



# Economic Letter

## Central Bank Transparency Anchors Inflation Expectations

by J. Scott Davis, Adrienne Mack and Mark A. Wynne

▶ *A high statistical correlation can be found between the level of policy transparency among central banks and the anchoring of inflation expectations.*

**C**entral banks in most developed countries, responding to the financial crisis that began in 2007, have pushed interest rates to zero (or close to it) and embarked on a range of unconventional monetary measures. These policies have boosted the size of the central banks' balance sheets to extraordinary levels, both in absolute terms and as a share of gross domestic product.

Such actions could have been expected to lead to significant increases in actual and expected inflation. Yet to date, in most of the countries that implemented these policies, actual inflation remains close to, if not below, central banks' targets, and inflation expectations remain well anchored.

The Federal Reserve's rate-setting Federal Open Market Committee (FOMC) has greatly increased the amount of communication about its decisions over the last two decades.<sup>1</sup> This major change was part of a broader Fed move toward greater transparency. Central banks have long realized the importance of independence, transparency and credibility to successfully maintain low and stable inflation.

Students of central banking have long maintained that greater policymaking transparency—desirable as part of sustaining independent central bank

accountability—also yields significant dividends in terms of the conduct of monetary policy.

Specifically, it was argued that greater transparency would increase central bank credibility and help anchor inflation expectations. Moreover, it allows a central bank to take extraordinary measures in certain circumstances without the public fearing that policymakers had abandoned their commitment to price stability. In fact, a high statistical correlation can be found between the level of policy transparency among central banks and the anchoring of inflation expectations.

### Central Bank Transparency

Researchers Nazire Nergiz Dincer and Barry Eichengreen sought to quantify various aspects of central bank transparency and combine them into a single index that could be tracked over time.<sup>2</sup> They looked at five dimensions of transparency—political transparency, economic transparency, procedural transparency, policy transparency and operational transparency.

Political transparency involves how open a central bank is about its policy objectives. The researchers ask three questions. First, is there a formal statement of the objective or objectives of monetary policy? (In the case of the Fed, the FOMC has a dual mandate for full

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employment and price stability.) Second, is the primary objective quantified? And third, are there explicit institutional arrangements between the central bank and the government?

Regarding economic transparency, three questions are also posed. First, are economic data relevant for the conduct of monetary policy publicly available? Second, does the central bank disclose the economic model or models that it uses for policy analysis? And third, does the central bank regularly publish its own macroeconomic forecasts?

Procedural transparency, the third dimension, involves how monetary policy decisions are undertaken. Three more questions are asked. First, does the central bank provide an explicit policy rule or strategy that describes its policy framework? Second, does it give a comprehensive account of its deliberations within a reasonable amount of time? And third, does the central bank disclose how it reached its rate-setting decision?

Policy transparency is the fourth aspect of transparency that Dincer and Eichengreen include in their index. Three questions follow. Are decisions about the adjustment to the main operating target or instrument announced promptly? Does the central bank provide an explanation of its decisions when it announces them? And does the central bank disclose an explicit policy inclination after every policy meeting?

Operational transparency is the final

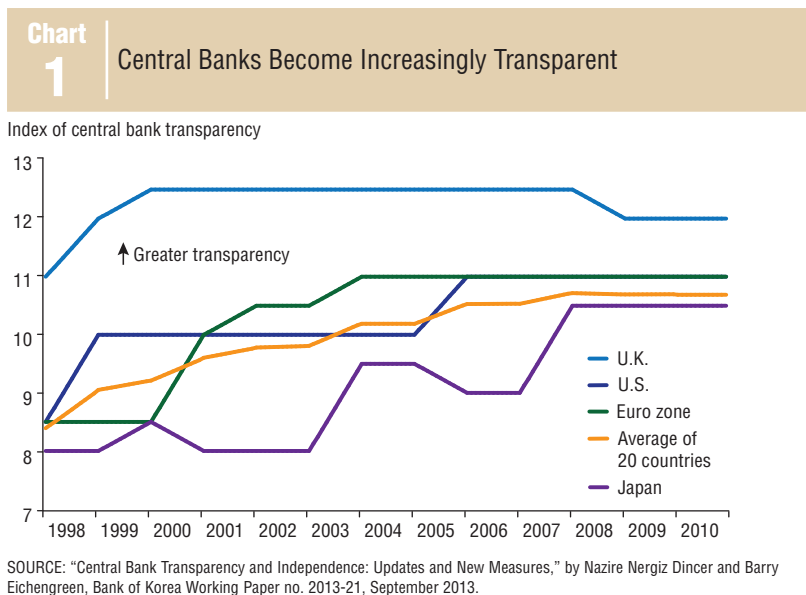
dimension—again, with three questions. Does the central bank regularly evaluate to what extent its main operating targets have been achieved? Does the central bank regularly provide information on unanticipated macroeconomic disturbances that affect the policy transmission process? And does the central bank offer an evaluation of the policy outcome in light of its macroeconomic forecasts?

