Guides to Monetary Policy in a Global Economy

Manuel H. Johnson

The Changing Financial Environment in the New Economy

Monetary policy is currently conducted in an environment very different from that of just 10 to 15 years ago. While this observation seems obvious in today's fast-paced financial world, many monetary policymakers around the world are still under the influence of monetary theory that was developed with a much more structurally closed financial environment in mind. Revolutions in telecommunications and information processing have dramatically lowered the costs of acquiring and processing information. Not only are information costs lower, but the quantity of information has greatly increased, and it is available both more quickly and continuously, 24 hours a day. This has helped to dramatically increase the knowledge and sophistication of market participants, although they have had to wade through a huge amount of useless noise as well.

One implication of these lower costs of information processing is that risk assessment is now cheaper. This in turn has spawned such financial innovations as the securitization of corporate and mortgage lending, which was followed by automobile lending, credit card receivables, and commercial leasing. Computer record keeping enables financial institutions to bundle a portfolio of small-denomination loans and sell them to a third party, earning fees for doing so. Computer technology also enables financial institutions to tailor these loan packages so they produce payment streams in forms desired by the market. Securitization in effect transforms loans into securities and promotes the integration of the loan and securities markets. Such developments have important implications for the banking industry

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Manuel H. Johnson is Co-Chairman and Senior Partner at Johnson Smick International and a former Vice Chairman of the Board of Governors of the Federal Reserve System.

and consequently, for the transmission mechanism of monetary policy.

Lower information costs, however, have much broader implications than integrating loan and security markets. Computer technology, for example, has fostered the development of program trading, which involves computer-driven trading between stock index futures and the stock price index. Such trading is synonymous with sophisticated arbitrage operations between future and spot equity markets; that is, to the intertemporal integration of equity markets. Lower information costs, therefore, constitute a force working to integrate financial markets that previously were more segregated. Computers and the Internet have also empowered individuals to bypass financial institutions in the trading and investment process.

Deregulation and Global Integration of Financial Markets

The reduction in information costs also has implications for foreign markets. Information quickly transcends political boundaries and circumvents regulatory barriers, thereby contributing to the integration of markets previously separated by geography. This development has important implications for monetary policy. The more integrated financial markets are, the more they behave in a unified rather than segmented manner. A higher degree of financial integration increases interdependence among economies, thereby increasing their responsiveness and sensitivity to foreign disturbances. This in turn increases the elasticity of substitution between domestic and foreign goods, services, and assets. Currency substitution becomes increasingly likely. Prices of financial assets, traded goods, and interest rates become increasingly interrelated and can move in unison, depending on the exchange rate regime. Among the most obvious examples are the sharp correction of world equity markets in October 1987, the convergence of inflation rates and interest rates in the world's industrial economies through European monetary union, and more recently, the Asian contagion and Russian crises. Increased integration implies that economies are increasingly open; today, the only truly closed economy is the world economy.

Increased global integration also implies that a national monetary policy that diverges from the consensus of policies pursued elsewhere elicits rapid capital flows and sharp exchange rate movements. Changes in monetary policy may affect economic activity or prices in different ways than they would have in a less open economy because an alternative transmission mechanism exists in an open economy.

Another important change is the increased deregulation of many financial markets, which has taken place in several dimensions: the abolition of most controls on interest rates, the dismantling or at least the erosion of some geographic restrictions on financial institutions, the elimination of some product prohibitions as well as the scrapping of capital controls. These developments have been accelerated by the proliferation of globally diversified, multinational firms and banks.

Measurement Problems with Traditional Models

Financial deregulation has occurred not just in the United States but also in many other industrialized countries and many emerging markets as well. This deregulation, together with developments in information processing, has worked to integrate heretofore segmented financial markets so that the identification or measurement of purely narrow transactions balances has become increasingly difficult; transactions and savings instruments are now almost impossible to distinguish. Also, there are some difficult and potentially dangerous growing pains associated with this transition to financial integration. If the appropriate financial market infrastructure such as property law, disclosure requirements, and accounting standards is not in place, unforeseen shocks can result, à la Mexico, Asia, and Russia.

In such an open, integrated international economic system, it is ludicrous today to think that anyone or anything can accurately measure over any meaningful time period the economic forces at work in the U.S. and global economies. We have amazingly faster and more powerful calculating machines and yet we are no closer to figuring out in a timely fashion the size of our economy or its actual growth rate than before. Why? Because these machines themselves are a reflection of the dynamism and complexity of what is happening or rather has already happened. So let's please spare each other the misery of reviewing again any monetary policy decision models that are based on knowing contemporaneously the actual money supply, the GDP, GDP growth rates, GDP potential, the unemployment rate, the natural rate of unemployment, the natural rate of interest, the inflation rate, and so on. Those things are all unmeasurable in any practical sense.

