



HIGHLIGHTS

The Levy Economics Institute of Bard College

---

# *Public Policy Brief*

---

Highlights, No. 74A, 2003

## UNDERSTANDING DEFLATION

### Treating the Disease, Not the Symptoms

L. RANDALL WRAY and DIMITRI B. PAPADIMITRIOU

In recent months, many policymakers and analysts have fretted about the possibility that the U.S. economy might enter a protracted period of price deflation. What we find missing from most analyses on this topic is a clear discussion of the causes of the deflationary pressures that seem to afflict economies today on a global scale. Further, most discussions and analyses appear to presume that deflation is itself a bad thing, but do not identify the costs that might be associated with deflation. We argue that deflation can and usually does generate large economic and social costs, but it is more important to understand that deflation is itself a symptom of severe and chronic economic problems.

**In our view, those who believe that the Fed** can effectively battle deflationary pressures with its monetary tools (even using fairly unconventional tools, as many commentators urge, to “pump liquidity” into the economy and prop up prices) have neither identified the causes of deflation nor formulated policy to resolve the economic problems generating deflationary pressures. At best, they are merely treating symptoms, not the underlying disease.

---

The full text of this paper is published as Levy Institute Public Policy Brief No. 74, available at [www.levy.org](http://www.levy.org).

The Levy Economics Institute is publishing this brief with the conviction that it represents a constructive and positive contribution to the discussions and debates on the relevant policy issues. Neither the Institute's Board of Governors nor its advisers necessarily endorse any proposal made by the authors.

## Causes of Deflationary Pressures

The current situation in the United States must be examined in the context of the policy stance (both monetary and fiscal) of the past decade. Many blamed the Fed for easing monetary policy too little, too late in the early 1990s. Even when growth did pick up in the middle of the decade, the Fed still fretted about inflation, but maintained relatively low rates. By the end of the decade, the Fed could stand it no longer, and raised the federal funds rate in about eight steps in 1999 and 2000. In quick succession, the stock market collapsed, the New Economy crashed and burned, the official recession hit, and the Fed began to lower interest rates in another dozen-plus steps.

But that is at best half the story. The other half also begins in the early 1990s, when burgeoning budget deficits overcame a deficiency of private sector demand. For a number of reasons (some of which were analyzed in Wray 2000; Papadimitriou and Wray 2001a)—including the stock market “wealth effect,” New Economy hype, creative accounting, innovations in consumer credit, and what Greenspan labeled “irrational exuberance”—firms and consumers began to borrow and spend on an unprecedented scale. As many analyses published by The Levy Economics Institute proclaimed at the time (Godley 1999, 2003; Godley and Izurieta 2001; Godley and Wray 1999; Papadimitriou and Wray 1998, 2001a, 2001b), the expansion was highly unsustainable and would almost inevitably culminate in an ugly crash.

To be specific, the end would come when households and firms tried to bring their spending back into line with their incomes. If the private sector were to return to a budget surplus, the resulting decrease in demand would generate massive layoffs as firms tried to bring production down to match it. Further, tax revenues would fall precisely when all levels of government needed to increase spending to alleviate the problems that accompany recessions (Wray 2003). This means that those projected surpluses would not and could not be realized; indeed, very large government deficits would be restored.

And so it all came to pass—or, at least, it is currently underway. In our view, recovery is not right around the corner. At best, the economy might limp along with a “growth recession,” although a double-dip recession, in which output falls once again, is possible. There is even the possibility that things could get very much worse, if a full-scale deflation were to take hold. Let us turn to a worst-case scenario after first examining what we mean by deflation.

## Deflation: Definitions, Consequences, and Policies to Counter It

Deflation can be defined as a falling general, or overall, price level. Many analysts, when employing this usage, refer to one of the common price indices: the consumer price index (CPI), the GDP deflator, the wholesale price index, or an index of manufactured-goods prices.

Deflation is, in itself, not necessarily always and everywhere a problem—for several reasons. It is technically possible, though unlikely, to record a falling index (e.g., the CPI) even if no firm actually receives lower prices for its products. (This is because many components of the index have imputed or quality-adjusted prices.) One could even envision several scenarios, including a period of rising productivity (output per hour worked), in which firms or consumers would not see measured “deflation” as a problem.

While few analysts have been specific, most seem to be concerned about the possibility of a 1930s-style deflation. Irving Fisher (1933) called this a “debt deflation,” and economist Hyman Minsky was fond of pointing out that while output prices fell by “only” 25 percent during the Great Depression, asset prices fell by 85 percent. That is, unlike most current commentators, both Fisher and Minsky, when speaking of deflation, emphasized falling asset prices—most prominently of equities and farms in the 1930s—not falling indices of output prices. This is not to imply that the two price systems are unrelated. In Minsky’s view, competitive pressures and inadequate demand led to falling sales and output prices in the 1930s. The dearth of spending in turn led to layoffs and pressure to cut wages. Falling wages, however, depressed demand further and led to a vicious cycle of price cuts, declining wages, and falling employment and sales.

