

Editor's Introduction

Daniel L. Thornton

The Twenty-Sixth Annual Economic Policy Conference was devoted to the issue of monetary policy transparency. The five papers covered a wide range of topics: Some focused on the value of transparency in the conduct of monetary policy from both theoretical and empirical perspectives; others focused on evidence that greater transparency matters for economic performance. In total, these papers generated a significant amount of new evidence on the importance of transparency, both in the conduct of monetary policy and for economic performance. The major conclusion is that transparency matters. Being transparent helps economic agents better predict monetary policy actions and fosters credibility. A transparent monetary policy focused on price stability tends to yield lower average inflation and more stable financial markets and a more stable economy. Whether inflation targeting per se is necessary to improve economic performance is less clear.

Any reader who is interested in the issue of monetary policy transparency and the related issues of central bank independence, accountability, and credibility will find these papers and the discussants' comments both entertaining and informative.

THE IMPORTANCE OF TRANSPARENCY

In the first conference paper, Alex Cukierman makes two important observations concerning monetary policy transparency. First, he notes that the degree of central bank opaqueness is a direct consequence of the "absence of consensus within the economic profession about the correct model of the economy." Cukierman notes that in the absence of such a consensus, it is reasonable for central bankers to assign some weight to alternative models of the economy. He illustrates this point by contrasting three models of the macroeconomic transmission mechanism: a monetarist Lucas-type model, a neo-Keynesian model, and a New Keynesian model. Cukierman notes that, among other things, these models differ in their concept of the output gap. In

what Cukierman characterizes as the Friedman/Lucas concept, the natural level of employment "is the level of employment that is generated by the *real* general equilibrium of the system in the absence of inflationary surprises." He contrasts this with the concept of NAIRU, which he characterizes as "the rate of unemployment below which inflation is accelerating and above which it is decelerating." He notes that these concepts are not necessarily identical and that both differ from the Keynesian concept of potential output because "the gap between actual and potential output may be non-zero even when inflation is fully expected and the rate of inflation is stable."

Fuzziness about conceptual measures of the output gap, and, by implication, other features of the true data-generating mechanism or politics, means that it is impossible for policymakers to be fully transparent. He notes that the lack of consensus of the "correct" model of the economy gives policymakers considerable discretion "which they can also use to hedge their positions in the face of model uncertainty and of political pressures."

Cukierman's second main point comes from questioning the view, explicit in nearly all specifications of central bank loss functions, that policymakers care as much about positive deviations of output gap as negative deviations. Specifically, he notes that "it is hard to see why CBs, social planners, or political authorities would consider, *given inflation*, a positive output gap of a given magnitude to be equivalent to a negative output gap of the same magnitude." He recalls the remarks of a former Vice Chairman of the Fed: "The Fed takes far more political heat when it tightens preemptively to avoid inflation than when it eases preemptively to avoid unemployment."

Cukierman then shows that if central bankers have an asymmetric loss function with respect to the output gap, i.e., policymakers care more about negative gaps than positive gaps, this factor in conjunction with uncertainty about the economy's true data-generating mechanism induces an inflation bias. That is, the economy's average inflation rate will be higher than if policymakers' preferences were symmetric. Moreover, he notes that the inflation bias is an increasing function of the relative weight that policymakers place on output stabilization. The inflation bias is zero only when policymakers are "inflation nutters," i.e., they put no weight on the output gap.

Moreover, Cukierman shows that this bias arises

Daniel Thornton is a vice president and economic advisor at the Federal Reserve Bank of St. Louis.

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in either the monetarist transmission mechanism or the New Keynesian framework. In the latter case, however, under some circumstances, the average level of the output gap will be positive. This suggests that there are circumstances where, at relatively low rates of inflation, there is a permanent trade-off between the average level of inflation and the average level of the output gap.

In his discussion of Cukierman's paper, Carl Walsh more fully develops the distinction between alternative measures of the output gap. Drawing on the work of Fischer (1977), Walsh derives functional forms for gaps of the natural level of output, defined as the output of the real economy in the absence of price surprises, i.e., $p_t = E_{t-1} p_t$, where p_t is the level of prices, and of the New Keynesian measure of potential, defined as the "flexible-wage and flexible-price equilibrium level of output." The former assumes that prices are flexible while wages are sticky, while the latter assumes that prices are sticky and wages are flexible. Consistent with Cukierman's analysis, Walsh then demonstrates the problems that can arise when central bankers target the wrong gap measure or, more generally, when both wages and prices are sticky.

