The Levy Economics Institute of Bard College

Summary

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LETTER FROM THE PRESIDENT

To our readers:

This issue begins with a policy note authored by me and Senior Scholar L. Randall Wray under the State of the U.S. and World Economies program. In it we urge the U.S. Congress to reform the Alternative Minimum Tax and retain some tax cuts in order to reduce the growing tax burden on middle-class families. In a working paper, Research Associate Jörg Bibow reviews global economic imbalances and concludes that Euroland (particularly Germany) has seriously contributed to the problem. The ill-designed Maastricht regime has failed dismally, he says, and Euroland has drifted into protracted domestic demand stagnation. In another working paper that is related to our policy note, Wray criticizes orthodox policymaking that calls for fiscally austere budgets when the real engine of economic growth is government spending. He warns that recession is nigh when taxes are growing faster than personal income and the federal tax system is geared to constrain demand long before full employment is reached.

Under the Monetary Policy and Financial Structure program, a brief by Research Associate Thomas I. Palley urges policymakers to focus on enhancing national competitiveness, to adopt current European-style social and economic protections, and to come up with an innovative set of institutional arrangements addressing the new challenges posed by globalization and outsourcing.

Five working papers in this program area are reviewed. Alfonso Palacio-Vera formulates a theoretical framework that integrates the notion of the natural (neutral) interest rate, liquidity preference theory, and the praxis of modern central banks. Contrary to the New Consensus view, he finds that structural factors may cause an economy to experience an aggregate demand deficiency. In the first of two papers, Éric Tymoigne develops a framework to distinguish between a unit of account, a financial instrument, and a monetary instrument. In the second, he analyzes the notion of the real rate of interest and concludes that it cannot be applied to macro- or microeconomic problems. Giovanni Cozzi and Jan Toporowski employ a Minskyan approach with an emphasis on modern nonfinancial corporations and financial liberalization policy to study emerging market economies in Southeast Asia. They conclude that the dynamics of assets and liabilities, as well as country-specific factors, play a significant role in moving an economy from stability to crisis. Claudio Sardoni and Wray advocate a combination of floating exchange rates, capital controls, and trade policy to ensure more stability in the international economic system. They observe that currency sovereignty allows a country to use fiscal and monetary policy to create jobs as an alternative to export-led growth.

Under the Distribution of Income and Wealth program, a working paper by Axel Börsch-Supan details the great variety in the size of the welfare state among European countries. In another working paper, Li Gan, Guan Gong, and Michael Hurd use a life-cycle model of consumption to find that there is no significant increase in bequests in response to an increase in Social Security benefits. In a third paper, Senior Scholars Edward N. Wolff and Ajit Zacharias construct a "comprehensive income" measure to highlight the relationship between overall inequality and stratification along class lines. They find that the increase in overall inequality between 1989 and 2000 was due to the disproportionate accrual of income from wealth to capitalist households.

A LIMEW report by Wolff and Zacharias reflects the advantages of asset ownership and the disadvantages of financial liabilities when a wealth-adjusted income measure is used. The authors determine that conventional measures understate most aspects of economic well-being and overstate the relative well-being of minorities.

A working paper by Research Associate James A. Rebitzer and Lowell J. Taylor under the Employment Policy and Labor Markets program explores the organizational structure of large law firms. Since controlling employees' case knowledge is extremely important, larger firms limit client-related work by associates, with the added benefit of maximizing the profit per partner.

Under our Economic Policy for the 21st Century program, a working paper by Theodore Pelagidis and Taun N. Toay analyzes inflation in Greece and concludes that domestic issues rather than the adoption of the euro were the most important factors underlying the increase in living expenses. Two working papers by Research Scholar Thomas Masterson study land ownership in Paraguay. He affirms the inverse relationship between productivity and farm size, and finds that land ownership is superior to tenancy as a way out of poverty for rural households. Moreover, credit-market reforms should be an integral part of land market reforms.

Also covered in this issue is a working paper pertaining to explorations in theory and empirical analysis. Jan Toporowski reviews Hyman P. Minsky's Ph.D. dissertation, edited by me and recently published by Edward Elgar, and finds unexpected elements relating to microeconomics and economic methodology.

As always, I welcome your comments and suggestions.

Dimitri B. Papadimitriou, *President*

Program: The State of the U.S. and World Economies

The April AMT Shock: Tax Reform Advice for the New Majority

DIMITRI B. PAPADIMITRIOU and L. RANDALL WRAY
Policy Note 2007/1
www.levy.org/pubs/pn_1_07.pdf

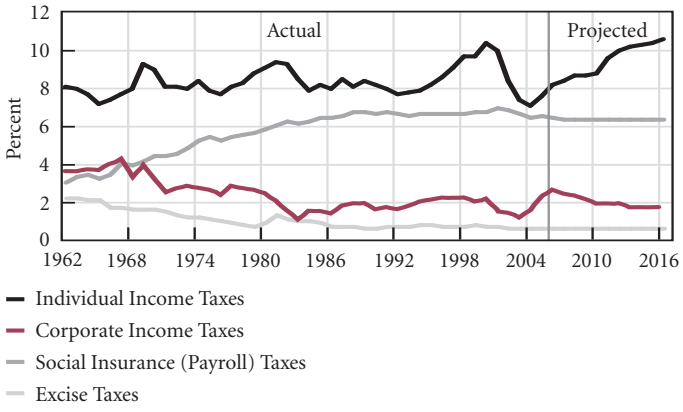
Rapidly rising tax burdens are affecting U.S. middle-income households as tax revenues grow much faster than income on the basis of current law. According to President Dimitri B. Papadimitriou and Senior Scholar L. Randall Wray, University of Missouri–Kansas City and research director at the Center for Full Employment and Price Stability, the fiscal squeeze will choke off economic expansions before full employment is reached. They urge the new majority in Congress to retain some of President George W. Bush's tax cuts, while reforming the Alternative Minimum Tax (AMT) to reduce the growing tax burden on middle-class families.

The authors outline a number of events that have adversely affected consumer spending (e.g., excessive levels of debt, slow wage growth, a poor housing market, and an erosion of real purchasing power). And according to projections by the Congressional Budget Office, individual income taxes will rise rapidly relative to both income and government spending (Figure 1). Half of the tax rise is driven by scheduled changes in existing tax laws, while the balance is due to such factors as "real bracket creep" and a greater number of taxpayers falling under the provisions of the AMT (from 3.5 million in 2006 to 32.4 million in 2010).

Papadimitriou and Wray outline numerous unfair features of the AMT: it targets married couples, homeowners in high-tax states, large families, those with high medical expenses and child-care credits, providers of Indian employment and of low-cost housing, and so on. They note that current tax law will generate revenue growth faster than GDP growth whenever the economy is expanding. However, much of the scheduled rise in income taxes relative to GDP would be eliminated if Congress were to repeal the AMT (without considering "offsets") and extend most of the tax relief provisions (since the AMT no longer targets rich taxpayers).

According to the authors, there is ample room for reform without reducing individual income tax rates below their current levels. Otherwise, it is likely that the current expansion will soon come to an end, given the restrictive fiscal stance. And many middle-income earners will be unprepared for the coming surprise in April when they file their returns and find themselves among the approximately 20 million more taxpayers who will be newly subjected to the AMT in 2007.

Figure 1 **Revenues by Source as a Share of GDP, 1962–2016**



Source: Congressional Budget Office

Global Imbalances, Bretton Woods II, and Euroland's Role in All This

JÖRG BIBOW
Working Paper No. 486, December 2006
www.levy.org/pubs/wp_486.pdf

The subject of global economic imbalances currently focuses on issues such as the U.S. twin deficits (government and current account), along with the export-led strategies of developing countries and undervalued currencies (with a particular emphasis on the Chinese renminbi). According to Research Associate Jörg Bibow, Skidmore College, Saratoga Springs, New York, important issues are overlooked, such as the systemic deficiencies in the global monetary and financial order, and protracted domestic demand stagnation in Japan, Germany, and Euroland. Only an

increase in domestic demand outside the United States will allow an orderly unwinding of global imbalances, he says.

According to the Bretton Woods II hypothesis advanced by Michael Dooley, David Folkerts-Landau, and Peter Garber in 2003, current account imbalances are inherently a two-sided affair. Surplus-seeking countries are the ultimate driving force behind the imbalance, and the situation is sustainable because it brings mutual benefits to both the peripheral surplus countries and the deficit country at the center (i.e., the United States). The U.S. dollar foreign exchange reserves accumulated along the way serve as collateral for the growing stock of foreign direct investment in countries whose own financial structures are underdeveloped. A "capital account region" of countries exists in association with the center and is characterized by a developed financial system and flexible exchange rates, where private investors are the key driving force behind net private capital flows and exchange rate movements. In Bibow's view, the Bretton Woods II hypothesis only partially describes the underlying global constellation because it does not adequately address the role of Euroland within the supposed capital account region.

Bibow points out that China's contribution to global imbalances was quantitatively insignificant until recently (after 2002) and that Japan's current account surplus remains larger than China's. Moreover, China runs trade deficits with some of its Asian neighbors. Furthermore, the Asian region seems to have relied on export-led growth primarily as an emergency strategy to overcome domestic headwinds stemming from the 1997–98 East Asian crisis. There is also a general trend in the developing world to pay down external debt and accumulate U.S. dollar reserves as a protection against financial crisis, while relying on export-led growth.

Bibow is not convinced that an immediate and sizable renminbi revaluation would be in China's own best interest. While a gradually appreciating renminbi may be preferable, reducing China's very high saving rate and boosting domestic demand seems more promising. The author also points out that, while the U.S./China trade imbalance has surged, the U.S. trade imbalance with other countries in East Asia has shrunk, and some Asian currencies have appreciated against the dollar.

