For release on delivery
12:15 p.m. EDT
April 11, 2011

Commodity Prices, the Economic Outlook, and Monetary Policy

Remarks by

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at the

Economic Club of New York

New York, New York

April 11, 2011

Good afternoon. For more than a century, the Economic Club of New York has provided an influential forum for the discussion of social, political and economic challenges facing the nation, and I appreciate very much your inviting me to speak today. My comments will focus on recent increases in commodity prices and the effects of those developments on the outlook for inflation, the economic recovery now under way, and the appropriate stance of monetary policy. Let me emphasize at the outset that these remarks reflect my own views and not those of others in the Federal Reserve System.[1]

Since early last summer, the prices of oil, agricultural products, and other raw materials have risen significantly. For example, the price of Brent crude oil has risen more than 70 percent and the price of corn has more than doubled; more broadly, the Commodity Research Bureau's index of non-fuel commodity prices has risen roughly 40 percent. The imprint of these increases has become increasingly visible in overall measures of inflation. For example, inflation as measured by the price index for personal consumption expenditures (PCE) moved up to an annual rate of about 4 percent over the three months ending in February after having averaged less than 1-1/2 percent over the preceding two years. Moreover, survey data suggest that surging prices for gasoline and food have pushed up households' near-term inflation expectations and are making consumers less confident about their economic circumstances.

Some observers have attributed the recent boom in commodity prices to the highly accommodative stance of U.S. monetary policy, including the marked expansion of the Federal Reserve's balance sheet and the maintenance of the target federal funds rate at exceptionally low levels. Such an interpretation of recent developments naturally

[1] I am indebted to Board staff members Christopher Erceg, Steven Kamin, David Lebow, Andrew Levin, Trevor Reeve, David Reifschneider, Stacey Tevlin, and William Wascher for their assistance in preparing these remarks.

leads to the conclusion that the Federal Open Market Committee (FOMC) should move promptly toward firmer monetary conditions. Indeed, some have even raised the specter of a return to the high inflation of the 1970s in arguing for the urgency of monetary policy tightening.

Increases in energy and food prices are, without doubt, creating significant hardships for many people, both here in the United States and abroad. However, the implications of these increases for how the Federal Reserve should respond in terms of monetary policy must be considered very carefully. In my remarks today, I will make the case that recent developments in commodity prices can be explained largely by rising global demand and disruptions to global supply rather than by Federal Reserve policy. Moreover, empirical analysis suggests that these developments, at least thus far, are unlikely to have persistent effects on consumer inflation or to derail the recovery. Critically, so long as longer-run inflation expectations remain stable, the increases seen thus far in commodity prices and headline consumer inflation are not likely, in my view, to become embedded in the wage and price setting process and therefore are not likely to warrant any substantial shift in the stance of monetary policy. An accommodative monetary policy continues to be appropriate because unemployment remains elevated, and, even now, measures of underlying inflation are somewhat below the levels that FOMC participants judge to be consistent, over the longer run, with our statutory mandate to promote maximum employment and price stability.

While I continue to anticipate a gradual economic recovery in the context of price stability, I do recognize that further large and persistent increases in commodity prices could pose significant risks to both inflation and real activity that could necessitate a policy response. The FOMC is determined to ensure that we never again repeat the experience of the late 1960s and 1970s, when the Federal Reserve did not respond forcefully enough to rising inflation and allowed longer-term inflation expectations to drift upward. Consequently, we are paying close attention to the evolution of inflation and inflation expectations.

Sources of the Recent Rise in Commodity Prices

Let me now turn to a discussion of the sources of the recent increase in commodity prices. In my view, the run-up in the prices of crude oil, food, and other commodities we've seen over the past year can best be explained by the fundamentals of global supply and demand rather than by the stance of U.S. monetary policy.

In particular, a rapid pace of expansion of the emerging market economies (EMEs), which played a major role in driving up commodity prices from 2002 to 2008, appears to be the key factor driving the more recent run-up as well. Although real activity in the EMEs slowed appreciably immediately following the financial crisis, those economies resumed expanding briskly by the middle of 2009 after global financial conditions began improving, with China--which has accounted for roughly half of global growth in oil consumption over the past decade--again leading the way. By contrast, demand for commodities by the United States and other developed economies has grown very slowly; for example, in 2010 overall U.S. consumption of crude oil was lower in than in 1999 even though U.S. real gross domestic output (GDP) has risen more than 20 percent since then. On the supply side, heightened concerns about oil production in the Middle East and North Africa have recently put significant upward pressure on oil prices, while droughts in China and Russia and other weather-related supply disruptions have contributed to the jump in global food prices.

