The Economic Club of New York

The Honorable Alan Greenspan
Chairman, the Federal Reserve Board

December 19, 2002

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Issues for Monetary Policy

Although the gold standard could hardly be portrayed as having produced a period of price tranquility, it was the case that the price level in 1929 was not much different, on net, from what it had been in 1800. But, in the two decades following the abandonment of the gold standard in 1933, the consumer price index in the United States nearly doubled. And, in the four decades after that, prices quintupled. Monetary policy, unleashed from the constraint of domestic gold convertibility, had allowed a persistent over issuance of money. As recently as a decade ago, central bankers, having witnessed more than a half-century of chronic inflation, appeared to confirm that a fiat currency was inherently subject to excess.

But the adverse consequences of excessive money growth for financial stability and economic performance provoked a backlash. Central banks were finally pressed to rein in over-issuance of money even at the cost of considerable temporary economic disruption. By 1979, the need for drastic measures had become painfully evident in the United States. The Federal Reserve, under the leadership of Paul Volcker and with the support of both the Carter and the Reagan administrations, dramatically slowed the growth of money. Initially, the economy fell into recession and inflation receded. However, most important, when activity staged a vigorous recovery, the progress made in reducing inflation was largely preserved. By the end of the 1980s, the inflation climate was being altered dramatically.

The record of the past twenty years appears to underscore the observation that, although pressures for excess issuance of fiat money are chronic, a prudent monetary policy maintained over a protracted period can contain the forces of inflation. With the story of most major economies in the postwar period being the emergence of, and then battle against inflation, concerns about deflation, one of the banes of an earlier century, seldom surfaced. The recent experience of Japan has certainly refocused attention on the possibility that an unanticipated fall in the general price level would convert the otherwise relatively manageable level of nominal debt held by households and businesses into a corrosive rising level of real debt and real debt service costs. It now appears that we have learned that deflation, as well as inflation, are in the long run monetary phenomena, to extend Milton Friedman's famous dictum.

To be sure, in the short to medium run, many forces are at play that complicate the link between money and prices. The widening globalization of market economies in recent years, for example, is integrating a growing share of previously local capacity into an operationally meaningful world total. That process has, at least for a time, brought substantial new supplies of goods and services to global markets. In addition, the more rapid rate of technological innovation, so evident in the United States, has boosted the pace at which our productive potential is expanding. These shifts in aggregate supply--whether foreign or domestic in origin--influence the relationship between money and prices. Moreover, the tie between money and prices can be altered by dysfunctional financial intermediation, as we have witnessed in Japan. Thus, recent experience understandably has stimulated policymakers worldwide to refocus on deflation and its consequences, decades after dismissing it as a possibility so remote that it no longer warranted serious attention.

The meaning of deflation and the characteristics that differentiate it from the more usual experience of inflation are subjects being actively studied inside and outside of central banks. As I testified before the Congress last month, the United States is nowhere close to sliding into a pernicious deflation. Moreover, a major objective of the recent heightened level of scrutiny is to ensure that any latent deflationary pressures are appropriately addressed well before they became a problem.

Central bankers have long believed that price stability is conducive to achieving maximum sustainable growth. Historically, debilitating risk premiums have tended to rise with both expected inflation and deflation, and they have been minimized during conditions of approximate price stability.

Although the U.S. economy has largely escaped any deflation since World War II, there are some well-founded reasons to presume that deflation is more of a threat to economic growth than is inflation. For one, the lower bound on nominal interest rates at zero threatens ever rising real rates if deflation intensifies. A related consequence is that even if debtors are able to refinance loans at zero nominal interest rates, they may still face high and rising real rates that cause their balance sheets to deteriorate.

Another concern about deflation resides in labor markets. Some studies have suggested that nominal wages do not easily adjust downward. If lower price inflation is accompanied by lower average wage inflation, then the prevalence of nominal wages being constrained from falling could increase as price inflation moves toward or below zero. In these circumstances, the effective clearing of labor markets would be inhibited, with the consequence being higher rates of unemployment.

