

Communications and the Objectives of Monetary Policy

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The objective of this note is to review recent thinking about central bank transparency and communications, with a particular focus on the pros and cons of greater economic transparency – that is, transparency about the central bank’s outlook for the economy – and on the limits of political transparency – that is, the ability of central banks to be clear about the objectives of the central bank.

The first point to note is that there has been a wide spread adoption of greater transparency among central bank, and this holds true for formal inflation targeting central banks and for central banks that have not formally adopted inflation targeting. Dincer and Eichengreen (2007) have developed an index of central bank transparency which they construct for 100 central banks.¹ I focus on a subset 63 of these countries (I exclude Africa and several very small – generally island – nations). The horizontal axis of Chart 1 gives the value of the Dincer-Eichengreen transparency index in 1998, while the vertical axis measures the value in 2005. Black triangles are non-inflation targeters, red diamonds are inflation targeters.

Several conclusions are illustrated by the chart:

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¹ Eijffinger and Geraats (2006) also have constructed an index of transparency for nine central banks, all representing developed economies.

1. Almost all central banks have become more transparent – few (9 of 63) are on the 45 degree line, none are below it.
2. Inflation targeters are on average more transparent and have seen the largest increases in transparency.
3. But, inflation targeting central banks were also, on average, more transparent in 1998 than non-inflation targeters.

To give some feel for what various levels of the Dincer-Eichengreen index mean, it is useful to associate different levels of the index with particular countries. For example, the overall average for the index in 2005 among both inflation targeters and non-targeters is 6.22. For comparison, this level of transparency is roughly that of the central banks of Columbia, Denmark, or Estonia, all with an index level of 6, or Cyprus, with an index of 6.5.

Among inflation targeters, the average value for the index in 2005 was 8.95. Thus, the typical level of transparency for inflation targeters is represented by Australia, with an index level of 9. In contrast, the average for non-inflation targeters in 2005 was 5.17, roughly corresponding to the case of Uruguay (at 5).

While central banks who are today inflation targeters were more transparent to begin with than non-targeters (i.e., in 1998 when the Dincer-Eichengreen index begins), the gap between the two groups has widened. Between 1998 and 2005, the inflation targeters experienced an increase on the transparency index of 3. This, for example is the increase in transparency seen by the Bank of Israel over this time interval. It also corresponds to the

2005 difference between the Reserve Bank of Australia and the Banco Central de la República de Columbia.

As previously mentioned, non-targeters have also become more transparent since 1998, but the increase has been smaller – only half as much as measured by the Dincer-Eichengreen index. Japan is typical of non-inflation targeters, experiencing a 1.5 point increase in transparency between 1998 and 2005. This is equivalent to the difference in 2005 between El Salvador (3) and Guatemala (4.5) or between Columbia (6) and Chile (7.5).

The clear trend towards greater central bank transparency raises an obvious question: Why has there been such an increase? Clearly, the adoption of formal inflation targeting has been crucial – being an inflation targeter without being explicit about one's inflation target is a contradiction. But the spread of transparency has also been supported by developments on the research front, and these developments have been driven, in part, by a significant shift in the way academic economists understand the role of monetary policy.

This changing understanding is best illustrated by contrasting views expressed in 1978 by Robert Lucas and Tom Sargent with those expressed in 2003 by Mike Woodford. In 1978, Lucas and Sargent stated that policy must be systematic:

- ...[equilibrium methods] will focus attention on the need to think of policy as the choice of stable rules of the game, well understood by economic agents. Only in such a setting will economic theory help predict the actions agents will choose to take. (Lucas and Sargent 1978)

But at the same time, it had to be unpredictable:

- ... the government countercyclical policy must itself be unforeseeable by private agents...while at the same time be systematically related to the state of the economy. Effectiveness, then, rests on the inability of private agents to recognize systematic patterns in monetary and fiscal policy. (Lucas and Sargent 1978).

Of course, under rational expectations, it is impossible to behavior systematically without being predictable. And by being transparent (and therefore more predictable), policy would become less effective. Contrast this view with a current one as expressed by Woodford (2003) which is based on the notion that policy must be systematic *and* predictable to be effective:

- ...the central bank's stabilization goals can be most effectively achieved only to the extent that the central bank not only acts appropriately, but is also understood by the private sector to predictably act in a certain way. The ability to successfully steer private-sector expectations is favored by a decision procedure that is based on a rule, since in this case the systematic character of the central bank's actions can be most easily made apparent to the public. (Woodford 2003, p. 465)

Under this modern perspective, transparency is likely to enhance policy effectiveness by making policy more predictable. The changing perspectives illustrated by these quotations helps account for the shift, at least among academic commentators, towards the view that transparency is an important component of modern best practice for central banks.