Walsh then develops a simple graphical exposition of Cukierman's findings when policymakers have asymmetric preferences for the output gap. His analysis shows not only why the average inflation rate is higher when policymakers put some weight on the output gap, but that the average inflation rate increases with the weight that central bankers place on the output objective.

Finally, Walsh notes that Cukierman's result that there is a permanent tradeoff between average inflation and the average level of the output gap is specific to the New Keynesian model that Cukierman employs. This is accomplished by using a model that effectively severs the link between the level of inflation and the output gap. In any formulation that directly links the level of inflation to the output gap, Cukierman's permanent tradeoff conclusion holds.

In the second conference paper, Stephen Cecchetti and Stefan Krause evaluate the effect of transparency on central bank performance. They do this by investigating how measures of central bank independence, accountability, transparency, and credibility relate to average inflation for a cross section of 63 countries and how these measures relate to measures of macroeconomic performance and policy inefficiency for a cross section of 24

countries. The measures of central bank independence, accountability, and transparency come from a survey of central banks in 1998 (Fry et al., 2000). They create an index of central bank credibility using each country's average inflation between 1985:Q1 and 1989:Q4 to proxy expected inflation. The index is equal to 1 if expected inflation is less than 2 percent and equal to zero if expected inflation is greater than 20 percent. The index is between zero and 1 if expected inflation is greater than 2 percent but less than 20 percent.

Economic performance is measured by the lowest weighted combination of the variance of inflation and the variance of output. A policy inefficiency measure is obtained for each country comparing the observed performance measure to the "optimal" performance obtained by minimizing the conventional quadratic loss function subject to constraints obtained by estimating a simple aggregate demand and aggregate supply model.

A univariate analysis of each of the central bank and economic performance measures shows that over the period 1995-99 there was a negative relationship between the average inflation rate in these countries and each of the central bank measures. Hence, the average inflation rate tends to go down the more independent, accountable, transparent, and credible is the central bank. This relationship is statistically significant only for the transparency and credibility measures, however. Hence, it appears that independence and accountability have little effect on inflation. The results, however, are dire for these measures when economic performance and policy inefficiency are considered. Not only are the relationships statistically insignificant, but the signs are wrong. Greater independence and accountability appear to reduce economic performance and policy effectiveness. The measures of transparency and credibility are correctly signed, but only the credibility index is statistically significant.

All of these performance measures are then regressed on cross section of the measures of independence, accountability, transparency, and credibility. These results are qualitatively similar to those using simple univariate analysis. Specifically, there is a strong negative relationship between each of the performance measures and the index of central bank credibility. None of the other measures is statistically significant at conventional significance levels, whether or not the credibility index is included. Cecchetti and Krause interpret their results as suggesting that "credibility is the primary factor explain-

ing the cross-country variation in macroeconomic outcomes.” They speculate that independence, accountability, and transparency might enhance credibility, but they find little cross-country correlation between these measures and the credibility index.

Alec Chrystal concurs with Cecchetti and Krause’s conclusion, but questions whether their evidence provides support for it. He suggests that it is “highly implausible” that better monetary policy accounts for the observed improvement in economic performance “if the demand and supply shocks had been of similar magnitudes to those experienced in earlier periods.” He suggests that a more likely explanation is that such shocks respond endogenously to the policy regime, suggesting that “greater monetary policy credibility across the world (but especially in major countries) has significantly reduced the demand and supply ‘shocks’ to which monetary authorities have to react.”

With respect to Cecchetti and Krause’s empirical analysis, Chrystal’s principal concern is with their measure of credibility. Specifically, he asks, “How can it make sense to judge the credibility of these new regimes from the outcomes in some earlier regime?” It would seem that, to do so, economic agents would have to have had expectations of a regime shift. Rather, he suggests that credibility—as measured by low inflation in the late 1980s—is correlated with inflation in the late 1990s, which may simply mean that inflation is autocorrelated. Nor is he particularly surprised that countries with high inflation in the 1980s had relatively high inflation in the 1990s. He suggests that a better approach would be to use survey measures of inflation expectations or measures based on a comparison of indexed and non-indexed bond yields. He notes that such measures are not available for many of the countries, but notes that this does not change the fact that using past inflation outcomes “fails to identify the separate influences of credibility, policy actions, shocks, and history.”

