September 29, 2014

On Bogs and Dots

Consider this scenario. You travel out of town to meet up with an old friend. Your hotel is walking distance to the appointed meeting place, across a large grassy field with which you are unfamiliar.

With good conditions, the walk is about 30 minutes but, to you, the quality of the terrain is not so certain. Though nobody seems to be able to tell you for sure, you believe that there is a 50-50 chance that the field is a bog, intermittently dotted with somewhat treacherous swampy traps. Though you believe you can reach your destination in about 30 minutes, the better part of wisdom is to go it slow. You accordingly allot double the time for traversing the field to your destination.

During your travels, of course, you will learn something about the nature of the field, and this discovery may alter your calculation about your arrival time. If you discover that you are indeed crossing a bog, you will correspondingly slow your gait and increase the estimated time to the other side. Or you may find that you are in fact on quite solid ground and consequently move up your estimated arrival time. Knowing all of this, you tell your friend to keep his cellphone on, as your final meeting time is going to be data dependent.

Which brings us to the infamous "dots," ably described by several of our colleagues writing on the New York Fed's *Liberty Street Economics* blog:

> In January 2012, the FOMC began reporting participants' FFR [federal funds rate] projections in the Summary of Economic Projections (SEP). Market participants colloquially refer to these projections as "the dots" (see the second chart on page 3 of the September 2014 SEP for an example). In particular, the dispersion of the dots represents disagreement among FOMC [Federal Open Market Committee] members about the future path of the policy rate.

The *Liberty Street* discussion focuses on why the policy rate paths differ among FOMC participants and across a central tendency of the SEPs and market participants. Quite correctly, in my view, the blog post's authors draw attention to differences of opinion about the likely course of future economic conditions:

> The most apparent reason is that each participant can have a different assessment of economic conditions that might call for different prescriptions for current and future monetary policy.

The *Liberty Street* post is a good piece, and I endorse every word of it. But there is another type of dispersion in the dots that seems to be the source of some confusion. This question, for example, is from Howard Schneider of Reuters, posed at the press conference held by Chair Yellen following the last FOMC meeting:

> So if you would help us, I mean, square the circle a little bit—because having kept the guidance the same, having referred to significant underutilization of labor, having actually pushed GDP projections down a little bit, yet the rate path gets steeper and seems to be consolidating higher—so if it's data dependent, what accounts for the faster projections on rate increases if the data aren't moving in that direction?

The Chair's response emphasized the modest nature of the changes, and how they might reflect modest improvements in certain aspects of the data. That response is certainly correct, but there is another point worth emphasizing: It is completely possible, and completely coherent, for the same individual to submit a "dot" with an earlier (or later) liftoff date of the policy rate, or a steeper (or flatter) path of the rate after liftoff, *even though their submitted forecasts for GDP growth, inflation, and the unemployment rate have not changed at all.*

This claim goes beyond the mere possibility that GDP, inflation, and unemployment (as officially defined) may not be sufficiently complete summaries of the economic conditions a policymaker might be concerned with.

The explanation lies in the metaphor of the bog. The estimated time of arrival to a destination—policy liftoff, for example—depends critically on the certainty with which the policymaker can assess the economic landscape. An adjustment to policy can, and should, proceed more quickly if the ground underfoot feels relatively solid. But if the terrain remains unfamiliar, and the possibility of falling into the swamp can't be ruled out with any degree of confidence...well, a wise person moves just a bit more slowly.

Of course, as noted, once you begin to travel across the field and gain confidence that you are actually on terra firma, you can pick up the pace and adjust the estimated time of arrival accordingly.

To put all of this a bit more formally, an individual FOMC participant's "reaction function"—the implicit rule that connects policy decisions to economic conditions—may not depend on just the numbers that that individual writes down for inflation, unemployment, or whatever. It might well—and in the case of our thinking here at the Atlanta Fed, it does—depend on the confidence with which those numbers are held.

For us, anyway, that confidence is growing. Don't take that from me. Take it from Atlanta Fed President Lockhart, who said in a recent speech:

> I'll close with this thought: there are always risks around a projection of any path forward. There is always considerable uncertainty. Given what I see today, I'm pretty confident in a medium-term outlook of continued moderate growth around 3 percent per annum accompanied by a substantial closing of the employment and inflation gaps. In general, I'm more confident today than a year ago.

Viewed in this light, the puzzle of moving dots without moving point estimates for economic conditions really shouldn't be much of a puzzle at all.

Photo of Dave Altig *By Dave Altig, executive vice president and research director of the Atlanta Fed*

September 29, 2014 in Economic Conditions, Economics, Federal Reserve and Monetary Policy, Forecasts | Permalink