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UNDERSTANDING DEFLATION

Treating the Disease,
Not the Symptoms

L. RANDALL WRAY and

DIMITRI B. PAPADIMITRIOU

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Preface

As this brief goes to press, figures have been released suggesting that the U.S. economy is growing at a rapid pace. Federal Reserve Chairman Alan Greenspan has downplayed earlier warnings about the threat of deflation. Nevertheless, wholesale prices are falling in several major economies in Asia, and a sharp decline in U.S. real estate values would not come as a complete surprise. Many observers appear to be underestimating the continuing threat of deflation, at least where decreases in the value of assets such as securities and homes are concerned.

Most recent discussions of deflation seem to overlook the main dangers posed by a deflationary economy and appear to offer superficial solutions. L. Randall Wray and I argue in this brief that, barring drastic changes in asset and output prices, deflation itself is not the main problem, but rather the recessionary conditions that sometimes give rise to deflation. Whether or not prices are falling, the proper remedy for a recession is the Keynesian one: government deficit spending, used to finance useful programs and tax cuts. These measures will reduce unemployment, increase growth, and relieve deflationary pressures.

Two alternative strategies for avoiding deflation have garnered more attention than the Keynesian one. One is to rely on private sector purchases to keep the economy moving, while balancing the federal budget. As we argue in the brief, unless the current account balance is greatly improved, a balanced government budget would entail a huge amount of new borrowing by the private sector, which is already saddled with record amounts of debt. The private sector will more likely reduce the rate at which it accumulates debt; this should be welcomed and encouraged by policymakers.

The second strategy bandied about in recent months has been to manipulate the money supply, that old shibboleth of the monetarist

school of economics. Efforts to change the money supply in one direction or another, as distinguished from adjusting the interest rate, have never been successful in the United States. The Federal Reserve Bank carries out the Open Market Committee's directives by purchasing or selling reserves, not by giving gifts of cash to the public. When the banks have sufficient reserves, they are not willing to hold more unless the interest rate on reserves falls, which is not an option, given that the Fed is committed to maintaining a specific federal funds rate. If the Fed wants to cut the interest rate on reserves, it can do so, but banks will not increase their reserve holdings much, since they prefer to hold assets that earn a healthy rate of return. Hence, no alternatives exist to deficit spending as a viable solution to the problem of deflation.

In this brief, Wray and I describe what we believe are the main conditions creating deflationary pressures in the U.S. economy, primarily efforts in the recent past to eliminate federal budget deficits. We define deflation and distinguish between those instances in which it poses a real threat to the economy and more benign cases. We discuss in detail the remedies suggested above. Finally, we describe a possible worst-case deflationary scenario and how it might come about in the current environment. We conclude that, as our late colleague Hyman Minsky warned, "it"—a deflation leading to depression—could very well happen again if decisive action is not taken soon.

We applaud the attention recently given by policymakers to the possibility of deflation. We hope this brief introduces some fresh ideas into the discussion and ultimately helps provide policymakers with the appropriate tools to deal with the disease of deflation, before its symptoms become too severe.

As always, your comments are welcome.

Dimitri B. Papadimitriou, *President*

November 2003

Understanding Deflation

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. Price data have been scoured for evidence, but are not yet conclusive. Federal Reserve officials have tried to calm markets by asserting they have at hand a number of tools to fight deflation. Those who consider deflation a real threat point to Japan, while naysayers argue that our economy is different, and our policymakers are more astute. Some time ago, Fed Chairman Alan Greenspan added to the confusion by eliminating the “D” word from his public pronouncements, trying to reassure markets that economic recovery is imminent and hinting that the real threat is renewed inflation.

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. This distinction becomes relevant to the design and implementation of economic policy. For example, if deflation is the primary problem, then one might propose policies specifically designed to stop prices from falling.

