

## COMMODITY PRICES AND MONETARY POLICY: WHAT HAVE WE LEARNED?

*Wayne D. Angell*

Money, macroeconomics, and forecasting cover the important ingredients in any policymaking strategy. While I will briefly comment on what I believe is the current state of monetary policymaking, my key focus will be on the role of forward-looking market price indicators—such as commodity prices—in any monetary policy strategy in our current environment. More specifically, I will discuss how I believe these indicators have been helpful and why they can contribute to a more successful monetary policy.

Because some key reasons for using forward-looking commodity price indicators are often overlooked by academic researchers, I want to outline the rationale for using these indicators and review some recent empirical evidence pertaining to their usefulness. Later in this paper, I will discuss how commodity prices have actually been used in implementing monetary policy in recent years.

### The Current State of Monetary Policymaking

In recent decades, we have witnessed the unreliability of several strategies for monetary policymaking. We have learned a good deal about what types of monetary policy strategies no longer work the way theory would have us believe. Most monetary economists now recognize that levels of nominal and real interest rates, real economic variables such as employment, trends and rates of economic growth, and even narrow monetary aggregates are no longer reliable as the sole guides or targets for monetary policy. While some of these variables were deemed theoretically inappropriate, others have been

---

*Cato Journal*, Vol. 12, No. 1 (Spring/Summer 1992). Copyright © Cato Institute. All rights reserved.

The author is a Member of the Board of Governors of the Federal Reserve System. This paper is based on his luncheon address at the Cato Institute's Ninth Annual Monetary Conference.

rendered ineffective, possibly because of deregulation, global integration of financial markets, and revolutions in computer and information-processing technology.

Despite these negative lessons—discovering what does not work—we have also learned some positive lessons during this same period. In recent years, we have seen an emerging consensus that the proper goal of monetary policy is price stability. It may well be that before price-level benefits are apparent, support for this goal will soften as the negative effects of an economic slowdown are experienced. It is propitious, therefore, to point out that the apparent employment and price tradeoffs can be mitigated by timely use of forward-looking price indicators.

Even economists who generally agree on the goal of price stability, however, may disagree on exactly how to achieve it. Specifically, economists disagree as to what procedures, what instruments, and what policy guides are best suited to achieve price stability.

As they ponder possible alternatives, the first task of monetary policymakers is to be able to accurately gauge the current posture of monetary policy. Policymakers must be able to judge whether policy is “tight” or “easy,” whether the current stance of policy is inflationary or deflationary.

At one time, I had a great deal of confidence in monetary aggregates as reliable targets or guides to monetary policy. After all, in the 1960s and 1970s much evidence was mustered suggesting that monetary aggregates did reliably signal the “tightness” or “easiness” of monetary policy better than did the level of interest rates. And in certain environments, the monetary aggregates are certainly very useful policy guides.

In the early 1980s, however, it became obvious that narrowly defined monetary aggregates no longer accurately gauged the stance of policy. Shortly after this deterioration, I began to consider what information could help to interpret movements in the monetary aggregates or, rather, what type of indicators could be used to supplement monetary aggregates in gauging the posture of monetary policy.

Over the years, I have become convinced that information from forward-looking financial market indicators can usefully serve this supplemental role. Several types of market price information can aid in this task. For example, commodity prices, foreign exchange rates, and bond prices have all been proposed and used for this purpose. For reasons of brevity, however, I will focus my attention primarily on commodity prices or indices of commodity prices.

## Some Reasons Why Commodity Prices Are Useful Monetary Policy Indicators

There are many reasons why commodity prices may provide useful information or may serve as useful indicators for monetary policy. First, the data-measuring commodity prices have a number of advantages over the type of data-measuring quantity variables such as GNP statistics, domestic output and income statistics, or statistics pertaining to the monetary aggregates. Commodity prices, for example, are readily available, are observed at frequent intervals, and are not subject to revision and adjustment as are the above-cited quantity data. Moreover, commodity prices have communication advantages in that they are simple and easy to understand. While individual commodities are sometimes affected by special factors, the use of broad-based indices of commodity prices minimizes the probability that movements in such indices reflect single-commodity supply factors.

Second, commodity prices are more flexible than other categories of prices. If commodity prices are flexible while other prices remain somewhat sticky, then changes in monetary policy may consistently have an impact on commodity prices before affecting other prices; commodity prices may yield timelier signals about policy change than do other prices. This characteristic may explain why commodity prices serve as useful leading indicators of inflation.