TRANSPARENCY IN THE CONDUCT OF MONETARY POLICY

William Poole, Robert Rasche, and Daniel Thornton present the first of two papers that investigate transparency in the conduct of policy. Specifically, they document the extent to which U.S. monetary policy has become increasingly open and transparent in recent years and estimate the

extent to which this greater openness and transparency has enabled markets to better anticipate monetary policy actions. They use a methodology developed by Poole and Rasche (2000) and Kuttner (2000) to estimate the unexpected change in the Fed’s target for the effective federal funds rate using the daily change in federal funds futures rates.

This methodology depends on the market knowing that the Fed has adjusted its funds rate target. Consequently, they perform the analysis separately for periods before and after February 1994—when the FOMC began the practice of announcing adjustments to the funds rate target. For the pre-1994 period, they undertake a detailed analysis to determine whether market participants were aware that the funds rate target had been changed.

They also explicitly account for the fact that this methodology does not account for all of the measurement error associated with measuring unexpected target changes. In addition, they identify instances since 1994 when market participants were surprised by Fed *inaction* and undertake case-by-case analyses of unanticipated events to better interpret their regression results and determine whether the market was better able to anticipate the Fed’s actions after 1994.

Their analysis indicates that “all target changes before 1994 were unexpected,” in that there were few instances when there was any widespread expectation that the Fed would act on a particular day and no instances when the market expected the Fed to act on the day that it did. They note, however, that “because the market frequently saw the need for an action, not all ‘unexpected’ target changes resulted in large adjustments to federal funds futures rates.” Moreover, there were few instances before 1989 when the market was aware that the Fed took an action when it did and “little indication that the market was aware that the Fed was setting an explicit objective for the funds rate before 1989.”

They find that rates responded significantly only to unexpected target changes for periods before and after 1994. Moreover, the 3-month rate responded nearly identically before and after 1994, but longer-term rates have responded much less after 1994. Noting two important issues—the difficulty of interpreting the response of interest rates at various maturities to the unexpected change in the funds rate target using the conventional expectations hypothesis and the problem that arises because all interest rates (including federal funds

futures rates) tend to respond to the same daily news—they undertake a case-by-case analysis of the response of futures rates at various maturities to unexpected actions and inactions.

The evidence indicates that the market was better able to predict target changes after 1994. This was due in part to the fact that, after 1994, the Fed followed the practice of changing the target primarily at regularly scheduled FOMC meetings. The largest surprises were associated with intermeeting changes. They also find evidence, however, that the market was better able to predict target actions further in advance after 1994 than before.

Mark Watson begins his comment on the Poole, Rasche, and Thornton paper by noting why the fact that the federal funds futures contracts are a bet on the average level of the effective funds rate in a particular month makes it difficult to use federal funds futures rates to predict daily changes in the funds rate. After showing how the Poole/Rasche and Kuttner methodologies circumvent this problem, he offers an alternative for estimating how well long-term rates predict changes in the funds rate and whether the market's ability to anticipate the funds rate has improved post-1994.

Specifically, he suggests testing the expectations hypothesis of the term structure of interest rates with a commonly used test, where the long-term change in the short-term rate is regressed on a constant term and the spread between the long-term rate and the short-term rate. If the expectations hypothesis holds, one should not be able to reject the null hypothesis that the coefficient on the rate spread is 1 and the estimate of \bar{R}^2 should indicate that the spread explains a large portion of the long-term change in the short-term rate. He employs this test using monthly average data, where the short-term rate is the effective federal funds rate and the long-term rate is the 3-month T-bill rate. The equation is estimated separately over the periods 1986:01–1994:01 and 1994:02–2001:06.

The results indicate a very sharp change in the market's ability to anticipate changes in the federal funds rate during the two periods, which is generally not reflected in the increased predictability associated with the federal funds futures rate. Specifically, Watson finds that the slope coefficient is very small, negative, and insignificantly different from zero before 1994 and 0.97 and insignificantly different from 1 after 1994. Moreover, the spread explains none of the variation of the long-term change in the funds rate before 1994, compared with about

60 percent after. Hence, Watson concludes that there was a marked increase in the predictability of the funds rate after 1994.

In the second paper in this section, Georgios Chortareas, David Stasavage, and Gabriel Sterne investigate the effects of transparency on inflation and output. The paper begins with an interesting discussion of the theoretical literature on transparency. The core of the paper, however, is empirical. Specifically, they use survey information on the transparency of central bank forecasts to investigate the effects of transparency on the average level of inflation and output volatility.