If, however, deflation serves mostly as the canary in the coal mine, policy should be aimed at the underlying economic problems that generate deflationary pressures rather than at the falling general price level. One can make a similar distinction between the early and later New Deal policies. The former were mostly devoted to maintaining prices and wages, while the latter tried to resolve problems of unemployment and

deficiency of demand that were largely responsible for deflationary pressures. 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 not identified the causes of deflation, nor have they formulated policy to resolve the economic problems generating deflationary pressures. At best, they are merely treating symptoms, not the underlying disease.

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. Ten years ago, the economy was faltering after a double-dip recession, with slow growth and almost no job creation. Many blamed the Fed for easing monetary policy too little, too late. Even when growth did pick up in the middle of the decade, the Fed still fretted about inflation. Many analysts advocated a policy of “speed limits,” according to which the Fed would tighten rates if economic growth exceeded the 2.5 percent that was believed to indicate “full employment” potential (Bell and Wray 1998). However, the Greenspan-helmed Fed eventually came to the view that the speed limits of the past no longer applied to the New Economy. For a variety of reasons, economic growth picked up, unemployment hovered around 4 percent, and while the chairman and other Fed governors continually warned that inflation lurked just around the corner, the Fed 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.

Such a story, which emphasizes the important role played by the Fed over the past decade, could be told by Fed detractors and supporters alike. One might see in that story brilliant management by Chairman Greenspan, who engineered the longest expansion in U.S. history, wiped out inflation, and skillfully induced a soft landing designed to purge excesses resulting from more-than-full employment. Alternatively, one could argue that the

chairman blundered into, and contributed to, the worst speculative bubble in world history and then raised rates to fight nonexistent inflationary pressures, only to throw the economy into a dangerous deflationary spiral. The latter interpretation is now taking hold in markets, as evidenced by a cascade of editorials calling into question the unqualified praise Greenspan received earlier in his tenure (Morgenson 2003; Krugman 2003).

But that is at best half the story. The other half begins a bit earlier, in the early 1990s, when burgeoning budget deficits overcame a deficiency of private sector demand. The economy began to recover from the Bush I recession at that time. 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. This activity not only overcame the fiscal drag built into the budget by the Gramm-Rudman-Hollings deficit limits, but actually generated large and rising surpluses that were projected to continue through the end of the first quarter of the new century. 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. Given the presence of a structural external deficit (a hypothetical current account deficit in conditions of full employment) and a large structural government surplus (likewise, a surplus that would exist, given current tax law, in an assumed full-employment economy), moderate growth requires that the private sector run deficits (Godley 1999, 2000; Godley and Izurieta 2001; Papadimitriou et al. 2002). Traditionally, however, private sector deficits were rare and short-lived before 1996; indeed, the typical private sector budget carried a surplus of some 2 or 3 percent of GDP (except during robust booms). If the private sector were to return to a more normal budget surplus, the resulting decrease in demand would generate massive layoffs as firms tried to bring production down to match it. The number of unemployed would increase by millions, creating snowballing financial

difficulties as households lost jobs and incomes, and as firms faced falling sales revenues. Further, tax revenues would fall precisely when all levels of governments 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. In either case, job losses will continue to occur because the economy will grow too slowly. 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, or one of the somewhat narrower indices, such as the wholesale price index or an index of manufactured-goods prices. However, this definition leads to some ambiguity and raises many questions. All price indices are artificial constructs and reflect assumptions about weighting schemes, and indeed which prices to include. The CPI and GDP deflator include many “imputed” prices of goods and services that are not regularly sold in markets. Measuring prices through time (which is essential to determine whether prices are falling) leads to well-known problems arising from upgrades in goods and changes in their weights in the typical consumer’s market basket.

In other words, deflation is, in itself, not necessarily always and everywhere a problem—for several reasons. First, it is certainly possible, though unlikely, to record a falling index (e.g., the CPI) even if no firm actually receives lower prices for its products. This could happen, for example, if technological advances led to improved quality of all (or a

significant portion of) output produced at constant costs. Quality-adjusted prices calculated for the index would then fall even though actual sales prices (hence, revenues and incomes) remained constant. In several other scenarios, including rising productivity (output per hour worked), firms or consumers would not see the measured “deflation” as a problem. Indeed, a vibrant and innovative market economy would expect to see such price changes frequently and on a large enough scale to affect overall price indices, sometimes pushing them up, other times pushing them down. But such changes should not worry policymakers and thus should not lead to policy responses.