According to the author, the Bretton Woods II hypothesis fails to account for some key industrial countries. For example, Japan, Germany, and Switzerland make up approximately 40 percent of the U.S. current account deficit. Although Germany has run the largest trade surplus in the world and experienced the largest current account swing in absolute term, it is not mentioned among surplus countries. He also notes that oil exports and the oil price boom since 2004 have exacerbated and redistributed global payment imbalances and turned Euroland's external surplus position into a small deficit.

Euroland has not adopted the necessary strategies to become a global economic player and reserve currency issuer (i.e., a member of the capital-account region), says Bibow. Instead, it has behaved like a member of the trade-account region. The Maastricht regime is institutionally introverted and incomplete with regard to exchange rate policy, and it has serious systemic deficiencies, such as a lack of fiscal backing for the euro, the absence of a lender of last resort, and no Euroland treasury bill trading in a deep and liquid market. The institutional vacuum under the European Monetary Union has left Euroland in a precariously exposed position, and no one is really in charge of exchange rate policy. The euro's appreciation since 2002 has failed to rebalance relative competitiveness positions, so the region remains at the mercy of the U.S. growth engine. Euroland does not have any natural right to perpetually freeload on U.S.-sponsored growth, asserts Bibow.

Euroland's problems are homemade. The ill-designed Maastricht regime has failed dismally, and Euroland has drifted into protracted domestic demand stagnation even in the middle of a global economic boom. Slow growth in Euroland and Japan has contributed markedly to the buildup of global imbalances (e.g., their combined bilateral trade surplus with the United States is on the same order of magnitude as China's). Within Euroland, Germany plays the same role that Euroland does at the global level, freeloading on external growth while feeding domestic deflation through its beggar-thy-neighbor policies. Inside Euroland, however, nominal exchange rates cannot adjust, and mounting internal imbalances are undermining unity. Bibow concludes that Euroland is unlikely to play any constructive part in the unwinding of global imbalances.

Demand Constraints and Big Government

L. RANDALL WRAY

Working Paper No. 488, January 2007

www.levy.org/pubs/wp_488.pdf

When addressing the demand-side effects of investment, John Maynard Keynes tended to hold constant the productive capacity

of the economy. Evsay Domar recognized that it is not legitimate to ignore capacity effects. When adding plant and equipment that increase capacity, investment not only adds to aggregate demand but also increases potential aggregate supply. The "Domar problem" means there is no guarantee that the additional demand will absorb the additional capacity created by net investment.

Harold Vatter and John F. Walker extended Domar's work on the supply-side effects of investment spending and the evolution of the "mixed" economy in the United States. They stressed that the main constraint on economic growth since 1910 has been chronically insufficient aggregate demand that has led to growth below capacity and to secular stagnation. They insisted that the U.S. economy is capable of growing at a rate of 4 percent on a sustained basis.

Senior Scholar L. Randall Wray, University of Missouri–Kansas City and research director at the Center for Full Employment and Price Stability, examines the works of Vatter and Walker in combination with the ideas of Hyman P. Minsky and concludes that the institutional approach, which recognizes the necessity of the mixed economy and "Big Government," will help to formulate policy appropriate to today's problems. Vatter and Walker showed that the supply-side effects of investment persistently outpace the demand-side multiplier effects due to capital-saving technological innovations. Therefore, the only way to use the extra capacity generated by net investment is to increase other types of demand: household, government, and foreign spending. Government spending would have to grow at a pace that exceeds GDP growth in order to avoid stagnation, and persistent trade deficits would increase the role of government in maintaining profits and demand.

Wray notes that orthodox economists and policymakers misread the problem and propose the wrong policy solutions. The orthodox solution is to encourage more saving to generate more investment, which will attenuate the imagined supply constraints. But more saving leads to less consumption, which increases idle capacity and discourages investment. Wray also notes that the problem is compounded by the resurgence of balanced budget conservatism and ivory tower academics who have concocted fanciful tales about the effects of fiscal deficits (e.g., the possible insolvency of the U.S. government). The bankruptcy of orthodox policy making is exemplified by economic projections by the Council of Economic Advisers that predict low economic growth, fiscally austere budgets, and robust investment when the real engine of growth is government spending.

Wray updates the analyses of Vatter and Walker to account for major changes that have occurred since the mid 1990s: consumption growth financed by borrowing; a chronic and growing trade deficit; and substantial changes to tax policy. He notes that total spending must equal total receipts or income for the economy as a whole (private, government, and foreign). He also notes that household deficit spending has driven GDP by raising domestic demand and encouraging production, and that the private sector cannot achieve balance between income and spending unless the budget deficit exceeds 6 percent of GDP. He further notes that there is a large independent role for tax policy in influencing long-term growth, and that revenues are currently growing at a rate that exceeds government spending and GDP growth rates.

Tax revenues growing five times faster than real GDP is historically unusual, and annual tax revenue growth rates above 10 percent have been followed closely by recession, observes Wray. Moreover, the current rapid rise of tax burdens is creating fiscal drag (i.e., taxes are growing faster than personal income). It appears that the structure of the federal tax system is geared to constrain demand long before the economy achieves full employment and thus plays a major role in creating the headwinds that lead to secular stagnation.

Wray dispenses with three commonly cited dangers facing the U.S. economy: inflation pressures; chronic budget deficits and "unfounded" government liabilities; and an "unsustainable" U.S. trade account deficit. Rather, the real dangers are: (1) federal government purchases not growing (on trend) above the GDP growth rate; (2) overly restrictive taxes (e.g., many taxpayers will not correctly anticipate the effect of the AMT [see Policy Note 2007/1 above]); (3) an acceleration of the trend rate of growth of private sector debt relative to income (real wages have not risen during the recent economic expansion); (4) globalization and external pressures on wages and prices that require a response to find employment for those displaced by the trade deficit and to ramp up domestic demand to cover the trade deficit leakage; and (5) the growth of "neoconservative" ideology, whereby reducing the size of government as the economy grows ignores the social desire and need for increased provision of social services.

Program: Monetary Policy and Financial Structure

The Economics of Outsourcing: How Should Policy Respond?

THOMAS I. PALLEY

Public Policy Brief No. 89, 2007

www.levy.org/pubs/ppb_89.pdf

According to Research Associate Thomas A. Palley, global outsourcing represents a new economic challenge that calls for a new set of institutions. In this brief, he expands upon the problems of offshore outsourcing as outlined in Public Policy Brief no. 86 and focuses on the microeconomic foundations. He argues that outsourcing is a central element of globalization that is best understood as a new form of competition. Palley urges policymakers to understand the economic basis of outsourcing in order to develop effective policies, and suggests that they focus on enhancing national competitiveness and establishing new rules that govern the nature of global competition.

Palley notes that job loss is not the correct measure for assessing the impact of outsourcing, as outsourcing affects workers' sense of employment security and bargaining power. An institutional perspective sees outsourcing as the impetus for a new competitive regime in terms of both the structure of bargaining power and the margins of competition (i.e., those areas where companies and countries compete). According to this perspective, globalization (multinational corporation production in combination with global sourcing by retailers and manufacturers) has dramatically changed the structure of international competition. While outsourcing delivers low prices, it does so at the high cost of undermining the structure of income and demand generation.

The initial globalization era was one of classical free trade. The new era includes mobile capital and technology, so that all countries have access to similar methods of production. As a result, cost arbitrage (especially wage arbitrage) is a critical driver of the system, leading to downward wage and benefit pressures in U.S. labor markets and rising income inequality. Additionally, Palley observes that export-led growth has contributed to a globally unbalanced economy (i.e., developing countries rely on the U.S. market, resulting in an enormous U.S. trade deficit), and that this configuration carries the risk of global deflationary pressures.

The author suggests that the economic thinking developed in the 1930s to solve the problems of the Depression era (i.e., the New Deal in combination with the adoption of Keynesian macroeconomic stabilization policies) and current European-style social and economic protections are relevant in the era of globalization. Today's task is to come up with an innovative set of institutional arrangements addressing the new challenges posed by globalization and outsourcing.

Palley observes that outsourcing undermines the effectiveness of many existing national arrangements and that there is a lack of effective institutions of international economic governance. He suggests that international solidarity is needed to establish a politics that will support new forms of international economic regulation, such as labor and environmental standards, capital controls, exchange rate coordination, and tax harmonization. The establishment of a floor under the global labor market would rule out retrograde competition, while unions would ensure the equitable sharing of productivity gains and income distribution that generates full employment. In addition, there should be new arrangements that discourage tax competition within and between countries, an increased investment in education that raises worker productivity, and a national health plan in the United States that is financed out of general tax revenues.

On Lower-bound Traps: A Framework for the Analysis of Monetary Policy in the "Age" of Central Banks

ALFONSO PALACIO-VERA

Working Paper No. 478, November 2006

www.levy.org/pubs/wp_478.pdf

The New Consensus view in macroeconomics holds that market economies possess strong self-regulation mechanisms guaranteeing that any expansion of potential output generates an equal proportional increase in the level of aggregate demand (so that the latter adjusts passively to the former in the long run). According to Alfonso Palacio-Vera, Universidad Complutense de Madrid, the mechanism through which the adjustment process takes place has been overlooked in macroeconomic theory. The main purpose of his study, therefore, is to determine the circumstances under which an economy will experience an aggregate demand deficiency problem (i.e., a situation where the central bank cannot generate a level of aggregate demand

that is compatible with price stability through the manipulation of interest rates).