Taken together, these considerations suggest that deflation could well be more damaging than inflation to economic growth. While this asymmetry should not be overlooked, several factors limit its significance. In particular, more rapid advances in productivity can make this asymmetry less severe. Fast growth of productivity, by buoying expectations of future advances of wages and earnings and thus aggregate demand, enables real interest rates to be higher than would otherwise be the case without restricting economic growth. Moreover, to the extent that more-rapid growth of productivity shows through to faster gains in nominal wages, there will be fewer instances in which nominal wages will be pressured to fall.

One also should not overstate the difficulties posed for monetary policy by the zero bound on interest rates and nominal wage inflexibility even in the absence of faster productivity growth.

The expansion of the monetary base can proceed even if overnight rates are driven to their zero lower bound. The Federal Reserve has authority to purchase Treasury securities of any maturity and indeed already purchases such securities as part of its procedures to keep the overnight rate at its desired level. This authority could be used to lower interest rates at longer maturities. Such actions have precedent: Between 1942 and 1951, the Federal Reserve put a ceiling on longer-term Treasury yields at 2-1/2 percent. With respect to potential difficulties in labor markets, results from research remain ambiguous on the extent and persistence of downward rigidity in nominal compensation.

Clearly, it would be desirable to avoid deflation. But if deflation were to develop, options for an aggressive monetary policy response are available.

Fortunately, the ability of our economy to weather the many shocks inflicted on it since the spring of 2000 attests to our market system's remarkable resilience. That characteristic is far more evident today than two or three decades ago. There may be numerous causes of this increased resilience. Among them, ongoing efforts to liberalize global trade have added flexibility to many aspects of our economy over time. Furthermore, a quarter-century of bipartisan deregulation has significantly reduced inflexibilities in our markets for energy, transportation, communication, and financial services. And, of course, the dramatic gains in information technology have markedly improved the ability of businesses to address festering economic imbalances before they inflict significant damage. This improved ability has been further facilitated by the increasing willingness of our workers to embrace innovation more generally. Irrespective of how deflationary forces might influence it, our economy has the benefit of enhanced flexibility, which has, at least to date, allowed us to withstand the potentially destabilizing effects of some substantial negative shocks.

Certainly, lurking in the background of any evaluation of deflation risks is the concern that those forces could be unleashed by a bursting bubble in asset prices. This connection, real or speculative, raises some interesting questions about the most effective approach to the conduct of monetary policy. If the bursting of an asset bubble creates economic dislocation, then preventing bubbles might seem an attractive goal. But whether incipient bubbles can be detected in real time and whether, once detected, they can be defused without inadvertently precipitating still greater adverse consequences for the economy remain in doubt.

It may be useful, as a first step, to consider both the economic circumstances most likely to impede the development of bubbles and the circumstances most conducive to their formation. Destabilizing macroeconomic policies and poor economic performance are not likely to provide fertile ground for the optimism that usually accompanies surging asset prices. Ironically, low inflation, economic stability, and low risk premiums may provide tinder for asset price speculation that could be sparked should technological innovations open up new opportunities for profitable investment. Even in such circumstances, bubble pricing is likely to be inhibited for a company with a history. To be sure, the stock prices of old-line companies do rise somewhat through arbitrage when the market as a whole is propelled higher by stock prices of cutting-edge technologies. But it is difficult to imagine stock prices of most well-established and seasoned old-line companies surging to wholly unsustainable heights. With some prominent exceptions, their capabilities for future profits have been largely tested and delimited.

The situation is likely different in the case of a new company that employs an innovative technology. Under these circumstances, the dispersion of rationally imagined possible future outcomes could be wide. If forecasts are unfettered by a need for consistency with the past, investors might take off on unwarranted flights of optimism. Moreover, skeptics find it too expensive or too risky to short sell the shares of such a company, especially when its stock price is rising rapidly.

