

Remarks by Vice Chairman Roger W. Ferguson, Jr.

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Economic Outlook for the United States

I appreciate the opportunity to speak to you today about the outlook for the U. S. economy. As always, the views that I will be expressing are my own and do not necessarily represent those of my colleagues at the Federal Reserve.

To jump right to the bottom line, I believe that the outlook for the economy remains solid despite the devastating blows delivered to the Gulf Coast by Hurricanes Katrina and Rita. These storms obviously took their horrible toll on lives and property. Nonetheless, the U.S. economy is remarkably flexible and resilient. The history of the past five years clearly shows that our economy was able to weather a series of significant shocks: the steep drop in equity prices, the terrorist attacks on September 11, the wars in Afghanistan and Iraq, and the corporate accounting scandals. And, although considerable uncertainties remain, I expect this resilience to be demonstrated again in the aftermath of Hurricanes Katrina and Rita.

I do not in any way mean to minimize the challenges we face in the near term because of these storms. A major city has been shut down, and a large number of people there and elsewhere along the Gulf Coast have been displaced. In addition, businesses in the region have been destroyed and jobs lost. It will take time--certainly months, and maybe years--to get these communities back on their feet. The storms also hit key parts of the nation's energy infrastructure. The resulting curtailment in the availability of crude oil, natural gas, and refined petroleum products has led to sharply higher prices for these fuels, which has eroded the purchasing power of consumers throughout the nation. But the Congress has approved \$62 billion in supplemental spending for hurricane relief and reconstruction, which should help to cushion the negative effects in the near term and stimulate economic activity over time as rebuilding accelerates. In addition, households and businesses will find ways to adjust to higher energy prices, as they have done in the past.

In my remarks today, I'd first like to discuss where the economy was headed before the storms hit. Then I will describe a framework for assessing the likely economic effect of the hurricanes. Obviously a great deal of uncertainty surrounds such an assessment, but it is a necessary first step to updating the economic outlook after the storms. Finally, I would like to talk about the macroeconomic consequences of sharply higher energy prices that, if futures markets are an accurate guide, appear likely to persist long after rebuilding has been completed.

The Economy Before the Hurricanes

Before the hurricanes, economic activity appeared to have had considerable near-term momentum. Payroll employment continued to increase through August, and other indicators suggested that further gains in production and sales were in train during July and August. Consumer spending was growing briskly despite rapidly rising energy prices. Sales of light

motor vehicles were especially robust--the result of the "employee pricing" plans offered by the major automakers. New residential construction remained at or near historically high levels through the summer, as did home sales. In contrast, business investment appeared to have lost a bit of steam. On net, real gross domestic product (GDP) looked likely to accelerate somewhat in the third and fourth quarters from the 3-1/2 percent annual rate registered in the first half of the year.

On the price side of the ledger, consumer price inflation was moving up in response to the direct effects of higher energy prices. Crude oil prices continued to rise before the storms hit as the growth in world demand for refined petroleum products further outstripped the growth of world supply. Meanwhile, the readings on core consumer price inflation--that is consumer price inflation excluding the direct effects of energy and food prices--had been favorable, coming in well below the more-elevated pace seen earlier in 2005. Of course, some of this slowdown in core price inflation was attributable to the temporary effects of the employee-pricing programs for light vehicles. And higher energy costs were expected to place continued upward pressure on the prices of other goods and services.

In this environment of somewhat faster growth in aggregate spending and greater upward pressure on prices, the Federal Open Market Committee (FOMC) raised its target for the federal funds rate to 3-1/2 percent in early August. At the same time, the Committee reiterated its belief that, with the appropriate monetary policy actions, the upside and downside risks to the outlook for sustainable economic growth and price stability were roughly equal and that the removal of monetary accommodation could proceed at a "measured pace." Thus, before the hurricanes, the outlook was relatively benign: continued moderate economic growth accompanied by little change in the underlying pace of core inflation.

There were, of course, risks in this forecast. The cumulative impact of the rise in energy prices on inflation and activity--a topic to which I will return shortly--was clearly one concern. So too was the ongoing rise in home prices and the possibility that this phenomenon is unsustainable. House prices have risen to levels that, in some areas of the country, seem high relative to the economic fundamentals. The market for second homes seems especially strong, raising the fear that some homeowners are speculating on further increases in home prices. The greater use of innovative forms of mortgage finance adds to the concern that the residential real estate market may well be vulnerable to a flattening of home prices, and in certain markets, perhaps a decline. I do not think that a significant and widespread drop in home prices is the most likely outcome, but the situation will require careful monitoring in the months ahead.

A further risk is the apparent deceleration in business spending on new equipment and software (E&S). Real E&S outlays grew almost 14 percent last year, but the rate of increase thus far in 2005 has slipped into the single digits. Are businesses becoming more reluctant to invest? One answer to this question may be that the slowdown only reflects the usual noise in the investment data. Another possibility is that higher energy prices are discouraging investment by increasing the uncertainty surrounding the outlook for aggregate demand. Higher energy prices ought to boost investment as firms seek to replace their machines with new, more energy-efficient models, but this effect easily could be swamped by concerns about future weakness in the demand for their products. Given the importance of capital deepening for the growth of structural productivity and for increases in our long-run standard of living, this slowdown in the growth of equipment investment also bears watching.