A core assumption of the study is that the adjustment of aggregate demand to potential output occurs mainly through the impact of investment spending, as well as the actions of conventional monetary policy. Palacio-Vera disagrees with the New Consensus view that permanent shocks to potential output automatically generate proportional increases in output so that, in the absence of unusually large shocks, central banks will always be in a position to generate the right level of aggregate demand. Rather, he sees "structural" factors, such as the saving ratio or the "natural" rate of growth or short-term (transitory) demand and supply shocks, as possible explanations for the emergence of an aggregate demand deficiency.

The author constructs a model of a closed economy without a government sector in which a central bank sets (real) interest rates with a view to hitting an inflation target. The key element in the analysis is the notion of the lower-bound trap on real interest rates, whereby the central bank is unable to push down real interest rates low enough and generate either a level of aggregate demand equal to potential output or a rate of growth of aggregate spending that is equal to the natural rate of growth.

Palacio-Vera distinguishes between growth and conventional lower-bound traps. If the economy is in a growth lower-bound trap, the unemployment rate will exhibit an upward trend despite short-term interest rates stuck at zero (e.g., Japan's recent experience). A conventional lower-bound trap occurs when conventional monetary policies have become impotent because nominal interest rates are at or near zero. This represents a situation of involuntary unemployment in the sense that money wage cuts will not help the economy reduce the unemployment rate (and downward price flexibility could set off a deflationary spiral). An economy may even get into a lower-bound trap if inflation is not very low.

A possible escape route from a lower-bound trap is the creation of inflationary expectations, but inflationary expectations closely track current inflation. As a result, central banks can only raise inflationary expectations by generating inflation, which cannot occur as long as the economy remains stuck in a lower-bound trap. Therefore, in the absence of unconventional monetary policy options, only countercyclical fiscal policy (i.e., a sufficiently large increase in the government budget deficit) or substantial improvements in the current account balance will kick-start the economy.

The main contributions of the study are: (1) it formulates a simple theoretical framework that integrates the notion of the natural or neutral interest rate, liquidity preference theory, and the praxis of modern central banks; (2) contrary to the New Consensus view, it shows that structural factors may cause an economy to experience an aggregate demand deficiency problem; (3) it supports studies claiming that the Japanese economy has been in a liquidity trap for a decade because of a high saving rate and a low natural rate of growth; (4) it shows that the New Consensus model can only explain a liquidity trap caused by unusually large shocks; and (5) contrary to conventional wisdom, it outlines how a rise (fall) in the nonaccelerating inflation rate of unemployment (NAIRU) may lead to a fall (rise) in the natural interest rate.

A central bank is able to prevent an aggregate demand deficiency problem if the economy is not stuck in a lower-bound trap (when the difference between the natural interest rate and the term premium required by investors is higher than the rate of inflation with a negative sign). Liquidity preference plays an important role in this framework, since it affects the natural interest rate as well as the term premium.

Palacio-Vera notes that his framework is limited by his assumptions of the exogeneity of the NAIRU and the natural rate of growth. Further studies will examine the interaction of the NAIRU and natural rate of growth variables, and the level of aggregate demand.

An Inquiry into the Nature of Money: An Alternative to the Functional Approach

ÉRIC TYMOIGNE

Working Paper No. 481, November 2006
www.levy.org/pubs/wp_481.pdf

According to Éric Tymoigne of California State University, Fresno, current analyses of monetary systems are theoretically flawed because they analyze money by its functions. Given its lack of rigor, the functional approach is subjective and confuses monetary instruments and the unit of account, he says. Monetary instruments acknowledge debt and are generally accepted financial instruments, and monetary systems rest on debit/credit and asset/liability relationships. Given the nature of financial instruments (bets against the future), the credibility of the issuer matters, and this is regulated by economic and political confidence.

Tymoigne outlines five essential characteristics of a monetary system: (1) the existence of a recording mechanism with a unit of account and tools with a well-specified purpose to record transactions; (2) the unit of account must be social (i.e., recognized as the unit in which debts and credits are kept); (3) some tools are financial instruments (i.e., an acknowledgment of debt and denominated in a unit of account); (4) some financial instruments are monetary instruments (i.e., "generally accepted"); and (5) a hierarchy of financial instruments may or may not exist, and there are a small number of issuers whose debts are used to clear accounts. A monetary system does not rely on any functions but is defined on the basis of the existence of a unit of account and financial instruments.

Tymoigne develops a framework to determine the parameters of a financial instrument. It must have a distinctive characteristic that allows its owner to know who issued it, how many units of the unit of account it carries, and its predefined maturity. If the financial instrument has an instantaneous maturity, is always accepted at par value, is impersonal (i.e., the degree of transferability of its unit of account or payment capacity is infinite), and is accepted back whenever it is presented to the issuer, it is regarded as a monetary instrument. A check is a financial instrument that falls short of being a monetary instrument because it names the receiver and is usually nontransferable.

Financial instruments are promises to deliver in the future, and their logical use is to allow intertemporal choices. Tymoigne notes the absence of characteristics relating to financial instruments in studies of "primitive money." He also observes that taxes serve as a reflux mechanism in a monetary system by returning the financial instruments to the original issuer. The monetary systems of ancient Mesopotamia and Egypt provide insights into understanding the differences between monetary and recording systems (e.g., a recording system does not contain any financial instruments).

The acceptance of a financial instrument rests on the expected capacity of its issuer to acquire credits from others, and on the time it takes the issuer to become a creditor. There is the expectation that one is able to swap back to the financial instrument, and creditworthiness is the determining factor of acceptance. Therefore, the acceptance of a monetary instrument does not rest principally on the materials used to issue it, but on the economic/political credibility of the issuer. By focusing on the materials, Tymoigne says, the functional approach completely misses the most important elements that determine a monetary system.

The role of the reflux mechanism is an important one. More government spending enables easier access to the unit of account, which reduces its value and tends to be inflationary. More difficult access to the unit of account (e.g., low wages or strict credit standards) tends to be deflationary. These effects are also related to the quality of the debt instruments issued, given the injection and reflux mechanisms.

The author notes that the relationship between a unit of account and a financial instrument is different than the one supposed by the functional approach because a unit of account is not a function of money. He also notes problems with the meaning of general acceptance in terms of a medium of exchange. He says the meaning has to be redefined so that three conditions are satisfied: instantaneous maturity, circulation at a defined monetary denomination (i.e., value in terms of a unit of account), and infinite transferability.

Using historical examples, Tymoigne points out the difficulty of establishing a well-working monetary system with perfect monetary instruments that circulate at par all the time. Coins, for example, did not respect the par-value condition, so they were "imperfect" monetary instruments as a result of the way in which the monetary systems were set up.

The author analyzed the use of cowries and tobacco as mediums of exchange and payments to show how early descriptions of their use confused commercial exchange and monetary payment and failed to explain how the unit of account came into existence or how it was monetized. Cowry shells seemed to qualify as monetary instruments in some parts of the world but not in others. Their use showed that the elasticity of the supply of the material and the maintenance of a relatively fixed value in terms of the unit of account are very important. Tobacco was not a monetary instrument in the 17th and 18th centuries but rather a commodity with an administered price that could be used instead of monetary instruments to settle debts written in a unit other than tobacco.

Fisher's Theory of Interest Rates and the Notion of "Real": A Critique

ÉRIC TYMOIGNE

Working Paper No. 483, December 2006

www.levy.org/pubs/wp_483.pdf

Irving Fisher's real rate of interest framework provides a rationale for the idea that monetary policy should be concerned mainly

with managing inflation expectations in order to keep real interest rates at a stable level that promotes saving and investment. Éric Tymoigne, California State University, Fresno, analyzes the notion of the real rate of interest and concludes that it cannot be applied to macro- or microeconomic problems. Fisher's idea that interest rate variations on monetary assets are the result of expected future inflation is doubtful, Tymoigne says. Economic agents such as financial power, liquidity, and solvency are more concerned with nominal matters.

The author reviews both Keynes's criticisms of Fisher's theory and the views of Post-Keynesians, and concludes that Fisher's explanation of what drives the interest rate is invalid. Changes in interest rates do not reflect changes in the opportunity cost induced by inflation in the present/future arbitrage; they reflect changes in uncertainty that affect the stock equilibrium between liquid and illiquid assets. Keynes provides an explanation via his notions of liquidity preference and marginal efficiency of capital. The uncertainty about the future liquidity of financial positions created by inflation *may* lead to an increase in the interest rate because of the higher liquidity premium attached to money. The only direct effect of inflation is that it increases the marginal efficiency of capital. Contrary to Fisher, the rate on nonmonetary assets adjusts for inflation.

The notions of the break-even point and duration are important to try to cope with liquidity risk induced by unforeseen capital losses or decreases in interest rates. The break-even point reflects the absolute or relative variation in the interest rate for which the capital loss (gain) is exactly compensated by the total gain (loss) from the reinvestment income. Duration is the time for a capital gain (loss) to be exactly compensated by a reinvestment income loss (gain) so that the actual rate of return is at least equal to the break-even point. Fisher's condition of indifference related to the choice between assets does not guarantee a protection against losses in purchasing power. In Fisher's terms, if inflation is expected to rise, the best way to protect purchasing power is to raise the interest rate on monetary assets.

Fisher assumes that arbitrage between present and future income at the microeconomic level can be applied to aggregate real income at the macroeconomic level. According to Keynes, Fisher's condition of indifference is wrong at both levels. Arbitrage does not automatically protect individuals against purchasing power loss, and arbitrage is impossible at the aggregate level because there are no spot and forward markets for a "commodity" called "aggregate income." Therefore, saving can only be realized in monetary terms, and the only way to save for the future in real terms is to invest today.

