Effect of the 'Polar Vortex' on Economic Activity

BY LISA KENNEY

"The Effect of Winter Weather on U.S. Economic Activity." Justin Bloesch and Francois Gourio, Federal Reserve Bank of Chicago *Economic Perspectives*, vol. 39, First Quarter 2015.

The polar vortex that descended on parts of the United States in the winter of 2013-2014 brought cold temperatures, record snowfalls, and possibly an economic slowdown. Anecdotes about boats delivering iron ore being unable to traverse the frozen Great Lakes — thus causing a delay in steel production — seemed to draw a connection between the weather and economic activity. But how accurate is that assumption?

Economists at the Chicago Fed studied whether this unusual winter actually caused the decline of economic indicators such as industrial production, employment, and housing starts from December 2013 to March 2014. They found that while weather had a significant, but short-lived, impact on economic activity, the effect was not large enough to account fully for the weak economy during that period.

They looked at both national and regional data for the actual winter weather and economic indicators. They also use historical data to determine if the economy has become more or less sensitive to weather changes over time.

Both national and regional data lead to similar results, though the national data are less clear because they cannot take into account regional variations in the weather. Some patterns can be attributed in part to the weather, but they cannot explain the magnitude and timing of the slowdown. Indeed, the researchers find that "an important share of the slowdown in the first quarter was driven by an inventory correction and the effect of foreign trade."

Also, the timing of the decline was uneven across indicators: Some declined in January, others did so in February, and still others declined in more than one month.

"Job Switching and Wage Growth." R. Jason Faberman and Alejandro Justiniano, Federal Reserve Bank of Chicago *Fed Letter* No. 337, 2015.

In a recent *Chicago Fed Letter*, economists Jason Faberman and Alejandro Justiniano explore whether the worker quit rate is correlated with wage growth and inflation. They find it to be not only highly correlated, but also highly predictive of both future wage growth and future inflation.

Faberman and Justiniano use data from the Job Openings and Labor Turnover Survey (JOLTS) to estimate the aggregate quit rate — a proxy for the pace at which workers move to new jobs — in each month since 2000. They find that the quit rate, along with wage growth, is highly procyclical, meaning it rises during economic expansions and falls during recessions.

The authors find that fluctuations in the quit rate appear to lead changes in the wage growth, peaking two to four quarters ahead. They also find that changes in the quit rate appear to lead changes in the inflation gap (the difference between actual inflation and long-run expected inflation). This suggests the quit rate may be a useful predictor of both future inflation and future wage growth.

"Is the Intrinsic Value of Macroeconomic News Announcements Related to their Asset Price Impact?" Thomas Gilbert, Chiara Scotti, Georg Strasser, and Clara Vega, Federal Reserve Board Finance and Economics Discussion Series No. 2015-046, April 23, 2015.

Some macroeconomic news announcements have a strong effect on asset prices and some do not. But there is not much literature on *why* this is the case. Fed researchers try to answer that question in a recent Finance and Economics Discussion Series paper.

First, they define and estimate novel measures of the intrinsic value of 36 macroeconomic announcements. The authors' definition of the intrinsic value of each announcement is its ability to nowcast several fundamentals, namely GDP, the GDP price deflator, and the federal funds target rate. (Nowcasting involves a statistical model that produces predictions about these fundamentals in real time; the actual measures of these fundamentals are often released only after a long delay.) Next, the authors decompose each announcement's intrinsic value into three characteristics: timing of the announcement, revision noise, and its relation to fundamentals using the same nowcasting framework. Finally, the paper relates the intrinsic value and the three characteristics to the announcements' effect on asset prices.

They find that their novel measure of intrinsic value "explains between 8 and 22 percent of the variation in the heterogeneous response of asset prices." When they estimate the importance of each of the three individual characteristics of the announcement, they find that tardiness — the loss of intrinsic value due to the time lag between the period covered by the announcement and the announcement's release — is the most important factor in explaining the asset price impact. The announcement's relation to fundamentals is less important and the revision noise is found to be insignificant.

Another takeaway from the research is that the relationship between the intrinsic value and the asset price impact is imperfect. Some announcements have a large impact on asset prices but are not found to have the biggest intrinsic value, which leads the authors to conclude that it is possible for financial markets to overreact to certain announcements. **EF**