
FRBSF WEEKLY LETTER

October 21, 1988

Monetary Policy in New Zealand

During the past five years, New Zealand has implemented sweeping financial sector deregulation. The preceding *Letter* discusses this change, which was motivated by a desire to eliminate the inefficiencies regulation had produced in the provision of financial services. Deregulation has also reshaped monetary policy in New Zealand. This *Letter* focuses on the changes in New Zealand's monetary policy and draws implications for the U.S. as its financial sector becomes increasingly deregulated.

Monetary policy before deregulation

Prior to July 1984, monetary policy in New Zealand was clearly subservient to both fiscal and exchange rate policies. The combination of reserve asset ratios on commercial banks' portfolios, pegged interest rates on government debt, and fixed exchange rates prevented the Reserve Bank of New Zealand from exercising effective control over the supply of money.

Reserve asset ratios (RARs), introduced in 1973, imposed constraints on the asset side of trading bank balance sheets in the same way reserve requirements currently do in the United States. Since government securities, as well as currency and deposits with the Reserve Bank (called settlement balances) could satisfy the RARs, government deficits automatically increased bank reserves. This prevented the Reserve Bank from controlling the level of bank reserves through its open market operations in government securities.

Monetary policy was also constrained by New Zealand's policy of pegging interest rates on government debt at below market-clearing levels. Since the Reserve Bank had to stand ready to buy and sell government securities at administratively-set prices, it had no control over the composition of its own portfolio. Similarly, New Zealand's exchange rate policy required the Reserve Bank to buy and sell foreign exchange at the pegged exchange rate, further reducing New Zealand's ability to exercise independent monetary control.

Without an effective, independent monetary policy, it is not surprising that New Zealand's rate of inflation averaged over 12 percent per year between 1979 and 1983, even though wage and price controls reduced the measured rate of inflation below four percent in 1983. During this period of high inflation, many called for greater effective control over the economy's supply of money. Effective monetary control, in turn, required changes in the financial system and in the policies governing exchange rates and the government's fiscal operations.

Monetary policy after deregulation

The financial reforms instituted since 1984 have allowed the Reserve Bank of New Zealand to control the reserves of the banking sector. By instituting a floating exchange rate and by selling government securities on an auction basis, the Reserve Bank is no longer required to increase the reserve base in support of pegged rates. In addition, the entire system of required reserve asset ratios was dismantled.

Now, monetary policy focuses on two different monetary aggregates. The first comprises bank settlement balances on deposit with the Reserve Bank. The second, called primary liquidity (PL), comprises settlement balances plus government securities with less than one month remaining to maturity. The Reserve Bank establishes target *levels* for each of these aggregates. Open market operations are then conducted in order to achieve the targeted levels.

Despite the elimination of reserve asset ratios, banks continue to hold settlement balances since these balances are the only asset accepted by the Reserve Bank for settling transactions between the government and the private sector. Since banks cannot perfectly forecast their daily net transactions with the government, they choose to hold positive settlement balances on average to be able to meet random fluctuations in the volume of their transactions. If a bank does find itself with insufficient settlement balances at the

FRBSF

end of a day, it attempts to borrow excess settlement balances in the interbank market (essentially equivalent to the federal funds market in the U.S.). Alternatively, it can borrow from the Reserve Bank by selling some of its holdings of government securities at a discount. Since the discount established by the Reserve Bank is below the market price, this option amounts to borrowing at a penalty rate.

The Reserve Bank determines the aggregate supply of cash settlement balances (that is, settlement balances that have not been borrowed from the Reserve Bank) through its open market operations. When aggregate demand for cash settlement balances exceeds the level supplied by the Reserve Bank, banks must obtain additional cash by borrowing from the Reserve Bank. Moreover, since only securities with less than one month to maturity can be discounted, the supply of PL limits aggregate borrowing.

A comparison with the U.S.

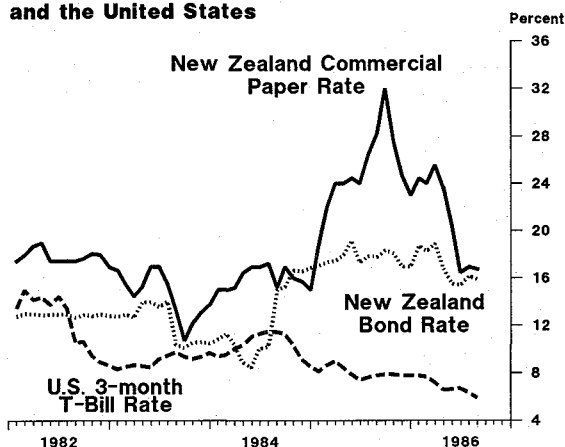
New Zealand's policy resembles the nonborrowed reserves operating procedure the Federal Reserve employed in the United States between October 1979 and late 1982. Cash settlement balances in New Zealand correspond to nonborrowed reserves in the U.S. and the Reserve Bank's practice of discounting eligible government securities is analogous to borrowing from the Federal Reserve's discount window at a penalty rate.