As our late colleague Hyman Minsky emphasized, prices serve many functions in a modern economy. Prices allow firms to cover costs and to accumulate financial reserves to finance investment internally. All things being equal, each firm prefers to sell at a higher price than a lower price. However, falling prices of output for a firm, industry, or even a sector can be consistent with long-term strategic plans. During the New Economy boom, for example, prices of high-tech products were generally falling for a wide variety of reasons, some of which are well known. First, there is the normal “product cycle,” in which new products sell at high prices to upper-income households, and then sales gradually filter down to lower-income households as prices fall (VCRs and cellular phones are good examples). Second, rapid technological advances, especially in the manufacture of computers and peripherals, led to rapidly falling production costs, while competition forced retail prices down. (Quality-adjusted prices fell at an even faster pace.) Third, manufacture of high-tech products moved to low-cost foreign producers, as did provision of many services associated with the sector. Hence, falling sales prices were not necessarily inconsistent with healthy performance by firms (effects on consumers were also good, although displaced workers suffered). While the New Economy innovations probably could not have generated deflation as measured by conventional indices, innovations affecting larger sectors of the economy might be capable of generating benign, measured deflation on an economywide scale. This is not the kind of deflation that should worry policymakers.

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 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—due in large part to declining investment spending as well as inappropriate fiscal policy—led to falling sales and output prices in the 1930s. This 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: the first consumer debt explosion occurred in the 1920s; farmers borrowed heavily to finance land purchases; and firms began to rely more heavily on external finance with the rise of what Rudolf Hilferding (1981) called “finance capitalism.” Because debts are in nominal terms (fixed dollar amounts), falling sales prices and wages made it impossible to service the debt. Defaults snowballed and brought down the banking system, wiping out depositors’ savings. Minsky liked to say that the financial system became “simplified” as most financial assets and liabilities disappeared. The lasting effects were fear of indebtedness, and hence the arrival of financial conservatism, as well as destruction of banker-borrower relations, all of which impeded recovery and contributed to the decade-long depression (made worse, as discussed below, by errant fiscal constraint).

Note that several of the early New Deal programs, such as agricultural price supports, were designed specifically to halt the fall of product prices and wages. These programs apparently were based on the belief that the main problem was the falling prices and wages themselves. They were largely unsuccessful: in addition to constitutional problems, market pressures induced firms to circumvent the programs to cut wages and prices anyway. One could see these as attempts to treat the symptoms (wage and price declines) rather than the underlying disease (insufficient demand). Many of the later New Deal programs were designed to restore demand: direct employment programs (Works Progress Administration, Civilian

Conservation Corps) and various income support programs (the biggest was Social Security). It is our belief that these proved much more successful than the early programs precisely because they were aimed at the disease, not the symptom of falling prices.

Unfortunately, those New Deal programs that were designed to prop up aggregate demand were overcome by attempts to balance the budget in 1936. 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 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. The government's deficit would increase (largely automatically, as tax revenues linked to economic performance fell even as income support spending rose) and provide a needed boost to demand. More importantly, according to Minsky (1992), the rising deficit would prop up corporate profits (as demonstrated in what is called the Levy-Kalecki profits equation¹) and thereby help firms meet their contracted payment commitments. In this way, falling private demand would not necessarily generate snowballing defaults on debts and culminate in a Minsky-Fisher debt deflation. 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. The question is whether the postwar arrangements and financial structures have evolved to the point that "it" can happen again—a question we will address in the next section.

There is a third 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. This of course follows on from the famous claim by Milton Friedman and Anna J. Schwartz that the Great Depression was caused by foolish Fed policy: when the Fed reduced the money supply, prices collapsed and generated widespread bankruptcy. The solution? Increase the rate of growth of the money supply. Commentators have not been specific, but there is a commonly

held belief that Fed “control of the monetary pump” is the answer to deflation. Let us examine this possibility in a bit more detail.