If the real rate of interest is just a definition, one must assume that there is a clear correlation between inflation and nominal interest rates. Tymoigne shows that there was no relationship between inflation and interest rates until the mid 1950s, when the central bank oriented its policy toward "fighting" inflation by raising or lowering interest rates with changes in the consumer price index. In this manner, changes in policy rates became more closely related to changes in prices and reflect the continuity of economic behaviors—that is, the concern about liquidity rather than purchasing power. The correlation between the discount rate and inflation variables is higher with actual inflation.

More systematic econometric analyses (e.g., cointegration, VAR analysis, and Granger causality) confirm that federal funds rate behavior is caused by expected inflation in the long run. The liquidity of money matters the most for economic agents because it protects them against future contingencies. As long as inflation is not too high, money provides a safe way to postpone decisions. In a monetary production economy, nominal variables are more important and inclusive of real value considerations than real variables.

The Balance Sheet Approach to Financial Crises in Emerging Markets

GIOVANNI COZZI and JAN TOPOROWSKI
Working Paper No. 485, December 2006
www.levy.org/pubs/wp_485.pdf

As a result of the financial and currency crisis in Southeast Asia in 1997–98, new theories and models have been developed to explain the causes of financial fragility and the dynamics of twin crises in emerging markets. While the conventional balance sheet approach focuses on problems in the financial markets, an alternative balance sheet approach extends Hyman P. Minsky's financial instability hypothesis and focuses on nonfinancial firms and financial liberalization policy.

Giovanni Cozzi and Jan Toporowski, The School of Oriental and African Studies, University of London, employ a more rigorous Minskyan hypothesis that focuses on maintaining liquidity by general balance sheet operations rather than from the sale of outputs. Companies are dependent on the liquidity of banking and

financial markets in addition to using these markets for capital project finance, the authors say. Many approaches to studying emerging market economies are clearly inspired by the work of Minsky, but they overlook his emphasis on modern nonfinancial corporations that experience crisis because of positions taken in the financial markets.

Two crucial considerations in open emerging markets are the heterogeneity of production units and the investment decisions of large businesses. On the one hand, production units are more varied than in a market capitalist economy, so firms require different financing structures. On the other hand, large firms determine the dynamics of a market capitalist economy and maintain liquidity by "taking positions" in financial markets. Thus, the application of Minsky's analysis to emerging markets depends crucially on the emergence of production units that not only use the financial markets, but also take positions in those markets to maintain cash flows.

The authors examine and compare the balance sheets of financial and nonfinancial institutions in Thailand, Indonesia, Malaysia, Singapore, and Hong Kong from 1996 to 2004. They analyze movements in accounting ratios and assets and liabilities by sector. They find that the aggregate balance sheet–based ratios (e.g., total debt to total capital, current assets and current liabilities to total debt, and loans to deposits) deteriorated in Thailand, Indonesia, and Malaysia (the crisis economies) for most sectors of the economy during the 1997–98 crisis. They also find that financial risk and leverage were already high in 1996. By comparison, the ratios for Singapore and Hong Kong (the noncrisis economies) remained fairly stable throughout the period.

The sharp decrease in the current assets and liabilities to total debt ratios suggests serious problems of liquidity and solvency for Thai and Indonesian businesses. The sharp increase in both total assets and liabilities indicates that the rise in assets was mainly the result of increases in total debt rather than increases in revenue (or equity). Furthermore, the margin between total assets and total debt was much narrower than for Malaysia or for the noncrisis countries. Thailand and Indonesia appeared to be more reliant on the short-term money market and at higher risk for liquidity problems.

Malaysia suffered less from short-term liability problems or a reversal of short-term (income) flows because current assets were sufficient to cover total debt. Also, the increase in total assets was greater than the increase in total debt, so asset expansion was driven by total debt expansion, as well as by revenues. Malaysia was comparatively less dependent on short-term capital, and its deteriorating accounting ratio was mostly the result of problems in the nontradable sector (e.g., real estate).

The research reveals that the dynamics that move an emerging market economy from stability to fragility and to twin crises are complex and influenced by different factors. The comparative analysis shows that deterioration of the balance sheets of financial and nonfinancial institutions in Southeast Asia has not been homogeneous, indicating many country-specific factors.

The authors recommend that an analysis of the East Asian crisis should account for both the economic differences between countries and the level of economic and financial development in each country. Both assets and liabilities play a role in creating fragility and a full-fledged crisis. Moreover, the peg and quasi-peg to the dollar of currencies in Thailand and Indonesia led to a huge influx of (short-term) capital to finance domestic activities. This influx increased financial, credit, and solvency risks; created a more fragile and crisis-prone environment; and increased liquidity problems in both the financial and nonfinancial sectors of the economy.

Fixed and Flexible Exchange Rates and Currency Sovereignty

CLAUDIO SARDONI and L. RANDALL WRAY
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www.levy.org/pubs/wp_489.pdf

For many Keynesian and Post-Keynesian economists, a return to fixed exchange rates is seen as the way to ensure more stability in the international economic system. According to Claudio Sardoni, University of Rome "La Sapienza," Italy, and Senior Scholar L. Randall Wray, University of Missouri–Kansas City and research director at the Center for Full Employment and Price Stability, a return to a regime of fixed exchange rates is neither feasible nor desirable. Global economic conditions have changed, they say, as the world is characterized by very high capital mobility and there is no effective mechanism to remove trade imbalances.

The authors replace the notion of money, as a mere medium of exchange that underpins a fixed exchange rate regime, with the notion of currency sovereignty, which is contingent on the adoption of floating exchange rates. They advocate a "managed money" system and suggest that greater stability and independence

could perhaps be achieved by some combination of floating exchange rates, capital controls, and trade policy, especially in the case of developing countries.

The authors' criticism of Keynesian and Post-Keynesian schemes for the adoption of fixed exchange rates (the Bancor plan and the Bretton Woods system) is that the schemes concentrate on current account imbalances and fail to pay due attention to the importance of capital movements in determining exchange rates. They note that orthodox neoclassical support for a flexible exchange rate system was based on the expectation that trade imbalances would cause currencies to adjust and automatically return trade to equilibrium. This expectation has been thoroughly discredited since the abandonment of Bretton Woods, and flexible exchange rates appear to have contributed to greater global instability.

Based on a review of the works of Keynes and Marx, Sardoni and Wray observe that these economists rejected the notion of money as a mere medium of exchange, since money can also be hoarded. This crucial theoretical innovation provides the fundamental rationale of the principle of effective demand. However, Keynes's and Marx's critique of money needs further development when considering the international monetary system. In the modern context, there is a third option: governments can hoard international reserves in order to protect their exchange rates. Therefore, currencies are used not only for current account transactions but also in capital account transactions. Unless capital is completely immobile, there is no reason for exchange rate adjustments as a means of eliminating current account imbalances.

The authors outline an alternative approach to money that derives from Keynes (in *A Treatise on Money*), focuses on the sovereign nature of the unit of account, and implies the adoption of a regime of floating exchange rates. They note that the gold standard and the Bretton Woods system of fixed but adjustable exchange rates were managed money systems, and that most developed countries now have fiat money systems. They also note that the European Monetary Union (EMU) is operating toward the "commodity money" end of the managed money spectrum. They further note that a sovereign government's ability to make payments is not constrained by either revenues or reserves, and that the interest rate paid on sovereign securities is not subject to normal market forces (i.e., it is incorrect to argue that the size of a sovereign government deficit affects the interest rate paid on securities). The interest rate is set exogenously in any sovereign nation—it is a monetary policy matter and not determined by the market. However, for a nonsovereign government currency in a region of high capital mobility that uses but does not issue a currency, the interest rate on its currency liabilities is not set independently, so it cannot put domestic employment and growth at the top of its policy agenda. A sovereign nation can use domestic policy to achieve internal stability and achieve full employment, even in the presence of a trade deficit. Thus, a flexible exchange rate preserves "policy space" for independent policy formation.

The authors examine the cases of Argentina and Europe. Argentina gave up its currency sovereignty when it adopted a currency board based on the dollar. It regained sovereignty and overcame its economic crisis by abandoning the currency board and regaining policy independence. For example, the Jefes y Jefas de Hogar Plan was a government job creation program that guaranteed employment for poor heads of households and put the economy on the road to recovery. In addition, dropping the peg to the dollar helped Argentina price its exports competitively.

The European experience is an example of the serious effects of nation-states giving up their sovereignty by renouncing flexible exchange rates in the absence of a federal sovereign fiscal institution and in favor of a totally independent central bank. Individual nation-states cannot freely use fiscal instruments to affect output and employment. The result is substantial economic stagnation, as member countries are forced to stay in line with the fiscal parameters (i.e., the Maastricht Treaty) and compete with one another by maintaining or reducing wages and prices. The EMU does not work satisfactorily for the same reasons that a world regime of fixed exchange rates cannot function well without a supranational institution that plays the role of a sovereign national government.

The authors observe that currency sovereignty allows a country to use fiscal and monetary policy to create jobs in the private and public sectors as an alternative to export-led growth. This observation is particularly important for developing countries.

Program: The Distribution of Income and Wealth

European Welfare States and Their Generosity toward the Elderly

AXEL BÖRSCH-SUPAN
Working Paper No. 479, November 2006
www.levy.org/pubs/wp_479.pdf

A summary of this working paper appears in session 1 of the write-up for the conference on government spending on the elderly in the Fall 2006 *Summary*, Vol. 15, No. 3, pages 9–10.