In contrast, the arguments linking the run-up in commodity prices to the stance of U.S. monetary policy do not seem to hold up to close scrutiny. In particular, some observers have pointed to dollar depreciation, speculative behavior, and international monetary linkages as key channels through which accommodative U.S. monetary policy might be exacerbating the boom in commodity markets. Let me address each of these possibilities in turn.

First, it does not seem reasonable to attribute much of the rise in commodity prices to movements in the foreign exchange value of the dollar. Since early last summer, the dollar has depreciated about 10 percent against other major currencies, and of that change, my sense is that only a limited portion should be attributed to the Federal Reserve's initiation of a second round of securities purchases. By comparison, as I noted earlier, crude oil prices have risen more than 70 percent over the same period, and nonfuel commodity prices are up roughly 40 percent. Put another way, commodity prices have risen markedly in all major currencies, not just in terms of U.S. dollars, suggesting that the evolution of the foreign exchange value of the dollar can explain only a small fraction of those increases.

A second potential concern is that U.S. monetary policy is boosting commodity prices by reducing the cost of holding inventories or by fomenting "carry trades" and other forms of speculative behavior. But here, too, the evidence is not compelling. Price increases have been prevalent across a wide range of commodities, even those that are associated with little or no trading in futures markets. Moreover, if speculative transactions were the primary cause of rising commodity prices, we would expect to see mounting inventories of commodities as speculators hoarded such commodities, whereas in fact stocks of crude oil and agricultural products have generally been falling since last summer.[2]

A third concern expressed by some observers is that the exceptionally low level of U.S. interest rates has translated into excessive monetary stimulus in the EMEs. In particular, even though their economies have been expanding quite rapidly, many EMEs have been reluctant to raise their own interest rates because of concerns that higher rates could lead to further capital inflows and boost the value of their currencies. Some argue that their disinclination to tighten monetary policy has in turn resulted in economic overheating that has generated further upward pressures on commodity prices.

I do not think this explanation accounts for much of the surge in commodity prices, in part because I believe that the bulk of the rapid economic growth in EMEs mainly reflects fundamental improvements in productive capacity, as those countries become integrated into the global economy, rather than loose monetary policies. Irrespective of monetary conditions in the advanced foreign economies, it is clear that the monetary and fiscal authorities in the EMEs have a range of policy tools to address any potential for overheating in their economies if they choose to do so. Indeed, in light of the relatively high levels of resource utilization and inflationary pressures that many EMEs face at present, monetary tightening and currency appreciation might well be appropriate for those economies.

[2] Longer-dated futures suggest that the prices of some important commodities, such as cotton, are expected to fall or at least remain flat in coming years; there is little incentive to speculate in commodities whose prices are not expected to increase further.

The Outlook for Consumer Prices

Turning now to the outlook for U.S. consumer prices, I anticipate that the recent surge in commodity prices will cause headline inflation to remain elevated over the next few months. However, I expect that consumer inflation will subsequently revert to an underlying trend that remains subdued, so long as increases in commodity prices moderate and longer run inflation expectations remain reasonably well-anchored.

Underlying Inflation Trends

Focusing on inflation prospects over the medium term is essential to the formulation of monetary policy because, due to lags, the medium term is the timeframe over which the FOMC's actions can influence the economy. For this purpose, economists have constructed a variety of measures to separate underlying persistent movements in inflation from more transitory fluctuations. These measures include "core" inflation, which excludes changes in the prices of food and energy, and "trimmed mean" inflation, which exclude prices exhibiting the largest increases or decreases in any given month.

No single measure of underlying inflation is perfect, but it is notable that these measures have exhibited a remarkably consistent pattern since the onset of the recession: All show the underlying inflation rate declining markedly to a level somewhat below the rate of 2 percent or a bit less that FOMC participants consider to be consistent with the Fed's dual mandate. For example, core PCE price inflation stood at less than 1 percent over the 12 months ending in February, down from 2-1/2 percent over the year prior to the recession. Trimmed-mean measures of inflation have also trended down over the past couple of years and are now close to 1 percent.

I want to emphasize that this focus on core and other inflation measures that may exclude recent increases in the cost of gasoline and other household essentials is not intended to downplay the importance of these items in the cost of living or to lower the bar on the definition of price stability. The Federal Reserve aims to stabilize inflation across the entire basket of goods and services that households purchase, including energy and food. Rather, we pay attention to core inflation and similar measures because, in light of the volatility of food and energy prices, core inflation has been a better forecaster of overall inflation in the medium term than overall inflation itself has been over the past 25 years.[3]

In my view, the marked decline in these trend measures of inflation since the intensification of the crisis largely reflects very low rates of resource utilization. Strong productivity gains have also played a role in holding down inflation because, together with low wage inflation, they have markedly restrained the rise in firms' production costs. With resource slack likely to diminish only gradually over the next few years, it seems reasonable to anticipate that underlying inflation will remain subdued for some time, provided that longer-term inflation expectations remain well contained.

