

Commentary

Adam S. Posen

In the span of 15 years, central bank transparency has gone from being highly controversial to motherhood and apple pie (or knighthood and fish and chips to the Bank of England–based authors of this paper). It is now an accepted broad goal to which all central banks pay at least lip service. Yet, like many other broad concepts in macroeconomic policy, such as “fiscal discipline” or “price stability,” what central bank transparency actually means remains rather open to debate. Chortareas, Stasavage, and Sterne make a valiant attempt to test whether one particular aspect of transparency—the release of economic forecasts by central banks to the public—confers the benefits that some theories predict it should.

Recent monetary theory has had difficulties in generating much in the way of operational hypotheses about transparency for empirical examination. The bulk of today’s theoretical models applied to central bank transparency—including those in the formal analysis of inflation targeting—cast the issue as whether or not a representative agent of the public can discern the central bank’s “type” (wet or dry; that is, soft or hard on inflation) and therefore whether it is more or less “credible.”¹ This is simply the wrong question to frame, especially in the developed economies: no one really has any doubts about the commitment of any current central banks to low inflation, and any reasons for doubt in this area would quickly become self-evident.² Even in the developing economies (which make up the bulk of the authors’ sample), discerning runaway fiscal positions, overt political pressures upon central bank governors, or economic world views at odds with today’s (perhaps questionable but evident) consensus on a vertical long-run Phillips curve is rather easy. Moreover, the all-or-nothing trigger strategy in these models implies that, once a central bank type is revealed, all is determined. This unrealistically reduces the conversation between central banks and the private sector to a simple long-lasting thumbs up or thumbs down. For purposes of even applied research, the failure of the predictions of

these widely used models raises further questions³ about much of the theoretical time-inconsistency framework that has been the workhorse of monetary economics in the last 20 years.⁴

The authors, presumably in pursuit of rigor and microfoundations, go to great pains to survey the extant literature in order to claim a source for their two testable hypotheses: that greater transparency reduces average inflation and increases output volatility. Yet, the fact that these hypotheses can easily be generated by a host of differing models and say nothing specific about which (measurable) aspect of transparency is at issue only underscores how irrelevant these microfoundations are. The two real issues are, instead, as follows: (i) to come up with hypotheses that are specific to transparency as distinct from just one more set of circular statements indicating that more credible central banks have better inflation performance and (ii) to derive reproducible measures of transparency that differentiate among the various types of information that may be disclosed by central banks. Unfortunately, the authors stick with the broad hypotheses and arbitrarily focus on a particular aspect of transparency, idiosyncratically measured. This puts them somewhat at odds with those few rigorous empirical investigations of central bank transparency that have already been done. Does it pay to be transparent? Yes, but not in the way the authors suggest.

SUMMARY OF THE ARGUMENT

The authors’ plan of attack is deceptively simple. They go through the current theoretical literature on central bank transparency (primarily the works of Cukierman, Faust and Svensson, Geraats, and Jensen). They acknowledge the relative lack of clear consensus on operational predictions:

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- ¹ The seminal article starting this approach is Cukierman and Meltzer (1986). See Faust and Svensson (2000a) and Geraats (2001), among others, for examples of these models.
 - ² Despite the constant invocation of the word “credibility,” it remains unclear that this concept does any meaningful work, except as a circular validation of successful central banks’ success. See Posen (1998).
 - ³ Broader problems with this framework, such as the observation that removal of the inflation premium proved rather easy once central banks chose to remove it, have been noted previously by Blinder (1998), McCallum (1997), and others.
 - ⁴ The founding papers being Kydland and Prescott (1977), Calvo (1978), and Barro and Gordon (1983), with the aforementioned Cukierman and Meltzer (1986) setting up a new subfield in this area. In the spirit of transparency, I should acknowledge my own reliance on such models in, for example, Kuttner and Posen (1999), despite earlier published misgivings.

Adam S. Posen is a senior fellow at the Institute for International Economics.

