## THE MACRO BULLETIN Macroeconomic research from the FEDERAL RESERVE BANK of KANSAS CITY

## The Shadow Labor Supply and Its Implications for the Unemployment Rate

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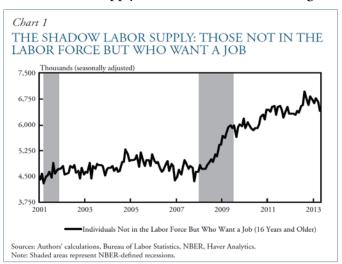
The number of individuals expressing interest in work, but who are not looking for a job, has swelled in the years since the Great Recession. While a rapid return of this group into the labor force is possible, their flow rate back into unemployment has been declining and, therefore, their potential to slow or reverse the decline in the unemployment rate appears modest.

In the wake of the Great Recession there has been a sharp rise in the number of people who indicate they want a job, but are not actively seeking one. These individuals are not considered unemployed because they are not actively seeking work and therefore are not counted in the unemployment rate or the labor force. Chart 1 below shows the size of this group swelled through the first few years of the economic recovery and by early 2013 numbered some 6.7 million—nearly 2 million more than before the crisis. Residing on the periphery of the labor market, this group may be viewed as a "shadow labor supply."

The shadow labor supply includes discouraged workers, who have stopped seeking work because they view economic conditions as weak. The shadow supply also includes other workers marginally attached to the labor force, having looked for a job sometime in the past year, but not in the last four weeks. And we consider the shadow supply to be still broader, including anyone who says they want a job but are not looking for one. If many of these individuals start actively seeking jobs as the economy recovers, they will be counted as unemployed until they find work, and that could push the unemployment rate upward or at least slow its descent.

To gain a deeper perspective on the potential impact these individuals may have on the unemployment rate, we turn to data that allows us to track individuals and their labor supply decisions over time. Using the

Current Population Survey (CPS) monthly extracts for the period from January 1996 to April 2013, we can categorize individuals into four categories: employed, unemployed, not in the labor force but wanting a job (NLF-WJ), and not in the labor force and not wanting a job (NLF-DWJ). We view the NLF-WJ as the shadow labor supply, while they along with the NLF-DWJ and the unemployed comprise the entire non-employed population. Matching individual records across consecutive months allows us to determine, for example, the fraction of individuals who are NLF-WJ in one month, but become unemployed the next.



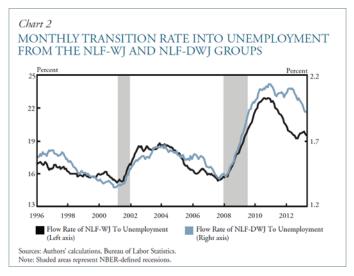
PAGE 1

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Chart 2 shows the fraction of individuals in the NLF-WJ group that move into the labor force is higher for the NLF-WJ group than for the NLF-DWJ group (note the different left and right axes). That is, those who state they want jobs are much more likely to start looking for work in the next month compared with those who do not express interest in working. Chart 2 also shows that these flow rates for both groups appear to rise and peak shortly after the end of a recession.

To assess the potential implications of the NLF-WJ group for the unemployment rate, we construct a model that links the various flow rates across labor



market groups and mimics how they move with economic conditions. We vary how the NLF-WJ group might react to economic conditions in two ways. First, we allow their flow rate into unemployment to rise back to its prior peak, which occurred shortly after the crisis, consistent with a view that foresees this group searching more aggressively for work as labor market conditions improve. In a second scenario, we allow the flow rate to drop precipitously. Holding the flow rates across other labor market categories and broader economic conditions constant, we find the total difference in the unemployment rate between these scenarios is about 0.4 percentage points by the end of 2016. Thus, this group is important and will likely affect the unemployment rate, but the overall impact is likely to be relatively modest.

Looking more broadly at all of the non-employed groups, we construct two additional scenarios to assess how variations in the flow rates out of these groups may affect the unemployment rate. One scenario incorporates relatively extreme cases of flow rates between the non-employed categories that are consistent with the labor force participation rate declining by about 1.5 percentage points to 62% by the end of 2016. The other scenario uses flow rates that result in the participation rate rising by about 1 percentage point to 64.5%. We again keep the flow rates into employment and economic conditions constant, essentially isolating the impact on the unemployment rate of how non-employed individuals respond to the CPS questions. Comparing the scenarios, the unemployment rate differs by nearly 1 percentage point by the end of 2016. In addition, the timing of when the unemployment rate falls to 6.5% could vary by about one year. This threshold is important because the Federal Open Market Committee has indicated the federal funds rate will likely remain in its current range of 0-.25% "at least as long as the unemployment rate reaches 6.5%," provided inflation forecasts one to two years ahead remain below 2.5% and longer-term inflation expectations remain anchored. The bottom line is that the timing of when the unemployment rate reaches 6.5% may vary by as much as a year, depending on how all the individuals who are currently not working adjust their job search behavior in the years ahead.

For more, see Davig, Troy and José Mustre-del-Río, 2013. "<u>The Shadow Labor Supply: Implications for the Unemployment Rate</u>," Federal Reserve Bank of Kansas City, Economic Review, third quarter. The views expressed above are those of the authors and do not necessarily reflect the positions of the Federal Reserve Bank of Kansas City or the Federal Reserve System.