

# Reactions to Discount Rate Cuts

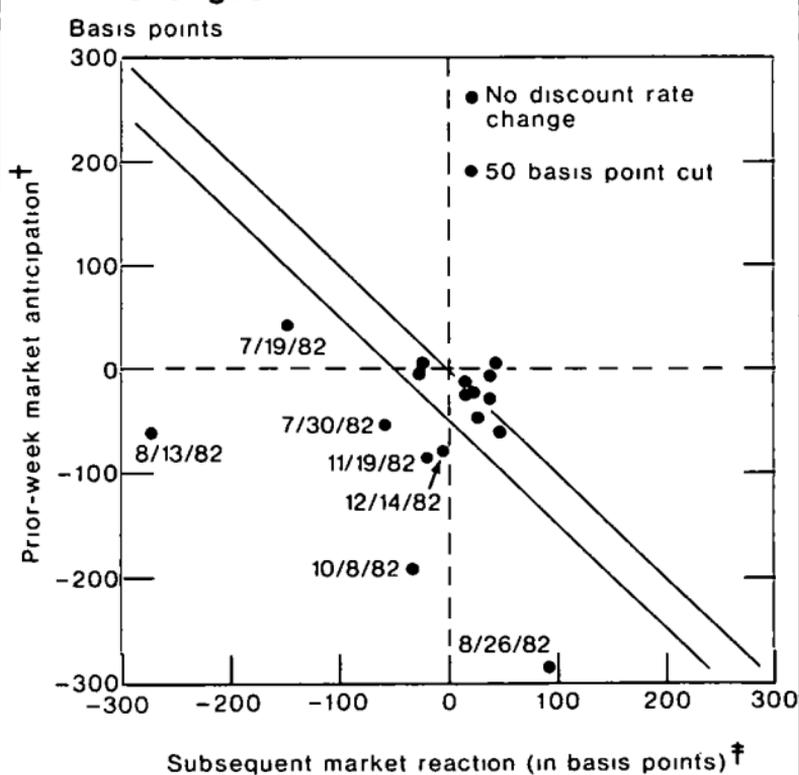
How do interest rates on short-term instruments such as Treasury bills react when the discount rate is changed? The experience in 1982, when seven different 50 basis point cuts in the discount rate occurred, throws some light on this question

According to the simplest theory, bill rates should change by the amount of a discount rate cut less whatever reduction of the bill rate had already occurred in anticipation of the cut. The chart compares movements in three-month Treasury bill rates after each of these cuts with a measure of how much change had been incorporated in the bill rates beforehand. The lower of the two diagonal lines predicts where actual observations should lie when a 50 basis point discount rate cut occurs, assuming that the simple theory holds. For example, if an anticipated 50 basis point cut had been reflected in the bill rate ahead of time, the lower line predicts that, subsequent to an actual 50 basis point cut, bill rates should stay unchanged. If anticipation of a 100 basis point cut had been initially built into bill rates, then the lower line indicates that bill rates subsequently should rise 50 basis points following an actual cut of only 50 basis points.

But the simple theory is too simple, as the chart shows. All seven of the observations corresponding to actual discount rate cuts in 1982 lie below the lower line instead of clustering around it. One way this could happen would be if the Federal Reserve tended to increase reserve availability whenever it cut the discount rate. Such increased availability then would be reflected in less borrowing from the Federal Reserve to meet reserve requirements. But, in fact, such borrowing was already very low prior to each of these cuts and did not systematically drop much afterward.

Apparently what did happen, particularly during mid-1982, was that market participants suspected a downward *trend* in the discount rate was under way (as turned out to be true). In such a situation, bill rates

### Market Reactions to Discount Rate Changes\*



\* Sloping lines show the market reaction predicted by the simple expectations hypothesis. The upper line corresponds to the hypothesis when no discount rate change actually occurs, and the lower line corresponds to the hypothesis for a 50 basis point cut.

† Average spread, in statement week prior to discount rate change, between the discount rate and the three-month Treasury bill rate (on a 365-day simple interest basis). For no discount rate change observations, current week spread is used.

‡ Change in average three-month Treasury bill rate between statement week prior to discount rate change and statement week following the week of the discount rate change. For no discount rate change observations, change between current week and two weeks later is used.

initially could fall quite a bit, in anticipation of several discount rate cuts. But, given the initial uncertainty about these expected cuts, when each cut occurred rates fell still further as events appeared to confirm the market's original suspicions. This shows up as observations lying in the lower left-hand quadrant of the chart—episodes when bill rates were initially low in anticipation of actual cuts, yet subsequently fell even further. One exception was the July 19, 1982 cut, which apparently was not widely foreseen by the market. But the subsequent fall in the bill rate was much larger than the discount rate cut itself, as further cuts began to be anticipated. Another exception was the August 26 cut. During the week before this cut, bill rates averaged

more than 250 basis points below the discount rate, an unusually large negative spread. Then, after the cut, bill rates rose nearly 100 basis points but this was still consistent with expectations of more cuts to come.

The two cuts lying closest to the lower line (and thus conforming best to the simple theory) were those in November and December 1982. The market apparently had guessed that these cuts were in store and, when the cuts did come, bill rates moved relatively little. Why would the simple theory work at that time but not earlier in the year? The best explanation seems to be that during the summer and early fall the recession was still well under way, and thus a sizable downward trend in interest rates seemed likely to market participants. By late 1982, however, the chances of an economic upturn were starting to look better, and any cut in the discount rate seemed increasingly likely to be the last for the time being. Indeed, following the December 14 cut, yields on long-term government securities actually rose a bit.

Reinforcing this view was the behavior of bill rates in the period immediately following, early in 1983. For such periods when the discount rate remains unchanged, the simple theory predicts that, if anticipated cuts do not materialize, any initial drop in bill rates would be reversed. The upper line in the chart should apply to such episodes since it predicts that any anticipatory decline in bill rates will be exactly matched by a subsequent rate increase. In fact, the observations plotted for ten weeks in early 1983 do indeed lie near the upper line, in accordance with the simple theory. As was true during periods of actual cuts in 1982, adjustment borrowings from the Federal Reserve remained low during these ten weeks. While discount rate cuts may have been anticipated on several occasions in early 1983, the market quickly gave up such hopes when the cuts did not materialize immediately. Again, this is consistent with the improving economic data emerging at that time, which indicated that the fundamental forces behind the earlier series of rate declines had receded.