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**Summary: “Flow and Stock Effects of Large-Scale Treasury Purchases”
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This summary is entirely quoted material taken direct from the authors’ paper, except for a few editorial notes in curly braces.

“During the crisis of 2008, policymakers took a number of extraordinary steps to improve the functioning of financial markets and stimulate the economy. Among the most important of these measures, in terms of both scale and prominence, were the Federal Reserve’s purchases of large quantities of government-backed securities in the secondary market, conventionally known as the Large Scale Asset Purchase—or ‘LSAP’—programs. The LSAPs included debt obligations of the government-sponsored housing agencies, mortgage-backed securities (MBS) issued by those agencies, and coupon securities issued by the U.S. Treasury, and they collectively amounted to \$1.7 trillion over a period of about 15 months.

Given the unprecedented size and nature of these programs and the speed with which they were proposed and implemented, policymakers could have had, at best, only a very rough *ex ante* sense of their potential impact. The minutes of the December 2008 Federal Open Market Committee meeting summarized the prospects thus: ‘The available evidence indicated that [LSAP] purchases would reduce yields on those instruments, and lower yields on those securities would tend to reduce borrowing costs for a range of private borrowers, although participants were uncertain as to the likely size of such effects.’

There was particular cause for skepticism regarding the program to purchase Treasury securities. The market for U.S. government debt is perhaps the largest and most liquid securities market in the world, and it was not obvious that even such a sizeable intervention—the \$300 billion purchased by the Fed constituted about 8 percent of the coupon market at the time—would have significant effects, given the array of other securities that serve as potential substitutes for Treasuries. Some observers even speculated that the program could perversely serve to *increase* yields if the accompanying rise in reserve balances were seen as inflationary or if the Fed were viewed as accommodating fiscal expansion by ‘monetizing the debt.’ On the other hand, there were those on the FOMC who argued for a{n} even greater role for the Treasury program, relative to the MBS and agency-debt programs because the Treasury program was seen as having the ability to contribute to reductions in the cost of credit across a range of markets. The issue received renewed attention in late 2010, when the FOMC announced further purchases of Treasury securities.

¹ These summaries have been prepared by the St. Louis Fed’s research staff and are designed to provide a general audience overview of the authors’ research. Any errors present or misinterpretations of the authors’ views are the sole responsibility of the St. Louis Fed’s staff. The views expressed in these summaries do not necessarily reflect the official positions of the Federal Reserve Bank of St. Louis, the Federal Reserve System, or the Federal Open Market Committee.

The FOMC's conviction that purchases of longer-term Treasury securities would reduce longer-term yields appears to have rested on a premise that the relative prices of financial assets are influenced in part by the relative quantities available to the public. Still, empirical work documenting these effects—that is, the extent to which changes in the relative supply of and demand for Treasury debt affect its pricing—is limited.

{The authors} distinguish between two types of impact that the LSAP program might have had—flow effects and stock effects. 'Flow effects' are defined as the response of prices to the ongoing purchase operations and could reflect, on top of portfolio rebalancing activity due to the outcome of the purchases, impairments in liquidity and functioning of the Treasury market. Such market imperfections might allow even pre-announced withdraws of supply to have effects on prices when they occur. Meanwhile, 'stock effects' are defined as persistent changes in price that result from movements along the Treasury demand curve and include the market reaction to changes in expectations about future withdraws of supply.

The results suggest that, on average across the yield curve, Treasury purchases reduced yields by about 30 basis points over the life of the program (the stock effect) and led to a further 3 to 4 basis point decline in purchased sectors on the days when purchases occurred (the flow effect). {The authors} find that these aggregate effects were driven largely by the responses of less liquid securities, such as those that were several issues off the run. The flow effects were concentrated in securities with remaining maturities of less than 15 years that were eligible for purchase on a given day.

{The authors} view these results as economically important. A decline in intermediate-maturity Treasury yields on the order of 30 basis points is economically significant by historical standards. Moreover, if this decline had indeed been passed through to private credit markets, it would have represented a substantial reduction in the cost of borrowing for businesses and households. Although {they} do not test whether this pass-through actually occurred, the observation that most credit spreads declined during the life of the program suggests that at least some of it may have. It thus appears that the Treasury LSAP program was probably successful in its stated goal of broadly reducing interest rates, at least relative to what they would otherwise have been.

Both the stock- and flow-effect results provide support for portfolio-rebalancing theories, as they demonstrate that Treasury rates are sensitive to the amount of Treasury debt available to the public. This is consistent with the widely held view that Treasury securities play a special role in the global economy and thus are not perfect substitutes for other types of debt. {Their} results further indicate that, on the days when a security was eligible to be bought, purchases of securities with similar maturities had almost as large effects on its yield as did purchases of the security itself while purchases of maturities further away had smaller effects. This supports the view that Treasuries of similar maturities are close substitutes but that substitutability diminishes as maturities get farther apart, consistent with imperfect substitutability across the term structure. In addition, {the authors} find that certain types of Treasury securities exhibit greater evidence of segmentation, and {their} sub-sample analysis seems to suggest that segmentation is determined by the intrinsic characteristics of the assets rather than market conditions, which is supportive of 'preferred habitat' theories. Understanding these

mechanisms has policy importance beyond the immediate question of the LSAP programs. For example, under normal circumstances, the Fed conducts most of its open-market operations in Treasuries, the Treasury Department may worry about the interest-rate effects of introducing new supply, and foreign central banks conduct sizeable interventions in Treasuries to maintain their reserves.”