



Thinking Like a Central Banker

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Everyone looks at the world through lenses colored by his or her own experiences and background. Over my nine plus years at the Fed, I have been struck by misunderstandings of why the Fed acts as it does—misunderstandings from vantage points that are quite different from that of a Fed official. Those with Fed experience do know things that others do not. Some of what we know is confidential, but such information is in most cases disclosed with a lag. There are few permanent secrets. Still, there is a central-banker way of thinking that can be described and analyzed; doing so may help others to avoid mistakes in assessing Fed policy. That is my topic in these remarks.

Obviously, all I can do is to describe how one particular central banker with the initials W.P. thinks about what he does. And my perspective is that from a particular central bank, the Federal Reserve. My Fed colleagues might put things differently and might believe that I am off base with some of my comments. Nevertheless, I think the effort is worthwhile, for the degree of success of monetary policy is positively correlated with how completely the market understands the Fed. My disclaimer is that the views I express here are mine. These views not only do not necessarily reflect official positions of the Federal Reserve

System but also may not reflect the views of anyone else at the Fed, past or present. I thank my colleagues at the Federal Reserve Bank of St. Louis for their comments, but I retain full responsibility for errors.

ASSESSING THE ECONOMY

An area where Fed practice and market practice are essentially identical is in assessing the state of the economy and the outlook. Private sector and Fed forecasters use similar methods and rely on the same statistical information. Obviously, there are professional differences of opinion and of approaches, but these do not create a divide between Fed and private forecasts. As I have often put it, economists inside and outside the Fed studied at the same universities under the same professors and read the same journal articles. There is substantial movement of economists into and out of the Federal Reserve System. Fed economists attend many university seminars, and academic economists attend Fed seminars. Disagreements about forecasts are similar inside and outside of the Fed.

There is a difference in the informal or anecdotal information available inside and outside the Fed. The Fed has a large network of business contacts and relies on them to augment the fore-

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casting effort. However, some private forecasters have access to data and information the Fed does not. Large financial firms in particular have access to data, such as credit card activity and prospective borrowing by major clients, that the Fed does not have. Retail firms have extremely current information on sales and orders. Of course, the Fed may obtain some of this information through its business contacts, but private companies often make much more systematic use of their own internal business information than the Fed does.

Forecasters continually provide updates based on the flow of current information, both statistical and informal. In this regard, Fed and market practice is essentially identical.

There is, however, a difference between the Fed and the market in the use of forecast information. Traders and portfolio managers base their trades on the current flow of information, which needs to be updated throughout the trading day. Fed policymakers, on the other hand, do not continuously adjust the stance of policy in the same way managers adjust portfolio holdings. For this reason, my own practice is not to worry much as to whether I have correctly absorbed the import of each day's, or each hour's, data. I know that some information will be irrelevant to my policy position because it will be superseded by new information by the time of the next FOMC meeting. For example, I do not need hour-by-hour information on security prices. When I get to the next FOMC meeting, I'll have the latest data, charts of how security prices have behaved since the previous meeting, and analyses of price behavior over a much longer period—indeed, for as far back in time as I find helpful. Given that the FOMC does not adjust policy continuously, updating my forecast with every data release would not be an efficient use of my time.

A consequence of the fact that FOMC meetings occur at six-week intervals, on average, is that when I give a speech and take questions I may not be completely up to date on the implications of the latest data. In my speeches and discussions of policy with various audiences, I try to concentrate on longer-run issues and general principles. I emphasize that I will be studying all the data and anecdotal information in the days leading

up to an FOMC meeting. Thus, I ordinarily do not give detailed answers to questions on the precise implications of the latest data for the economic outlook. In many cases, I just haven't studied the implications thoroughly, although I certainly do so by the time the FOMC next meets.

DEALING WITH RISK

A private firm, especially a financial firm, must have robust policies to address risk. To an economist, risk is a two-sided concept. Outcomes may be above or below prior expectations. The possibility of an outcome far below expectation deserves special attention, for such an outcome may force a firm into bankruptcy. A financial firm models risk quantitatively, to the extent possible, and then examines with great care the extent to which formal models may miss key risks, perhaps because they were not observed during the sample period used to fit a model or because the economic environment may be changing. A central bank has a similar task. Quantification of risks to the economy should be taken as far as possible and then careful thought applied to risks beyond those that can be captured in models.