That was bad enough. But the 1920s had been marked by a run-up of private sector debt. Because debts are in nominal terms (fixed dollar amounts), falling prices and wages made it impossible to service the debt. Defaults snowballed and brought down the banking system, wiping out depositors’ savings. The lasting effects were fear of indebtedness, and hence the arrival of financial conservatism, as well as destruction of banker-borrower relations that impeded recovery and contributed to the decade-long depression. It was not until the start of World War II that the government began to run adequate deficits, and only then that the Great Depression came to an end—and the Keynesian golden age began.

Minsky's trenchant analysis (1986) identified the difference between prewar "small-government capitalism" and postwar "big-government capitalism." Spending equal to 20 to 25 percent of the nation's output, up from about 3 percent earlier in the century, enabled the federal government to counteract falling private demand during postwar recessions. In this way, falling private demand would not necessarily generate snowballing defaults on debts. In Minsky's view, deficits, together with intervention by the Fed as a lender of last resort to prevent bank runs, is what banished great depressions and debt deflations from the U.S. economy for the last six decades.

There is another approach to dealing with price deflation, but it was never seriously considered until the rise of monetarism in the 1970s. It is now the most commonly discussed. The central bank is supposed to be able to stop deflation by "pumping liquidity" into the economy. Proponents of this approach fail to realize that in the real world, central banks conduct monetary policy in one of two ways: they engage in open-market purchases of sovereign debt, or lend reserves at the discount window. In recent years, most analysts have come to recognize that these activities are nondiscretionary from the point of view of the central bank; that is to say, reserves are provided only when the banking system needs them. In the past, the Fed has experimented with borrowed-reserve and with nonborrowed-reserve targets, but total reserves (the sum of the two) cannot be set by the Fed at a level of its choice. Once the banking system has all the reserves it wishes to hold, further purchases by the Fed will simply generate excess reserve positions. This will place downward pressure on the overnight (federal funds) rate, ultimately driving it to zero, making further stimulation through monetary policy impossible. Japan is a current example of a nation in which excess reserves are allowed to remain in the banking system, resulting in a zero overnight interest rate.

### **The Worst-Case Scenario: A Debt Deflation**

Minsky warned that a small-government economy with complex financial relations would be subject to periodic episodes of debt deflation. Any historical debt series shows that private debt ratios (whether measured as debt-to-income or debt-to-net worth) have trended upward in the postwar period. Some periods, especially the 1980s and 1990s, show sharp accelerations of such trends.

Minsky worried that the very act of putting off an outright debt deflation encouraged increasingly fragile financial positions. Could "it" (debt deflation) happen again? Yes, Minsky thought, it might. Let us quickly review developments that might have made that worst-case scenario more possible.

First, the federal government has been "downsized"—partly because of the devolution of more responsibilities to state governments, partly because of reduced military spending, and partly because of attempts to balance the budget. The threat of deflation has been made worse by another development over the past two decades: the chronic and growing trade deficit. This deficit now runs some 5 percent of GDP. When we add together the full-employment budget surplus and the trade deficit, we have a "leakage" of aggregate demand that reaches to 6 or 7 percent of GDP when the economy grows robustly.

Competition from low-wage nations has also imperiled households' ability to repay their increasing debt out of wage income. As production shifts offshore, or as it is simply reduced due to low demand, more households find their incomes lowered and begin to experience difficulty making payments on debts run up over the course of the expansion.

In recent months, concerns have also arisen about Freddie Mac and Fannie Mae, the quasi-governmental home mortgage guarantors. Technically considered government-sponsored enterprises (GSEs), they package mortgages into bonds. Together, they own or guarantee 42 percent of the U.S. mortgage market. If real estate markets cool, and some regions begin to experience falling values, the entire mortgage-backed securities market could be in trouble.

The final point here concerns the deteriorating condition of state budgets. States have been forced to cut spending between \$20 billion and \$40 billion, and some have raised taxes as well. It is likely that very large deficits will open up over the coming year, as tax revenues continue to fall far short of projections. Unlike the federal government, state and local governments can be (and occasionally are) forced to default on their debts. Even if they do not, budget cutting, layoffs, and tax increases will begin to take a greater toll on the economy this year.

## Conclusion: Likely Prospects and Effective Policy Responses

Falling indices of output prices can be generated by several mechanisms: increases in productivity, quality increases and hedonic imputations of prices, competition from low-cost producers, or depressed aggregate demand. These causes are not equally pernicious.

