Economic Research note

US: the Fed reaches deeper into its toolbox

- **The Fed has attempted to address current financial strains through unconventional means**
- **By changing the composition, not size, of its balance sheet, the Fed is hoping to target liquidity problems**
- **Balance sheet space to deal with liquidity is limited; at some point such actions expand the balance sheet**

In his first speech as a Fed governor, Ben Bernanke remarked: "My suggested framework for Fed policy regarding asset-market instability can be summarized by the adage, *Use the right tool for the job."* At the time, Bernanke was referring to two sets of tools. For the job of achieving good macroeconomic outcomes, the tool is the federal funds rate. For the job of ensuring financial stability and liquid markets, the tool is the discount window as well as the Fed's other regulatory and supervisory powers. As the credit crunch has proceeded, the Fed has had to invent a variety of new tools to deal with the latter responsibility.

Fed accounting

The Fed is a bank. Like any bank, the Fed has a balance sheet, with assets on the left side and liabilities and equity on the right. There the similarities end. The liabilities of the Fed are unique and essentially form the monetary base, a quantity which, as the name implies, is the building block for all broader concepts of money. These liabilities—the monetary base—take essentially two forms: currency and reserve balances of depository institutions.

Equity in the Fed, though it does exist, is trivially small and is a relatively unchanging quantity.[1] Therefore, for the balance sheet to balance, increases in the Fed's liabilities must be a result of increases in the Fed's assets; for the monetary base to expand, the Fed must acquire assets. It is these assets on the Fed's balance sheet that have been the object of the Fed's recent actions.

Before last December, there were three important categories of Fed assets: securities held outright, securities held under repurchase (repo) agreement, and direct loans to banks through the discount window. The outright holdings of securities—called the System Open Market Account or SOMA—consist entirely of Treasuries and constitute the vast bulk of the Fed's balance sheet. Securities held under repo include Treasuries, GSE agency debt, and agency MBS. Discount window lending is small in normal times.

With this in mind, Bernanke's distinction among policy tools—and the Fed's actions taken as the credit crisis has proceeded—can be seen in the context of the effect on the Fed's balance sheet. More precisely:

1. Ownership in the monopoly supplier of the nation's currency would seem to be a great investment; however, retained earnings are minimal as the Fed returns most of the interest earned on its stock of Treasury securities back to the Treasury Department.

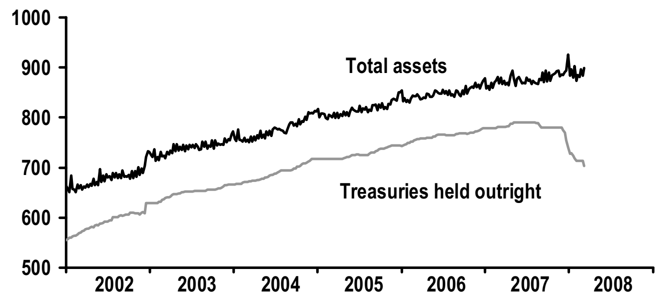
Current Federal Reserve balance sheet
$ billion

Assets		Liabilities and owners' equity	
		Liabilities	
Securities held outright	703	Currency	781
Repurchase agreements	77	Deposits and other items	78
Term auction credit	60		
Other items	58	**Capital accounts**	39
	898		898

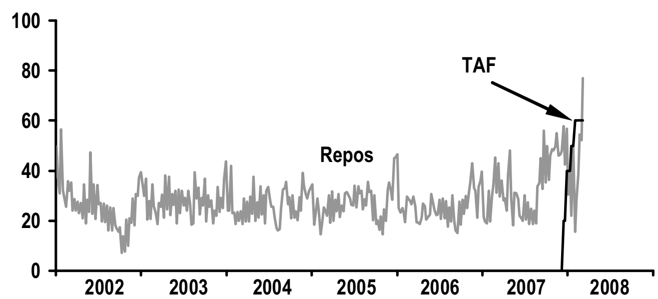
Estimated Federal Reserve balance sheet as of April
$ billion

Assets		Liabilities and owners' equity	
		Liabilities	
Securities held outright		Currency	781
RMBS	200	Deposits and other items	78
Treasuries	390		
Repurchase agreements	150		
Term auction credit	100		
Other items	58	**Capital accounts**	39
	898		898

Assets on Fed balance sheet
$ billion



Assets on Fed balance sheet
$ billion



- **Monetary policy**. Fed actions to support macroeconomic goals should be viewed as an expansion or contraction of the Fed's balance sheet. By changing the size of the money supply, i.e., the Fed's liabilities, the Fed is able to affect the overnight price for money—the federal funds rate.

