consensus" macroeconomic model suggests that the interest rate can be adjusted to tame inflation and create equilibrium in an economy. Equilibrium is defined as a zero-output gap between actual output and capacity output and a balance between aggregate supply and aggregate demand. The central bank is perceived as being able to set a discount rate that generates interest rates that balance saving and investment at an employment level corresponding to capacity output (and constant inflation). The new consensus model treats money endogenously, but, contrary to the Keynesian endogenous money approach, it supports the view that monetary policy is effective, while fiscal policy is ineffective. The authors note that the new consensus pays little attention to the process by which loans and deposits are created and destroyed, and that it overlooks the causal links between investments and loans and between inflation and the creation of money. They further note that there is no strong reason to believe that a zero-output gap corresponds to full employment.

Keynes identified the natural rate and the market rate of interest and determined that there is a simple explanation for why a bank rate increase modifies the effective interest rate and depresses price levels. The new consensus, say the authors, does not explicitly
discuss the relationship among saving, investment, and the natural rate of interest, although it does discuss the equivalent relationship between output and demand and introduces an equilibrium rate similar to the natural rate of interest. The authors note that Keynes rejected the idea of a unique natural rate of interest in favor of a rate corresponding to each level of effective demand (and level of employment), which balances saving and investment. The authors further note that the equilibrium rate of interest depends on the fiscal stance, but new consensus economists take the view that fiscal policy should not be used as a countercyclical policy instrument.

The authors outline a number of ways to refute the conclusion that interest rate policy can guide an economy to equilibrium and examine the effect of monetary and fiscal policy (Arestis and Sawyer, Working Paper no. 364). They expand the new consensus model by explicitly introducing fiscal policy and the government sector. They find that the equilibrium rate of interest depends on government expenditure (as well as the parameters of the consumption and investment functions) and that there is no unique natural rate of interest. They note that the econometric models used by the Bank of England are an elaboration of the new consensus model and that the models generally suppose the existence of a supply-side equilibrium. Therefore, output can barely diverge from equilibrium, so any fiscal stimulus is dissipated and leads to the conclusion that fiscal policy is ineffective. However, say the authors, there is also a limited role in the models for monetary policy. It is not feasible to adjust interest rates sufficiently when there is a major shift in the coefficients of the model; a fall of 1 percent in the autonomous component of aggregate demand may require a 3-percentage-point reduction in the interest rate, for example. Therefore, when interest rates are constant and output is well below capacity, fiscal policy rather than monetary policy will stimulate economic activity.

The authors outline and refute three economic arguments claiming that fiscal policy is ineffective because of the crowding-out of investment. The first contends that fiscal expansion is followed by a rise in interest rates (based on an exogenous money supply and an interest rate equating the supply and demand of money). The authors note, however, that a sufficient increase in the money supply, along with an increase in government expenditure, could prevent a rise in interest rates. Moreover, any crowding-out depends on the responses of the monetary authorities rather than the markets.

The second argument maintains that aggregate demand adjusts in order to sustain a supply-side equilibrium. In the context of exogenous money, price changes generate changes in the real value of the stock of money and aggregate demand. In the context of endogenous money, changes result from interest rate adjustments by the central bank and the adoption of Taylor's rule. Since fiscal policy affects aggregate demand, crowding-out occurs only if one assumes that a supply-side equilibrium must be attained (to ensure a constant rate of inflation) and if aggregate demand adjusts accordingly. In the absence of automatic market forces and potent monetary policy, fiscal policy has a role to play.

The third argument derives from the Ricardian equivalence proposition, i.e., an expansion of government expenditures, however funded, leads to an equal reduction in private expenditures, so overall demand is unchanged. If the proposition holds, say the
authors, then the size of the budget deficit with respect to the level of aggregate demand is irrelevant. A balanced budget would then be compatible with full employment (the supply-side equilibrium) and, for a closed economy, saving would equal investment and fiscal policy would not be required. However, when fiscal policy is approached in functional finance terms, i.e., a budget deficit is allowed because saving and investment will differ at a desired income level, then the Ricardian equivalence proposition is irrelevant because the budget deficit does not necessarily put upward pressure on the interest rate.

Testing for Financial Contagion between Developed and Emerging Markets during the 1997 East Asian Crisis
Philip Arestis, Guglielmo Maria Caporale, and Andrea Cipollini

Previous studies of the 1997 East Asian currency crisis have shown mixed results concerning the contagious influence of the crisis on the economies of developed countries. According to Institute Professor Philip Arestis, Guglielmo Maria Caporale of the Centre for Monetary and Financial Economics, South Bank University, London, and Andrea Cipollini of Queen Mary and Westfield College, University of London, the degree of contagion on developed financial markets was small. However, the drastic reduction of international lending in the latter half of 1997 had a significant contagious effect on East Asian economies.