Net Intergenerational Transfers from and Increase in Social Security Benefits

LI GAN, GUAN GONG, and MICHAEL HURD
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www.levy.org/pubs/wp_482.pdf

An increase in Social Security benefits may not be a complete transfer from the younger generation to the older generation because some of the increase in benefits may be bequeathed back to the younger generation. Li Gan, Texas A&M University and the National Bureau of Economic Research (NBER), Guan Gong, Shanghai University of Finance and Economics, China, and Michael Hurd, RAND Corporation and NBER, use a life-cycle model of consumption to quantify how much of an increase in Social Security benefits would be bequeathed back to the younger generation. They find that there is no significant increase in bequests in response to an increase in Social Security benefits.

In life-cycle models of consumption under uncertainty, individuals make choices based on current information and beliefs in order to maximize the expected discounted present value of utility, which is the sum of utility in the current period and future utility. Future utility depends on the probability of an individual surviving to each future period, the return to saving, budget constraints, optimal consumption choices at each future period, and the value of financial bequests at death.

The authors construct a behavioral model for a single person that maximizes expected lifetime utility over the consumption path. The model places considerable emphasis on annuity income (e.g., pension income, including Social Security) and is estimated using two waves of data from the Asset and Health Dynamics study. An important determinant of the consumption path is mortality risk.

The authors use the model to solve for the optimal consumption path, which is conditional on initial bequeathable wealth, Social Security benefits (wealth), age, sex, and number of children. They outline the consumption and wealth paths for a single man and a single woman aged 65 (with and without a bequest motive; i.e., children). They then compare the paths before and after an increase in Social Security in order to determine any changes in bequests and consumption.

When there is a bequest motive, an increase in Social Security benefits does cause an increase in bequests. However, all but a trivial fraction of the increase in Social Security benefits is used for consumption. An unanswered question is the role of inter vivos transfers, which are fairly large and perhaps would increase in response to an increase in Social Security benefits.

Class Structure and Economic Inequality

EDWARD N. WOLFF and AJIT ZACHARIAS
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www.levy.org/pubs/wp_487.pdf

The relationships between class structure and forms of economic and social inequality were key concerns of classical economists. According to Senior Scholar Edward N. Wolff of New York University and Senior Scholar Ajit Zacharias, the relationships do not receive due attention today. The authors revise the class schema used in prior empirical research and adopt an alternative strategy to highlight the relationship between overall inequality and stratification along class lines. Their approach includes a number of distinctive features, such as defining the contributions made by different sources of income to overall income inequality and using a post-tax, post-transfer wealth-adjusted measure of income that reflects economic well-being better than gross money income or earnings.

Empirical studies in the Marxist tradition tend to identify the capitalist class as a subset of the self-employed who employ others for the purpose of making profits. In the modern U.S. economy, corporations rather than individual business owners dominate production for private profit, so an alternative approach is to identify those who control the corporations. These approaches are insufficient, say the authors, because they do not

include the financial aristocracy among the ranks of the capitalist class. Therefore, the authors identify the capitalist class on the basis of nonhome wealth, which includes real estate and businesses, as well as liquid, financial, and retirement assets.

The authors focus on the inequality in the potential command over commodities among capitalist and earner households. A household is considered to be a capitalist household if it has nonhome wealth of at least $4 million or business equity worth at least $2 million (in 2000 dollars). These threshold values yield a property income that can provide a household with a standard of living that is beyond the reach of the majority of households.

The Census Bureau's occupational codes are used to group employees into six class locations: managers, supervisors, professionals, white- and blue-collar skilled workers, and nonskilled workers (workers are distinguished both by their supervisory relationship and by the skill content of their work). Individuals in noncapitalist households who are self-employed are treated as a distinct group separate from employees.

The basic data is drawn from the public-use files of the Census Bureau's Annual Demographic Supplement, which is statistically matched with the Federal Reserve's Survey of Consumer Finances for 1989 and 2001 in terms of key characteristics, such as race and age of householder. The authors find that worker households constituted the majority of households in both years (55 to 57 percent), followed by manager, professional, supervisor, and self-employed households. Capitalist households constituted 2 percent of all households in 2000, up from 1.1 percent in 1989 (reflecting the large increase in household wealth over the period). Nonwhites made up a larger share of nonskilled workers and an equal share of blue-collar skilled workers. Women increased as a share of every group between 1989 and 2000, and constituted the majority of nonskilled workers in 2000. The highest percentage of older workers (age 51 and over) was in the self-employed class (45 percent).

The most widely used income measure in studies of inequality is gross household money income. The authors construct an alternative measure called "comprehensive income" (CI) that is different in terms of its treatment of income from wealth (i.e., home and nonhome wealth) and is a better reflection of the resources available to the wealth holder on a sustainable basis over his/her expected lifetime. The authors also use asset-specific, historical rates of total return in calculating annuity values in order to account for differences in portfolio composition across households.

Wolff and Zacharias find a widening income gap between the capitalist and earner households, as well as between the nonskilled and other earner households, over the period 1989–2000. In 2000, 84.3 percent of the income received by the capitalist class was income from nonhome wealth, compared to 29.9 percent overall. Base income accounted for 18.2 percent of total income for the capitalist class, but over 92 percent for all other groups. The share of taxes in income was only 7.4 percent for capitalist households but over 28 percent for all other groups, except nonskilled workers.

The authors address the relationship between class divisions and overall inequality in CI using the Gini coefficient and the Yitzhaki/Lerman index of stratification. The most striking result is that the increase in overall inequality between 1989 and 2000 was due solely to an increase in interclass inequality, reflecting primarily the huge income gap between the capitalist class and everyone else. Intraclass inequality contributed the same amount to overall inequality in both years, so its share declined from 70 to 58 percent over the period. Among the employee groups, blue-collar workers showed the lowest amount of within-class inequality, reflecting, perhaps, a higher degree of unionization and relatively lower degree of occupational heterogeneity, which limits the pay range.

Capitalist households received about 20 percent of aggregate income in 2000, which was nearly twice as high as in 1989, and accounted for 35 and 52 percent of income from wealth in 1989 and 2000, respectively. Thus, income from wealth, particularly nonhome wealth, accrued disproportionately to capitalist households and was the principle factor behind the increase in inequality in the 1990s.

Using the "natural decomposition" method to examine the contribution of different sources of income to inequality, the authors find that base income contributed the most to inequality, followed by income from nonhome wealth. Base income shares increased for capitalists, managers, and professionals, but decreased for the other groups, with the exception of white-collar skilled workers.

Levy Institute Measure of Economic Well-Being

Wealth and Economic Inequality: Who's at the Top of the Economic Ladder?

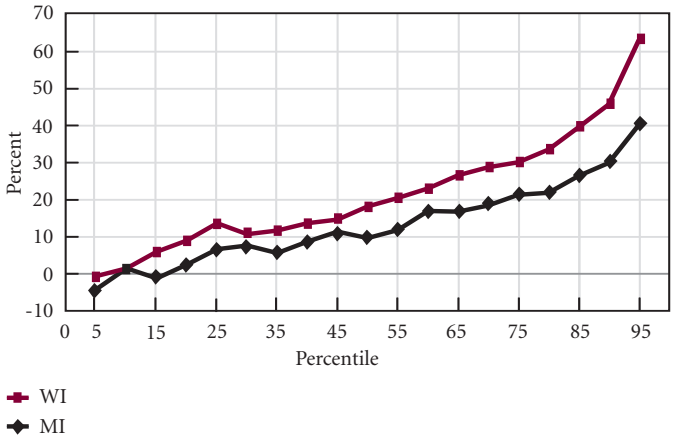
EDWARD N. WOLFF and AJIT ZACHARIAS

Levy Institute Measure of Economic Well-Being, December 2006
http://www.levy.org/pubs/limew1206.pdf

This report argues that wealth is an integral aspect of economic well-being. Senior Scholar Edward N. Wolff of New York University and Senior Scholar Ajit Zacharias combine income and net worth to demonstrate the importance of wealth inequalities in shaping overall economic inequality and defining the disparities among population subgroups.

CEOs of big businesses are at the top of the income ladder and earn 145 to 188 times more than the average male and female worker, respectively. According to the authors, the accumulation of vast amounts of wealth by a tiny minority receives far less attention than income disparities, in spite of the fact that the wealthiest Americans possess over 16,000 times more wealth than the average household. They note that conventional measures of household economic well-being do not adequately reflect the advantages of asset ownership or the disadvantages of financial liabilities.

Figure 1 Percent Change in Money Income (MI) and Wealth-adjusted Income (WI) at Selected Percentiles, 1982 to 2000



Source: Authors' calculations based on the SCF public-use files

The authors find that the picture of economic well-being in the United States during the 1980s and 1990s is quite different if the yardstick is their wealth-adjusted income measure (WI) rather than the standard measure of money income (MI) because the degree of income inequality is lower than that of wealth inequality. WI focuses on total annual household income, which includes the sum of income from wealth and money income from other sources. It differs from the conventional measures by distinguishing between home and nonhome wealth and converting the latter into a lifetime annuity; accounting for differences in portfolio composition of nonhome wealth; and capturing differences in life expectancies among racial groups.

Using the Federal Reserve Board's Survey of Consumer Finances, the authors examine how income gains over the period from 1982 to 2000 were distributed along the economic ladder according to MI and WI (Figure 1). Both measures show that there was a strong positive relationship between the initial income level and subsequent income gains. However, there were two important differences between the distributions: (1) the WI rate of increase is higher than the MI rate for almost all percentiles, including at the median; and (2) the gap between the two distributions widens toward the top rungs of the distribution. The primary factor behind the differences is the steep rise in the annuitized value of nonhome wealth. WI does not support the conclusion that the so-called "working rich" have replaced the "coupon-clipping rentiers" at the top of the economic ladder.