- **Liquidity and financial stability**. Actions taken by the Fed to promote liquid and functioning markets have affected the composition of the Fed's balance sheet, not its size. By taking out-of-favor assets onto its balance sheet, in return for Fed liabilities, the Fed creates liquidity for the institution that held those assets.

With respect to the second policy goal, the Fed has altered the composition of its balance sheet several times during the credit crisis in order to affect liquidity conditions. One notable example has been the Term Auction Facility (TAF). The TAF has lent funds to banks against a broad range of collateral that the borrowing institution has pledged to the Fed. To offset the increase in the balance sheet resulting from the TAF, the Fed has had to reduce holding of other assets—in this case Treasuries in the SOMA.

In a similar fashion, the Fed has announced that it will effectively "sterilize" the liquidity provided through the TSLF and the expansion of term repos. The TSLF (or Term Securities Lending Facility) expands the Fed's existing securities lending arrangement. Under the new facility, the 20 primary dealers will be allowed to exchange mortgages (both GSE agency mortgages and private label RMBS) for Treasuries that the Fed holds in the SOMA. In principle, the broker dealers should be able to fund these Treasuries more easily than they can fund mortgages. This should allow broker dealers who have trouble securing liquidity to more readily fund their portfolio. The acquisition of mortgages through the TSLF does not have to be offset by a reduction in balance sheet elsewhere because it automatically reduces the amount of Treasuries in the SOMA.

In contrast, the increase in term repos is being offset by a lowering of the SOMA. On March 7, the Fed announced an intention to undertake $100 billion in 28-day term repos. This has two effects: first, it provides more term funding to the banking system; second, it does so by (potentially) taking on board more mortgage collateral. Unlike the outright security holding, securities held under repo include GSE agency debt and MBS. Already, the Fed has begun to reduce SOMA holdings to accommodate the increase in term repos. What the TAF, TSLF, and term repos all have in common is that they potentially bring more mortgages onto

Recent Fed liquidity initiatives

	TAF	TSLF	Term repos
Counterparties	All depository institutions	20 primary broker-dealers	20 primary broker-dealers
Amount	$100 billion	$200 billion	$100 billion
Collateral	Broad array of public and private securities and loans	Treasuries, agency debt, agency MBS, private RMBS	Treasuries, agency debt, agency MBS
Term of lending	28- and 35-day	28-day	28-day

the Fed balance, but leave the size of the balance sheet relatively unchanged by selling or lending more Treasuries to the public. By reducing the supply of the relatively illiquid asset and increasing the supply of the currently more desired asset, the Fed is using the composition of its balance sheet to foster liquidity where it is needed.

Limits to a distinction

As the credit crisis has unfolded, FOMC members have repeatedly made reference to separating their monetary policy (or macro-prudential) responsibilities from the financial and liquidity (or micro-prudential) responsibilities. Arguably, this has always been a distinction without a difference: failure in one realm will invariably bleed over and cause problems in the other realm.

However, as the Fed continues to devote its balance sheet to attending to its micro-prudential responsibilities, there may come a time when the distinction between responsibilities will reach its limits. After the Fed completes the expansion of the TAF, the rollout of the STLF, and the increase of term repos there will be a much smaller SOMA; if the overall size of the balance sheet were held constant (probably a valid working assumption given its recent slow growth), Treasuries in the SOMA not lent out would amount to just under $400 billion, down from $700 billion currently. If the Fed were to expand the TAF again, or move to directly purchase agency mortgages, this number would shrink further.

While not imminent, it is not inconceivable that at some point such liquidity actions will use up the remaining SOMA balance sheet. At that point, the Fed would have to confront the fact that a further reconfiguration of its balance sheet would have monetary policy implications as it would expand the balance sheet and lower the funds rate. In that environment, the distinction between monetary policy and actions to promote financial stability would no longer have meaning.