Dincer and Eichengreen score the answers to the questions with a 0, ½ or 1. Summing the 15 scores, they arrive at an aggregate index that ranges from 0 (least transparent) to 15 (most transparent). For 2010, the Federal Reserve System scored 11, putting it in the top 10 central banks in terms of transparency that year. The European Central Bank also scored 11, and the Sveriges Riksbank (central bank of Sweden) took the top spot with a score of 14.5. Among member countries of the Organization for Economic Cooperation and Development (OECD), Mexico rated a 6, the lowest score of the group.

Over the past 15 or so years, there has been a general movement toward greater transparency, according to a review of the Dincer–Eichengreen measure for major central banks and for an average of 20 countries with independent central banks (Chart 1).<sup>3</sup>

## Anchoring Inflation Expectations

The anchoring of inflation expectations refers to a change in what people anticipate about inflation in some future



period in response to temporary and/or unexpected inflation today. Thus, if expectations are perfectly anchored, then beliefs about future inflation shouldn't change following a temporary increase in prices—for instance, following a sudden rise in oil and gas prices. However, if they aren't perfectly anchored, then even a temporary shock to prices today can feed long-term inflation expectations and affect price and wage stability for years to come.<sup>4</sup>

Because expectations are not typically observed, gauging how anchored they are can be challenging. Some survey data on inflation expectations do exist, and market expectations can be inferred from the yields on nominal and real (inflation-adjusted) bonds. But these data are available for only a handful of countries.

An alternative measure of the extent to which inflation expectations are anchored may be constructed for a wide range of developed and developing countries.<sup>5</sup> It assesses how much people raise their long-term expectations when actual inflation is 1 percentage point higher than anticipated. If there is no change in inflation expectations following a surprise increase in prices, then the index takes a value of zero and inflation expectations are perfectly anchored.

The average value of the “anchoring” index across the same 20 countries depicted in Chart 1 is plotted for 1998–2007 (*Chart 2*). The smaller the index value is, the more anchored are inflation expectations.

For the average country in the sample, there was a steady fall in this index over the 10 years. In 1998, when actual core inflation turned out to be 1 percentage point higher than expected, people raised their long-term inflation expectations by 0.10 percentage points. By 2007, they would raise long-term inflation expectations by only 0.02 percentage points following the same unexpected increase.

### Aiding Monetary Policy

Has the move toward greater central bank transparency helped anchor inflation expectations and made it easier to realize monetary policy? For the average country in the sample, inflation expectations became better anchored between 1998 and 2007, as indicated by the data used in Charts 1 and 2.

The 1998–2007 average transparency index value plotted against the average value of the anchoring index for the 20 countries in the sample shows that countries with more transparent central banks have more anchored inflation expectations (*Chart 3*). The inflation anchoring index falls—meaning expectations are more anchored—as the transparency index rises.

Cross-country differences in central bank transparency explain 44 percent of the cross-country differences in inflation expectation anchoring, statistical analysis shows. This finding is in line with the results from other studies showing a strong tie between central bank transpar-

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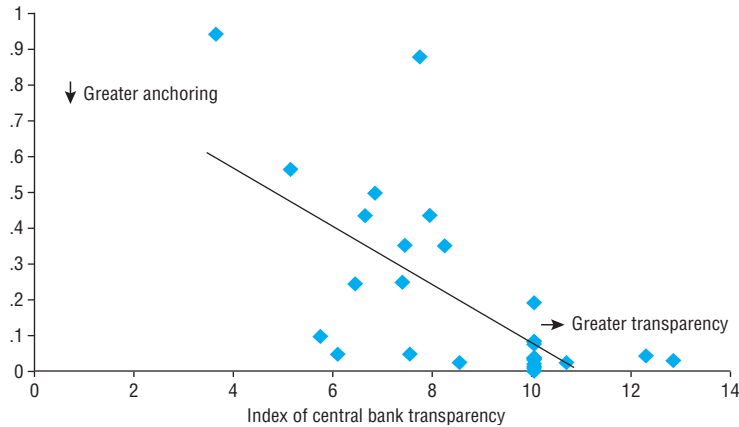
**Chart 2** | Inflation Expectations Become More Anchored Over Time