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The currently expanding theoretical literature on central bank transparency identifies various channels through which increased transparency may affect economic policy outcomes. Not all of these move in the same direction. And neither is there a universally accepted definition of central bank transparency. Various authors conceptualize transparency in different ways...

They then abruptly decide in their investigations to “focus on the detail in which central banks publish forecasts...,” suggesting that this is of wide interest without any particular justification for its saliency over preferences, targets, models, decisionmaking processes, or other aspects of central bank transparency. Fair enough, were they to make this an empirically driven exploration of simply what difference forecast disclosures make.

But the authors then underline the arbitrariness of their focus by spending several pages discussing the inconsistent theoretical models, most of which are concerned with the revelation of central bank preferences (over inflation versus output goals and for the target level of inflation). At the conclusion of the paper’s first section, the authors assert that “transparency is generally conceptualized as the publication of central bank forecasts, since this allows the public to observe the control error.” This claim is incorrect in two senses. First, in terms of the theory, the public is only able to discern the control error, given the forecast, if they are also informed of the model of the economy, of the nature of any revealed shocks (and/or the central bank’s perception of those shocks), and most importantly of the central bank’s true preferences. The forecast simply is not enough to reveal what the authors claim it does. Second, in terms of the empirical investigations, it is extremely difficult to say what specifically should be the impact of forecast releases on observable macroeconomic outcomes without considering what other information releases or institutional frameworks the central bank in question exercises.

In any event, the authors then identify two general hypotheses about the effects of transparency for testing: (i) that increasing transparency reduces the incentive to inflationary policies, never resulting in higher inflation outcomes and (ii) that improvement in inflation performance may be offset by a reduction in the capacity of the central bank to stabilize the economy. The authors then pull in “a new data set on central banking institutions,” created

from a survey of central banks conducted (under the leadership of one of the authors) by the Centre for Central Banking Studies of the Bank of England. The results on the subset of questions on “...the quality, scope, and frequency of forecasts and the extent to which forecast errors are monitored and publicly discussed” are to be used as the measure of the independent variable of transparency. It should be kept clear that they are testing joint hypotheses—their offered hypotheses plus the idea that forecast releases are a sufficient measure of transparency plus the idea that the results of their measure accurately portray forecasts—and not just the hypotheses about transparency per se.

In fact, this is critical, since the availability of this survey data determines the scope of the authors’ investigations. The authors proceed to conduct a cross-sectional analysis of the effects of this measure of forecast disclosure on the level of inflation and of the volatility of output, in a sample of 87 countries over the period 1995-99. The four aspects of forecast disclosure are amalgamated into a four-point Guttman scale, a new twist on the standard additive indices for such measures. They find a significant negative correlation between their measure of forecast transparency and average inflation, even when controlling for such institutional factors as fixed exchange rate pegs, political instability, and central bank independence. They find no such significant correlation between the disclosure of forecasts and average output volatility. Finally, the authors take on a large number of what they consider robustness checks to their results, but they rephrase those as the question, since “the effort required for a central bank to publish detailed forecasts may not appear to be particularly arduous relative to the benefits of securing lower inflation... Why, then, do many more central banks not introduce forecasts?” They end up raising a number of questions about the possibility of reverse causality, to which I will return.

SOME FRIGHTENING FOOTNOTES ON THE RESULTS

Leaving aside for the moment the questions of whether the dependent and independent variables are properly defined, consider the authors’ results on their own terms. Is the significant negative correlation between this measure of forecast disclosure and the average level of inflation (and the absence of any such correlation with output volatility) well established? Given the authors’ commendable clarity

with which they conduct their investigations, there are a number of details which unfortunately raise some doubts. These have to do for the most part with the construction of the forecast disclosure index and with the nature of the sample determined by the availability of this index.