The report shows that the conventional measures understate most aspects of economic well-being: the portion of the aggregate economic pie that goes to the rich; the degree of overall inequality and the contribution of income from wealth to the increase in inequality; and the relative well-being of the elderly. The measures also overstate the relative well-being of minorities. Thus, policies ignoring asset ownership will have only partial success in redressing the relatively high level of economic inequality in the United States.

Program: Employment Policy and Labor Markets

When Knowledge Is an Asset: Explaining the Organizational Structure of Large Law Firms

JAMES B. REBITZER and LOWELL J. TAYLOR
Working Paper No. 477, October 2006
www.levy.org/pubs/wp_477.pdf

Large law firms are organized differently than most other companies. Their practice of hiring inexperienced associates who must eventually either become partners or be fired is explained in a new working paper by Research Associate James B. Rebitzer of Case Western Reserve University, the National Bureau of Economic Research, and the Institute for the Study of Labor (IZA), and Lowell J. Taylor of Carnegie Mellon University. The partnership system developed, write Rebitzer and Taylor, because firms do not have legal rights to some of their most important "assets"—their employees' knowledge of their clients. A common problem in the legal industry is "grab and leave"—top employees resigning and taking their clients to a different firm. Since the U.S. legal framework does not prevent this, firms developed a strategy to maintain their "property" in their employees' relationships with important clients.

Rebitzer and Taylor develop their model in three stages, the last of which theoretically explains the "up or out" system of promotion in law firms. They show that if employees control valuable knowledge, the firm will not maximize profit; doing so would foil efforts to retain employees. Instead, firms maximize profit *per partner,* which requires them to fire some associates while they promote others to partnership. This means that firms must fire some associates, say the authors, even if they are good attorneys, a situation that might appear paradoxical at first.

The paper includes an analysis of laws and codes of professional conduct in the United States that shows that firms cannot enforce contracts that prevent grabbing and leaving. Specifically, state codes of ethics, which originate in American Bar Association (ABA) rules, allow clients the freedom to choose their representatives. The ABA also prohibits "noncompete" clauses in lawyers' contracts; these are utilized in some other industries and states to prohibit former employees from using knowledge and serving clients from former jobs. This institutional framework emerged gradually in the early 20th century from a system in which lawyers were allowed to solicit clients early in their careers and take them along as they moved from firm to firm.

Rebitzer and Taylor investigate their hypothesis empirically by studying the factors that determine how much time lawyers spend in direct contact with their clients. They find that associates spend less time with clients and in client-development activities. This finding holds up even when associates and partners with similar types of practice, experience levels, geographic locations, and undergraduate institutions are compared. Limiting time with clients and work on client development is one way that firms can reduce the possibility of grabbing and leaving. Rebitzer and Taylor's hypothesis suggests that the problem of controlling employees' knowledge is most important in large firms, and their data show that the larger the firm, the more limited the associates' client-related work.

Program: Economic Policy for the 21st Century

Expensive Living: The Greek Experience under the Euro

THEODORE PELAGIDIS and TAUN N. TOAY
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The common perception among Greeks is that the euro has been the primary cause of recent price hikes. Theodore Pelagidis, University of Piraeus, Greece, and Taun N. Toay, University of Piraeus Fulbright Scholar, analyze inflation in Greece and the notion that European integration has not led to higher standards of living for the majority of Greeks. They find that domestic issues, especially product market rigidities, were the most important factors underlying the increase in living expenses. They therefore recommend that the government free companies from excessive regulations and monitor price abuses in order to break the oligopolistic nature of many Greek industries, and open markets to competition. These actions would stimulate economic activity and drive down artificially high prices. While the euro provides a convenient "cause" for domestic inefficiencies that encourage inflation, the solutions to the problem lie at home, they say.

The authors note the growing European divide between the proposed benefits of monetary union and the accompanying

public discontent surrounding reforms. They also note the rapid negative shift in Greek sentiment about inclusion in the European Monetary Union (EMU) and the adoption of the euro. They further note that, despite the public's perception, recent levels of inflation in Greece pale in comparison to earlier periods.

Pelagidis and Toay examine five issues for a possible explanation of recent inflation in Greece: (1) the constraints imposed by monetary union and a single currency; (2) the adoption of the euro versus domestic product market rigidities; (3) the impact of strong seasonal effects in the context of traditional quasi-capitalism; (4) the extent to which unemployment drives down wages and purchasing power; and (5) whether the Balassa-Samuelson effect is the reason for nontradable product price hikes. Their conclusion: that all five of these factors have played a role.

Loss of domestic control over monetary policy makes macroeconomic shocks more asymmetric among countries, particularly relatively smaller European Union (EU) countries. Thus, overall wages have stagnated for the "unprivileged" sectors and regions (e.g., Greece) and the introduction of the euro has created conditions for growing inequalities in incomes and eroding standards of living (e.g., higher prices for basic goods and services). The authors point out that countries with more complex conversion rates witnessed higher inflation during the changeover to the euro (especially pronounced in low-priced goods), when there was information asymmetry between buyers and sellers. The view that the euro caused higher prices in Greece during a period of historically low inflation rates actually stems from product and service market rigidities (e.g., excessive regulation, uncompetitive markets, and producers' power). The authors observe that trade represents only 15 percent of the country's GDP, which is the lowest among EU members, and that core inflation is the highest in the EU (3 percent).

The blame for recent price trends should focus more on structural forces that perpetuate inflation, say the authors. Furthermore, stubbornly high rates of unemployment and low pay scales have exacerbated the burdens of inflation for a growing segment of the population. Since there has been divergence between Greek and Eurozone inflation rates in both tradable and nontradable sectors, as well as no significant increase in income flows from abroad (i.e., tradable sector exports have stagnated), the Balassa-Samuelson effect offers only a partial explanation of recent inflation (e.g., inflows from the EU in the form of structural and common agricultural policy funds).

Productivity, Technical Efficiency, and Farm Size in Paraguayan Agriculture

THOMAS MASTERSON

Working Paper No. 490, February 2007

www.levy.org/pubs/wp_490.pdf

Many agricultural studies show an inverse relationship between productivity and farm size. The reasons for this relationship, however, are open to debate. Research Scholar Thomas Masterson measures land productivity and technical efficiency in Paraguay and affirms the inverse relationship. His conclusions bolster the argument for the redistribution of land as a means of increasing overall production and improving the welfare of the landless peasantry. Policies favoring large-scale farms may result in growth in the agricultural sector, he says, but they will not combat the problem of rural poverty.

Masterson uses the 2000–01 MECOVI dataset, which is a living standards measurement survey that follows World Bank guidelines. The dataset is a sample of 8,131 Paraguayan households that includes demographic data as well as data on land ownership, usage, and output. Masterson focuses on land, because of the extremely high land concentration and high rates of rural poverty in Paraguay, and on efficiency, because of critiques that land productivity is an inaccurate measure of actual efficiency.

The author uses two methods to derive the technical efficiency measure: a nonparametric technique (data envelopment analysis) and a regression technique (stochastic production frontier). He regresses the land productivity and technical efficiency measures on household and farm characteristics, as well as on various farm management and regional factors. Household characteristics include the gender, age, and education of the household head. Farm characteristics include the operational area and the area owned by the household, household size, tenure security, mode of production, and assets. Farm management characteristics include receipt of credit and technical and marketing assistance. Regional factors include soil quality.

Masterson finds that the land productivity measure clearly shows a tendency to decrease with farm size (i.e., smaller farms use land more intensively). He also finds that land is unequally distributed among rural farms. The smallest farms have the highest land productivity, labor-to-land ratio, and capital-to-land ratio. However, according to all technical measures, there are significant declines of efficiency for smaller farms. The

nonparametric technical efficiency measure increases for larger farms, while the largest farms have the highest average stochastic efficiency measure.

Using regression analysis, Masterson analyzes the effect of factors that other studies were unable to control for, such as soil quality, tenure security, and mode of production. He finds that better tenure security leads to lower productivity and efficiency, but the reason is unclear. Since titling is the wunderkind of mainstream policy proposals, its benefit may be based on a combination of theory and incomplete empirical analysis, the author says, so more detailed research is in order.

Masterson also finds that rising shares of household labor in agriculture result in lower productivity and efficiency, which is in opposition to theory. A further finding is that there are no productivity or efficiency differences between men and women. Since the stochastic and nonparametric methods to estimate technical efficiency produced different results, future studies should employ both methods.

Land Rental and Sales Markets in Paraguay

THOMAS MASTERSON
Working Paper No. 491, February 2007
www.levy.org/pubs/wp_491.pdf

The inverse relationship between farm size and productivity means that redistributing land can increase overall welfare by increasing overall production (see Working Paper no. 490 above). Using Paraguay as a case study, Research Scholar Thomas Masterson examines the claim that the land rental market can be an effective means of redistributing land to the rural poor. He finds that access to credit is extremely important in order to participate in the land rental and sales markets. He also finds that there is little evidence to support the theory that tenancy may be a way out of poverty for rural households. Land ownership is clearly superior to tenancy, he says.

Masterson reviews land market reform policies, land rental markets, and the history of agricultural policy in Paraguay. He notes that microeconomic theory of competitive markets has little to say about agricultural land markets, and that the nature and transfer of land do not adhere to the notion of perfectly competitive markets. The question is whether land reform by the state, versus better functioning markets, results in more equitable redistribution to smaller farmers.