Transparency can take several forms, and Petra Geraats (2002) has enumerated five types:

1. Political – about objectives
2. Procedural – about decision making
3. Economic – about forecasts and models
4. Policy – about actions
5. Operational – about instruments

I will focus on political and economic transparency, though I will discuss them in reverse order.

I think recent events in the subprime mortgage market in the U.S. and the resulting broader turmoil in financial markets illustrate how there can be differences in the economic forecasts of central banks and the private sector. This is, at least in the U.S., not the result of different information or data, but instead arises primarily from different models of how the economy operates and different judgments about the future path of the economy.

Currently, financial market participants in the U.S. seems to be holding to a more pessimistic view about the U.S. economy and the likelihood of a recession than the Fed does, and this has led the market to be more certain there will be future rate cuts than the Fed seems to be. When the private sector and the central bank have different views about the outlook for inflation or real economic activity, economic transparency can reduce these differences.

But perhaps an equally important aspect of transparency is that it can remove a distortion in the incentives that face the central bank. In the absence of transparency, policy actions have their direct or traditional effects on the economy – a rise in interest rates increases the cost of credit and reduces aggregate spending. But policy actions also have an indirect, information effect. This informational effect arises because, in the absence of transparency, policy actions also convey information to the private sector. Private agents will try to use any policy action to infer something about the central bank's views on the economy. For

example, a rise in interest rates might be viewed as a signal the central bank is forecasting a rise in inflation –this may cause expected inflation to increase and act to offset partially the rate increase.

The presence of this informational effect changes the incentives facing the central bank since it alters the net effect a policy action has on the economy. When the central bank is open and transparent, policy actions have only direct effects as they no longer themselves convey information.

Besides removing this distortion to incentives, it is usually argued that economic transparency can help anchor long-term inflation expectations, it can help align private and central bank expectations, and it can help the central bank manage expectations.

Current macro models imply that managing expectations is a critical component of an effective monetary policy. Woodford (2005) has even gone so far as to state that "For not only do expectations about policy matter, but, at least under current conditions, very little else matters." In addition, a number of researchers (e.g., Rudebusch and Williams 2007), have shown how transparency can help the private sector learn when faced with uncertainty.

But there are also legitimate concerns about the potential costs of greater economic transparency, particularly about future policy actions. As Bill Poole has expressed it:

“...for me the issue is whether under normal and routine circumstances forward guidance will convey information of whether it will create additional uncertainty.”

Poole (2005)

A large and growing literature has attempted to develop models that will allow this concern about adding uncertainty to be studied. Much of it builds on the work by Morris and Shin (2002), who studied an environment in which there is informational heterogeneity – not just between the central bank and the private sector, but within the private sector as well.

To understand the Morris and Shin framework, suppose that private agents must attempt to forecast future economic developments, but they must also forecast what others are forecasting. For example, when a firm sets its price, it must be concerned with the aggregate price level which will depend, in part, on what other firms are doing. So the individual firm must try to forecast what other firms will be doing. And what other firms will be doing will depend on their forecasts of the economy. Higher order expectations (expectations of what others are expecting about what others are expecting and so on) become important.

In an environment in which we all have different information, models, or judgment and must forecast what others are forecasting, Morris and Shin showed that announcements by the central bank – because they become common information shared by all – can have disproportionately large impacts on expectations. Agents overreact to the central bank’s

announcement. If central bank forecasts are also subject to error, then this overreaction to what may turn out to be forecast errors can add uncertainty and volatility to the economy.

Morris and Shin argue that better quality central bank information might actually reduce welfare as private agents respond even more strongly to this better but still imperfect information.

Subsequent research, including some of my own (Walsh, forthcoming), has generally found that *better* central bank information is beneficial – an improvement in the accuracy of the projections the central bank announces is welfare improving. But *more* central bank information – i.e., making announcements about the future outlook for the economy – may reduce welfare, particularly if the quality of private sector information is relatively poor.

The benefits of providing more information can depend on how well the public understands the quality of the information – that is, the uncertainty surrounding any announced forecast. Dale, Orphanides, and Osterholm (2007), for example, examine an environment in which the public is learning about the economy and find that announcements may lower welfare if the public is uncertain about the quality of the information. Similarly, Rudebusch and Williams (2007) find the benefits of transparency are reduced if the public is uncertain about the quality of the information the central bank provides. This work emphasizes that, in providing information, central banks need to be clear about its quality and the uncertainty that characterizes any forecasts or projections that the bank might release.

Relevant to the issue of whether to provide more information is the current debate about the desirability of being explicit about the future path of interest rates. The chief concerns about providing interest rate paths seem to be two:

1. Will the public fully understand the conditionality of any interest rate projections?
2. Will the announcement of an interest rate path “lock in” the central bank and reduce future policy flexibility?