The conditions of extended low inflation and low risk were combined with breakthrough technologies to produce the bubble of recent years. But do such conditions always produce a bubble? It seems improbable that a surge in innovation in the near future would generate a new bubble of substantial proportions. Investors are likely to be sensitive to the need for asset prices to be backed ultimately by an ongoing stream of earnings. Hence, a further necessary condition for the emergence of a bubble is the passage of sufficient time to erode the traumatic memories of earlier post-bubble experiences.

Most standard macroeconomic models fitted to the experience of recent decades imply that a distortion in valuation ratios induced by a bubble can be offset by adopting a sufficiently restrictive monetary policy. According to such models, a tighter monetary policy, on average, credibly constrains demand and lowers asset prices, all else being equal. These models can also be interpreted to suggest that incremental monetary tightening can gradually deflate stock prices. But that conclusion is a consequence of the model's construction. It is not based on evidence drawn from history. In fact, history indicates that bubbles tend to deflate not gradually and linearly but suddenly, unpredictably, and often violently. In addition, the degree of monetary tightening that would be required to contain or offset a bubble of any substantial dimension appears to be so great as to risk an unacceptable amount of collateral damage to the wider economy.

The evidence of recent years, as well as the events of the late 1920s, casts doubt on the proposition that bubbles can be defused gradually. As I related this summer at the annual Jackson Hole symposium sponsored by the Kansas City Federal Reserve Bank, "...our experience over the past fifteen years suggests that monetary tightening that deflates stock prices without depressing economic activity has often been associated with subsequent increases in the level of stock prices....Such data suggest that nothing short of a sharp increase in short-term rates that engenders a significant economic retrenchment is sufficient to check a nascent bubble. The notion that a well-timed incremental tightening could have been calibrated to prevent the late 1990s bubble is almost surely illusion."

In short, unless a model can be specified to capture the apparent market tendency toward bidding stock prices higher in response to monetary policies aimed at maintaining macroeconomic stability, the accompanying forecasts will belie recent experience. Faced with this uncertainty, the Federal Reserve has focused on policies that would, as I testified before the Congress in 1999, "...mitigate the fallout [of an asset bubble] when it occurs and, hopefully, ease the transition to the next expansion." The Federal Open Market Committee chose, as you know, to embark on an aggressive course of monetary easing two years ago once it became apparent that a variety of forces, including importantly the slump in household wealth that resulted from the decline in stock prices, were restraining inflation pressures and economic activity.

It is too soon to judge the final outcome of the strategy that we adopted. The contractionary impulse from the decline in equity prices appeared to be diminishing around the middle of this year. But then the fallout for stock prices from corporate governance malfeasance, argued by some as having been spawned by the bubble, became more intense. This, in turn, damped capital investment and trimmed inventory plans. More recently, of course, geopolitical risk has risen markedly, further weighing on demand. Though unrelated to the bubble burst of 2000, it has muddied the evaluation of the post-bubble economy.

If the postmortem of recent monetary policy shows that the results of addressing the bubble only after it bursts are unsatisfactory, we would be left with less-appealing choices for the future. In that case, finding ways to identify bubbles and to contain their progress would be desirable, though history cautions that prospects for success appear slim.

The difficulties that policymakers and private agents face become especially acute as an economic expansion lengthens. The decline in risk premiums under these circumstances presumably results, in part, from rational appraisals. In an economy in which the business cycle has averaged four years in length over a protracted period, households and businesses would doubtless become more cautious in the fourth year of a new cycle. But how do they behave when, as for the past two decades, expansions have been long and cyclical downturns have been exceptionally rare? After five or six years of uninterrupted expansion, is it irrational or even unreasonable to assume that expansion would continue for the subsequent six months? Thus, it was disturbing to observe risk seemingly being priced so cheaply in late 1997 when BBB corporate spreads over ten-year Treasuries sunk to only 70 basis points. That spread is now about 250 basis points, although it has narrowed significantly in recent weeks.