One important difference between a financial firm and the central bank is that a firm has a much wider array of strategies available to mitigate risk than does a central bank. A financial firm can make careful calculations of the extent of duration mismatch between assets and liabilities and can adjust its positions continuously to control the extent of mismatch. A financial firm can deal in many derivatives markets to control risk. A financial firm has wide latitude in choosing how much risk to accept.

A central bank pretty much has to accept policy risks to the economy arising from the economy's institutional structure and market environment. Market sentiment, bullish or bearish, can change quickly. Analytically, the central bank can explore implications of various possible scenarios and can engage in special information collection to try to understand as quickly as possible what is happening in the economy. Beyond that, what a central bank can do is to adopt from

time to time a somewhat asymmetric policy stance in an effort to control risk, especially by guarding against particularly costly possible outcomes. When inflation risk is the dominant concern, policy should lean on the restrictive side and policymakers should be more ready to tighten than to ease policy. Conversely, when deflation and/or recession risk predominates, policy should be asymmetric toward policy ease. However, there is always the danger of leaning in one direction too far or too long; policymakers must be prepared to reverse course and should try not to allow the stance of policy to drift too far from a baseline approach.

It is worth emphasizing that the central bank, as the dominant player in the money market, is in a different situation than is a competitive firm. The central bank's strategy in mitigating risk must work through the markets and by shaping accurate market expectations about future central bank behavior.

The list of possible risks facing private firms and central banks is a long one. A risk that is often incompletely understood by those outside management is reputational risk. The issue is much more than simple embarrassment. Trust is an essential capital asset for a financial firm, and for a central bank. A damaged reputation can send customers fleeing to competitors. For a central bank, a damaged reputation can lead market participants to question the bank's policy consistency, its motivations, and even its veracity. For these reasons, successful private sector firms and central banks both invest heavily in programs and procedures to ensure fair dealing and high ethical standards. With regard to reputational risk, the issues inside and outside the central bank are essentially identical. Financial firms and central banks understand each other very well on this dimension of managing risk.

ASSESSING ODDS ON FED POLICY ACTION

Market participants are constantly assessing the odds on Fed policy actions at upcoming FOMC meetings. These assessments register

directly in market prices, especially in the federal funds futures and options markets and the similar markets in eurodollars. There is an important policy purpose for the Fed to study these market expectations. Understanding how the flow of new information affects market expectations can be useful to policymakers. For example, suppose I interpret a surprise change in employment to be an anomaly in the data but I observe a large market reaction to the data release. In that case, I would reexamine my interpretation, and if I still believe I am correct I might comment during the Q&A session after a speech that my own personal take on the data differs from the market view. My aim would be to prompt market participants to reexamine their interpretation of the data.

Consider another example of the importance of tracking market expectations. When I examine the federal funds futures market, a large discrepancy between market expectations and my "best guess" of the FOMC's future actions might suggest to me the possibility of a Fed communications failure. The ideal situation is one in which the market and the Fed have read available information the same way. I am only one participant in the FOMC process, but I try not to contribute to market misunderstanding of monetary policy. The market is collating information from all FOMC participants, paying especially close attention, of course, to the Chairman's views.

I also follow market data carefully as part of ongoing research on how market expectations are formed. This research, conducted with economists in the St. Louis Fed's Research Division, helps me to understand monetary policy at a deeper level. My perspective in this research is essentially the same as similar research conducted in universities and by active market participants.

OBJECTIVES

Private firms have the goal of profit maximization, whereas the central bank is pursuing the macroeconomic goals of price stability, employment stability at a high level, and financial market stability. The private sector and monetary policy goals are quite different, but that fact does not, in

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my view, define an important difference in approach.

Policymakers think in terms of a loss function that depends on departures of outcomes from desired outcomes. Policy goals are quantifiable and, as with profits, come with short and long horizons. As already discussed, private firms and central banks must understand and control risks to the extent possible.

Private firm and central bank governing and disciplining processes are, of course, quite different. Nevertheless, analytical approaches to achieving goals are quite similar. I do not believe that differences of objectives and governing processes define an essential difference between the two types of organizations. Thus, in this respect those in the private sector and in the central bank understand and relate to each other easily.