They use a Guttman index to combine the responses to four questions concerning central banks' transparency about their forecasts. The questions address whether the forecasts are published, whether they are forward looking, whether there is a discussion of past forecast errors, and whether there is some indication of the risks associated with the forecasts. They do a cross-sectional regression of the average inflation rate over the period 1995-99 on the Guttman index and several control variables: per capita GDP, a measure of openness, a measure of political instability, and a dummy variable indicating whether the country is operating an exchange rate peg.

They find a negative and statistically significant relationship between the average inflation rate and this measure of transparency, suggesting that countries that are more transparent about their forecasts have lower average inflation rates. They also consider the interaction of transparency with the dummy variable for the peg and dummy variables indicating whether the country's operating target is inflation or money. While the coefficient for the interaction with the money-targeting variable is statistically significant, it is not significantly different from the estimate using the Guttman index alone. They find a negative but not statistically significant relationship between the standard deviation of GDP growth using either annual or quarterly data. Hence, by this measure, there is little indication that increased transparency results in more stable output growth.

Concerned that their results for the average inflation rate might be affected by the incomplete adjustment of some central banks to full transparency, reverse causation, or other complications, they undertook several robustness checks. In one of these, they test for the sensitivity of their findings to the presence of "high inflation" countries. The results suggest that high inflation matters. The

coefficient was negative but not statistically significant from zero when they excluded the countries in the top third of the inflation distribution. Moreover, the estimate became increasingly negative and statistically significant as higher inflation countries were added sequentially to the sample.

They also investigated the possibility that the results were due to reverse causation by considering a number of variables that could be correlated with their transparency index, such as the level of democracy, fiscal discipline, or the extent to which central banks have control over inflation. In nearly all cases, the results were robust to these challenges. The exceptions were when they considered past deviation of inflation from an assumed desired level and past inflation volatility. While the estimated coefficient remained negative and statistically significant in both instances, the estimate was smaller in absolute value and significant at a higher significance level.

Finally, they investigated which components of the index appeared to be most important for the average inflation effect. The results suggested that the largest marginal gains from forecast transparency came from publishing information about past forecast errors and the risks. They conclude that their results indicate that “transparency contributes to lower inflation whether or not policy is based more on an inflation-targeting or money-targeting anchor for policy.” They also conclude that they find no evidence to support “the proposition that a high degree of transparency is associated with higher output volatility.”

Adam Posen is critical of both Chortareas, Stasavage, and Sterne’s analysis and methodology. In answering the question “Does it pay to be transparent?” Posen says, “Yes, but not in the way that the authors suggest.” He suggests that the authors merely assert the importance of forecasting transparency, noting that the authors claim it “is of wide interest without any particular justification for its saliency over preferences, targets, models, decisionmaking processes, or other aspects of central bank transparency.” He is particularly critical of Chortareas, Stasavage, and Sterne’s claim that the publication of forecasts allows the public to observe the central bank’s control error, noting that the forecasts alone are insufficient to observe forecast errors. He is also concerned that the relationship between the release of economic forecasts and macroeconomic variables may not be as obvious and direct as the authors suggest.

With respect to the empirical analysis, Posen is concerned that the results may not provide information about the effects of transparency on inflation. He is particularly concerned that high-inflation countries drive the results, noting that when the high-inflation countries were eliminated the estimate was not significantly different from zero. This concern is exacerbated by the authors’ finding that the estimate is sensitive to past inflation volatility, noting that this result “runs opposite to the theoretical models (e.g., those of Faust and Svensson) that the authors invoke to justify their investigations...” In the end, Posen suggests some recent research that he argues provides evidence that it pays to be transparent even though the authors’ evidence is “unconvincing.”

In the final conference paper, Manfred Neumann and Jürgen von Hagen address the question “Does inflation targeting matter?” They compare the performance of a group of inflation-targeting countries (Australia, Canada, Chile, New Zealand, Sweden, and the United Kingdom) with that of a group of non-inflation-targeting countries (Germany, Switzerland, and the United States). They compare the average inflation rates and the variance of inflation, interest rates, and the output gap for each country before and after 1992. They also estimate Taylor rules and a vector autoregression (VAR) for each country over these periods. Finally, they undertake an “event study” of the response of central banks to the oil price shocks of 1978 and 1998.