Longer-Run Inflation Expectations

In this regard, surveys and financial market data indicate that longer-run inflation expectations remain reasonably well anchored even though near-term inflation expectations have jumped in the wake of the surge in commodity prices. For example, the Thomson Reuters/ University of Michigan Survey of Consumers indicates that median inflation expectations for the coming year moved up about 1-1/4 percentage

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[3] Overall inflation and core inflation regularly deviate from one another. When this has occurred over the past 25 years, the tendency has been for overall inflation to subsequently converge to core inflation, and not the other way around.

points in March, whereas the median expectation for inflation over the next 5 to 10 years increased only 1/4 percentage point. While such movements obviously bear watching, I would note that such a combination--namely, a substantial jump in near-term inflation expectations coupled with a relatively modest uptick in longer-run expectations--has often accompanied previous sharp increases in gasoline prices, and when it did, those movements were largely reversed within a few months.[4]

Information derived from the Treasury inflation-protected securities (TIPS) market also suggests that financial market participants' longer-term inflation expectations remain well anchored even as the near-term outlook for inflation has shifted upward. In particular, while the carry-adjusted measure of inflation compensation for the next five years has increased about 1/4 percentage point since earlier this year, forward inflation compensation at longer horizons is roughly unchanged on net. Much of the increase in five-year inflation compensation has been associated with the surge in food and energy prices, and the level of this measure appears consistent with a normal cyclical recovery after adjusting for those effects.

Commodity Prices and Inflation

Now I would like to explain in further detail why I anticipate that recent increases in commodity prices are likely to have only transitory effects on headline inflation. The current configuration of quotes on futures contracts--which can serve as a reasonable benchmark in gauging the outlook for commodity prices--suggests that these prices will roughly stabilize near current levels or even decline in some cases. If that outcome materializes, the prices of gasoline and heating oil are likely to flatten out fairly soon, and retail food prices are likely to continue rising briskly for only a few more months.

[4] An example of this pattern was seen in the months following Hurricane Katrina in 2005.

Consequently, the direct effects of the surge in commodity prices on headline consumer inflation should diminish sharply over coming months.

Over time, I anticipate that the recent surge in commodity prices will also affect the prices of a broader range of consumer goods and services that use these commodities as inputs. Many firms are seeing such costs escalate and will pass along at least part of these increased raw materials costs to their customers. Nevertheless, I expect the overall inflationary consequences of these pass-through effects to be modest and transitory, provided that longer-run inflation expectations remain well anchored. Moreover, labor costs per unit of output--the single largest component of the unit cost of producing goods and services in the business sector--are essentially unchanged since 2007, owing to both moderate wage increases and solid productivity gains. I expect that nominal wage growth and labor costs will continue to be restrained by slack in resource utilization. Indeed, it would be difficult to get a sustained increase in inflation as long as growth in nominal wages remains as low as we have seen recently.

My expectation regarding the transitory effects of commodity price shocks on consumer inflation is supported by simulation results from the FRB/US model--a macroeconometric model developed at the Federal Reserve Board and used extensively for policy analysis. Starting from a situation in which inflation is running at 2 percent and households and firms expect the FOMC to keep it there in the longer run, the model predicts that a persistent increase of $25 per barrel in the price of crude oil--that is, a rise similar to what we've experienced since last summer--would cause the PCE price index to rise at an annual rate of nearly 4 percent over the first two quarters following the shock. Beyond that horizon, however, total PCE inflation drops quickly to about 2-1/4 percent and then declines gradually back to its longer-run rate of 2 percent.

These fairly modest and transitory effects of an oil price shock are also consistent with the response of the U.S. economy to the dramatic run-up in commodity prices from 2002 to 2008. Indeed, while oil prices more than quadrupled over that period, measures of underlying inflation remained close to 2 percent. In my view, that outcome was crucially dependent on the stability of longer-run inflation expectations, which in turn limited the pass-through of higher production costs to consumer prices.

Risks to the Inflation Outlook

I have argued that recent commodity price shocks are likely to have only a transitory effect on inflation. But even if such a trajectory for inflation is most likely, some specific risks must be considered. First, while futures markets suggest that commodity prices will stabilize near current levels, these prices cannot be predicted with much confidence. For example, oil prices could move markedly higher or lower as a consequence of geopolitical developments, changes in production capacity, or shifts in the growth outlook of the EMEs.