PRICE MAKERS VERSUS PRICE TAKERS

What is a critically important difference between a central bank and a private financial firm is that the central bank, in the short run anyway, sets a policy interest rate and importantly influences longer-term interest rates through effects on market expectations. The central bank is a price maker in the interbank funds market. Private financial firms are essentially price takers in that market and in the government securities market.

A typical trader or portfolio manager can plan security purchases and sales with little or no regard to any effects on market prices or the behavior of other firms. Of course, this statement is not precisely true for very large portfolios, but the difference in market impact between a central bank and a large private portfolio is enormous.

The fact that a central bank is a price maker makes its strategy fundamentally different from that of a portfolio manager. To achieve policy goals, the central bank must think of its policy actions as following a predictable policy rule that the private sector can observe. A portfolio manager responds to the flow of new information partly as it affects probabilities of future central bank action.

I pointed out earlier that both market participants and policymakers try to understand the implications of the flow of information for policy actions. Now I want to emphasize the important point that policymakers have the task of designing systematic policy responses to new information. The design should advance achievement of policy goals, such as price stability. There are many dimensions to policy design. A simple example is that the Federal Reserve now adjusts its target for the federal funds rate in multiples of 25 basis points. That may seem a trivial example, but in the past the Fed sometimes adjusted its funds rate target by smaller amounts. Another example is disclosure of the policy decision promptly after the decision. That practice started only in 1994 and ever since the FOMC has almost constantly grappled with disclosure issues.

I could point to many other dimensions of defining a policy rule, or response function (Poole, 2005). My point is not to elaborate on the nature of the policy rule but instead to emphasize how different that responsibility is from that of a portfolio manager. Policymakers should shape their policy actions by conscious decisions about how to guide market thinking not just in the context of a particular policy action but also in the future for policy actions in general. Put another way, when economic conditions recur, policy responses to the same set of conditions should also recur. If that were not the case, then policy actions could be interpreted only as random, unpredictable responses to changes in economic conditions. It simply cannot be good policy for policy actions to be essentially random.

The market interprets every policy action and every policy statement in the context of past actions and statements. What is a surprise and what is expected depends on past practice. The implication of this obvious point is that every policy action needs to be based on an understanding of how the action will be regarded in the future. Policy actions set precedents, and policymakers must be careful about those precedents. Otherwise, what appears to be a policy success today could be the seed of a policy problem in the future.

Modern macroeconomics emphasizes the importance of policy predictability for good policy outcomes (Taylor, 1984). The difference in perspective from standard practice 30 years ago is profound and incompletely recognized by many journalists and commentators. Even in the early Greenspan years, many thought that monetary policy worked by creating surprises. That perspective was natural because policy surprises had visible effects on security prices.

Theoretical developments in macroeconomics in the 1970s emphasized that policy surprises were undesirable. Efficient planning in the private sector requires that expectations about government policies be accurate, or as accurate as the inherent uncertainty of the economic environment permits. Policymakers ought not to add to inherent economic uncertainty. It is desirable that, to the maximum possible extent, the economy be characterized by an expectational equilibrium in which the market behaves as policymakers expect and the central bank behaves as the market expects. There are certainly times, however, when policy surprises are unavoidable.

So, much of my own thinking is driven by an effort to help define a policy that will increase policy predictability over time. In my speeches and ensuing Q&A, I try to emphasize general policy principles rather than the current policy situation. What is important is not the policy action at the next FOMC meeting, which is typically what people want to know, but the policy regularity that will extend across many FOMC meetings, which is what people should want to know.

AVOIDING POLICY DISTURBANCES

An important corollary to the task of defining a policy rule is that the central bank ought not to be a source of random disturbances. All of us are well aware of the potential for saying things inadvertently that will create market misunderstanding of likely future Fed policy actions. Or, more precisely, what needs to be understood is how and why various possible economic condi-

tions would justify particular appropriate policy responses. One way to avoid misinformation is to avoid providing any information. Put another way, if my mouth is not open, I cannot put my foot into it.

In my view, however, it is important to try to convey correct information. I do not believe that I would be doing my job if fear of providing misinformation led me to provide no information. For this reason, I have maintained an active speaking schedule.