Friedman once joked that we can analyze central bank injections of money into the economy by assuming that helicopters simply drop it from the sky. In the real world, no central bank would even consider such a policy. Rather, real-world central banks either engage in open market purchases of sovereign debt, or lend reserves at the discount window.² It is very important to understand that central banks take these actions in order to provide banking system reserves.³ In recent years, most analysts have come to recognize that provision of reserves is nondiscretionary from the point of view of the central bank; that is to say, reserves are provided only when the banking system needs them. The reason is rather simple. When banks do not have sufficient reserves, they go to the overnight, interbank market (called the federal funds market in the U.S.) to borrow the reserves they need. If the banking system as a whole is short of reserves, the bids to borrow exceed the offers to lend, placing upward pressure on the federal funds rate. All central banks operate with an overnight rate target, and when the market rate is bid above the target-rate range, the central bank intervenes to provide reserves. 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.

However, in recent months, some commentators have asserted that even if the federal funds rate target approaches zero, the Fed will still be able to provide stimulus by “pumping liquidity” into the economy. (See Bernanke 2002 for the more-or-less definitive statement.) Some have said this will be accomplished by buying longer-term government bonds, or even by purchasing privately issued debt. However, 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 federal funds rate, ultimately driving it to zero. Further purchases by the Fed will simply cause a substitution on bank balance sheets of nonearning reserves for bonds. The end result will not be that the money supply has increased, but rather that banks will hold more (excess) reserves and fewer bonds. In addition, the federal funds rate will be stuck at zero, and it is probable that interest rates on longer-maturity

bonds will also be reduced.⁴ Moving to a zero federal funds rate target could add some stimulus to the economy (Japan's experience to date should cause one to doubt the strength of such medicine), but once a zero rate is reached, monetary policy becomes impotent.⁵ It is really not helpful to imagine helicopter drops, or to talk of "pumping liquidity" into the economy: all that will really result is a zero federal funds rate target.

In a recent interview, Friedman admitted that evidence accumulating over the past several decades has thoroughly discredited the two main monetarist beliefs he once held: that the central bank can and should hit monetary targets, and that the money supply is reliably related to prices (London 2003). While we are not sure what his views are concerning the current discussion about "pumping liquidity" into the banking system to fight deflation, we are certain that such pronouncements are not helpful to policy formation.

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. It is necessary to explain briefly why financial arrangements matter. Minsky emphasized that the new stage of capitalism developed in the early 20th century included increased reliance on the external finance of investment spending. According to Minsky, as the 20th century progressed, a "layering" of finance developed, with ever-larger portions of positions in assets financed by borrowing. Ironically, the existence of big government and the absence of depressions and debt deflations in the postwar economy actually encouraged "balance-sheet adventuring" through increased leverage (or borrowing). Indeed, 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 attributed the "explosive" growth of debt leveraging in the 1980s to financial innovations, and in particular to increased use of leveraged buyouts (in which prospective income flows of the takeover target were pledged against the loans used in the buyout). But Minsky would argue that even though individual defaults occurred, and even though financial crises

sometimes resulted (as in the case of the savings and loan crisis of the 1980s), no general debt deflation occurred, owing to deficit spending and federal bailouts.

However, Minsky also worried that absence of a debt deflation encouraged increasingly fragile financial positions—and, as just mentioned, debt ratios have indeed climbed steadily. 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 devolution of more responsibilities to state governments, partly because of reduced military spending, and partly because of the attempts to balance the budget (already discussed above). By the end of the 1990s, federal government spending had declined to just over 17 percent of GDP, a fall of some 3 percentage points below what was common in the postwar period. And, importantly, tax revenues had not fallen much: they were still running about 20 percent of GDP, in spite of the much-vaunted tax cutting efforts of President Reagan a decade earlier. This meant that a demand gap of nearly 3 percentage points had opened up. To be sure, slower economic growth since then has eliminated the budget surplus and generated a large deficit. However, the government budget has been structured to run surpluses at adequate rates of growth, so as to act as a drain on demand (called “fiscal drag” in the early 1960s), and this tight fiscal stance exerts a chronic drain on disposable incomes and profits, making debt that was emitted in each expansion harder to service.

