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Using Stock Market Liquidity to Forecast Recessions

Michael W. McCracken, *Research Officer and Economist*

The National Bureau of Economic Research (NBER) Business Cycle Dating Committee (the committee that dates U.S. recessions) says that the recent recession started in the fourth quarter of 2007. But looking back years from now, that time frame might not be when we think problems in the economy actually became apparent. Instead, we might think of the "credit crunch" that began in August 2007 as the first time problems emerged. At that time, the cost of interbank borrowing jumped sharply to levels that ultimately made it difficult for firms to afford the level of borrowing that they had grown accustomed to. Once investors figured this out, they began to pull out of the stock market, thus beginning a worldwide downward trend in stock prices.

Given this sequence of events, a reasonable question is whether the decline in the liquidity of debt markets (the credit crunch) or the decline in the liquidity of equity markets (the stock market deterioration) caused the recent economic crisis and subsequent recession. For this discussion we focus on the latter, highlighting recent work by Næs, Skjeltorp, and Ødegaard[1] that shows that changes in the liquidity of the U.S. stock market have been coinciding with changes in the real economy at least since the Second World War. In other words, stock market liquidity is a very good leading indicator of the real economy.

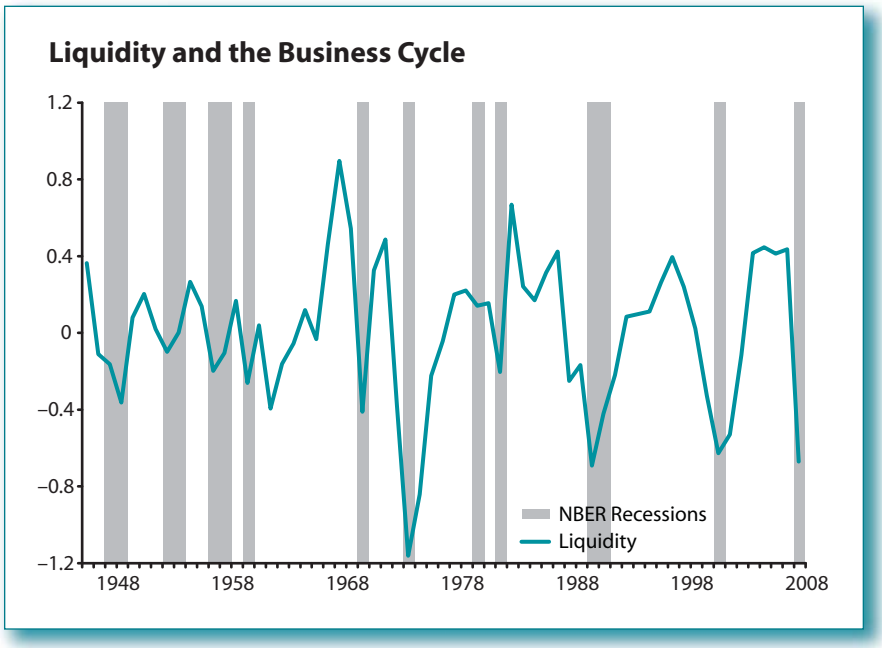
There are, however, many different measures of liquidity. The one these authors focus on is one that measures how much stock prices move in response to each volume unit of trades. A high estimate indicates high liquidity (low price impact of trades) and a low estimate indicates low liquidity (high price impact of trades). Their preferred measure is constructed by averaging across the common shares of stocks listed at the New York Stock Exchange.

The chart combines a time-series plot of their preferred measure of stock market liquidity with the NBER recession periods (gray bars), illustrating the temporal relationship between stock market liquidity and the business cycle. Liquidity tends to fall before the recession and rise as the recession ends.

Market participants rebalance their portfolios in advance of a recession.

Of course, preceding a recession and actually causing a recession are two very different things. Stock market liquidity did not dry up without cause. It did so only after U.S. housing prices began to fall and the mortgages associated with residential loans started to become suspect. As this problem became well known, market participants began to rebalance their portfolios in a "flight to quality" toward less-risky assets (such as bonds) and away from riskier assets (such as stocks). The decline in liquidity itself did not cause the recession; it was simply a signal of something fundamental happening in the economy.

That said, it is often very difficult to determine whether fundamental shifts are taking place in an economy. In con-



trast, measures of stock market liquidity are readily available on a daily basis. So, while financial market liquidity may not cause recessions, keeping track of liquidity as an indicator of the state of the business cycle certainly seems like a good idea. ■

[1] Næs, Randi; Skjeltorp, Johannes A. and Ødegaard, Bernt A. "Stock Market Liquidity and the Business Cycle." Forthcoming in *Journal of Finance*; March 2010 version available at www.afajof.org/afa/forthcoming/6765p.pdf. These authors are gratefully acknowledged as the source of the data used in this essay.

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