A particular concern is the absence of discussion of subsamples beyond Table 1, where the distribution of responses across industrial, transitional, and developing economies' central banks is displayed. As shown in Table 1, however, there is a strong correlation between level of development and positive response to the survey regarding forecast disclosure: 56 percent of industrial countries publish forecasts with words and numbers versus less than 25 percent of transitional and less than 33 percent of developing countries; 25 percent of industrial countries publish "words and numbers" risks to the forecast, while only 9 percent of transitional and no developing countries do. While the authors later include per capita gross domestic product (GDP) as a control variable, this is likely insufficient to account for such differences. In fact, in their robustness checks, as displayed in the authors' Figure 2, the authors note that "[t]he coefficient becomes progressively more negative as we include high-inflation countries in the sample, suggesting that the estimated anti-inflationary effect of publishing a forecast in our Table 3 regressions may be somewhat inflated by the inclusion of high-inflation countries." This is more than somewhat inflated—as the authors move from 50 observations to 63 (in their total sample of 94), the estimated coefficient drops below the lower bound of significance on the point estimate at 50, while at 50 it was not significantly different from zero. Considering that industrial economies make up only 28 observations of their full sample, this hardly is convincing of subsample stability. This problem is exacerbated when one considers that, by dummied out the pegged exchange rate countries in their Table 3, they are disproportionately taking out (European) developed countries from their sample.

A second set of concerns has to do with embedding these results in the other aspects of central bank structure. In short, for us to believe in these results about the effects of forecast disclosure, we have to believe that other aspects of central bank transparency, independence, exchange rate regimes, and the like are appropriately held constant. While the authors make some attempt to do so, notably by including the fixed exchange rate yes/no classifi-

cation from the International Monetary Fund's (IMF) lists in their Table 3 regressions, these are insufficient. The authors' controls for inflation or money [sic] targets in Table 3 are based on central banks' self-reporting from the same central bank survey (see their footnote 22). As there is great dispute over who should call themselves "inflation targeters" (including those who are "implicit targeters") and similar dispute over "monetary targeters" (with many who assume this label having proven their tendency to ignore their stated monetary targets while making policy decisions), this measure should be replaced with a standardized, independently observable means of verifying targeter status.

Moreover, given the narrowness of the authors' "focus" on forecast disclosure, it is difficult in the time period they consider (the late 1990s) to disentangle high scores on this measure from the adoption of inflation targeting writ large. The authors themselves state in footnotes 30 and 31 that there is some coincidence of the two and that their reporting of self-assessed measures of targeter status leads to some strange results (e.g., that only three countries have changed their regimes four or more times since Bretton Woods, which points up a very awkward definition of regime). In their controls for central bank independence, they use a very noisy measure made up of five elements even though the literature has long since established that only one aspect of central bank transparency has predictive power for the industrial economies (restrictions on direct central bank purchases of government debt) and a different single aspect has power for developing economies (turnover of central bank governors).⁵

There are also some plain strange results which are disclosed in the authors' discussion, but not taken sufficiently seriously. In footnote 23, they point out that, while they get their expected results for a negative correlation between forecast disclosure and inflation level, they find no link between their measure and inflation volatility, despite the long-standing correlation of inflation's volatility and level. Given that the relationship between inflation volatility and level increases with the level of inflation, this may be another indicator that their desired correlation is being driven unduly by the low-inflation countries. In footnote 27, the authors note that only 3 of their 87 countries get a top score on their four-point Gutman index of forecast disclosure; but footnote 41 shows that all the major variation across

⁵ Berger, de Haan, and Eijffinger (2001) and Eijffinger and de Haan (1996).

countries is in the jump between scores 3 and 4—in other words, it is only whether the risks to forecast are discussed that matters, and this should have been done as a simple dummy. But, definitionally, this is the aspect of the authors' forecast disclosure that has most to do with preferences, least to do with forecast narrowly defined, and probably least dependable as gathered in a self-description. This re-raises the questions about the authors' definition of the independent variable as a measure of transparency.