In addition, the indirect effects of the commodity price surge could be amplified substantially if longer-run inflation expectations started drifting upward or if nominal wages began rising sharply as workers pressed employers to offset realized or prospective declines in their purchasing power.

Indeed, a key lesson from the experience of the late 1960s and 1970s is that the stability of longer-run inflation expectations cannot be taken for granted. At that time, the Federal Reserve's monetary policy framework was opaque, its measures of resource utilization were flawed, and its policy actions generally followed a stop-start pattern that undermined public confidence in the Federal Reserve's commitment to keep inflation under control. Consequently, longer-term inflation expectations became unmoored, and nominal wages and prices spiraled upward as workers sought compensation for past price increases and as firms responded to accelerating labor costs with further increases in prices. That wage-price spiral was eventually arrested by the Federal Reserve under Chairman Paul Volcker, but only at the cost of a severe recession in the early 1980s.

Since then, the Federal Reserve has remained determined to avoid those mistakes and to keep inflation low and stable. It will be important to closely monitor the state of longer-term inflation expectations to ensure that the Federal Reserve's credibility, which has been built up over the past three decades, remains fully intact.

The Outlook for the Real Economy

Turning now to the real economy, real gross domestic product (GDP) has been rising since mid-2009 and now exceeds its level just prior to the onset of the recession. While GDP growth during late 2009 and early 2010 was largely the result of inventory restocking and fiscal stimulus, private final sales growth has picked up over the past six months--an encouraging sign. At the same time, measures of business sentiment have generally returned to pre-recession levels, factory output has been expanding apace, and the unemployment rate has dropped by a percentage point over the past few months.

Real consumer spending--which had been rising at a brisk pace in the fall--slowed somewhat around the turn of the year, and measures of consumer sentiment declined in March. Those developments may partly reflect the extent to which higher food and energy prices have sapped households' purchasing power. More generally, however, as the improvement in the labor market deepens and broadens, households should regain some of the confidence they lost during the recession, providing an important boost to spending.

Broad Contours of the Outlook

Nonetheless, a sharp rebound in economic activity--like those that often follow deep recessions--does not appear to be in the offing. One key factor restraining the pace of recovery is the construction sector, which continues to be hampered by a considerable overhang of vacant homes and commercial properties and remains in the doldrums. In addition, spending by state and local governments seems likely to remain limited by tight budget conditions.

Moreover, while the labor market has recently shown some signs of life, job opportunities are still relatively scarce. The unemployment rate is down from its peak, but at 8.8 percent, it still remains quite elevated. And even the decline that we've seen to date partly reflects a drop in labor force participation, because people are counted as unemployed only if they are actively looking for work.

Some observers have argued that the high unemployment rate primarily reflects structural factors such as a longer duration of unemployment benefits and difficulties in matching available workers with vacant jobs rather than a deficiency of aggregate demand. In my view, however, the preponderance of available evidence and research suggests that these alternative structural explanations cannot account for the bulk of the rise in the unemployment rate during the recession. For example, if mismatches were of central importance, we would not expect to see high rates of unemployment across the vast majority of occupations and industries. Instead, I see weak demand for labor as the predominant explanation of why the rate of unemployment remains elevated and rates of resource utilization more generally are still well below normal levels.

Commodity Prices and the Real Economy

As I have indicated, the recent run-up in commodity prices is likely to weigh somewhat on consumer spending in coming months because it puts a painful squeeze on the pocketbooks of American households.[5] In particular, higher oil prices lower American income overall because the United States is a major oil importer and hence much of the proceeds are transferred abroad. Monetary policy cannot directly alter this transfer of income abroad, which primarily reflects a change in relative prices driven by global demand and supply balances, not conditions in the United States. Thus, an increase in the price of crude oil acts like a tax on U.S. households, and like other taxes, tends to have a dampening effect on consumer spending.[6]

The surge in commodity prices may also dampen business spending. Higher food and energy prices should boost investment in agriculture, drilling, and mining but are likely to weigh on investment spending by firms in other sectors. Assuming these firms are unable to fully pass through higher input costs into prices, they will experience some compression in their profit margins, at least in the short run, thereby causing a decline in the marginal return on investment in most forms of equipment and structures.[7] Moreover, to the extent that higher oil prices are associated with greater uncertainty about the economic outlook, businesses may decide to put off key investment decisions until

[5] It should be noted that commodity price increases do boost the incomes of commodity producers. For example, the recent surge in food prices has generally boosted the incomes of farmers and others with ties to the agricultural sector.
[6] Staff analysis at the Federal Reserve Board indicates that a dollar increase in retail gasoline prices--a little more than has occurred over the last year--reduces real household disposable income by nearly 1 percent and hence tends to exert a significant drag on consumer spending.
[7] Increased investment in energy-conserving technologies would likely provide a partial offset to the various factors damping capital spending outside the commodity-producing sectors.

that uncertainty subsides. Finally, with higher oil prices weighing on household income, weaker consumer spending could discourage business capital spending to some degree.