Weaving a monetary policy path through the thickets of bubbles and deflations and their possible aftermath is not something with which modern central bankers have had much experience.

As I noted earlier, it seems ironic that a monetary policy that is successful in inducing stability may inadvertently be sowing the seeds of instability associated with asset bubbles. I trust that the use by the central bank of deliberately inflationary policy as protection against bubbles can be readily dismissed. While the current episode has not yet concluded, it appears that, responding vigorously in a relatively flexible economy to the aftermath of bubbles, as traumatic as that may be, is less inhibiting to long-term growth than chronic high-inflation monetary policy. Moderate inflation might possibly inhibit bubbles, though at some cost of reduced economic efficiency. However, I doubt that such policies could be sustained or well-controlled by central banks. Among our realistically limited alternatives, dealing aggressively with the aftermath of a bubble appears the most likely to avert long-term damage to the economy.

Regardless of history's verdict on a policy that addresses only the aftermath of bubbles, we still need to improve our understanding of the dynamics of bubbles and deflation to contain the latter, if not the former.

Before closing this evening, I would like to take a few minutes to address recent economic developments.

As I pointed out earlier, the U.S. economy exhibited considerable resilience to a series of post-boom shocks. The list is rather impressive: First, a halving of stock prices and household equity wealth; second, a dramatic decline in capital expenditures; third, the tragic events of September 11; fourth, the disturbing evidence of corporate malfeasance; and fifth, the recent escalation of geopolitical risks. I would scarcely state that our economy was not shaken by these series of shocks, one on top of the other. But after we experienced a mild recession, real GDP grew in excess of 3 percent over the year ending in the third quarter.

The recovery, however, ran into resistance in the summer, apparently as a consequence of a renewed weakening in equity prices, further revelations of corporate malfeasance, and then the heightened geopolitical risks. Concern on our part led the Federal Open Market Committee to reduce its targeted federal funds rate 50 basis points at our early November meeting as some insurance against the possibility that the weakening would gain some footing. Although our most probable forecast already was that growth would pick up, we judged the cost of the insurance provided by additional easing as exceptionally modest because we viewed the risk of an imminent rise in inflation as remote.

The limited evidence since the November easing has supported our view that the U.S. economy has been working its way through a soft patch. And the patch has certainly been soft. The labor market has remained subdued, as businesses apparently have been reluctant to add to payrolls. The manufacturing sector remains especially damped, and nonresidential construction has trended lower. By all reports, state and local governments continue to struggle with deterioration in their fiscal conditions. Oil prices have recently risen and, not least, the economies of most of our major trading partners have shown little vigor.

Still, low interest rates and rapid advances in productivity have been providing considerable support to economic activity. Those influences have been most evident on consumer spending and new home sales, which have been remarkably firm this year. Motor vehicle sales have been supported by low financing costs, by high levels of customer incentives, and by high rates of vehicle scrappage and multiple car ownership. More broadly, strong growth of labor productivity, supplemented by reduced tax payments, has provided a boost both to incomes and to spending. Meanwhile, new home sales have been buoyed by low mortgage interest rates as well as favorable demographics.

Cash borrowed in the process of mortgage refinancing, an important support for consumer outlays this past year, is bound to contract at some point, as average interest rates on households' total mortgage portfolio converges to interest rates on new mortgages. However, applications for refinancing, while off their peaks, remain high. Moreover, simply processing the backlog of earlier applications will take some time, and this factor alone suggests continued significant refinancing originations and cash-outs into the early months of 2003.

Corporate risk-taking underwent pronounced retrenchment following the traumatic disclosures of corporate malfeasance this summer. Capital appropriations slowed noticeably across a broad spectrum of American industries. Aggressive accounting practices seemingly disappeared virtually overnight. I would not be surprised if further disclosures of questionable practices were to surface in the months ahead, but I would be quite surprised if such practices were introduced after mid-2002.