Finally, the authors' Table 8, meant as a robustness check using lagged inflation and volatility to test for reverse causation between low inflation and forecast disclosure, shows that the greater the past inflation and output deviations (from "desirable," presumably high and low, respectively) and the greater the past volatility of each, the less disclosure of forecasts.⁶ Given that this runs opposite to the theoretical models (e.g., those of Faust and Svensson) that the authors invoke to justify their investigations suggesting that central banks with less credibility will need to disclose more, this re-raises questions about the authors' definition of the dependent variables of interest as average inflation and average output volatility. It also suggests, as the authors acknowledge, "that it is difficult to be certain there is not some endogeneity between transparency [as defined by their forecast disclosure measure] and inflation..."

WHAT DEFINITION OF TRANSPARENCY IS RELEVANT?

Returning to the design of the authors' investigation, we have to reconsider the explanatory variable. As discussed in Posen (1999), we can use the control theory view of monetary policy to come up with the aspects of central bank behavior that can be revealed by transparency. Essentially, the central bank has preferences over macroeconomic outcomes, an intermediate target linked to a model of the economy, and a forecast of that economy based on shocks revealed to date. If the issue is to determine the central bank's preferences on the relative weight of inflation versus output goals or for a longer-term target for inflation, the public and markets need two of these three plus the outcome in the economy in order to determine the remaining one. A forecast alone, even combined with economic results, does not necessarily reveal preferences, without a clear revelation of the central bank's model.

Yet, in the real world, central banks never have one exact model that is relied upon consistently, especially when there are multiple monetary policy decisionmakers (voters on a committee) and changing economic structures; and, in the real world, the public and even markets are unable to discern such models and reason backwards from them and from forecasts and shocks to determine central bank preferences, even if it is possible theoretically.

Ultimately, central bank transparency is about the broad communication of general preferences by the central bank. When the public trusts in the preferences of the central bank, its inflation expectations will respond differently to shocks than when trust is less (King, 1997; Kuttner and Posen, 1999). In this regard, it is important to have a forecast definition that is not just the revelation of numbers, but a mechanism for a structured conversation with the public that conveys the central bank's evaluation of shocks and reinforces the longer-term goals. Posen (2000) sets out this framework and identifies it as the source of the Bundesbank's success. This would imply that the independent variable to measure is the institutional framework committing the central bank to regularly report on its activities and explain its performance against its stated goals (Kuttner and Posen, 2001, give one way of operationalizing such a measure for empirical work).

Interestingly, this is consistent with the fact noted in the previous section that the bulk of variation and explanatory power in the authors' measure has to do with whether or not (in their survey) central banks discuss risks to the forecast. Thus, it is not the forecast specifically or the implication of reasoning backwards to a model (to "discern control errors" as the authors have it) that counts. It is the provision of context for economic decisionmakers. This underlines the difficulties the authors have in "controlling" for the broader institutional structures of inflation targeting, central bank independence, and exchange rate pegs in their investigations.

Given that the authors have only a cross-section of central bank self-definitions, because of their commitment to use survey data from a specific one-time survey, they cannot distinguish whether the disclosure of forecasts is the result of a prior or contemporaneous adoption of inflation targeting

⁶ Another problem with this examination of endogeneity is that all countries' desirable real growth level is presumed to be 2 percent, and the desirable inflation level is presumed to be 2.5 percent, which is rather inappropriate for a sample that includes numerous developing and transitional economies.

or of something called (but not necessarily indicative of) central bank independence. Their use of the IMF's definition of exchange rate pegs is particularly misleading in this set-up: it is impossible to tell whether inflation forecasts do not offer "transparency benefits" when pegs are in place (i) because of a lack of discretion or (ii) because inflation is irrelevant to the goal of the central bank (especially because, as is now well-known, many floaters seem like fixers). Ultimately, the authors' use of their idiosyncratic measure of forecast disclosure as a measure of transparency, and their reliance on the one-time observation of it, renders their definition of the explanatory variable irrelevant.

WHAT EXPECTED IMPACT OF TRANSPARENCY IS REASONABLE TO TEST?