These deflationary conditions have been aggravated 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. This leakage must be made up by a private sector “injection,” that is, through spending in excess of income by households and firms taken as a whole. It is thus no coincidence that the Clinton boom was characterized by a private (business and personal) sector deficit that reached above 6 percent of GDP. Meanwhile, exposure to fierce foreign competition has made it more difficult for businesses to maintain prices of final output, and, hence, to service their debt.

Mirroring the troubles of firms, 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. While the pace of personal borrowing has subsided a bit in recent months, it is no secret that consumers have carried the economy since 2000, largely by borrowing against home equity. As late as the first half of 2003, household debt was still growing at 10 percent per year: household debt now stands at 83.5 percent of national income, up from 76 percent in 2000 (Crooks 2003). The Federal Reserve has recently reported that as of August 2003, the overall level of consumer credit outstanding (revolving and nonrevolving credit, excluding mortgages) stood at an all-time high of \$1.96 trillion.

In discussing deflation, the aftermath of the bursting of Wall Street's bubble is also noteworthy. Many households lost financial wealth as equity values plummeted, creating some financial distress and leading to some moderation of consumption. What is only now being realized, however, is the long-term damage that has been done to the private pension system. About 44 million private sector workers and retirees are covered by "defined benefit" plans, which pay a preset amount at retirement and typically hold portfolios biased toward equities holdings. The three-year bear market has already forced some of these defined benefit plans into default, and estimates place the remaining plans some \$400 billion short (Walsh 2003a, 2003b, 2003c). Unless Congress approves relief, companies will have to contribute \$125 billion next year; because there is a long lag built into the system—even if the autumn equity price rally continues—firms will have to continue to make such contributions for several years to come.⁶ The dilemma: Forcing firms to set aside more cash for their pension plans will force them to cut elsewhere, adding to the deflationary pressures. Alternatively, some firms will use bankruptcy or mergers to eliminate defined benefit plans—strategies that increase the burden on retirees. If equity markets do not recover and post moderate gains, and if the economy does not begin to grow more rapidly to generate household income and corporate profits, the Pension Benefit Guaranty Corporation (PBGC, the government agency that guarantees pensions) could, according to

Treasury Secretary John W. Snow, face a “financial meltdown similar to the savings and loan collapse of 1989” (Walsh 2003a).

In recent months, concerns have also arisen about the quasi-governmental home mortgage guarantors, Freddie Mac and Fannie Mae, technically government-sponsored enterprises (GSEs) that are widely believed to have the “full faith and credit” of the U.S. government behind them. Together, they own or guarantee 42 percent of the U.S. mortgage market. Freddie Mac is accused of misstating earnings and has recently ousted four of its top managers. It has been reported (Bloomberg News 2003) that the European Central Bank is selling off its portfolio of Freddie Mac and Fannie Mae securities and has advised its 12 member central banks to do the same. The difference in interest rates between securities issued by these agencies and U.S. Treasury debt has widened on worries about credit risk. More generally, it has become apparent that U.S. real estate markets may be approaching a peak, and mortgage rates appear to have reached bottom and started upward. If real estate markets cool, and some regions begin to experience falling values, the entire mortgage-backed securities market could be in trouble.

Ultimately, it is probable that the federal government would bail out the PBGC, Freddie Mac, and any other GSE that threatened to fail. The question is, at what point would the government step in, and what conditions would it impose on the agencies it rescued? When the savings and loans failed, the Bush (senior) administration’s rescue plan was formulated and executed in such a way that asset prices were depressed by “fire sales” of thrift assets by the Resolution Trust Corporation. It is impossible to know how the Bush (junior) administration would react to a possible crisis involving the PBGC or any GSE. It should be remembered that most of the thrift industry’s excesses came in the middle of a long expansion that was fueled by large government deficits (rather than solely by private borrowing). By contrast, our current situation comes at the end of the second of two very long expansions (the Reagan and Clinton years) and very rapid growth of private sector debt for more than a decade and a half. In Minsky’s terminology, today’s economy, taken as a whole, is much more fragile than it was during the savings and loan crisis.