There are several important differences between the two policies, however. First, unlike New Zealand's Reserve Bank, the Federal Reserve generally did not (and still does not) impose a penalty borrowing rate. This created an incentive for banks in the U.S. to borrow, but banks also faced non-price restrictions on the frequency with which they could borrow. Many analysts argued that the Fed could have achieved better control over the broader monetary aggregates by setting the discount rate above the federal funds rate. Such a penalty rate would have discouraged banks from borrowing from the Fed, but many worried that such a policy also would have increased interest rate volatility since the supply of reserves would have been inelastic.

New Zealand's experience provides a useful counterpoint to this concern. The Reserve Bank

of New Zealand imposes a penalty rate on discount borrowing, producing an interest-inelastic reserve supply. While daily rate volatility has increased, monthly observations on interest rates in New Zealand two years before and after financial reform was initiated in July 1984 show that rates were no more volatile after the change than before, even though the post-reform contractionary policy raised rates to very high levels. (See Chart.)

Interest Rates in New Zealand and the United States



Another difference between the U.S. and New Zealand is that the Reserve Bank's target for primary liquidity imposes a ceiling on total reserves since government securities counted as part of PL are the only securities that can be discounted at the Reserve Bank and the supply of these securities is limited. In contrast, the Federal Reserve does not impose an explicit ceiling on the amount of borrowing it will allow.

Finally, New Zealand's policy is not subject to the problems associated with lagged reserve requirements, as the Federal Reserve's procedure was. Lagged reserve accounting, it was argued, weakens the link between the current supply of bank reserves and bank deposits, thereby weakening the Fed's ability to control the broader monetary aggregates through a nonborrowed reserves operating procedure. In New Zealand, reserve requirements were set equal to zero, in effect, making reserve accounting contemporaneous.

Lessons for the U.S.

In 1982, the Fed shifted away from its nonborrowed reserves policy because of uncertainty over the link between the monetary aggregates and nominal income. Even though New Zealand's current policy resembles an approach the Fed has rejected, New Zealand's experience still holds some lessons for the U.S., particularly in the debate over reserve requirements. Reserve requirements force affected institutions to hold non-interest bearing cash or deposits at the Federal Reserve. The interest income these institutions must forego by holding these non-interest bearing assets amounts to a direct tax on their activities. Since reserve requirements are typically imposed on some financial institutions but not on others that may nonetheless be engaged in very similar types of activities, regulatory distinctions will influence the portfolio choices of individuals. Moreover, such a tax on the institutions that offer transactions accounts tends to reduce the level of financial intermediation services provided by these institutions, even though they may be the most efficient providers of such services.

Traditionally, economists have argued that a system of reserve requirements is necessary because it enhances the ability to control the money supply and the rate of inflation. The Federal Reserve can control the *supply* of bank reserves, but unless there is a well-defined *demand* for reserves, controlling reserves will not give the Fed control over the broader monetary aggregates and economic activity. A system of reserve requirements generates the needed link between the demand for the monetary aggregates and demand for non-interest bearing bank reserves.

However, the New Zealand experience reinforces recent theoretical arguments that reserve requirements are not necessary for the conduct of monetary policy (see *Letter* of 8/22/86). The Reserve Bank has found that the demand for reserves has remained well defined even after the elimination of all reserve requirements.

The key factor insuring a demand for reserves appears to be the requirement that transactions

with the government be settled with bank settlement balances and that these balances be non-negative at the close of each business day. This means that banks need to hold an average level of reserves that is high enough to avoid facing unanticipated cash outflows during the day in excess of their reserve balances. Because the Reserve Bank does not permit the banking system as a whole to have a negative net reserve position, a minimum is established for reserve holdings. Legal reserve requirements merely force this minimum to a higher level and, by linking reserves and monetary aggregates, tie together money supply control and inflation control.

Although legal reserve requirements are not necessary to generate a demand for reserves, presumably, the Reserve Bank could alter demand through the payment of interest on reserves. Currently, the Reserve Bank of New Zealand sets the interest rate on bank reserves at two-thirds the 7-day call money rate. The gap between these two rates represents the opportunity cost to banks of holding reserves. While this gap has not been used in New Zealand to actively influence the demand for reserves, the interest rate paid on reserves certainly represents a potential policy tool—for the U.S., as well as for New Zealand.

Perhaps the most useful lesson to be drawn from the experience of New Zealand is that the elimination of reserve requirements necessitates only minor adjustments in the conduct of monetary policy. Since legal reserve requirements seem largely unnecessary from the perspective of monetary policy and their elimination does not require drastic changes in the implementation of policy, proponents of reserve requirements need to articulate why a tax, the sole purpose of which seems to be to raise revenue, should be imposed on bank borrowers and depositors, but not on non-bank borrowers and depositors.

Carl E. Walsh
Visiting Scholar
Federal Reserve Bank of San Francisco
and
Associate Professor
University of California, Santa Cruz

Opinions expressed in this newsletter do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco, or of the Board of Governors of the Federal Reserve System. Editorial comments may be addressed to the editor (Barbara Bennett) or to the author. . . . Free copies of Federal Reserve publications can be obtained from the Public Information Department, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco 94120. Phone (415) 974-2246.

