FRBSF Economic Letter

2006-11 May 19, 2006

Subscribe RSS Feed Share

« More Economic Letters

Central Bank Capital, Financial Strength, and the Bank of Japan

Thomas F. Cargill

Pacific Basin Notes. *This series appears on an occasional basis. It is prepared under the auspices of the Center for Pacific Basin Studies within the FRBSF's Economic Research Department.*

Central bank balance sheets and capital structure in the context of legal independence, transparency, and flexibility to pursue price stability have increasingly been recognized as important issues in the optimal design of central banks. However, capital structure is more complex than a set of accounting conventions designed to organize central bank operations. In fact, focusing on simple accounting measures of central bank financial strength may itself generate adverse policy outcomes. The Federal Reserve in the 1930s focused on balance sheet measures of collateral for discount loans, "free gold," and "excess reserves held by banks" to the detriment of proper monetary policy (see Friedman and Schwartz 1963). More recently, the Bank of Japan has focused on accounting measures of capital that some suggest might interfere with appropriate monetary policy to reverse a deflation process that lasted a decade and only now has shown signs of ending.

This *Economic Letter* addresses central bank capital and financial strength in the context of Bank of Japan policy (Cargill 2005). Specifically, it reviews general considerations about central bank capital and financial strength, discusses recent Bank of Japan policy in the context of capital structure, evaluates the Bank of Japan's concern in the context of the broader issue of central bank independence, and draws some lessons from recent Bank of Japan policy.

Central bank capital and financial strength

The importance of central bank capital can be illustrated by considering the importance of central bank "financial strength" as opposed to "capital" or "net worth" and why financial strength is important in the current environment.

Capital structure does not define meaningful ownership status; for example, while national banks and member banks hold 100% of outstanding Federal Reserve stock and individuals hold about 40% of Bank of Japan (BOJ) stock, no private entities in either the U.S. or Japan own or influence the respective central banks in any significant property-right sense. Nor does capital structure have implications for legal independence. The BOJ achieved a significant increase in legal independence in 1998 without any meaningful change in the distribution of stock ownership between the government and the public. Most important, capital structure is a weak measure of central bank financial strength because of contingent liabilities.

Stella (2005) defines financial strength as the central bank's ability to generate sufficient revenue to cover the costs of providing the monetary services it has committed to under a variety of macroeconomic events. A central bank can be regarded as financially strong it if can conduct operations in the present and future without incurring operating losses. Ironically, central bank financial strength or independence at times may involve cooperation with the government that appears to conflict with its legal independence. Financial strength is forward-looking and focuses on the risks the central bank incurs in committing to a specific policy target in spite of losses it may incur in doing so.

Technically a central bank does not require capital to conduct policy, but it does need to generate enough revenue by asset acquisition (open market operations and loans) and fees to cover the costs of providing monetary services. As a practical matter, however, central banks will always be organized around a capital structure, and failure to distinguish between capital strength and financial strength can adversely influence public perception and policy outcomes. A financially weak central bank is one that continually generates losses that eventually require monetary expansion to cover expenses, requires abandonment or modification of a policy objective to eliminate losses, reduces the ability of the central bank to function as a fiscal agent for the government, and may in the extreme, generate a shift from the formal to the informal payments system. A financially weak central bank also loses credibility with the public as people come to believe it will modify or abandon a specific policy to ensure profitable operation.

Unfortunately, financial strength is difficult to measure since it depends on the asset structure of the central bank, the cost of providing monetary services, and the macroeconomic events that influence operating profits. Stella (2003) offers some possible indicators of financial strength, but emphasizes that it is unlikely a "one size fits all" measure is practical. Financial strength cannot be measured by conventional balance sheet ratios; in fact, focusing on balance sheet ratios may generate adverse policy outcomes.

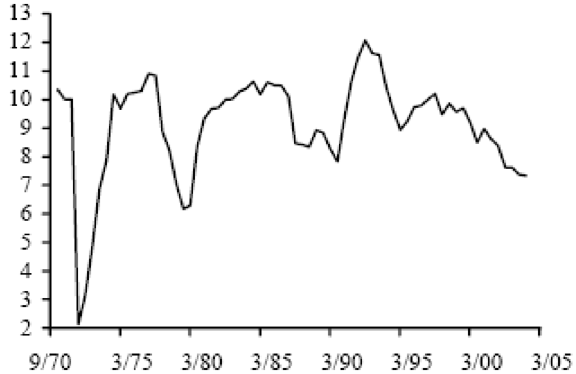
Few central banks in developed economies have generated operating losses; however operating losses have been recognized as a problem in a number of South American economies (Stella 2005 and Ize 2005). The recent concern for developed economies arises from two sources. First, the overwhelming success central banks achieved over the past two decades of bringing inflation and nominal interest rates to low levels raises concerns about the ability of central banks to cover the costs of providing monetary services without depleting their capital. Second, the financial risks facing the BOJ resulting from a decade of deflation might necessitate a material modification to the stance of monetary policy. What has made the BOJ special?

BOJ's concern over capital adequacy

Prices have declined continually in Japan since 1994 and has deflation abated only with positive prices projected for

2006. The BOJ has made large purchases of Japanese government bonds (JGBs) to reverse deflation, and it has made loans to troubled financial institutions and even purchased equities from banks on a small scale. As a result, it has assumed a leveraged position in the domestic financial market. The past asset accumulation of JGBs has exposed the BOJ to problems when policy shifts from preventing deflation to restraining inflation in a higher interest rate environment.

Figure 1
September and March values of BOJ measure of capital adequacy



Note: Capital Adequacy Ratio=[capital account (BOJ paid-in stock plus legal reserves)+several reserve accounts]/average of BOJ notes outstanding.