The final point we would make here concerns the financial position of state budgets. This has recently received a great deal of press, especially

focused on California—the governor of which has been recalled in part because of its budget problems. The state cut \$12 billion from its spending and plans to cut at least another \$8 billion for this year (Uchitelle 2003). Even that will not be enough, so the state has been forced to engage in creative accounting—for example, by selling the state’s right to collect tobacco settlement money—and borrowing. While California’s situation is arguably the worst, states have been forced to cut spending between \$20 billion and \$40 billion, and some have raised taxes as well. All but two states are required by their constitutions or statutes to balance budgets, but in practice, this means they only need to attempt to submit balanced budgets for the coming year. 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 for the simple reason that states already made the least painful adjustments during the past three years. The financial straits of states have already been proclaimed as the worst since the Great Depression. But if our prognosis is correct, things are likely to get very much worse before they get better.

Conclusion: Likely Prospects and Effective Policy Responses

Falling indices of output prices—which are what most commentators seem to worry about—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. Falling output prices, in turn, can have deleterious effects, especially on the ability to service debts fixed in nominal terms, but of course that burden depends on the indebtedness of households and firms.

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. Stock prices are still down significantly from their 2000 prerecession peak, and a recent Levy Institute study by Arestis and Karakitsos (2003) makes a strong case that a double-dip recession could cause them to fall by as much as another 25 percent. Real estate prices also appear to be excessive compared to long-term trends. Given the rising leverage ratios that are increasingly accepted by financial markets, the margins of safety have been reduced considerably over the past two decades. Therefore, fairly small negative movements of the value of real estate (and other) assets can reduce their value below the debt issued in their purchase. (Indeed, the effects of a real estate market crash would be more widespread across American households than were the effects of the stock market tumble after 2000.) In a worst-case scenario, this would lead to “fire sales” of assets, pushing their prices down farther and setting off a classic Minsky-Fisher debt-deflation spiral. Experience shows that the impacts of such crises on expectations and confidence are so devastating that recovery can take a decade or more; see the discussion of Japan below. Also, the suffering of the unemployed is intolerable for any democratic nation.

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. By the logic of national accounting, if our economy tends to run a current account deficit, then the government sector must run a deficit of equal size (relative to GDP) to permit the domestic private sector to run a financial balance (income equal to expenditures). (In these accounts, the public and private domestic balances must add up to the foreign balance.) Taking the opposite route, that is, trying to rely on private sector spending to fuel an expansion in the context of government “fiscal prudence,” will tend to increase private sector indebtedness and generate the kind of financial fragility that makes a debt deflation possible.

The U.S. federal government budget has already relaxed by some 7 percent of GDP, moving toward a deficit that might reach 5 percent of GDP before the end of this year. This has gone a long way toward allowing

the private sector to bring its spending into line with its income. However, on average, except when the economy grows robustly, the private sector runs a surplus (spending less than its income) equal to some 2 to 3 percent of GDP. In downturns, that surplus can sometimes run twice as high. 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 such a large private sector surplus (Papadimitriou et al. 2002). This would allow private sector portfolios to recover as surpluses allowed net wealth to rise.

One possible scenario is that the economy will stagnate as private sector spending falls, lowering demand and income, and, thus, tax revenues. Federal government spending would not fall (at least not as quickly), so the budget deficit will continue to expand until it reaches levels needed to allow the private sector to run a 3-percent surplus. The large federal deficit would then maintain aggregate demand at a level such that GDP growth remained slightly positive; private sector balance sheets would improve very slowly as households and firms gradually paid down some debt by spending less than they brought in. Barring large defaults (say, by mortgage lenders or pension funds) that might snowball, the overall financial position would eventually improve to the point that private spending would begin to grow. Net job creation would resume, and the economy would finally enjoy an expansion. We label this the “muddling-through” scenario. The question, of course, is how long this process could take.