The academic literature on this issue has not really focused directly on these two issues. Instead, the focus has been on how interest rate projections aid learning and contribute to expectational stability. For example, Rudebusch and Williams (2007) have shown that providing interest rate projects can help the public learn about the central bank’s policy preferences and improve welfare. And Gosslin, Lotz, and Wyplozs (2007) find that providing interest rate projections allows the central bank to extract more information about private sector expectations from long-term interest rates.

Eusepi and Preston (2007) have examined the Taylor Principle – the idea that nominal interest rates must be moved more than one-for-one with changes in inflation – as a requirement for expectational stability when the public does not know the true model of the economy and is engaged in learning behavior. They find that it may not be sufficient for a central bank to follow the Taylor Principle and simply announce an inflation target. The Taylor Principle only suffices to ensure a unique equilibrium if the central bank provides more information about how it is implementing monetary policy, so this can be viewed as

an argument for providing more details (such as a projected interest rate path) about the policy process. Alternatively, it may be sufficient to simply provide clear information about the variables the central bank is responding to in setting policy.

Finally, on the issue of whether providing rate projections might add uncertainty, the answer seems to be no. Ferrero and Secchi (2007) look at announcements of policy intentions in the U.S., N. Z., the euro area, and Norway and find that better information about future intentions improves the predictability of monetary policy. This evidence is generally consistent with other work assessing the impact of central bank transparency. The general conclusion is that transparency improves the predictability of policy in terms of reducing private sector forecast errors.²

But is this the right way to measure the impact of transparency? We really should be concerned with the ability to transparency to improve policy, and that may or may not be associated with making it more predictable. Predictability may reflect the lock in effect in which the central bank feels it has to validate private sector expectations.

Lock in can occur without transparency. In the U.S. (as this is written in November 2007), markets expect further rate cuts – will this force the Fed to validate these expectations or risk creating financial instability?

² Other empirical work on transparency includes Demertzis and Hughes Hallett (2003), Gurkaynak, Levin, and Swanson (2005), Corbo, Landerretche, and Schmidt-Hebbel (2001), Crowe (2006), and Ehrmann and Fratzscher (2007).

This brings me to my final point – does the public understand the policy objectives of central banks? Are central banks sufficiently transparent about policy objectives? Inflation targeters are certainly transparent about their inflation target. So there is clarity about this objective. Not all central bankers are in favor of announcing inflation targets; Alan Greenspan has recently stated that “I have no ideological objection to publishing inflation targets, I just don’t see what one gains in the process.” As this quotation indicates, however, not all central bankers – or at least former central bankers – are convinced that one should be transparent about objectives.

The more fundamental point is that most inflation targeters are flexible inflation targeters – they worry about financial market instability, they worry about instability in the real economy. But they have not been very clear about how they weigh these potentially conflicting objectives or even about what these other, non-inflation, objectives might be.

So should central banks announce their policy objectives and the relative weight they place on each objective? In some sense, clarity about objectives seems necessary to ensure central banks are accountable, and one of the purposes of transparency is to support accountability. Lars Svensson (2007) has argued that central banks should state publicly what their objective function is. No central bank has chosen to do so.

But how explicit about policy preferences can central banks be? What are the proper objectives of monetary policy? As I have already mentioned, inflation targeters generally

care about other things than just inflation. Our theoretical models of monetary policy say that central banks should maximize social welfare. But what is that? How do we measure social welfare? How do we even define it outside the context of simple theoretical models?

Our current generation of monetary policy models suggest that social welfare is maximize if the central bank minimizes a weighted average of inflation volatility and output gap volatility. While this is a seemingly simple and straightforward definition of optimal objectives, it raises further difficulties as the correct output gap is the gap between output and an unobserved and difficult to measure welfare maximizing level of output. And current models are missing critical aspects of the economy that are likely to be important in assessing the consequences of economic fluctuations. For example, the basic models do not incorporate unemployment or financial market imperfections.

Thus, the appropriate objectives for monetary policy are difficult to define and harder to quantify. In such an environment, inflation targeting can be viewed as an attempt to define an objective for central banks that is related to social welfare and can be easily measured. In that sense, inflation becomes a performance measure on which to judge the conduct of central banks, but it is important to recognize that it is only an imperfect measure of what society would really like central banks to do.

Let me conclude with a list of questions, each of which summarizes some of the open issues associated with economic and political transparency:

- Are announced targets sufficient? Or do central banks need to be much more explicit about the policy process and about future policies to ensure expectational stability?
- Do interest rate projections confuse or help the public? Are their conditional nature understood? Do they lock policy makers in?
- How does transparency differ from communications? Is it sufficient to release forecasts? Or is a broader communications strategy critical?
- Are there any benefits to being opaque about forecasts or about objectives? Do announcements add to or reduce market uncertainty?
- If objectives are unobservable, how or what should the central bank convey to the public? How do markets react to the forecasts your bank publishes? Do they understand the conditionality of the forecasts, the ranges of uncertainty surrounding the forecasts?

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Chart 1: The spread of transparency