Fortunately, considerable evidence suggests that the effect of energy price shocks on the real economy has decreased substantially over the past several decades. During the period before the creation of the Organization of the Petroleum Exporting Countries (OPEC), cheap oil encouraged households to purchase gas-guzzling cars while firms had incentives to use energy-intensive production techniques. Consequently, when oil prices quadrupled in 1973-74, that degree of energy dependence resulted in substantial adverse effects on real economic activity. Since then, however, energy efficiency in both production and consumption has improved markedly.

Consequently, while the recent run-up in commodity prices is likely to weigh somewhat on consumer and business spending in coming months, I do not anticipate that those developments will greatly impede the economic recovery as long as these trends do not continue much further. For example, the simulation of the FRB/US model that I noted earlier indicates that a persistent increase of $25 per barrel in oil prices would reduce the level of real GDP about 1/2 percent over the first year and a bit more thereafter. The magnitude of that effect seems broadly consistent with the estimates of professional forecasters; for example, the Blue Chip consensus outlook for real GDP growth has edged down only modestly in recent months.

Monetary Policy Considerations

Let me now turn to the stance of monetary policy. As you know, monetary policy has been highly accommodative since the financial crisis intensified. In December 2008, the FOMC lowered the target federal funds rate to near zero and started to provide forward guidance concerning its likely future path. As in its statements since March 2009, the Committee reiterated last month that "economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations, are likely to warrant exceptionally low levels for the federal funds rate for an extended period." In addition, the FOMC has purchased a substantial volume of agency debt, agency mortgage-backed securities, and longer-term Treasury securities. The Committee initiated a second round of Treasury purchases last November and has indicated that it intends to complete those purchases by the end of June. My reading of the evidence is that these securities purchases have proven effective in easing financial conditions, thereby promoting a stronger pace of economic recovery and checking undesirable disinflationary pressures.

I believe this accommodative policy stance is still appropriate because unemployment remains elevated, longer-run inflation expectations remain well anchored, and measures of underlying inflation are somewhat low relative to the rate of 2 percent or a bit less that Committee participants judge to be consistent over the longer term with our statutory mandate. However, there can be no question that sometime down the road, as the recovery gathers steam, it will become necessary for the FOMC to withdraw the monetary policy accommodation we have put in place. That process will involve both raising the target federal funds rate over time and gradually normalizing the size and composition of our security holdings. Importantly, we are confident that we have the tools in place to withdraw monetary stimulus, and we are prepared to use those tools when the right time comes.

Of course, there are risks to the outlook that may affect the timing and pace of monetary policy firming. In my view, however, even additional large and persistent shocks to commodity prices might not call for any substantial change in the course of monetary policy as long as inflation expectations remain well anchored and measures of underlying inflation continue to be subdued. As I noted earlier, a surge in commodity prices unavoidably impairs performance with respect to both aspects of the Federal Reserve's dual mandate: Such shocks push up unemployment *and* raise inflation. A policy easing might alleviate the effects on employment but would tend to exacerbate the inflationary effects; conversely, policy firming might mitigate the rise in inflation but would contribute to an even weaker economic recovery. Under such circumstances, an appropriate balance in fulfilling our dual mandate might well call for the FOMC to leave the stance of monetary policy broadly unchanged.

That said, in light of the experience of the 1970s, it is clear that we cannot be complacent about the stability of inflation expectations, and we must be prepared to take decisive action to keep these expectations stable. For example, if a continued run-up in commodity prices appeared to be sparking a wage-price spiral, then underlying inflation could begin trending upward at an unacceptable pace. Such circumstances would clearly call for policy firming to ensure that longer-term inflation expectations remain firmly anchored.

Conclusion

In summary, the surge in commodity prices over the past year appears to be largely attributable to a combination of rising global demand and disruptions in global supply. These developments seem unlikely to have persistent effects on consumer inflation or to derail the economic recovery and hence do not, in my view, warrant any substantial shift in the stance of monetary policy. However, my colleagues and I are paying close attention to the evolution of inflation and inflation expectations, and we are prepared to act as needed to help ensure that inflation, over time, is at levels consistent with our statutory mandate.