I do follow some general practices designed to reduce missteps. I try to schedule speeches, and certainly press interviews, for times when the markets are closed. That allows the market to digest what I say overnight. Another practice is that I never predict the outcome of future FOMC meetings. Given that I am only one participant in those meetings and that the Chairman's opinion carries great weight, predicting the outcome would be foolish. That is obvious, but what is less obvious is that I do my best to avoid being committal even in my own mind about the policy implications of recent data. Clearly, I could draw conclusions from available data that would create a certain presumption about the policy decision or at least about my policy position. I am very cautious about drawing firm implications about policy from the data.

I emphasize that my policy position will depend on all the information available at the time of the FOMC meeting, on the staff analysis, and on the debate during the meeting. That description of my attitude is literally correct. I noted earlier that I often do not focus on the data arriving day by day because I know that new data will supersede existing data and that I will benefit from my own intensive preparation before each meeting. I rely on the expert staff analysis prepared for each FOMC meeting. Given the complexity and dynamic nature of the issues, I find it best not to form a settled policy position well in advance of the meeting.

Moreover, what policy purpose would be served by my discussing publicly every twist and turn of my analysis between FOMC meetings? Market effects from doing so would not serve a

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constructive policy purpose—indeed, they would violate one of the important findings in macroeconomics that policy should not create random disturbances.

BASICS OF POLICY STRATEGY

I have emphasized the importance of the central banker perspective in conveying a policy strategy. I will conclude by sketching the appropriate strategy as I see it.

First, the central bank should be clear as to its goals. The most fundamental goal is maximum possible sustainable economic growth, which in my mind motivates the dual mandate in the law for the Federal Reserve to strive for price stability and high employment. Price stability, which is uniquely a central bank responsibility, contributes greatly to the goal of maximum sustainable growth. Price stability is not in conflict with high employment but contributes to it.

I personally believe, and have so stated on numerous occasions, that the inflation goal should be quantified. I know that many disagree on this point. In today's economy, I believe that a quantified inflation goal is not critically important but quantification might be of great importance in the future. I ask this question: If the Fed had had a specific inflation goal in 1965, would that commitment have helped to avoid the Great Inflation? I think the answer to the question is "yes." If that is the correct answer, then the United States might have avoided a very costly 15-year period of inflation, or the period might have been shorter.

A central bank cannot fix the level of employment or its rate of growth, or the average rate of unemployment. However, the central bank can contribute to employment stability. Avoiding, or at least cushioning, recessions is an important goal. This goal should not be viewed as in conflict with price stability. The most serious employment disaster in U.S. history was the Great Depression, which was a consequence of monetary policy mistakes that led to ongoing serious deflation. Similarly, the period of the Great Inflation saw four recessions in 14 years. Price stability is an essential precondition for overall economic stability.

We have tentative signs that the financial markets are beginning to recover from the recent upset, but financial fragility is obviously still an issue. If the upset were to deepen in a sustained way, it might have serious consequences for employment stability. As of today, we just do not know what the consequences may be. My best guess is that the inherent resilience of the U.S. economy along with future policy actions, should they be desirable, will keep the economy on a track of moderate average growth and gradually declining inflation over the next few years.

Similar bouts of financial market instability in the nineteenth century on up to the financial panic of 1907 led Congress to pass the Federal Reserve Act in 1912. A fundamental responsibility of the central bank is to contribute to orderly and efficient functioning of financial markets. The financial market upset of 2007 will join the history of upsets including those in 1970, 1984, 1987, and 1998. Each upset has different specifics but all of them have common characteristics, including especially a flight to safe assets.

I believe that part of the policy strategy ought to be to convey as clearly as possible to the market what the central bank is doing and why. A policy strategy that is a mystery to the markets will not serve the central bank well. Of course, the market will observe what the central bank does and infer many aspects of the strategy from those observations. Nevertheless, central bank strategy always relies in part on judgments about incoming information, such as whether a particular data release has anomalous features and should be discounted. The strategy of a central bank should be institutionalized and enduring. The strategy should not change just because the official roster changes. The strategy should evolve as economic knowledge improves and as economic conditions change.

I hope these remarks are useful. They do, in any event, explain something about how I have approached my responsibilities.

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