Whatever the measure of transparency, the authors have another hurdle in deciding which variables should be affected by it. As mentioned, they test two—average inflation level and average output volatility—finding support for a negative correlation between transparency and the first and no correlation with the second. But are these the right variables to test? It is not clear that average macroeconomic outcomes, particularly of real variables, are the right dependent variables for investigations of transparency. The obvious problem, particularly on the real side, is the inability to control for a sufficient range of factors, including the degree of structural change induced (or not) by changes in monetary regime, à la Lucas.

More importantly, though, is the question of what one thinks central bank transparency is for. Even if the central bank has a greater commitment to low inflation, or can be held to one because of increased transparency (which seems to be the authors' vision), dependent upon the shocks that the bank faces, it can choose to let inflation rise temporarily. For example, after the second oil shock in 1979, the Bundesbank allowed its "unavoidable rate of price increase" to climb from 2 percent to over 4 percent in 1980 and then transparently brought it down year-by-year to 1986 (see Laubach and Posen, 1998). This may well have been the optimal response to a supply shock for a (nearly) inflation-targeting central bank (see Bernanke et al., 1999, Chap. 4). What made the Bundesbank's policy a success was that this optimal easing did not result in pass-through of a second round of inflation increases, or even a particularly costly disinflation.

Kuttner and Posen (1999, 2001a,b) argue that this means the real issue of central bank transparency is therefore the reaction of inflation expectations and (long-bond) markets conditional on central bank action. The implication is that the macroeconomic variables likely to be affected most directly by transparency are inflation persistence, not inflation level, and the ratio of inflation and output volatility, not the level of output volatility. Following King's (1997) articulation of the optimal state-contingent rule strategy for an inflation-targeting central bank, increased transparency should remove Svensson's (1997) stabilization bias, reducing inflation persistence, and should free the central bank to be more aggressive about stabilizing output. From this point of view, the authors' focus on inflation level as the dependent variable is misguided, even if one accepts that the point of transparency is to make the central bank more sensitive about its reputation.

THE CELL PHONE-LIKE USES OF CENTRAL BANK TRANSPARENCY⁷

What are the hypotheses that might be tested about central bank transparency, and what are the appropriate measures that might be utilized instead of the ones in the authors' paper? Think of the relationship between a central bank and the attentive public as analogous to the relationship between a married couple. Good communication is key if the relationship is to cope well with the bumps and bruises of everyday life. While familiarity removes the need for too much explicitness in communication, changing surroundings and personal needs over time make it dangerous to take too much previous understanding for granted. Presumably, the relationship is for the long-term and day-to-day misunderstandings do not imperil the relationship, but they can make it less pleasant or mutually beneficial.

My wife already has a (subjective) estimate of how considerate a husband I am, that is, my "type" on a scale of wet to dry. While she may update it if I were to do something extraordinarily bad or good more than once, she is unlikely to do so as a result of our quotidian existence. In fact, small variations in the day-to-day signals she gets from me are likely to be ignored, while any big changes will be easily noticed, whatever the day-to-day signals. Communication between us, therefore, is not about her judging my type or my commitment—instead, it is about the smaller, practical issues of coordination.

⁷ This section is drawn and adapted from Posen (2002).

This fall, in response to the more worrisome world in which we find ourselves, my wife had me get a cell phone. This cell phone increases the transparency with which I live my life: I can be reached at any time we are apart, and similarly I can reach her; in an emergency (God forbid), I can make a call; and, most concretely, we can use it to update each other on our schedules, such as who is likely to get home first from work. I can be more or less considerate about updating her by using the cell phone (probably well within one standard deviation of how considerate I was prior to having this transparency mechanism). Yet, her primary concern is to know where I am for practical reasons and not to have a means of monitoring my commitment to her well-being.

