

Commentary

## The Fed's Balance Sheet

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The sharp growth in the Fed's consolidated balance sheet has received much attention lately. Some have questioned the Fed's balance-sheet capacity to continuing providing liquidity at home and abroad, and some have worried about the inflationary consequences of its balance-sheet growth down the road. This essay will address these issues--briefly.

**First:** The Federal Reserve, as a central bank holding the reserve deposits of commercial banks (hence its name), creates bank reserves and money when it adds to its loans or any other asset. More loans on the asset side of its balance sheet are usually matched by more bank reserve deposits on the liabilities side. There is no balance-sheet constraint on that process. The Fed doesn't have to have assets to make loans.

In practice, however, the Federal Reserve over the past year has offset most of the increase in loans among its assets with decreases in its holdings of government securities. In other words, it has neutralized or sterilized the monetary impact of its lending--meaning the impact on bank reserves--with open market sales of government securities.

The funds have gone to the borrowing banks, mostly through the new term auction facilities, but those funds haven't been net additions of reserves to the banking system as a whole. In an operational sense, the trading desk at the New York Fed has not set out to offset loans per se, but that is the effect of maintaining the FOMC's target Federal Funds rate. The targets have produced that outcome.

While the Fed's balance sheet doesn't constrain Fed lending, it does constrain its ability to offset the impact of the lending on bank reserves. To sell government securities in the open market, it has to have securities in its portfolio. Recently, the Fed asked the Treasury to sell some extra Treasury securities, which the Fed put into a special account to be available for sterilization purposes.

**Second:** If the purpose of monitoring the Fed's balance sheet is to gauge the expansionary or inflationary implications of its lending or other actions, a more appropriate way to do it is not to

focus on growth total assets and liabilities, but to focus directly on bank reserves. Bank reserve deposits at the Fed, together with currency outside the banking system, make up what economists call the monetary base, or high-powered money.

Rapid growth in the base (primarily bank reserves in practice) gives the banking system an ability to make more loans and investments and, hence, create more deposit money. The effective marginal reserve requirement is about 10%, so each dollar of new reserves will eventually add about \$10 of money. Think of bank reserves as wholesale money and bank deposits as retail money. Exactly which bank deposits you include gives you different definitions of money: M1, M2, MZM and so forth.

Those definitions and distinctions aren't important for our purposes here. Let me just say that the best measure of the money supply is the one that has the most constant and predictable relationship with income, and that changes from time to time. It is because no measure of money has a tight relationship with income that the Fed uses the Federal Funds Rate, rather than a measure of the money supply, as its operating target. Yet most believe that over the long run, inflation, to quote Milton Friedman, "is always and everywhere a monetary phenomenon." But, I digress.

**Third:** I said earlier that a focus on bank reserves on the Fed's balance sheet was more useful in anticipating monetary outcomes than a focus on the overall size of the balance sheet. To isolate bank reserves, consider the following relationship: **Bank Reserves equal total Fed assets minus non-reserve Fed liabilities.**

That relationship means that, other things being equal, increases in Fed assets tend to increase bank reserves while increases in other Fed liabilities tend to reduce bank reserves. Therefore, when the Fed offsets an increase in one of its assets--loans--with a decrease in another of its assets--Treasury securities--there is no net effect on bank reserves.

That was the case over most of the past year. Fed lending had virtually no impact on bank reserves. However, beginning in September 2008, that changed dramatically. In recent weeks, bank reserves, the monetary base and other monetary aggregates, have grown very rapidly.

According to the Fed's H.4.1 releases, as of Thursday, Oct. 23, the Fed's assets totaled \$1,804,208,000, roughly double its total of \$919,235 a year earlier. Bank reserve balances during the same period rose from \$294,225,000 to \$301,270,000, an increase of only 2.4%. Thus the monetary impact of Fed activities over the year has been substantially less than implied by the doubling of its assets.

While an increase in reserves of 2.4% seems low for a year, virtually all the increase is recent, which means it was even lower for most of the year. Bank reserves remained flat up until a few weeks ago even though total bank assets were growing. The monetary base and various measures of the money supply followed that pattern--very slow growth for about a year then explosive growth in recent weeks.

The main thing that accounts for the greater growth in total assets than bank reserves is the expansion of the Fed's swap facilities that allow participating foreign central banks access to dollars to meet the demand for dollars in their countries. A swap is simply an exchange of a given dollar amount of currencies with a promise to swap back some time in the future at the same exchange rates. Swap lines used to be used to provide dollars for foreign central banks to use to support their currencies in foreign exchange markets.

One could easily argue that the Fed overdid its sterilization for most of the period, which made monetary policy too tight. As for the recent period, the extremely high growth is probably appropriate, and not inflationary, while credit markets remain frozen and velocity continues to fall. It is something that will have to be corrected as we return to normal in credit markets, or accelerating inflation will become a serious concern.

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