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## The Economy

Remarks by

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In the period immediately prior to September 11, there were tentative signs that some sectors of the U.S. economy had begun to stabilize, contributing to a hope that the worst of the previous cumulative weakness in world economic activity was nearing an end. That hope was decisively dashed by the tragic events of early September. Adding to the intense forces weighing on asset prices and economic activity before September 11, were new sources of uncertainty and risk that began to press down on global demand for goods and services.

In almost all areas of the world, economies weakened further, a cause for increasing uneasiness. The synchronous slowing in activity raised concerns that a self-reinforcing cycle of contraction, fed by perceptions of greater economic risk, could develop. Such an event, though rare, would not be unprecedented in business-cycle history.

We had already observed a coincident deceleration in activity among the world economies over the past year, owing apparently, at least in part, to the retrenchment in the high-technology sector. The global nature of most technology industries and the global reach of the capital markets in which the firms in these industries are valued and funded appears to have fostered a greater synchronousness in world activity in this cycle, seemingly broader than has generally been the case. However, before the terrorist attacks, it was far from obvious that this concurrent weakness was becoming self-reinforcing.

But, if ever a situation existed in which the fabric of business and consumer confidence, both here and abroad, was vulnerable to being breached, the shock of September 11 was surely it. Indeed, for a short period, in response to that shock, U.S. economic activity did drop dramatically.

But, arguably, our economy has not been weakening cumulatively in recent weeks. In fact, indications of stabilization, similar in many respects to those observed in the period

immediately preceding September 11, have been appearing with greater frequency. A possible significant contributor to this emergence of stability--if that is what it is--may be the very technologies that have fostered coincident global weakness: those that have substantially improved access of business decisionmakers to real-time information.

Thirty years ago, the timeliness of available information varied across companies and industries, often resulting in differences in the speed and magnitude of their responses to changing business conditions. In contrast to the situation that prevails today, businesses did not have real-time data systems that enabled decisionmakers in different enterprises to work from essentially the same set of information. In those earlier years, imbalances were inadvertently allowed to build to such an extent that their inevitable correction engendered significant economic stress. That process of correction and the accompanying economic and financial disruptions too often led to deep and prolonged recessions.

Today, businesses have large quantities of data available virtually in real time. As a consequence, they address and resolve economic imbalances more rapidly than in the past. At the same time, firms are largely operating with the same information set, and thus resolution of imbalances induces parallel movements in activity. Contractions initially may be steeper, but because imbalances are more readily contained, cyclical episodes overall should be less severe than would be the case otherwise.

In the current situation, inventories, especially among producers and purchasers of high-tech products, did run to excess over the past year, as sales forecasts went badly astray; alas, technology has not allowed us to see into the future any more clearly than we could previously.

But, technology did facilitate the quick recognition of the weakening in sales and backup of

inventories. This enabled producers to respond forcefully, as evidenced by output adjustments that have resulted in the extraordinary rate of inventory liquidation currently under way.

Inventories in many industries have been drawn down to levels at which firms will soon need to taper off their rate of liquidation, if they have not already done so. Indeed, in recent months, there have been fewer reports from industrial purchasing managers that their customers' inventories are too high. Moreover, the relative stability of industrial commodity prices in recent weeks, and especially the recent firmness in the prices of semiconductors, could be hinting at less intense stock drawdowns.

A slowing in the rate of inventory liquidation will induce a rise in industrial production if demand for those products is stable or is falling only moderately. That rise in production will, other things being equal, increase household income and spending. The runoff of inventories, even apart from the large reduction in motor vehicle stocks, remained sizable in the fourth quarter. Hence, with production running well below sales, the potential positive effect of the inevitable cessation of inventory liquidation on income and spending could be significant.

But that impetus to activity will be short lived unless the demand for goods and services itself starts to rise. On that score, despite a number of encouraging signs of stabilization, it is still premature to conclude that the forces restraining economic activity here and abroad have abated enough to allow a steady recovery to take hold. For that to happen, sustained growth of final demand must kick in before the positive effects of the swing from inventory liquidation to accumulation dissipate.

For the household sector, which had been a major stabilizing force through most of last year's slowdown, the outlook for demand is mixed. Low mortgage interest rates and favorable

weather have provided considerable support to homebuilding in recent months. Moreover, attractive mortgage rates have bolstered both the sales of existing homes and the realized capital gains that those sales engender. They have also spurred refinancing of existing homes and the associated liquification of increases in house values. These gains have been important to the ongoing extraction of home equity for consumption and home modernization.

The recent rise in home mortgage rates, however, is likely to damp housing activity and equity extraction. It is already having an effect on cash-outs from refinancing. Cash-outs rose from an estimated annual rate of about \$20 billion in early 2000 to a rate of roughly \$75 billion in the third quarter of last year. But the pace of cash-outs has likely dropped noticeably in response to the recent decline in refinancing activity that has followed the backup in mortgage rates since early November.