We believe that the probability of significant deflation of output prices, even as imperfectly measured by conventional indices, is not great. Nor do we believe that falling output prices alone would be sufficient to wreak havoc on the economy. Rather, the real danger comes from the possibility of a deflation of asset prices. In a worst-case scenario, “fire sales” of assets could occur, setting off a classic Fisher-Minsky debt-deflation spiral.

Is there an alternative? During World War II, Evsey Domar (1944) remarked that the best solution to heavy indebtedness is economic growth. But not just any type of growth will alleviate overindebtedness of the private sector. It was, after all, the relatively robust and private sector-led growth during the Clinton expansion, as well as the sluggish recovery since 2001, that resulted in the current high debt loads. The public sector must take the lead.

If the current account deficit remains in the 4-to-5-percent range, the government sector as a whole (federal, state, local) would have to run a deficit of 7 to 8 percent of GDP to allow the private sector to run the surplus that has been typical since World War II (Papadimitriou et al. 2002). This would best be achieved by means of a discretionary federal government stimulus package, rather than a recession that saps tax revenues. A broad-based tax cut could boost household incomes, allowing improvement of balance sheets without requiring curtailed consumption. Cutting payroll taxes would help a broad swath of the population; some estimates show that 80 percent of all taxpayers pay more in payroll taxes than in income taxes (Wray and Tcherneva 2001). We would also favor a permanent tax credit to employers equal to 50 percent of their Social Security payroll taxes paid.

Together, these provisions would add some \$220 billion annually to the economy and would increase the federal deficit (all else being equal) by a bit over 2 percent of GDP. We advocate increasing the federal government’s emergency support to states in order to stem pressures on them to slash budgets. An additional \$100 billion to states would allow them to eliminate

budget shortfalls and to deal with increased needs until the economy turns around.

Much of this stimulus would be phased out as the economy recovers. In addition to the payroll tax credit for employers, discussed above, we would advocate increased federal government support for public infrastructure investment in the range of 1 percent of GDP annually.

In conclusion, we view any evidence of output price deflation, or, at least, of deflationary pressures, mostly as a symptom of an underlying disease. That disease is inadequate demand. The causes of the disease are surely multifarious: overindebted households and firms, competition by low-cost producers overseas (at least some of this coming from American firms that have relocated), serious demand problems outside the United States (again, for a wide variety of reasons), state and local government budget problems, and excessive investment and saturation in some sectors of the economy (notably the high-tech sector). To that list, we would add—and single out as perhaps the most important contributing factor—the excessively tight federal government budget that had its beginnings in the balanced budget initiatives at the end of the 1980s. Fortunately, this factor is (economically) the easiest to remedy. But if views of the proper role of the federal government do not change, the probable economic scenarios range from bad to worse.

## References

- Domar, Evsey D. 1944. “The Burden of the Debt and the National Income.” *American Economic Review* 34:4: 798–827.
- Fisher, Irving. 1933. “The Debt-Deflation Theory of Great Depressions.” *Econometrica* 1:4: 337–357.
- Godley, Wynne. 1999. *Seven Unsustainable Processes: Medium-Term Prospects and Policies for the United States and the World*. Strategic Analysis. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.
- . 2003. *The U.S. Economy: A Changing Strategic Predicament*. Strategic Analysis. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.
- Godley, Wynne and Alex Izurieta. 2001. *The Developing U.S. Recession and Guidelines for Policy*. Strategic Analysis. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.

Godley, Wynne and L. Randall Wray. 1999. "Can Goldilocks Survive?" Policy Note 1999/4. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.

Minsky, Hyman P. 1986. *Stabilizing an Unstable Economy*. New Haven: Yale University Press.

Papadimitriou, Dimitri B., Anwar M. Shaikh, Claudio H. Dos Santos, and Gennaro Zezza. 2002. *Is Personal Debt Sustainable?* Strategic Analysis. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.

Papadimitriou, Dimitri B. and L. Randall Wray. 1998. "What to Do with the Surplus: Fiscal Policy and the Coming Recession." Policy Note 1998/6. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.

———. 2001a. "Are We All Keynesians (Again)?" Policy Note 2001/10. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.

———. 2001b. "Fiscal Policy for the Coming Recession: Large Tax Cuts Are Needed to Prevent a Hard Landing." Policy Note 2001/2. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.

Wray, L. Randall. 2000. "Can the Expansion Be Sustained? A Minskian View." Policy Note 2000/5. Annandale-on-Hudson, N.Y.: The Levy Economics Institute.

———. 2003. "The Perfect Fiscal Storm." *Challenge* 46:1: 55–79.

Wray, L. Randall and Pavlina Tcherneva. 2001. "Tax Cut Facts." Policy Note 01/01. Kansas City: Center for Full Employment and Price Stability.