We could debate the conceptual frameworks that underlie estimates of the various variables that I have just mentioned. But there are many theoretical models that are useful in helping us understand how the macro economy works and suggest how we could manage the economy along a stable path from one equilibrium point to the next. In fact, I have my own pet conceptual framework designed by my own

pet eccentric economic theoretician, Knut Wicksell. The key issue for monetary policy is not one of conceptual frameworks, it is whether practical, measurable indicators are available to support decisionmaking given the framework.

Still Valid Principles of Monetary Policy

Despite the failure of successive approaches to monetary policy in recent decades, some key principles remain valid. For example, there is no reason to reject the notion that inflation is ultimately a monetary phenomenon, even if the reliability of the relationship between money and income has deteriorated. Accurately measuring relevant transactions balances may not be possible, but when nominal prices of all goods are persistently increasing, too much money is chasing too few goods, and the value of money is decreasing. This suggests that nominal prices continue to be reliable signals of changes in the value of money.

Similarly, monetary stimulation cannot permanently influence real variables or relative prices in any way that would violate the long-run neutrality of money. The fact that inflation has little predictable relationship to real economic activity suggests that nominal rather than real variables or relative prices are the appropriate guides to monetary policy. Therefore, since monetary policy can only permanently influence nominal variables and the only permanent contribution it can make is to achieve price stability, the credible maintenance of a stable value for money is the proper ultimate objective of monetary policy.

Price stability is important not only because its attainment enhances the usefulness of money, but also because it enables the price system to best fulfill its function of communicating information. The price system, after all, is the elaborate signaling mechanism of a free market system. It enables decentralized, dispersed knowledge to be aggregated and communicated, often instantly, to millions of decisionmakers. Operating properly, the price system enables resources to be allocated most efficiently, thereby fostering the increased economic growth and higher living standards commonly enjoyed in market economies.

Selecting the Proper Indicators

Price stability is another way of saying that money maintains its value over time. The goal of price stability, therefore, is equivalent to the goal of stabilizing the exchange rate between money and goods, or stabilizing the price or exchange value of money. We have already

established that policy lags, sampling error, revisions, and other measurement problems counsel against directly targeting general price indices.

Therefore, broad proxies of general prices such as the GNP deflator or the Consumer Price Index are not good direct targets because they have proven to be quite sticky. To be useful, data comprising these indices necessarily must be seasonally adjusted and often rebased. Should redefinitions occur, due, for example, to quality adjustments or other factors, price level changes can sometimes be significant. Accurate rebasing of these types of indices can only be achieved over fairly long intervals.

Because of the problems associated with measuring general price indices over the short term, an intermediate indicator approach to policymaking is more appropriate. Useful intermediate policy indicators should possess a number of characteristics, including flexibility and availability. They should also be accurately measurable and should respond reliably to changes in monetary policy. Finally, they should lead the price of money or at least be useful proxies for it.

Since prices communicate knowledge about the relative scarcities of economic goods and services, intuition suggests that the price system likely can communicate information and knowledge about the relative scarcity of the price of money—that is, the exchange rate between money and goods. Financial asset markets often approach the definition of an efficient market. Their prices reflect all relevant information, they are forward-looking, and they provide a current consensus of knowledgeable opinion about the prices of financial instruments.

In 1988, I proposed using financial market prices as indicators in a system to manage monetary policy. Bob Keleher (my assistant at the Fed) and I wrote a book on this market price approach in 1996. Our approach employs information from three key financial asset market prices in assessing the stance of monetary policy. These indicators are to be found in commodity markets, the foreign exchange market, and the bond market. All three represent economically important, broadly based, and sensitive markets whose prices yield early, useful signals about the price of money. Each sheds light on the price of money from a different perspective.

Information from these three intermediate financial market indicators can best be utilized within a Wicksellian-type policy framework. Wicksell's approach called for adjusting the interest rate controlled by the central bank toward equality with an unobservable natural rate (the interest rate consistent with noninflationary growth).

In this approach, the overnight bank rate (in the case of the United States the federal funds rate) is employed as an operating instrument

adjusted on the basis of information about the price of money from assessments of the commodity, foreign exchange, and bond markets. When these indicators, carefully assessed in conjunction with one another, suggest that the price of money is falling or rising, the bank rate can be adjusted accordingly. Information from these three market prices, therefore, signals the central bank that too much or too little money is being produced. Therefore, these signals provide information to the monetary authority about the relative position of the natural rate. All else equal, relatively stable commodity prices, stable foreign exchange rates with those countries experiencing price stability, and relatively stable bond yields should signal that the overnight rate is in the vicinity of the natural rate. Of course, if this is the case, broad measures of inflation such as the CPI growth rate should converge roughly to zero over time.

Reference

Johnson, M. H., and Keleher, R. E. (1996) *Monetary Policy: A Market Price Approach.* Westport, Conn.: Quorum Books.