Consumer spending received a considerable spur from the sales of new motor vehicles, which were remarkably strong in October and November owing to major financing incentives. Sales dropped last month when the incentives were scaled back, but have remained surprisingly resilient. Other consumer spending appears to have advanced in recent months, though at a subdued pace.

The substantial declines in the prices of natural gas, fuel oil, and gasoline have clearly provided some support to real disposable income and spending. These price declines added more than \$50 billion at an annual rate to household purchasing power in the second half of last year. However, a decline in energy prices provides, in effect, only a one-shot boost to consumption, albeit one that is likely to take place over time. To have a more persistent effect on the ongoing growth of total personal consumption expenditures, energy prices would need to continue to

decline. Futures prices do not suggest that such a decline is in the immediate offing, but the forecast record of these markets is less than sterling.

Although the quantitative magnitude and precise timing of the wealth effect remain uncertain, the steep decline in stock prices since March 2000 has, no doubt, curbed the growth of household spending. Although stock prices recently have retraced a portion of their earlier losses, the restraining effects from the net decline in equity values presumably have not, as yet, fully played out. Future wealth effects will depend importantly on whether corporate earnings improve to the extent currently embedded in share prices.

Perhaps most central to the outlook for consumer spending will be developments in the labor market. The pace of layoffs quickened last fall, especially after September 11, and the unemployment rate rose sharply. Over the past month or so, however, initial claims for unemployment insurance have declined markedly, on balance, suggesting some abatement in the rate of job loss.

Although this development would be welcome, the unemployment rate may well continue to rise for a time, and job losses can be expected to put something of a damper on consumer spending. However, the extent of that restraint will depend on how much of any rise in unemployment is the result of weakened demand and how much reflects strengthened productivity. In the latter case, average real incomes could rise, at least partially offsetting losses of purchasing power that stem from diminished levels of employment.

Finally, economic policies will have an important influence on household spending in the period ahead. No doubt, we will continue to benefit from the tendency of our tax and entitlement systems to buffer cyclical swings in income. Moreover, despite the failure of Congress to enact

further tax cuts and spending increases, the continued phase-in of earlier reductions in taxes and the significant expansion of discretionary spending already enacted should provide noticeable short-term stimulus to demand.

Some of this stimulus has likely been offset by increases in long-term market interest rates, including those on home mortgages. The recent rise in these rates largely reflects the perception of improved prospects for the U.S. economy. But over the past year, some of the firmness of long-term interest rates probably is the consequence of the fall of projected budget surpluses and the implied less-rapid paydowns of Treasury debt.

In our conduct of monetary policy, the Federal Reserve responded to the weakening economy over the past year by markedly lowering our target for the federal funds rate. We accelerated the pace of rate reductions during this period in response to the accelerated pace of economic adjustment. Moreover, the magnitude of policy adjustment and the resulting low level of the federal funds rate responded both to the strength of the forces restraining demand and to the continued subdued pace of underlying inflation. Liquidity, as a consequence, has expanded significantly, and the accompanying lower interest rates have supported spending and held down the cost to households of servicing debts.

The dynamics of inventory investment and the balance of factors influencing consumer demand will have important consequences for the economic outlook in coming months. But, the broad contours of the present cycle have been, and will continue to be, driven by the evolution of corporate profits and capital investment.

The retrenchment in capital spending over the past year was central to the sharp slowing we experienced in overall activity. The steep rise in high-tech spending that occurred in the early

post-Y2K months was clearly not sustainable. The demand for many of the newer technologies was growing rapidly, but capacity was expanding even faster, exerting severe pressure on prices and profits. New orders for equipment and software hesitated in the middle of 2000, and then fell sharply as firms re-evaluated their capital investment programs. Uncertainty about economic prospects boosted risk premiums significantly, and this rise, in turn, propelled required, or hurdle, rates of return to markedly elevated levels. In most cases, businesses required that new investments pay off much more rapidly than they had previously. For much of last year, the resulting decline in investment outlays was fierce and unrelenting. Although the weakness was most pronounced in the technology area, the reductions in capital outlays were broad-based.

These cutbacks in capital spending interacted with, and were reinforced by, falling profits and equity prices. Indeed, a striking feature of the current cyclical episode relative to many earlier ones has been the virtual absence of pricing power across much of American business, as increasing globalization and deregulation enhanced competition. In this low-inflation environment, firms have perceived very little capability to pass cost increases on to customers. Growth in hourly labor compensation has slowed in response to deteriorating economic conditions, but even those smaller increases have continued to outstrip gains in output per hour for the corporate sector on a consolidated basis. The result has been that profit margins are still under pressure.