They begin their analysis with an extensive and useful summary of the empirical work on the importance of inflation targeting. The survey suggests that, while inflation-targeting central banks appeared to behave in a manner consistent with their specified objective, there is little evidence that adopting an explicit inflation target is critical for improved economic performance. Their own evidence is consistent with these findings. They find that not only did the average inflation rates drop for both the inflation-targeting and non-inflation-targeting countries, but the volatility of inflation, interest rates, and the output gap for the inflation-targeting countries fell to levels consistent with those of the successful non-inflation-targeting countries after adopting inflation targets.

Moreover, their estimates of the Taylor rule using monthly and quarterly data suggest that the long-run response of interest rates to inflation for the inflation-targeting countries was larger after adopting inflation targets. However, the quarterly

estimates indicate that only two of these countries (Sweden and the United Kingdom) followed the “Taylor principle”—the long-run change in the policy rate was more than point-for-point with the change in inflation. Moreover, the estimates suggest that only one of the successful non-inflation-targeting countries followed the Taylor principle. They attribute this to their use of CPI inflation rather than the GDP deflator. Consistent with these findings, their VAR estimates suggest that interest rates were more responsive to inflation shocks after adopting inflation targeting. They interpret this as evidence that the adoption of inflation targets made these central banks more aggressive in responding to inflation.

They note that the time-series analyses that they and others have performed is based on the assumption that monetary policy was exposed to essentially the same shocks in the two periods. Their event study analysis overcomes this problem by identifying a shock that is truly exogenous, i.e., an oil price shock. They note, however, that this methodology is subject to several limitations, including the fact that industrialized countries considerably reduced their dependence on oil in the wake of the first oil price shocks. Nevertheless, they found that inflation-targeting countries achieved a larger improvement in their inflation performance relative to non-inflation-targeting countries and experienced an improvement in credibility, as measured by the behavior of long-term government rates. Consistent with their increased credibility interpretation, these improvements were achieved with a relatively smaller adjustment of the short-term rate.

When all of their evidence is considered, they conclude that it “confirms the claim that inflation targeting matters.” They are quick to note, however, that their “evidence does not support the claim that [inflation targeting] is superior to strategies that focus on monetary aggregates, such as the Bundesbank’s approach to monetary targeting...nor even to the Fed’s strategy in the 1980s and 1990s, which focused neither on monetary nor on inflation targets.”

They suggest that the principal usefulness of inflation targeting may be that it provides a structure for the policy debate, both inside the central bank and between the central bank and the public. In this sense, they suggest that inflation targeting should be seen within the context of a country’s culture and traditions and suggest that “the choice between an inflation target or a monetary aggregate then is probably more a question of culture than economic principles.”

Frederic Mishkin favors Neumann and von Hagen’s conclusion that “inflation targeting has improved monetary policy performance in the countries that have adopted it.” He notes, however, that his job is to “point out that the evidence in the paper suffers from several problems and so is not completely convincing.” He is troubled by the Taylor rule estimates, noting that even though monetary policy improved for inflation-targeting countries, the long-run inflation coefficient values “indicate that the inflation process is unstable.” He is particularly troubled that the estimate of the long-run coefficient is less than 1 for the United States for the 1993-2001 period. Unconvinced by Neumann and von Hagen’s suggestion that this result is due primarily to the use of CPI inflation, he suggests, rather, that the problem is that the “estimated Taylor rules in the paper are misspecified.” He notes that his experience is that central banks “respond to future forecasts of inflation rather than to current inflation.” Hence, the problem is the authors’ failure to estimate a forward-looking Taylor rule.

Mishkin is equally skeptical of the VAR evidence, noting that typically VARs do not yield “a lot of useful evidence without putting a lot of structure.” He suggests, that “as economists, we always need to be skeptical of getting something for nothing.” He is concerned that the model does not have sufficient structural dynamics to “interpret the response of monetary policy to inflation.”

He believes that the most interesting evidence in the paper involves the examination of responses to oil price shocks. He is concerned, however, about the required assumption that the response to oil price shocks is the same for all inflation-targeting countries. As a result of this concern, he concludes that the results are little more than “suggestive.”

He concludes his comment by noting that the successful non-inflation targeters that Neumann and von Hagen identify are not “very different in their monetary policy strategies from the inflation targeters.” From this perspective, he suggests that “the adoption of inflation targeting should be seen as a convergence to best practice in the conduct of monetary policy.”