The Economic Effects of Hurricanes Katrina and Rita

I'd now like to turn to the economic effects of Hurricanes Katrina and Rita. On the one hand, it is important to recognize that, besides causing enormous human tragedy, the hurricanes made the nation economically worse off. Not only did output fall as the result of the storms, but households lost their homes and possessions, businesses were damaged or destroyed, and key infrastructure was wiped out. Initial estimates of losses range anywhere from \$50 billion to \$150 billion. On the other hand, although these are very large losses in absolute terms, they represent only a tiny fraction of national net worth.

Past natural disasters can serve as a rudimentary guide to the likely economic effects of the hurricanes, but the unique characteristics of these two storms--including the devastation of a major city and the displacement of its population--clearly put us in uncharted territory. Nonetheless, I think it is useful to think about a natural disaster as having three relatively distinct phases. In the first phase, production and sales decline in the affected area. In the second phase, activity bounces back as initial repairs are made to damaged infrastructure and the disruptions recede. In the third phase, rebuilding activity boosts production for a time, and real GDP can actually be higher than it would have been in the absence of the disaster. In the long run, once national saving has increased enough to restore the national net worth to its desired level, the effect of the disaster on economic activity essentially disappears.

Obviously, the recoveries of the various communities and industries affected by the hurricanes will have different time profiles. For example, the need to drain New Orleans of water and clear it of any environmental hazards will slow the pace of its recovery relative to other areas that did not suffer from extreme flooding. But, I think that the bulk of the disruptions from the storms will be felt in the second half of this year. A significant portion of this effect results from the reduced output of oil, natural gas, and refined petroleum products. Although the additional losses of energy production in the wake of Hurricane Rita are clearly a negative for growth, repair and recovery activities should pick up as we move through the fourth quarter. There are, of course, substantial uncertainties both about the actual dimension of the economic effects and about the abilities of our statistical systems to measure these effects. But the effects on the growth of real GDP in the second half of the year should be noticeable.

In 2006, the recovery process is expected to contribute to the growth of real GDP. I should note that a key element in this recovery is the federal aid package, which provides some income support to evacuees and, in effect, finances a sizable portion of the reconstruction activity. Without this federal effort, the dislocations from the hurricanes likely would have a much greater negative effect on aggregate demand, and the rebuilding process would occur more slowly.

At this point, it seems likely that the hurricanes had, at most, a small effect on the supply side of the economy. The losses of productive capital, while devastating in the regions directly affected, appear to be small relative to the overall size of the national capital stock. Moreover, at this time the dislocation of workers seems unlikely to be large or persistent enough relative to the size of our nation's labor force to significantly affect the natural rate of unemployment. This impression was reinforced by the employment report for September, which showed the pace of hurricane-related job losses to be considerably less than many analysts had feared. Of course, it is too early to put too much weight on any one observation about the economy after the hurricanes.

The hurricanes have, however, adversely affected the outlook for inflation. The damage to production and refining facilities has significantly boosted the prices of natural gas and gasoline. Consumer energy prices are projected to rise substantially in the second half of this year, and some spillover into the prices of non-energy goods and services looks likely as well.

The Macroeconomics of Higher Oil Prices

In the absence of the hurricanes, the economy would still be coping with higher oil prices. From a level of \$30 per barrel at the end of 2003, the spot price of West Texas intermediate crude oil has risen to a range of \$60 to \$70 per barrel this year. This doubling of the nominal price of crude oil represents a significant shock to the economy. The effect may well be amplified in this instance because the higher prices are expected to be quite long lasting rather than temporary. In past episodes of rising spot prices, the prices of far-dated futures contracts indicated that oil market participants expected prices to eventually gravitate back to about \$20 per barrel. In the current episode, far-dated futures prices have risen roughly in line with the spot price and currently stand at approximately \$60 per barrel.

In general, economists believe persistent changes in relative prices have a larger effect on economic activity than do temporary changes. When a price change is transitory, consumers tend to change their saving more than their spending. Similarly, business investment decisions typically reflect multiyear horizons, and transitory fluctuations in prices during that period are relatively unimportant. But more-permanent changes in relative prices elicit more-substantial adjustments on the part of both consumers and businesses.

A large, long-lasting increase in the relative price of energy will affect inflation for a time. Although short-run swings in firms' energy costs might be absorbed in their profit margins, a persistent increase is likely to be fully passed on to the consumer. Such cost pressures could potentially feed back into wages as workers strive to maintain their real incomes. The behavior of inflation expectations is the key to such a feedback process. If expectations for long-run inflation become unanchored--that is, begin to rise persistently--the possibility of a wage-price spiral increases. However, if households and businesses believe that the central bank is committed to preserving price stability, the likelihood that inflation expectations will become unanchored decreases. Thus, the preservation of the credibility of the central bank's resolve to contain inflation is one of the key elements in the adjustment to a higher relative price of energy.