The BOJ has directed attention to its declining measure of capital adequacy (Figure 1). In addition, for FY2003 (April 1, 2003, to March 31, 2004) the BOJ reported its first operating loss since 1972, and former Governor Masaru Hayami (retired March 19, 2003), Governor Toshihiko Fukui, and Kazuo Ueda, former member of the Policy Board, have all publicly expressed concern over BOJ capital and its relationship to central bank credibility.

The BOJ has been increasingly concerned about the potential for a sudden decline in capital adequacy when nominal interest rates increase. This concern may have accounted for the premature shift to a tighter monetary policy in August 2000 as well as recent statements by the BOJ that it may soon shift to tighter policy and adversely impact what many regard as a weak recovery.

Is the concern justified?

Financial strength is an important concern for BOJ policy, given that higher interest rates will generate a capital loss on the large holdings of JGBs even with modest increases in long-term interest rates if the JGBs are sold, and that the Bank's measure of capital adequacy has declined in the last few years.

However, it is difficult to argue that the operational losses are likely to be so severe as to compromise the BOJ's financial strength or to undermine the credibility of its commitment to price stability. In fact, the opposite might be true. The irony here is that the BOJ is trying to defeat deflationary expectations; hence, a weak balance sheet—implying a need for future money creation—could add to its credibility. It should also be noted that the BOJ has not sold any JGBs in the past thirty years (Ueda 2004).

Part of the issue is that the BOJ's measure of capital adequacy appears to have recovered from declines in the past, but more importantly, the measure has little bearing on its financial strength. The measure does not incorporate legitimate elements in determining financial strength, such as interest rate risk, credit risk, or exchange rate risk, and it is overly influenced by currency in circulation. Alternative measures of capital adequacy, particularly with a forward-looking dimension, incorporating risks under different macroeconomic scenarios, would provide a better measure of potential threats to its financial strength, that is, its ability to pursue price stability.

A more fundamental issue might be the overemphasis on legal independence and the constraint this imposes on the ability of the BOJ and the Ministry of Finance (MOF) to cooperate in the face of unusual events to ensure that the central bank has the flexibility to pursue price stability. Deflation is such an unusual event that it may require nontraditional approaches to price stability and cooperation between the central bank and the government. The BOJ is not a corporation in the private market sense and cannot go bankrupt any more than government can default on general debt in ordinary and even extraordinary times. The BOJ could absorb a mark-to-market loss and continue to have assets to constrict liquidity through open market operations. It is difficult to conceive that the BOJ would not be able to generate sufficient revenue to cover operating expenses given the essentially zero marginal cost of purchasing even low-interest yielding assets.

The balance sheet can impose a real constraint on BOJ's operations if it reflects a dependence of the central bank on government to the degree monetary policy is directly financing government spending or supporting insolvent financial institutions, or if the BOJ needs to resort to money creation to finance its own operations. To prevent this, the MOF has an obligation to ensure the BOJ retains financial strength in the context of legal independence; however, maintaining an adequate level of capital will not be costless to the government budget.

The solution might involve the introduction of new variable interest rate government bonds, as suggested by Bernanke (2003), to immunize the Bank's balance sheet from interest rate fluctuations, or, more simply, a public commitment to ensure the BOJ's commitment to price stability will not be compromised by interest rate risk. Legal independence does not mean the central bank is a "sink or swim" institution separate from the rest of government. Both the BOJ and the MOF need to cooperate to ensure that balance sheet constraints do not interfere with the more important objective of price stability.

This is new ground for the BOJ as well as for other central banks in a low interest rate environment. The BOJ and the MOF need to determine jointly and transparently—so as not to interfere with the objective of price stability—how to ensure that the BOJ maintains an adequate level of capital if there is a meaningful threat to the BOJ's financial strength. This will clearly involve direct dialogue, since the law does not address what the adequate level of capital is, what would happen if the BOJ's balance sheet generated negative net worth, or what responsibility the MOF has to ensure adequate bank capital

Conclusion

The BOJ's concerns about financial strength are legitimate; however, it would be an error to conduct monetary policy based on concern over balance sheet definitions as occurred in the 1930s in the United States. The current measure of capital adequacy does not reflect financial strength.

A solution to the BOJ's legitimate concerns involves the following: first, a clear restatement of the BOJ's financial strength and the adoption of a capital policy that appropriately reflects the risks it faces in the current policy environment; second, a recognition by the MOF that central bank independence does not mean "sink or swim"; and third, a recognition that cooperation with the MOF does not ring the death knell for the BOJ's independence. Deflation in the context of a low or zero interest rate environment is a serious problem and requires nontraditional approaches to policy, including cooperation between the central bank and the government.

Thomas F. Cargill
Visiting Scholar, FRBSF, and
Professor, University of Nevada, Reno

References

[URLs accessed May 2006.]

Bernanke, Ben S. 2003. "Some Thoughts on Monetary Policy in Japan." Speech to the Japan Society of Monetary Economics, Tokyo, Japan, May 31.

Cargill, Thomas F. 2005. "Is the Bank of Japan's Financial Structure an Obstacle to Policy?" IMF Staff Papers 52(2).

Friedman, Milton, and A. Schwartz. 1963. *A Monetary History of the United States.* Princeton, NJ: Princeton University Press.

Ize, Alain. 2005. "Capitalizing Central Banks: A Net Worth Approach." *IMF Staff Papers* 52(2).

Stella, Peter. 2003. "Why Central Banks Need Financial Strength." *Central Banking* (November).

Stella, Peter. 2005. "Central Bank Financial Strength, Transparency and Policy Credibility." *IMF Staff Papers* 52(2).

Ueda, Kazuo. 2004. "The Role of Capital for Central Banks." Based on speech to Japan Society of Monetary Economics, Tokyo, Japan (February).