TRANSPARENCY IN THE PRACTICE OF MONETARY POLICY

The conference concluded with a panel discussion by three prominent policymakers: Charles Freedman, deputy governor at the Bank of Canada,

Václav Klaus, the president of the Chamber of Deputies of the Parliament of the Czech Republic, and J. Alfred Broaddus Jr., president of the Federal Reserve Bank of Richmond. These panelists discuss several aspects of the transparency issue and the related issues of independence, accountability, and credibility, each taking different perspectives which appear to be based in large part on differences in their experiences.

Freedman begins his analysis by putting the goal of price stability into a broader perspective. He argues that price stability is a means to an end, not the goal itself. Specifically, he notes that “a monetary policy aimed at inflation control will tend to moderate the economic cycle...in focusing on these benefits, the central bank should make it clear that the objective of low inflation, or price stability, is a means to an end, the end being a well-functioning economy, and not an end in itself.” From this perspective, Freedman emphasizes the role of transparency in generating broad support for the goal of low inflation and for smoother functioning of the financial markets. He specifically notes that as the communication between policymakers and the public improves, financial markets become less volatile and policy actions are incorporated more smoothly into interest rates and exchange rates. Freedman then discusses how the Bank of Canada has pursued these objectives.

Broaddus discusses issues of policy effectiveness and accountability but in the context of asking whether still greater transparency is necessary or desirable in the United States. He answers in the affirmative, discussing four basic areas where greater transparency is desirable: the Fed’s long-run inflation objective, the extent to which the Fed will stabilize output, the extent to which the Fed believes that further actions will be needed, and the use of testimony and speeches by members of the FOMC. Echoing an observation made by Mishkin in his comment, Broaddus notes that “the Fed’s long-term commitment to price stability is now largely embodied in our current Chairman’s demonstrated commitment to this objective, rather than being institutionally grounded in an explicit objective.” Offering a view of the role of price stability similar to that stated by Freedman, Broaddus notes that the Fed “will optimize its contribution to the economy’s overall performance by maintaining credibility for low inflation.” He believes that economic performance can be enhanced by “making the Fed’s commitment to this objective definite and unambiguous.”

Out of an apparent concern that the objective of stabilizing output could undermine the desirability of having a specific long-run inflation objective, Broaddus notes that the argument that it would be “difficult or impossible” for the Fed to ignore economic weakness during times when inflation rises above the Fed’s explicit objective when real output is below potential and unemployment is rising does not mean that “an explicit inflation objective for the United States is impractical,” as some have suggested. Rather, he suggests that having an explicit inflation objective would enhance the Fed’s ability to respond to adverse economic shocks. Being transparent about the Fed’s intermediate-term strategy would make it easier for the public to understand that the “Fed may anticipate bringing inflation back to the objective more quickly in some cases than in others.”

Václav Klaus’ experiences are very different from those of Freedman and Broaddus, and these experiences are reflected in his views on monetary policy transparency. He argues that “transparency has a meaning and plays a positive role only when the other preconditions of monetary policy are in place.” Hence, he begins his analysis by stating emphatically that “*transparency does not represent the main and most important issue in monetary policy.*” He notes that “the more relevant issues or the prior issues are the quality of the monetary regime and the way in which monetary policy reflects the preferences of society.” He specifically argues that the independence of the central bank should be limited to the choice of the policy instrument, not the objective of policy. He notes that the central bank of the Czech Republic’s attempt to peg the exchange rate while simultaneously targeting money “had very unpleasant consequences.”

He also notes that, in part because of inexperience, the Czech central bank “*chose an extremely low inflation target which slowed down the economy too much.*” The result was that instead of 6 percent inflation, they got deflation. His view about transparency of policy decisionmaking is similar to that of Cukierman, Freedman, and others. Namely, he argues that transparency is different depending on whether the central bank is exercising discretion or following a policy rule. He notes that “discretionary policy cannot be—perhaps even should not be—transparent.”

Consistent with Klaus’ argument that transparency is not a monetary policy absolute, Freedman argues that there should be limits to public disclosure.

Consistent with the comments of Chairman Greenspan, he argues against policy deliberation in a public forum. He also suggests that central banks can provide the public with too much information, which he suggests would increase “openness” at the expense of “clarity.” Like Klaus, Freedman suggests that there are limits to the extent that a central bank can be specific about its reaction function. Good monetary policy requires that central banks make good decisions in response to new information. It does not require the central bank to set forth a reaction function that indicates how it will react to every eventuality.