## About the Authors

DIMITRI B. PAPADIMITRIOU is president of the Levy Institute. His areas of special interest are community development banking, banking and financial structure, the Federal Reserve, monetary and fiscal policy, and the distribution of wealth and income in the United States. He is continuing his research on the use of price indices as targets for monetary policy, and will apply the findings to OECD countries. His interests also include measures of well-being and the effects of macroeconomic policy on the distribution of income. In addition to his duties as president of the Levy Institute, Papadimitriou is executive vice president and Jerome Levy Professor of Economics at Bard College. He was a visiting distinguished professor at the Shanghai Academy of Social Sciences from October to November 2002 and recently served as vice chairman of

the congressional U.S. Trade Deficit Review Commission. Papadimitriou is general editor of the Levy Institute book series and a member of the editorial board of the *Review of Income and Wealth*. He received a Ph.D. in economics from New School University.

Senior Scholar L. RANDALL WRAY is working in the areas of monetary policy, employment, and social security. He is a leading expert in the "chartalist" theory of money. His other interests include proposals for the government to act as the employer of last resort. He has used the ideas of the late Hyman Minsky to analyze current U.S. economic problems. Wray has published widely in journals and is the author of *Understanding Modern Money: The Key to Full Employment and Price Stability* (Elgar 1998). He is a professor of economics and a senior research associate of the Center for Full Employment and Price Stability at the University of Missouri–Kansas City. He received a B.A. from the University of the Pacific and an M.A. and a Ph.D. from Washington University in St. Louis.

## Recent Public Policy Briefs

### *Understanding Deflation*

*Treating the Disease, Not the Symptoms*

L. RANDALL WRAY and DIMITRI B. PAPADIMITRIOU  
No. 74, 2003 (Highlights, No. 74A)

### *Asset and Debt Deflation in the United States*

*How Far Can Equity Prices Fall?*

PHILIP ARESTIS and ELIAS KARAKITSOS  
No. 73, 2003 (Highlights, No. 73A)

### *What Is the American Model Really About?*

*Soft Budgets and the Keynesian Devolution*

JAMES K. GALBRAITH  
No. 72, 2003 (Highlights, No. 72A)

### *Can Monetary Policy Affect the Real Economy?*

*The Dubious Effectiveness of Interest Rate Policy*

PHILIP ARESTIS and MALCOLM SAWYER  
No. 71, 2003 (Highlights, No. 71A)

***Physician Incentives in Managed Care Organizations***

*Medical Practice Norms and the Quality of Care*

DAVID J. COOPER and JAMES B. REBITZER

No. 70, 2002 (Highlights, No. 70A)

***Should Banks Be “Narrowed”?***

*An Evaluation of a Plan to Reduce Financial Instability*

BIAGIO BOSSONE

No. 69, 2002 (Highlights, No. 69A)

***Optimal CRA Reform***

*Balancing Government Regulation and Market Forces*

KENNETH H. THOMAS

No. 68, 2002 (Highlights, No. 68A)

***The Economic Consequences of German Unification***

*The Impact of Misguided Macroeconomic Policies*

JÖRG BIBOW

No. 67, 2001 (Highlights, No. 67A)

***Racial Wealth Disparities***

*Is the Gap Closing?*

EDWARD N. WOLFF

No. 66, 2001 (Highlights, No. 66A)

***Easy Money through the Back Door***

*The Markets vs. the ECB*

JÖRG BIBOW

No. 65, 2001 (Highlights, No. 65A)

***Campaign Contributions, Policy Decisions, and Election Outcomes***

*A Study of the Effects of Campaign Finance Reform*

CHRISTOPHER MAGEE

No. 64, 2001 (Highlights, No. 64A)

***The Future of the Euro***

*Is There an Alternative to the Stability and Growth Pact?*

PHILIP ARESTIS, KEVIN McCAULEY, and MALCOLM SAWYER

No. 63, 2001 (Highlights, No. 63A)

Public Policy Briefs are published in full-text and highlights versions. Briefs and all other Levy Institute publications are available online on the Levy Institute website, [www.levy.org](http://www.levy.org).

To order a Levy Institute publication, call 845-758-7700 or 202-887-8464 (in Washington, D.C.), fax 845-758-1149, e-mail [info@levy.org](mailto:info@levy.org), write The Levy Economics Institute of Bard College, Blithewood, PO Box 5000, Annandale-on-Hudson, NY 12504-5000, or visit our website at [www.levy.org](http://www.levy.org).



**The Levy Economics Institute of Bard College**

Blithewood

PO Box 5000

Annandale-on-Hudson, NY 12504-5000

**NONPROFIT ORGANIZATION**

**U.S. POSTAGE PAID**

**ANNANDALE-ON-HUDSON, NY**

**PERMIT NO. 12**

*Address Service Requested*