The World Bank made land reform policy a centerpiece of its rural poverty alleviation program in 1975. Since then, a major policy change has led to a focus on the land rental market, which is apparently more equitable and efficient than the land sales market. However, the credit and insurance markets impose constraints on peasants' participation in the land market, in spite of a rural labor market structure that makes them more competitive.

Masterson believes that a well-functioning credit market is essential for the performance of the land sale and rental markets, so credit-market reforms should be an integral part of proposals for land-market reforms. Moreover, insurance is scarce in poor rural areas despite factors such as climate and disease, and this situation leads to covariance of incomes. Government policy, however, can improve the labor, credit, and insurance markets, as well as equity and efficiency.

Masterson reviews the theoretical and empirical basis for promoting land rental markets as an avenue for improving rural welfare. Theoretically, land rental markets have equity and efficiency advantages over land sales markets (e.g., greater flexibility to transfer land use to more efficient producers with relatively low transaction costs, and less vulnerability to credit market imperfections). However, studies in Latin America show that rental markets have not been effective in redistributing land, and that reforms have increased tenure insecurity and decreased productivity. Land rental markets appear to be constrained by weak property rights and ineffective conflict-resolution institutions.

In his review of agricultural policy in Paraguay since the 1960s, Masterson finds increasing pressure for land from the peasants but little government effort to address the problem. He uses the 1991 agricultural census and the 2000–01 MECOVI survey to obtain information about land tenure, farm management, and production for approximately 3,000 farms. Household (farm) income is regressed on the tenure variables in order to test the benefits of participation in the rental markets (versus ownership and landlessness) and to examine the determinants of buying, selling, and renting land.

All regions except the central region experienced remarkable decreases in maximum farm size and land ownership over the 1991–2001 period. The incidence of land rentals was much lower in 2001, particularly for farms of less than one hectare. The percentage of small farms increased from 40 to 51 percent, and most land sales and purchases were concentrated among farms of less than 50 hectares. There was little evidence to show

that the land rental market was contributing significantly to land redistribution. The author notes that the smallest farms were four times more likely to be rented than owned.

The author also notes that participation in the land markets was limited, ranging from 1.5 percent of farms for sale to approximately 9 percent of those for rent in 2001. The demand side was restricted by a lack of access to credit, especially for inputs, and this restriction was most strongly felt in the land rental market. In terms of the relationship between household income and participation in the land rental and sales markets, the author finds no apparent statistically significant connection between tenancy and income. Therefore, there is scant evidence to support the theory that tenancy may be a way out of poverty for rural households. It appears that the benefits of tenancy are accruing not to peasant households, but to medium-size farms that rent-in large parcels of land.

Masterson questions the merits of World Bank policies that encourage fiscal austerity while simultaneously supporting the land markets as the means for land redistribution and poverty reduction. He notes that, if rental markets are the way to go, then state intervention is as important as the land markets in redistributing land and reducing poverty.

Explorations in Theory and Empirical Analysis

Methodology and Microeconomics in the Early Work of Hyman P. Minsky

JAN TOPOROWSKI

Working Paper No. 480, November 2006

www.levy.org/pubs/wp_480.pdf

Hyman P. Minsky's Ph.D. dissertation *Induced Investment and Business Cycles* has been published recently by Edward Elgar (D. B. Papadimitriou, ed., 1954/2004). Jan Toporowski, The School of Oriental and African Studies, University of London, and the Centre for the History and Methodology of Economics, University of Amsterdam, reviews Minsky's thesis and finds unexpected elements pertaining to microeconomics and economic methodology. These elements are not usually associated with the works of Minsky and may be seen as the foundation of some of his later works, Toporowski says.

Minsky's thesis begins with methodology and a critique of business cycle theory by Joseph Schumpeter (his dissertation supervisor) and models by Alvin Hansen and Paul Samuelson (multiplier-accelerator), John Hicks (floor-ceiling), and Richard Goodwin. Minsky concludes that the stochastic coefficient nonlinear accelerator model is "consistent with the observed irregularity and nonsymmetry of business cycle experience." According to the author, Minsky's critique answers Tobin's assessment of Minsky's financial instability hypothesis as lacking empirical statistics and a formal model.

The bulk of Minsky's thesis examines the consequences of financial liabilities on the investment behavior of firms. By attributing macroeconomic fluctuations to extreme movements in business investment, Minsky adhered to the classic view of the business cycle that emerged during the Great Depression in the 1930s. In his view, however, investment activity could not be separated from market process, which, in turn, was determined by market structure. Minsky rejected theories that retained the traditional presumption that firms in perfect competition maximize profits, and instead adopted profit-maximization as a means of obtaining tractable equations. His argument is a particular example of a more general methodological criticism leveled against the Neo-Cambridge school by Wassily Leontief (who became Minsky's supervisor upon Schumpeter's death)—that of "implicit theorizing," or the process of introducing concepts without deriving them from clear and unambiguous axioms. Nevertheless, Minsky unexpectedly used the notion of "conditional monopoly" put forward by Alfred Marshall of the Cambridge school; that is, monopolies do not maximize profits but hold prices low enough to discourage potential competition.

The author notes that Minsky's originality lay in his approach to incorporating financing costs into various (Marshallian) cost curves, making them more complex by including a firm's financing commitments prior to undertaking investment. In this way, Minsky introduced the theory of the firm that was later to be the core of his analysis of financial fragility—the notion of the firm as a balance sheet of assets and liabilities rather than as an entrepreneur making production decisions.

According to Toporowski, an inconsistency in Minsky's dissertation is that he does not distinguish between factory/production facilities and accounting firms, although he does drop the "planning curve" analysis in favor of the balance sheet analysis of the firm later on. Toporowski notes that Minsky's use of Marshall is surprisingly selective; Minsky omits, for example, Marshall's

discussion of company finance and excess capital. Another surprise is the omission of the Chicago School liberal Henry Simons, who directed Minsky toward his consideration of macreconomic financial disturbance.

The last chapter of Minsky's thesis deals with monetary analysis and the dependence of the investment accelerator on accommodating banking and monetary policy. His argument is essentially Keynesian and Marshallian: the central bank determines the money supply and demand is determined by Keynes's liquidity preference. Minsky, however, goes far beyond Keynes and Marshall in considering the effects of security purchases by banks. His adoption of Kalecki's profits theory in the 1970s allowed him to make financial fragility endogenous, because the theory shows how corporate cash flows decline as investment falls off after an investment boom peaks. The reduced cash flows then make it more difficult for firms to settle their financial commitments, thus causing a crisis of overindebtedness. This theory would later appear in Minsky's "The Financial Instability Hypothesis: A Restatement," *Thames Papers in Political Economy* (1978).

Minsky's adoption of Kalecki's profit theory is problematic, says Toporowski, because it ignores crucial monetary and credit aspects of the theory. The source of incompatibility is essentially a fallacy of composition (e.g., the notion of the representative firm versus firms differentiated by market power and engaged in continuous production). The crucial determinant of financial fragility is the distribution of liquidity among companies. The net indebtedness of individual firms is the critical indicator of fragility, not the gross indebtedness of the company sector as a whole (as argued by Minsky). In retrospect, says Toporowski, Minsky might have better spent his Ph.D. years researching Schumpeter's monetary theory, which was similar to Kalecki's, and thereby avoided his inconsistency with Kalecki's theory of profits.

New Senior Scholars

The Levy Institute welcomes JAN KREGEL as senior scholar and director of its Monetary Policy and Financial Structure program. Kregel is distinguished visiting research professor at the Center for Full Employment and Price Stability of the University of Missouri–Kansas City. He was formerly chief of the Policy Analysis and Development Branch of the United Nations Financing for Development Office and deputy secretary of the U.N. Committee of Experts on International Cooperation in Tax Matters. Before joining the U.N., he was professor of economics at the Università degli Studi di Bologna and professor of international economics at Johns Hopkins University's Paul H. Nitze School of Advanced International Studies (SAIS); he also served as associate director of the SAIS Bologna Center from 1987 to 1990.

Kregel is the author of more than 160 papers and articles, which have been published in international academic journals including the *Economic Journal, American Economic Review, Journal of Economic Literature, Journal of Post Keynesian Economics, Economie Appliquée,* and *Giornale degli Economisti*, among other academic journals. His books include *Rate of Profit, Distribution and Growth: Two Views*, 1971; *The Theory of Economic Growth*, 1972; *The Reconstruction of Political Economy*, 1973 and 1975 (2nd ed.); *Theory of Capital*, 1976; *Origini e Sviluppo dei Mercati Finanziari*, 1996; and most recently, *International Finance and Development* (with J. A. Ocampo and S. Griffith-Jones), 2006.

Kregel studied primarily at the University of Cambridge, and received his Ph.D. from Rutgers University. He is a life fellow of the Royal Economic Society (U.K.), an elected member of the Società Italiana degli Economisti, and a distinguished member of the Asociacion Nacional de Economistas de Cuba.

NILÜFER ÇAĞATAY, formerly a research associate with the Gender Equality and the Economy program, has become a senior scholar, and will be working with Rania Antonopoulos toward the creation of a Center on Gender, Macroeconomics, and Globalization within the Institute.

Çağatay is associate professor of economics at the University of Utah, Salt Lake City. Her recent work has focused on gender and development; international trade theories; and on engendering macroeconomics and international trade theories and policies. In 1994, she co-founded the International Working Group on Gender, Macroeconomics, and International Economics (GEM-IWG). Between 1997 and 2000, she was economic adviser at the Social Development and Poverty Elimination Division of the United Nations Development Programme in New York.