Bear in mind the case of Japan, where deficits have run at 7 to 8 percent of GDP for several years, and the economy is only now showing signs of emerging from stagnation. In a similar muddling-through vein, the U.S. private sector could work off much of its debt and accumulate federal government bonds. After several years of deficits in the appropriate range, some trillions of dollars of government debt would be added to private sector portfolios, going a long way toward replacing wealth lost in the stock market downturn or at risk in a future real estate downturn.

A more favorable scenario might be achieved with a quicker, discretionary, federal government stimulus package. A broad-based tax cut could boost household incomes, allowing improvement of balance sheets without requiring curtailed consumption. Capital gains tax cuts, cuts of taxes on dividends, or even across-the-board income tax cuts are not the

best way to do this, for the simple reason that these will not put much money into the hands of most Americans. This is because most Americans pay little to nothing in the way of federal income taxes. In 1998, the top 13 percent of all taxpayers paid almost 70 percent of all federal income tax; the bottom three-quarters of income earners paid only 17 percent (Wray and Tcherneva 2001).

A far better way to help most Americans is to cut payroll taxes; some estimates show that 80 percent of all taxpayers pay more in payroll taxes than in income taxes (Wray and Tcherneva 2001). We do not want to revisit the debate about Social Security's finances here, but to allay concerns that this will gut the program, we suggest a refundable tax credit equal to 50 percent of Old-Age, Survivors, and Disability Insurance (OASDI) payroll taxes paid by workers (this would represent a tax credit of about \$110 billion in 2003), to be deducted from general revenues and not from Social Security's revenues. The credit could be temporary, to be phased out as the economy recovers. We would also favor a permanent tax credit to employers equal to 50 percent of their OASDI payroll taxes paid. This would not only reduce costs, but would also encourage employment and make American labor more competitive with foreign labor.

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, while leaving room for additional emergency federal government spending. We advocate increasing the federal government's emergency support to states in order to halt 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 our view, the federal government's "structural," or full-employment, budget is far too tight, and even with increased military spending for the war on terror and with the various tax cuts already enacted, some "permanent" relaxation would be required. 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. Most of this could be devolved to state and local government, with the federal government providing funding of

projects that met its standards. (Spending could be postponed in an economic boom if inflationary pressures threatened.) There is overwhelming evidence that spending on public infrastructure has been inadequate for more than three decades.

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. By contrast, there are no easy solutions to most of the other factors depressing demand. But the federal government budget can be shifted to a more fiscally neutral stance, through broad-based tax cuts and new spending programs. The barriers are political, not economic. This does not mean that we discount the size of the shift of thinking within the Beltway that will be required, particularly by Democrats who now want to seize on the growing deficit as a campaign battle with the administration. However, if views of the proper role of the federal government do not change, the probable economic scenarios range from bad to worse.

Notes

1. In its simplest form, this approach demonstrates that profits are identically equal to investment, plus the government's deficit, less the current account deficit, plus consumption out of profits, and less saving out of wages.
2. Depending on institutional arrangements, some central banks might also buy privately issued debt; this is really not very different from

lending at the discount window against private debt that is deemed acceptable as collateral.

3. Conversely, central bank open-market sales, or net reductions of outstanding discounts, drain reserves from the banking system.
4. Indeed, Operation Twist of the early 1960s tried to lower longer-term interest rates as the Fed sold short-term bonds and bought long-term bonds.
5. In fact, maintaining or increasing bank holdings of undesired, excess reserves could backfire by reducing bank profits (since reserves do not earn interest).
6. Congress is considering a new law that would temporarily relieve firms of their obligation to contribute more money to pension programs that are underfunded. At one point, discussion became so heated that Democrats stomped out of a session of the House Ways and Means Committee, and the panel's chairman called the Capitol police.

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