Being a bit more explicit, there are six conceivable channels through which my use of the cell phone could affect her:

- She could be more relaxed in general if updates via cell phone about my comings and goings reduce her worry.
- She could find life a little easier if this device makes it simpler for us to adjust our schedules.
- She could find that, after all, she really does not care about what I say on the cell phone, just that I am no less prompt or responsive than I was before.
- She could herself become more cognizant of my activities and use this to demand greater responsiveness, perhaps interfering with my normal habits.
- She could become annoyed if I were to say that I would call at a specified time and am late in doing so.
- Or, she could be more (rather than less) worried if she came to count on my calls and events beyond my control, even innocuous ones, prevented me from calling.

It is ultimately an empirical matter which of these various, occasionally contradictory, but all theoretically plausible, effects will turn out to be of practical import to the day-to-day functioning of our relationship. To repeat, none of this, however, should change her basic estimate of what type of husband I am and therefore of my level of commitment.

Now, consider the analogous situation of a central bank communicating with its public (including financial markets) as part of an ongoing relationship based on a fundamental assumption of trust and good will. The addition of various recent mea-

asures of transparency to monetary policymaking—announced inflation targets, disclosure of votes, timely publication of minutes, explicit forecasts, and so on—in hopes of showing sensitivity to markets and the public's concerns are the equivalent of my acquisition and use of the cell phone in response to my wife's concerns. Being a bit more explicit, there are six conceivable channels through which central banks' enhanced transparency could influence the public's and markets' reaction to monetary policy (see Table 1):

- The public could be *reassured* in general if updates via regular releases about policy decisions reduce worry about what is going on in the short-term.
- The public, and particularly markets, could find it a little easier to plan their actions if transparency about the *details* of the economy makes the world more predictable.
- The public could find that, after all, what central banks say is *irrelevant*, so long as the central banks are no less responsive to shocks than before.
- The public, and particularly markets, could become more cognizant of central bank activities and use this to demand greater responsiveness *contingent* on specific targets, perhaps interfering with central banks' normal habits.
- The public could become *annoyed*, adding political pressures, if central banks were to announce a specific target or forecast, and fail to meet it.
- Or, the public could be more (rather than less) worried in general if it demanded adherence to announced targets, *diverting* central banks from responding optimally to shocks.

As Table 1 summarizes, each of these six practical views of central bank transparency (reassuring, detailed, irrelevant, contingent, annoying, and diverting) focuses on a specific set of information releases, with a specific hypothesis for the impact of those releases upon expectations and central bank behavior and for the mechanism by which this impact is transmitted. None of these hypotheses can be ruled out a priori on theoretical grounds, and these multiple options show the diversity of implications possible from (and proposed in) the current literature on central bank transparency. All are subject to empirical examination, and some work has already been completed. On the reassuring

Table 1

Practical Views of Central Bank Transparency

View of transparency	Information released	Hypothesized impact	Cause of impact	Testable impact	Result
Reassuring	Regime, speeches	Greater flexibility	Greater trust	Inflation persistence	Supported by evidence
Detailed	Forecasts, models	Greater disclosure	Greater predictability	Market response	Supported by evidence
Irrelevant	Whatever	None	Only actions matter	Inflation level	Exact opposite—lower inflation
Contingent	Mandate, votes	Stronger reputation	Greater credibility	Inflation volatility	Unsupported by evidence
Annoying	Minutes, targets	Greater confusion	Increased politicization	Effect of target misses	Unsupported by evidence
Diverting	Targets, goals	Less discretion	Increased oversight	Output volatility	Unsupported by evidence

view, as discussed in the preceding section, Kuttner and Posen (1999, 2001a,b) have offered evidence that the announcement of explicit inflation targets is associated with a decline in inflation persistence and no rise in output volatility; this tends to contradict the diverting view, which is the mirror image with opposite predictions. On the details view, Daniel Thornton has done a series of papers (including Poole, Rasche, Thornton, 2002, for this conference) indicating the benefits of disclosure for the U.S. Treasuries market.⁸ The authors of “Does It Pay To Be Transparent?” can find in these papers some evidence that their answer of yes is correct, even though the authors’ own method of assessing the contingent view is unconvincing.

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