SOURCES: “Cross-Country Variation in the Anchoring of Inflation Expectations,” by Scott Davis and Adrienne Mack, Federal Reserve Bank of Dallas *Staff Papers*, no. 21, 2013.

## Chart 3 Transparency Linked to Inflation Expectations in Advanced Countries

Anchoring of inflation expectations



SOURCES: "Central Bank Transparency and Independence: Updates and New Measures," by Nazire Nergiz Dincer and Barry Eichengreen, Bank of Korea Working Paper no. 2013-21, September 2013; "Cross-Country Variation in the Anchoring of Inflation Expectations," by Scott Davis and Adrienne Mack, Federal Reserve Bank of Dallas *Staff Papers*, no. 21, 2013.

ency and reduced inflation and inflation volatility.<sup>6</sup>

### Policy Benefits

Over the past two decades, the Federal Reserve System has become much more transparent about how it formulates and conducts monetary policy. Other central banks similarly changed their practices over the period. One of the main arguments for greater transparency in policy deliberations is that it helps anchor inflation expectations. The evidence supports this argument.

Among advanced countries, a review shows a strong relationship between an index of central bank transparency and one measuring the anchoring of inflation expectations. The fact that transparent

central banks such as the Federal Reserve and the Bank of England can maintain stable inflation expectations despite extraordinary measures and an unprecedented amount of monetary easing over the past five years is a testament to the benefits of monetary policy transparency and credibility.

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### Notes

<sup>1</sup> See "A Short History of FOMC Communication," by Mark A. Wynne, Federal Reserve Bank of Dallas *Economic Letter*, vol. 8, no. 8, 2013.

<sup>2</sup> See "Central Bank Transparency: Where, Why and With What Effects?," by Nazire Nergiz Dincer and Barry Eichengreen, in Jean-Philippe Touffut, ed., *Central Banks as Economic Institutions*, Cheltenham, U.K.: Edward Elgar, 2008, pp. 105–41; "Central Bank Transparency: Causes, Consequences and Updates," by Nazire Nergiz Dincer and Barry Eichengreen, *Theoretical Inquiries in Law*, vol. 11, no. 1, 2010; "Central Bank Transparency and Independence: Updates and New Measures," by Nazire Nergiz Dincer and Barry Eichengreen, Bank of Korea Working Paper no. 2013-21, September 2013.

<sup>3</sup> The 20 countries are Austria, Belgium, Canada, Chile, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Spain, Sweden, United Kingdom and the United States. The transparency index for the euro zone is a gross domestic product-weighted average of Eurosystem central banks in 1998 and a measure for the European Central Bank from 1999 onward.

<sup>4</sup> See "Relating Commodity Prices to Underlying Inflation: The Role of Expectations," by J. Scott Davis, Federal Reserve Bank of Dallas *Economic Letter*, vol. 6, no. 14, 2011, and "Inflation Expectations Have Become More Anchored Over Time," by J. Scott Davis, Federal Reserve Bank of Dallas *Economic Letter*, vol. 7, no. 13, 2012, for a discussion of the role that inflation expectations play in the price-setting process and how the 1970s temporary shocks to oil prices, combined with unanchored inflation expectations, led to years of high inflation.

<sup>5</sup> See "Cross-Country Variation in the Anchoring of Inflation Expectations," by Scott Davis and Adrienne Mack, Federal Reserve Bank of Dallas *Staff Papers*, no. 21, 2013.

<sup>6</sup> "Central Bank Independence and Transparency: Evolution and Effectiveness," by Christopher Crowe and Ellen E. Meade, *European Journal of Political Economy*, vol. 24, no. 4, December 2008, pp. 763–77; and "Central Bank Transparency: Causes, Consequences and Updates," by Nazire Nergiz Dincer and Barry Eichengreen, *Theoretical Inquiries in Law*, vol. 11, no. 1, 2010.

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