Third, commodity prices are forward looking. They are determined in auction markets and behave similarly to the prices of bonds, equities, or foreign exchange. Accordingly, commodity prices incorporate agents' anticipations of fundamental market forces as well as anticipations of both policy change and movements in general prices. In short, commodity prices embody expectations of the future.

Fourth, commodity prices may also serve as useful indicators for monetary policy because they enter the production process at early stages of production. Because of these facts, changes in commodity prices may tend to lead movements in broader price indices such as producer or consumer price indices.

In addition to these useful indicator properties that are pertinent for domestic monetary policy, commodity prices can be a useful ingredient in the international coordination of monetary policy. For example, when central banks monitor movements in commodity prices in conjunction with movements in exchange rates, they can often determine whether a given inflation is local or global in character. This information may provide guidance as to which country should pursue a relatively tighter policy and which should pursue a relatively easier policy.

If a domestic currency is depreciating against a basket of other currencies while broad indices of commodity prices are weak, then perhaps domestic monetary policy should ease relative to foreign monetary policy. Market price indicators, therefore, may help to signal the type of policies that should be undertaken in different countries and help to coordinate monetary policy.

Coordination of monetary policy that stabilizes exchange rates, however, also muffles information previously provided by exchange rate movements. In this situation, the information provided by commodity price movements becomes increasingly important. In particular, commodity price movements can provide vital information as to the monetary policies of those countries that coordinate policy; commodity prices also can provide valuable information as to global inflation or deflation and thereby can help anchor the international monetary system. In this context, it may be especially important for a key currency country to monitor commodity prices in assessing international price developments and the condition of the international economy. It is noteworthy that in 1987, then-Treasury Secretary James Baker proposed that commodity prices be included among the set of indicators monitored by the G-7 countries.

Thus, there are many practical and theoretical reasons why broad indices of commodity prices may serve as useful indicators for monetary policy, particularly if they supplement or complement information from monetary aggregates. While some uses of commodity prices as a policy guide are occasionally overlooked in academic literature, commodity prices may provide very useful information to the practical monetary policymaker.

### Evidence Pertaining to the Policy Usefulness of Commodity Prices

Of course, presenting practical and theoretical rationale for the use of commodity prices as monetary policy indicators is fine. But empirical evidence supporting this rationale is also essential. Empirical evidence pertinent to using commodity prices as policy guides takes two general forms: first, the relationship between changes in monetary policy and changes in commodity prices, and second, the relationship between changes in commodity prices and changes in general prices.<sup>1</sup>

Recently, a good deal of empirical evidence has been produced on these very issues. I cannot hope to survey all of this evidence,

<sup>1</sup>See Angell (1989), Brayton et al. (1993), and Reinhart (1991).

but I will present a very brief summary. First, existing empirical evidence on the relationship between changes in monetary policy and changes in commodity prices comes from a number of bodies of literature. Specifically, the following all yield information about this issue: formal empirical evidence of the effects of changes in monetary policy on broad indices of commodity prices, historical studies of these effects, and studies of the key determinants of commodity prices. In fact, the overall evidence is mixed. But much evidence does suggest that changes in monetary policy do significantly influence commodity prices.

Second, evidence examining the relationship between changes in commodity prices and changes in general prices or inflation also takes several forms. For example, turning point or leading indicator evidence and evidence relating to "causality" or predictability both provide information about this relationship. Turning point evidence indicates that commodity prices are useful leading indicators of movements in general prices. More specifically, this evidence suggests that changes in commodity price movements usually precede movements in various measures of general prices. A number of studies corroborate these findings. False signals, however, do occur; although commodity prices are not perfect leading indicators of inflation, they are useful enough to be included in a well-known index of leading indicators of inflation.

A number of empirical studies indicate that commodity price movements do significantly "cause" or predict general price movements. But these studies generally find that the incremental information content provided by commodity prices—beyond that contained in a host of other variables—does not appear to be great. Nonetheless, several studies suggest that the importance of commodity prices may be increasing.

In sum, the empirical evidence suggests that (1) changes in monetary policy influence commodity prices, and (2) movements in commodity prices both lead and "cause" changes in general prices. To be sure, this evidence also indicates that commodity prices are not perfect monetary indicators and should be neither the sole indicator nor the target for monetary policy. Nonetheless, most economists investigating this issue do agree that commodity prices yield useful information for perceptive monetary policymakers and, accordingly, can be useful supplementary indicators to the monetary aggregates.

### Recent Experience

In recent years, several important examples have demonstrated how commodity prices can be used to improve monetary policy.

These examples suggest that commodity prices improved monetary policymaking when they were used, and probably would have improved monetary policymaking at other times if they had not been ignored.