An energy price shock is often likened to an income tax increase. Given that we import about twelve million barrels of crude oil and related products a day, a price increase of \$30 per barrel translates into a \$130 billion increase in the oil bill paid to foreigners. Like a tax increase, these added costs reduce the disposable income available to households to make purchases of other goods and services. Economists speak of consumers as basing their consumption spending on their "permanent" income--the inflation-adjusted income that they expect they can earn on a sustained basis over time. Clearly, a quite long-lasting increase in energy prices reduces this permanent income and, if all else remains the same, would reduce the level of consumer spending. Thus, as we saw in the 1970s and 1980s, in the near term households will adjust the thermostat and drive a bit less. However, over time they will tend to avoid products that use energy relatively intensively and will buy more fuel-efficient vehicles and home appliances. This substitution will mitigate somewhat, but not fully offset, the effects of higher energy prices on consumer spending.

The reaction of the business sector to permanently higher energy prices is more complicated.

As I noted earlier, high and volatile energy prices may increase the uncertainty of firms about the near-term course of aggregate demand and damp their investment spending. But over time, there are gains to be made by companies that can produce capital goods that are more energy efficient. Higher prices for energy-efficient capital should spur research and development in those industries, and over time, more energy-efficient equipment will become available for purchase. One need look only at the increase in orders for the latest generation of fuel-efficient jetliners for an example of this kind of innovation.

Higher energy prices will force all firms to examine whether their production processes remain cost minimizing at the current set of relative prices. In an effort to lower the cost of production, firms tend, where possible, to substitute capital and labor for energy consumption. In the 1970s and 1980s, such substitution greatly reduced the amount of energy consumed in the business sector per unit of output. I'd expect to see a similar response to the latest price run-up in the years ahead.

Some portions of the business capital stock may be made obsolete by higher energy costs. Facilities that are no longer profitable will be shut down. We already see an example of this in the airline industry, where increasingly airlines are eliminating unprofitable routes. We may see more such adjustments in other industries. Firms that use natural gas seem especially vulnerable at this time. Many plants that use natural gas as a feedstock were not designed to be profitable at the current level of natural gas prices. We have a limited capacity to increase our imports of liquefied natural gas at present. Hence, some companies are talking about moving their production facilities to overseas locations where the price of natural gas is lower than in the United States.

Studies have shown that adjustments by households and businesses in response to higher energy prices reduce the long-run level of potential output in the economy. This reduction mainly reflects the tendency of production to become more labor intensive in response to the increase in the relative price of energy. In essence, labor productivity grows more slowly after an energy price shock and that effect lowers the trajectory for potential output. If higher energy prices induce scrapping of parts of the business capital stock, this would lower the growth of capital services and further lower the path for potential output.

Up to this point, I have spoken qualitatively about how a permanent change in the relative price of energy affects the economy. Now I'd like to report on some simulations of the Board's FRB/US econometric model that attempt to quantify some of these effects. As with any model simulation, the results will depend on the structure of the model and a host of ancillary assumptions. However, in my view, the results are illustrative of the magnitude of the shock that we've experienced. We simulated FRB/US using the path for crude oil prices that futures market participants in December 2003 expected to prevail over the following three years. We also simulated the model with the revisions to futures prices that occurred subsequently over 2004 and through mid-September of this year. Based on a comparison of these simulations, we estimate that real GDP growth was held down 1/2 percentage point in 2004 and 1 percentage point this year relative to what it otherwise would have been. The drag on real GDP growth next year would be comparable to that in 2004. As higher energy prices are passed through to the prices of other goods and services, prices for core personal consumption expenditures (core PCE) are estimated by the model to have been boosted 1/4 percentage point last year and more than 1/2 percentage point in 2005. Given the lags in the inflation process, core PCE inflation rises a bit further relative to baseline next year. These are big effects, and they reinforce my earlier point about how resilient our economy has been to some very large shocks. We have continued to grow at a solid pace despite some

very strong counter forces.

What does all of this mean for the conduct of monetary policy? In my view, it reinforces the need for policy to continue to be dependent on the incoming data on output and prices and on our forecasts for how those variables will evolve over time. To understand longer-term trends, it is also important to recognize that the measurement of economic activity in the immediate aftermath of the hurricanes may give an incomplete picture. Since it began withdrawing monetary accommodation in June 2004, the FOMC has repeatedly stated that its future policy actions will be governed by the expected performance of the economy. Monetary accommodation can be withdrawn at a faster pace if inflation pressures seem to be building to a greater extent than expected. Likewise, if economic weakness emerges, the trajectory of policy could be appropriately adjusted for these circumstances. For now, I believe that our policy of removing monetary accommodation at a "measured" pace is most likely to promote our broader objectives of price stability and maximum sustainable economic growth.

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