Since early October, conditions in financial markets have turned less adverse. Stock prices have, on net, moved up, and corporate yield spreads, especially for below-investment-grade debt instruments, have narrowed significantly. Those spreads, nevertheless, remain quite elevated relative to their readings of early 2000. Credit derivative default swaps have improved recently in line with yield spreads. The overall cost of business capital has clearly declined, inducing in recent weeks increased issuance of bonds of all grades and halting the runoff of commercial paper and business bank loans.

The recent increase in the expansion of business credit may hint at some stirring in capital investment, but it is simply too early to tell. There is evidence that some corporate managers are beginning to tentatively venture out on the risk scale. New orders for capital goods equipment and software, after falling sharply over the preceding two years, have stabilized and in some cases turned up in nominal terms this year--an improvement, to be sure, but not necessarily the beginnings of a vigorous recovery.

In the end, capital investment will be most dependent on the outlook for profits and the resolution of the uncertainties surrounding the business outlook and the geopolitical situation. These considerations at present impose a rather formidable barrier to new investment. Profit margins have been running a little higher this year than last, aided importantly by strong growth in labor productivity. But a lack of pricing power remains evident for most corporations. A more vigorous and broad-based pickup in capital spending will almost surely require further gains in corporate profits and cash flows.

A full enumeration of the caveats surrounding the economic outlook would, as usual, be lengthy. But often-cited concerns about the levels of debt and debt-servicing costs of households and firms appear a bit stretched. The combination of household mortgage and consumer debt as a share of disposable income has moved up to a historically high level. But the upward trend in the series reflects, in part, financial innovations that have increased access to credit markets for many households. These innovations include the development of a deep secondary market for home mortgages, along with the advent of credit scoring and automated underwriting models that have enhanced the ability of loan officers and credit card companies to identify good credit risks. These innovations lower the risk level of any given amount of debt.

To be sure, the mortgage debt of homeowners relative to their income is high by historical norms. But, as a consequence of low interest rates, the servicing requirement for that debt relative to homeowners' income is roughly in line with the historical average. Moreover, owing to continued large gains in residential real estate values, equity in homes has continued to rise despite very large debt-financed extractions. Adding in the fixed costs associated with other financial obligations, such as rental payments of tenants, consumer installment credit, and auto leases, the total servicing costs faced by households relative to their income appears somewhat elevated compared with longer-run averages. But arguably they are not a significant cause for concern.

Some strain from corporate debt burdens became evident as rates of return on capital projects financed with debt fell short of expectations over the past several years. While overall debt has not been paid down, corporations have significantly increased holdings of cash and have reduced their near-term debt obligations by issuing bonds to pay down commercial paper and bank loans.

In early 2000, as financial imbalances and increased risk brought the surge in capital investment to an end, significant profitable opportunities remained to be exploited. One must presume that they still exist and may well have been enlarged by subsequent technological advances. Indeed, one of the most remarkable features of the performance of the U.S. economy over the past year had been the extraordinary gains in productivity. The increase in output per hour over the year ending in the third-quarter--5-1/2 percent--was the largest increase in several decades. That pace will not likely be sustained, but it suggests that the underlying supports to productivity growth have not yet fully played out. Against that background, any significant fall in the current geopolitical and other risks should noticeably improve capital outlays, the indispensable spur to a path of increased economic growth.

In summary, as we focus on the dangers of bubbles, deflation, and excess capacity, the marked improvement in the degree of flexibility and resilience exhibited by our economy in recent years should afford us considerable comfort for now. Still, economic policymakers are having to grapple with what seems to be a much larger portfolio of problems than that which our predecessors appeared to face a half-century ago. The ever-growing complexity of our global economic and financial system surely plays a role. Moreover, the very technologies that have helped us reap enormous efficiencies have also presented us with new challenges by increasing our interconnectedness.

I venture that future invitees to the Economic Club of New York dinners will not lack interesting problems to address.