Business managers, with little opportunity to raise prices, have moved aggressively to stabilize cash flows by trimming workforces. These efforts have limited the rise in unit costs, attenuated the pressure on profit margins, and ultimately helped to preserve the vast majority of

private sector jobs. To the extent that businesses are successful in stabilizing and eventually boosting profits and cash flow, capital spending should begin to recover more noticeably.

Such success would likely be accompanied by a decline in elevated risk premiums back to more normal levels and, with real rates of return on high-tech equipment still attractive, should provide an additional spur to new investment. When capital spending eventually recovers, its growth is likely to be less frenetic than that which characterized 1999 and early 2000, when outlays were boosted by the dislocations of Y2K and the extraordinarily low cost of capital faced by many firms.

Still, the evidence strongly suggests that new technologies will present ample opportunities to earn enhanced rates of return. Indeed, anecdotal reports from businesses around the country suggest that the exploitation of available networking and other information technologies was only partially completed when the cyclical retrenchment of the past year began. Many business managers are still of the view, according to a recent survey of purchasing managers, that less than half of currently available new, and presumably profitable, supply chain technologies have been put into use.

While these opportunities remain abundant, they will now play out against the backdrop of a major uncertainty that we all must deal with these days--the specter of further terrorist incidents on American soil. It simply is not possible to predict whether there will be any such incidents or to forecast their possible consequences for the economy. But we can have little doubt that the tragic events of September 11 have left obvious marks on the economy that will not soon fade even though some of the initial impact of the shock has receded. Importantly, as I

suggested shortly after the event, adjustments to new levels of perceived risk will cause a one-time downward shift in the level of productivity.

Clearly, businesses will be less comfortable now than they were before September 11 in allowing inventories to shrink to minimal levels in a just-in-time supply chain. Moreover, in some industries, resources will need to be diverted from efficiency-enhancing capital investment to providing security and contingency backup. Fragmentary data for the months following September 11, however, indicate output per hour is holding up well. Temporary labor-shedding may have overwhelmed the effects of added security and redundancy. It is not yet clear whether the negative shock to output per hour from the heightened risks is small, or just delayed. In any event, once these adjustments are completed, the full benefits of more rapid technological advance should show through to the growth of productivity.

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The central role that is being played by technological advance poses special challenges to forecasters. Few technologies that influence our economic future are truly anticipated much in advance. And even when they are anticipated, their effect on economic growth is difficult to predict, in part because their pace of diffusion and application is so uncertain. The latter consideration is particularly significant to the longer-term rate of growth of productivity.

The events of the past decade clearly illustrate those difficulties. Few observers foresaw how microprocessors, integrated circuits, and the mating of laser technology with fiber optics, even well into their development and application, would rejuvenate the American economy.

For example, as recently as a decade ago, the outlook was for a continuation of meager gains in output per hour, with the rate of growth barely exceeding one percent per year, if that.

Instead, during the last half of the 1990s, we experienced a surge in productivity growth well above the rate of increase experienced in the previous quarter-century.

Even as our economy slipped into recession, the growth of output per hour remained positive and, as I indicated earlier, has held up well even in the wake of September 11. Until last year, the hypothesis of an accelerated productivity trend had not been tested in the contracting phase of a business cycle. Recent developments have provided that test, and the early returns certainly look favorable to the hypothesis.

In retrospect, our economic structure changed in the mid-1990s. The crucial agent of this remarkable change was the quantum leap in information availability.

If the tentative indications that the contraction phase of this business cycle is drawing to a close are ultimately confirmed, we will have experienced a relatively mild downturn. To be sure, a great deal of real economic pain has been felt over the past year and a half. But imbalances have not been allowed to fester. They could have progressively undermined endeavors at stability and prolonged this difficult period.

The American economy has had to absorb some extraordinary shocks over the past year and a half. For the economy to have weathered as well as it has a severe deflation of equity asset values followed by an unprecedented blow from terrorists to the foundations of our market systems is impressive. In my judgment, this performance is a testament to the exceptional degree of resilience and flexibility that our economy has gained in recent years, much of which owes to advances not only in information technology, but to the globalization and deregulation of our markets, as well. The adaptability and resourcefulness of our businesses and workers have been especially important in this trying period.

There are sound reasons for concluding that the long-run picture remains bright, and even recent signals about the current course of the economy have turned from unremittingly negative through the late fall of last year to a far more mixed set of signals recently. But I would emphasize that we continue to face significant risks in the near term. Profits and investment remain weak and, as I noted, household spending is subject to restraint from the backup in interest rates, possible increases in unemployment, and from the effects of widespread equity asset price deflation over the past two years.

But if the recent more favorable developments continue and gather momentum, uncertainties will diminish, risk premiums will fall, and the pace of capital investment increase. Should those gains in investment materialize, they would, doubtless, embody the newest technologies. As we have witnessed so clearly in recent years, advances in technology have enhanced the growth of productivity, which, in turn, has been essential to lifting our standards of living.