The authors define contagion as a positive significant shift in the degree of mutual movement between asset returns after a shock to one country. Their analysis uses weekly stock market returns from January 1990 to July 1998 from the five major countries lending to East Asia (Japan, the United States, Germany, the United Kingdom, and France) and from the four largest economies in East Asia (Thailand, Indonesia, South Korea, and Malaysia). The period of the study was chosen to avoid any overlap with the Russian crisis in August 1998. Consistent with the break point—the beginning and end of the contagion period—contagion was allowed to start between July 1997 and July 1998.

The empirical analysis corrects for heteroskedasticity and endogeneity bias and improves on earlier studies by conducting a full sample test of the stability of a structural form system. The focus of the study estimates coefficients that measure the degree of movement among asset returns during normal and crisis periods.

The results show that, during normal periods, there is solid evidence of interlinkages between economies, but evidence of contagion appears mixed. While Japan had a contagious influence on all four East Asian economies, the United States influenced only Thailand and the United Kingdom influenced Thailand and Malaysia. (There was no
evidence of contagion between Germany or France and an East Asian country.) By contrast, the East Asian economies had a contagious influence only on the economy of Japan. The empirical evidence suggests that contagion does not occur at the onset of crisis, but is delayed, the authors say.

A possible explanation for the lack of contagion between East Asia and the developed countries is the reversal in bank lending, especially from Japan. Banks moved quickly to reduce their claims in East Asia by not renewing short-term loans and by reallocating bank loans favoring Latin America and Eastern Europe. This risk diversification, combined with prudential supervision and regulation, reduced the effect of the crisis on developed economies. By contrast, reduced international lending had a significant contagious effect on the East Asian economies.

Credibility of Monetary Policy in Four Accession Countries: A Markov Regime-Switching Approach Crisis
Philip Arestis and Kostas Mouratidis

The studies concerned with the credibility of the monetary policy of the European Monetary System have used the Markov regime-switching (MRS) framework. They support the hypothesis that credibility is characterized by distinct regimes. Institute Professor Philip Arestis and Kostas Mouratidis of the National Institute of Economic and Social Research, London, use an MRS framework with Autoregressive Conditional Heteroscedasticity (SWARCH) to study the credibility of monetary policy in four accession countries applying for membership in the European Monetary Union (EMU): the Czech Republic, Hungary, Poland, and the Slovak Republic. A main purpose of the study is to show that the conduct of monetary policy depends on the type of central bank. The authors find that the countries display differences in monetary policy preferences, credibility, and economic structures, and therefore recommend gradual and unique accession procedures.

The authors use weekly interest rate data from the International Financial Statistics database for the period from 1992 to 2002 and a weighted average market interest rate (the target rate) for the 11 EMU countries. They define a model where the autoregressive parameters are regime dependent and test for the different rates of interest rate convergence and levels of uncertainty in the accession countries relative to the target interest rate. The model captures uncertainty relating to the behavior of underlying macroeconomic relationships (i.e., switches in the mean) and random shocks (i.e., switches in the ARCH process). Moreover, switches in the variance of interest rates capture the risk premium when domestic central bank monetary policy deviates from the European Central Bank (ECB), i.e., the credible central bank.
The authors note that the theoretical approach to credibility is based on the time inconsistency problem and that inflation bias is handled by increasing the marginal cost of inflation (as perceived by the central bank), so that the marginal cost equals the marginal benefit. They suggest that the central bank should first acquire an anti-inflation reputation in order to expand output with low inflation in the future. They further note that there is uncertainty whether a central bank prefers to follow a low inflation policy consistent with the credible central bank or places more emphasis on such issues as employment and growth.

The authors' econometric model takes into account suggestions that credibility changes under different regimes: monetary policy is credible or lacks credibility. The authors assume that the interest rate differential converges to a long-run equilibrium (close to zero) if the sum of the autoregressive coefficients is close to unity in one regime and less than unity in the other regime. They note that the sum of the autoregressive coefficients is higher in the high-credible regime than in the low-credible regime, and that the transition probability is higher from the low-to-high credible regime than vice versa.

The authors distinguish between a high-credible regime with low variance and high persistence and a low-credible regime with high variance and low persistence. Their results indicate that the accession countries might be in different regimes. When the Czech Republic and the Slovak Republic are in the high (low) credible regime, Poland and Hungary are in the low (high) credible regime. They find that the credibility of monetary policy in the Czech Republic and Hungary is high in relation to the EMU, that persistence in the high-credible regime is highest in Hungary, and that credibility is lowest in Poland.

The evidence that Hungary is in a different regime than the Czech and Slovak Republics implies that these countries have different monetary policy preferences or different economic structures. The authors therefore recommend that accession procedures should be gradual, based on the speed and degree of convergence of individual economies with the European Union and a country's credibility in relation to the monetary policy of the ECB.

Program: Federal Budget Policy

The Big Fix: The Case for Public Spending
James K. Galbraith
Policy Note 2003/1

The U.S. government has recently focused on stimulating the economy with tax cuts and deficit spending. This focus follows the teachings of John Maynard Keynes. Senior Scholar James K. Galbraith of the Lyndon B. Johnson School of Public Affairs,
University of Texas at Austin, warns, however, that the government programs of quick-convert Keynesians may be ineffective today. Lower taxes on profits and capital gains do not necessarily mean that corporations will increase investment or that tax cuts passed along to shareholders and executives will stimulate consumption. He notes that household spending may run out of steam soon, that the Federal Reserve has little leeway to cut short-term interest rates, and that substantial budget cuts are required to balance state and local budgets. The result, he says, could be economic chaos.