During the period from spring to autumn 1989, broad indices of commodity prices were trending down; the level of commodity prices was actually declining. World commodity prices were also quite sluggish. Therefore, commodity prices were signaling that an easier policy stance was appropriate and that the monetary restraint implemented in earlier months had taken root.

At the same time, other key market price indicators were providing corroborating evidence. The spread between the federal funds rate and the 30-year Treasury bond rate became progressively more inverted during this period. The bond rate itself persistently declined from March until autumn, and the dollar was appreciating. Market price indicators all suggested that policy ease was in order.

The federal funds rate was, in fact, reduced during this period, thereby ameliorating what could have been an even more abrupt slowdown in economic activity. If this action had not been taken, it is likely that the foreign exchange rate would have further appreciated, thereby contributing to a more pronounced plateau in net exports. Thus, for the first time, the Federal Reserve used commodity prices effectively to improve the conduct of monetary policy.

In late 1989, however, events had changed. In particular, by December 1989 commodity prices had stabilized. Commodity prices were signaling that additional policy ease would be misinterpreted and could lead to higher long-term interest rates. Furthermore, the dollar had begun to depreciate, and long-term bond rates had stabilized so that the federal funds rate had fallen relative to the long bond rate. Market prices were signaling that additional ease was not appropriate at that time.

At the Federal Open Market Committee (FOMC) meeting in December 1989, I dissented from the easing action undertaken. In dissenting, I explicitly stated for the record:

Policy decisions should rely mainly on leading indicators, including commodity prices, the exchange rate, the yield curve, and money supply growth. Attention to such indicators had served policy well in the past. . . . At this meeting, price-level indicators were not signaling a need for further ease. In these circumstances, an additional drop in the federal funds rate, coming after two previous easing moves in the fourth quarter, could raise doubts about the System's commitment to its objective of price stability, . . . and drive

## COMMODITY PRICES AND MONETARY POLICY

up long-term interest rates, thereby increasing the likelihood of economic instability.<sup>2</sup>

As it happened, the Federal Reserve went about seven months without further easing action and by that time circumstances had changed. For me, the lesson of this particular episode is that commodity prices can help in bringing about the better timing of policy action: Commodity prices can help the monetary policymaker to take the correct action earlier.

In addition to these earlier episodes, oil-price fluctuations have also bolstered the case for monitoring commodity prices. In situations when the price of a key commodity like oil dramatically changes, it is particularly useful to monitor those commodity prices not influenced by changes in energy prices. In other words, it is useful to continue to monitor those commodity prices still reflecting the influences of monetary policy.

Broad indices of non-oil commodity prices have provided very useful information to monetary policymakers. In particular, at the time of the Persian Gulf War, non-oil commodity price indices clearly signaled that monetary policy was not accommodating the oil price increase. These non-oil commodity price indices, therefore, were signaling that monetary policy was maintaining an anti-inflation policy posture. The persistent decline in non-oil commodity prices together with declines in bond yields indicated that the January 1991 cut in the discount rate was fully justified.

### Conclusion

In recent decades we have witnessed unreliable performance of some one-time key indicators of monetary policy. Nonetheless, we have learned important lessons about what can work, and we have reached a consensus that price stability is the proper goal of monetary policy. Many reasons and a good bit of empirical evidence support the use of commodity prices as a monetary policy indicator that is useful in pursuing this goal. Practical experience continues to suggest that commodity prices yield beneficial information and are quite helpful in the policymaking process.

In addition to being theoretically sound and practically useful, commodity prices may also serve to help us understand important monetary episodes of the past. A number of studies of this sort are on my personal research agenda.

<sup>2</sup>Board of Governors of the Federal Reserve (1990, p. 238).

## References

- Angell, Wayne D. "Commodity Prices and Monetary Policy: Empirical and Theoretical Considerations." Paper presented at the annual meeting of the Virginia Association of Economists, 16 March 1989.
- Board of Governors of the Federal Reserve. "Recond of Policy Actions of the Federal Open Market Committee." *Federal Reserve Bulletin* 76(4) (April 1990): 233-39.
- Brayton, Flint; Tinsley, Peter; and von zur Muehlen, Peter. "Modeling and Policy Use of Auction Price Expectations." In *Evaluating Policy Regimes: New Research in Empirical Macroeconomics*, chap. 15. Edited by R. Bryant, P. Hooper, C. Mann, and R. Tryon. Washington, D.C.: Brookings Institution, 1993.
- Reinhart, Vincent. "Conducting Monetary Policy Without an Anchor." *Journal of Macroeconomics* 13 (Fall 1991): 573-96.