Çağatay holds a B.A. in economics and political science from Yale University and an M.A. and a Ph.D. in economics from Stanford University.

New Research Scholar

THOMAS MASTERSON has joined the Levy Institute as a research scholar working chiefly on the Levy Institute Measure of Economic Well-Being within the Distribution of Income and Wealth program. Masterson has in the past worked as a consultant on rural economic development for the United Nations Development Programme and the World Bank, and was formerly assistant professor of economics at Westfield State College in Massachusetts. His specific research interests include the distribution of land, income, and wealth.

Masterson received a Ph.D. in economics from the University of Massachusetts, Amherst.

New Editor

BARBARA ROSS has joined the Levy Institute as an editor. She will review all Institute public documents and develop an overall style for published Institute research. Ross has served as an editor at *Forbes* magazine, as well as *Artforum*. At the Museum of Modern Art in New York, she was editor of the annual journal *Studies in Modern Art* and also oversaw editing of the museum's pilot website. She has been an educational researcher, archivist, and rare books cataloguer. Ross was educated at Rhodes College in Memphis, Tennessee, and at Columbia University.

Upcoming Event

16th Annual Hyman P. Minsky Conference

Global Imbalances: Prospects for the U.S. and World Economies

April 19–20, 2007
Blithewood
Annandale-on-Hudson, New York

This year's Minsky conference will draw upon public discussions on the state of the U.S. and world economies in the context of current economic trends and their implications. Topics will include fiscal and monetary policy, the U.S. trade deficit, jobs and outsourcing, and recent financial and currency market fluctuations.

Federal Reserve Board Governor Frederic S. Mishkin will give the keynote address on Friday, April 20. The conference will include presentations by Lakshman Achuthan, managing director, Economic Cycle Research Institute; Robert J. Barbera, chief economist, Hoenig & Company; James E. Glassman, managing director and senior policy strategist, J. P. Morgan Securities, Inc.; Peter Hooper, managing director and chief economist, Deutsche Bank Securities, Inc.; Wolfgang Munchau, associate editor, *Financial Times*; Paul McCulley, managing director, PIMCO; Dimitri B. Papadimitriou, president, Levy Institute; and James K. Galbraith, senior scholar, Levy Institute, and Lloyd M. Bentsen Jr. Chair in Government/Business Relations and professor of government at the University of Texas at Austin. Other speakers include Korkut A. Ertürk, research associate, Levy Institute, and professor of economics, University of Utah; L. Randall Wray, senior scholar, Levy Institute, and professor of economics and senior research associate at the Center for Full Employment and Price Stability at the University of Missouri–Kansas City; Jan A. Kregel, senior scholar, Levy Institute, and distinguished visiting research professor at the Center for Full Employment and Price Stability at the University of Missouri–Kansas City; and Robert W. Parenteau, chief U.S. economist and investment strategist, RCM.

For further information visit www.levy.org.

Publications and Presentations by Levy Institute Scholars

PHILIP ARESTIS *Senior Scholar*

Publications: "The New Attitudes about Inflation" (with J. McCombie and W. Mosler), *Challenge: The Magazine of Economic Affairs*, Vol. 49, No. 5, September/October 2006; "Fiscal Policy Matters" (with M. Sawyer), *Public Finance*, Vol. 54, Nos. 3–4, October 2006; "The Role and Nature of Monetary Policy When Money Is Endogenous" (with M. Sawyer), *Cambridge Journal of Economics*, Vol. 30, No. 6, November 2006; "Monetary Policy When Money Is Endogenous" (with M. Sawyer) in *Complexity, Endogenous Money, and Macroeconomic Theory: Essays in Honour of Basil J. Moore*, M. Setterfield, ed., Cheltenham, U.K.: Edward Elgar, 2006; *Growth and Economic Development: Essays in Honour of A.P. Thirlwall* (with J. McCombie and R. Vickerman, eds.), Cheltenham, U.K.: Edward Elgar, 2006; *A Handbook of Alternative Monetary Economics* (with M. Sawyer, ed.), Cheltenham, U.K.: Edward Elgar, 2006.

Presentations: "Monetary Policy in the U.K." (with A. Angeriz) and "EMU Economic Policy Perspectives," 10th international conference of the research network Alternative Macroeconomic Policies, titled "European Integration in Crisis," Berlin, October 27, 2006; "The Channels through which Financial Liberalization Influences Poverty" (with A. Caner), meeting of the Association for Evolutionary Economics, annual Allied Social Sciences Association conference, Chicago, January 5; "New Consensus Macroeconomics and the ECB Macromodel," 33rd Annual Conference of the Eastern Economic Association, New York, February 24.

WYNNE GODLEY *Distinguished Scholar*

Publications: *Monetary Economics: An Integrated Approach to Credit, Money, Income, Production, and Wealth* (with M. Lavoie), New York: Palgrave MacMillan, 2007; "A Simple Model of Three Economies with Two Currencies: The Eurozone and the USA" (with M. Lavoie), *Cambridge Journal of Economics*, Vol. 31, No. 1, January.

CAREN GROWN *Senior Scholar*

Publication: "Non-Governmental Organizations" in *The New Palgrave Dictionary of Economics*, Second Edition, L. Blume and S. Durlauf, eds., London: Palgrave-Macmillan, 2007.

Presentations: "Putting Women at the Center of Development," Earth Institute Sustainable Development Seminar, New York, December 8, 2006; "The Financial Requirements of Achieving Gender Equality and Women's Empowerment," paper presented at IAFFE-URPE panel, meeting of the American Economic Association (AEA), annual Allied Social Sciences Association (ASSA) conference, Chicago, January 5; "Gender and Development: Assessing Investments, Empowerment Strategies, and Measuring Women's Progress," panel discussion, IAFFE-URPE, meeting of the AEA, annual ASSA conference, Chicago, January 5; "Gender and Development: Some Reflections on 30 Years of Research," Young Women in International Development Group, New York, January 23; "Poverty from a Gender Perspective," keynote speaker, IPPF annual donor meeting, London, January 26; "Taking Stock of MDG 3: Progress and Way Forward" and "Achieving Gender Equality: How to Accelerate Progress and How Much Does It Cost?" African Development Bank Seminar on Gender and the MDGs: Translating Commitments into Actions and Results, Tunis, February 8; "Gender Equality, Poverty, and the Millennium Development Goals," School of Development Studies, University of KwaZulu-Natal, Durban, South Africa, February 28.

GREG HANNSGEN *Research Scholar*

Publications: "The Transmission Mechanism of Monetary Policy: A Critical Review" in *A Handbook of Alternative Monetary Economics*, P. Arestis and M. Sawyer, eds., Cheltenham, U.K.: Edward Elgar, 2006; "A Random Walk Down Maple Lane: A Critique of Neoclassical Consumption Theory with Reference to Housing Wealth," *Review of Political Economy*, Vol. 19, No. 1, January.

DIMITRI B. PAPADIMITRIOU *President*

Presentations: Interview regarding the Federal Reserve year in review with Greg Robb, MarketWatch.com, November 27, 2006; interview regarding Greek banks' expanding their operation in Turkey with Özer Turan, *Turkishtime*, December 12, 2006; interview regarding dollar reserve holdings of central banks in China and other Asian economies with Steven Johnson, Reuters, January 10; interview regarding the impact of growing debt on the economy with Michael E. Kanell, *Atlanta Journal-Constitution*, February 27.

EDWARD N. WOLFF *Senior Scholar*

Publications: Review of *Means-tested Transfer Programs in the United States*, edited by Robert A. Moffitt, in *Eastern Economic Journal,* Vol. 32, No. 2, Spring 2006; "The Global Distribution of Household Wealth" (with J. Davies, S. Sandström, and A. Shorrocks), *Wider Angle,* No. 2006/2.

Presentations: Press briefing on the study "The World Distribution of Household Wealth," United Nations University, New York, December 5, 2006; interview regarding the status of U.S. wages with Liz Claman, *Morning Call*, CNBC, December 27, 2006.

L. RANDALL WRAY *Senior Scholar*

Publications: "Money: An Alternative Story" (with E. Tymoigne) in *Handbook of Alternative Monetary Economics*, P. Arestis and M. Sawyer, eds., Cheltenham, U.K.: Edward Elgar, 2006; introduction and new chapter for the Spanish-language edition of his book *Understanding Modern Money* (2003), *El Papel Dinero Hoy: La Clave del Pleno Empleo y la Estabilidad de Precios*, trans. G. Feher, Mexico, D.F.: Universidad Nacional Autonoma de Mexico, 2006; "What a Long, Strange Trip It's Been: Can We Muddle Through without Fiscal Policy?" (with S. Kelton) in , C. Gnos and L.-R. Rochon, eds., Cheltenham, U.K.: Edward Elgar, 2006.

Presentations: "Demand Constraints, Secular Stagnation, and Big Government: The Contributions of Harold G. Vatter," Harold Goodhue Vatter Memorial Lecture in Economics, Portland State University, Oregon, October 25, 2006; "Veblen's Theory of Business Enterprise and Keynes's Monetary Theory of Production," meeting of the American Economic Association, annual Allied Social Sciences Association conference, Chicago, January 7; interview regarding the twin deficits with Peter Coy, *BusinessWeek*, February 21; "Credit Money, State Money, and Endogenous Money Approaches" (with P. Tcherneva, presenter), Eastern Economic Association annual conference, New York, February 23.

AJIT ZACHARIAS *Senior Scholar*

Presentation: "Class Structure and Economic Inequality," Department of Economics, University of Utah, Salt Lake City, December 14, 2006.

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