The author believes that the Bush strategy is unlikely to generate the growth and profitability required to restart strong business investment, stabilize households and basic government services, and reduce unemployment. He proposes to solve the nation's problems by (1) retaining state and local government spending on schools, health care, the environment, and core services through federal revenue-sharing programs and by increasing the Medicaid match; (2) temporarily cutting Social Security payroll taxes, in order to encourage private consumption by working families, and directing estate taxes to the Social Security Trust Fund; and (3) promoting public sector investment if the private sector will not invest. Galbraith recommends that the government devote resources toward energy conservation, renewable fuels for transportation, unemployment insurance, universal health coverage, and subsidies for prescription drugs. The Democrats' promotion of such measures would position them as progrowth and anti-unemployment, he says.

Galbraith notes that the ability of the U.S. economy to grow depends on global markets' adding to their dollar holdings and dollar debts. Such support, however, may not continue, as a result of low interest rates, a flat stock market, deepening Japanese stagnation, debt defaults in Latin America, and, perhaps, an unpopular war. A return to prosperity may require an adequate U.S. response to counter any shift toward Europe as the center of world finance.

Institute News

Leon Levy: In Memoriam

Leon Levy, life trustee of Bard College and founder of The Levy Economics Institute, died on April 6, 2003, at his home in Manhattan. Mr. Levy was the leading donor to Bard College and chairman of the Institute's board of governors. His philanthropy and leadership provided the means to promote programs associated with the study of the humanities and economics. He supported the Institute as a tribute to his father and contributed immeasurably to its development since its founding in 1986. He was a man of ideas, whose wise counsel and guidance will be sorely missed.
Mr. Levy was a hedge fund pioneer, who joined the firm of Oppenheimer & Company in 1951 and, with Jack Nash, founded Odyssey Partners in 1982. He firmly believed that investing was as much a psychological as an economic act and that the stock market surge of the 1990s did not reflect a new economic reality, but only people's hopes. His autobiography, *The Mind of Wall Street* (with Eugene Linden), was published last year (Public Affairs, 2002). This semester, Mr. Levy taught a course at Bard College, Contemporary Developments of Finance, to which he brought peerless knowledge, delivered with characteristic enthusiasm and passion.

Mr. Levy was also a trustee of the John Simon Guggenheim Memorial Foundation, Rockefeller University, and Institute of Fine Arts at New York University, and was president of the Institute for Advanced Study at Princeton University.

The Bard community, including The Levy Economics Institute, extends its deepest condolences to his wife, Shelby White; his daughter, Tracy White; his brother, Jay; and the entire Levy family.

### New Research Associate


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### Publications and Presentations by Levy Institute Scholars

**PHILIP ARESTIS** *Institute Professor of Economics*

**Publications:** "Causes of Euro Instability" (with I. Biefang-Frisancho Mariscal, A. Brown, and Malcolm Sawyer) and "Macroeconomics of Sterling and the Euro" (with Malcolm Sawyer), in A. M. Al-Agraa, ed., *The Euro and Britain: Implications of Moving into the EMU*, London: Pearson, 2002; "The Euro Area Deserves a New


WALTER M. CADETTESenior Scholar

ASENA CANERResearch Scholar

JAMES K. GALBRAITHSenior Scholar

Presentations: "Toward a New Pragmatism," keynote lecture to the socioeconomics section of the American Association of Law Schools, Washington, D.C., January 4; "Inequality and Globalization: What Is the Evidence?" National Economics Association, annual meeting of the Allied Social Science Associations, Washington, D.C., January 4; "The War, the Economy, and What (God Help Them) the Democrats Should Do Now," New America Foundation, Washington, D.C., January 6; "The Experience of Rising Inequality in Russia and China during the Transition" (with Ludmila Krytnskaia and Qifei Wang), Fifth International Meeting of Economists on Globalization and

**THOMAS L. HUNGERFORD** Research Director and Senior Scholar  

**MALCOLM SAWYER** Senior Scholar  

**EDWARD N. WOLFF** Senior Scholar  

**AJIT ZACHARIAS** Research Scholar  
**Presentation:** "Accumulation, Gender Disparities in Paid Work, and Domestic Labor" (with Melissa Mahoney), Eastern Economic Association, New York, February 21-23.

**GENNARO ZEZZA** Research Scholar  
**Publication:** "Il contesto economico in cui operano le imprese on line" ("E-Commerce: The Economic Background"), *Diritto ed Economia dei Mezzi di Comunicazione*, 2002.  

**RANIA ANTONOPOULOS** Research Associate

MELISSA MAHONEY Research Assistant

GWYNETH H. CROWLEY Head of Information Services

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