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Japan's Recession: Is the Liquidity Trap Back?

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Since the early 1990s, rising unemployment, price deflation, sluggish growth, and even recession have beleaguered Japan. The country's central bank, the Bank of Japan (BOJ), has responded by lowering interest rates to stimulate demand. Short-term rates, shown in Figure 1, were gradually lowered from 8.3% in early 1991 to virtually zero by early 1999 and have stood at that level for more than a year. By mid-1999, the two-year government bond rate was only 0.48% and the corporate bond rate was 0.80%.

With interest rates at historic lows, why is the Japanese economy still in a slump? One explanation, put forward by Paul Krugman (1998a, b), is that traditional monetary policy instruments are powerless to provide effective stimulus to the economy because Japan is in a "liquidity trap." This *Economic Letter* evaluates the liquidity trap argument against a leading alternative explanation: a credit crunch associated with Japan's banking problems.

Liquidity traps

Japan is the first major industrial economy to face serious deflation since the 1930s, and, not surprisingly, that also was the time that the liquidity trap explanation for the ineffectiveness of monetary policy was popularized. A liquidity trap is characterized by a situation–similar to Japan today–where interest rates are at or near zero. Monetary policy is seemingly impotent to stimulate demand and raise spending since interest rates are already at the lowest point possible–no one would normally be willing to hold bonds with negative yields over (zero interest-bearing) money.

Is Japan in a liquidity trap? Krugman (1998a) forcefully argues this case and suggests a specific and unorthodox policy recommendation–that the BOJ bring inflation and inflationary expectations up to 4% and keep them there for 15 years (see Spiegel 2000). The key element of Krugman’s analysis is that the equilibrium real interest rate–that is, the real rate that would match saving and investment–is negative in a liquidity trap. How could the equilibrium real interest rate be negative? Because poor long-run growth prospects, which, in Japan’s case, presumably are linked to unfavorable demographic trends, make investment demand so low that a negative short-term real interest rate would be needed to match saving with investment. Given a nominal interest rate floor of zero, Krugman argues that a positive expected rate of inflation is necessary to generate negative real interest rates, which will stimulate aggregate demand and restore full employment.

Krugman draws on two bits of empirical evidence to support the liquidity trap argument. First, he points to the fact that short-term interest rates have reached a minimum point, virtually zero. Moreover, the yield curve has been virtually flat, as the 10-year government bond yield declined to less than 1% for a brief period in late 1998. The low interest rates seen in Japan at the end of the 1990s are unprecedented for any major industrial country since the 1930s.

Second, Krugman points out that injections of liquidity by the central bank have not been very effective in raising the growth rate of the broader money aggregates. He shows that the monetary base grew 25% from 1994 to 1997, but that the broader monetary aggregate (M2 + CDs) grew only 11%, and bank credit grew not at all. And more recent statistics indicated that “money hoarding” continued to be evident in 1998-1999, as an expansion of the monetary base in the range of 8% to 10% resulted in only about a 3% growth in M2 + CDs. Bank lending has collapsed since early 1998, as shown in Figure 2. Moreover, low interest rates and expansion in the monetary base had not helped increase aggregate demand–the economy continued in recession.

Alternative explanation: the credit crunch

The main alternative explanation for the ineffectiveness of monetary policy to stimulate the economy is the “credit crunch” view. This explanation focuses on the contraction of the supply of bank credit (credit crunch) caused by massive nonperforming loans accumulating in the financial system.

This argument has two parts. The first focuses on the decline in bank capital due to the accumulation of bad loans held by Japanese banks. The capital asset ratio of the 20 largest financial institutions in Japan fell significantly between 1994 and the end of 1998. Less than candid reporting initially both by banks and by the Ministry of Finance about the magnitude of the nonperforming loan problem made it difficult for banks to raise capital in domestic and international financial markets. They therefore responded by reducing the amount of loans. Japanese financial institutions have attempted to raise capital-asset ratios, in part in response to recently tightened international capital standards, as well as in response to pressure from the markets and the government. But building capital-asset ratios by restraining lending takes a long time. And it induces a credit squeeze in the process–the origins of the credit crunch in Japan.

The second part of the credit crunch explanation focuses on the cautious lending attitude of Japanese banks following their recent experience with bankruptcies, nonperforming loans, and recession. Liabilities associated with bankruptcies hit an all-time high of 2.7 trillion yen in October 1997, and a trend line shows a sustained rise to the highest point in the postwar period towards the end of the decade. These circumstances make firms less desirable potential borrowers than they used to be, from the banks’ point of view. And they also have the self-reinforcing effect of tightening credit conditions and worsening the recession.

Evidence of a credit crunch also is suggested by the BOJ survey known as *Tankan*. This survey asks firms their views of the “lending attitude of financial institutions.” Despite the low interest rate environment,

the survey indicates a sharp tightening of credit conditions in Japan since mid-1997 facing both large and small enterprises. The "lending attitudes" of financial institutions, at least from the borrower's perspective, have become much more stringent.

A credit crunch implies that injections of liquidity (base and narrow money expansion) do not increase credit and aggregate lending. This is exactly what has occurred in Japan. Base and narrow money have increased at a robust pace in 1997-1999, but the broader money aggregates most directly related to spending in the economy grew modestly. Most disturbing is that aggregate lending by banks has decreased sharply, the flip side of which is the tightening of credit conditions faced by enterprises in Japan.

Which is right?

Krugman (1998a) dismisses the credit crunch argument, arguing that banks with a large portfolio of nonperforming loans should take on excessive risk and stand ready to lend even to questionable borrowers. Excessive lending, rather than a credit contraction, would be predicted, as banks gamble on high-risk projects, hoping to restore solvency before they are forced into bankruptcy by the financial authorities.

This type of excessive lending occurred in Japan at the early stages of the banking crisis. Lending by real estate lending institutions, known as *jusen*, actually grew rapidly in 1991-1992, as they faced growing problems with nonperforming loans (Cargill, Hutchison, and Ito 1997). But at the current stage of the banking problem–with the creation of a new Financial Supervisory Authority, greater transparency, and more disclosure on loan positions–the supervisory authorities are not sitting by idly and allowing excessive risk-taking on the part of banks. Greater stringency in banking oversight is the new modus operandi in Japan since 1998 (Cargill, Hutchison, and Ito, forthcoming).

The balance of evidence seems to support the credit crunch explanation of why monetary policy–and zero interest rates–have not been effective up to this point in stimulating the Japanese economy. Low interest rates, slow broad money growth, and falling commercial loans are consistent with either a liquidity trap or the credit crunch explanation. But the *Tankan* survey results and some other facts tilt the balance of evidence towards the credit crunch view. In particular, the banking sector was hurt by the temporary emergence of the so-called "Japan premium" (extra expense Japanese banks must pay for raising funds in overseas markets) and by the downgrading of the investment ratings (by agencies such as Moody's) on debt issued by Japanese financial institutions. More generally, the overall negative publicity about the Japanese financial system and economy clearly contributed to a very pessimistic atmosphere in Japan in the late 1990s.

To address the banking and credit crunch problems, public funds totaling 60 trillion yen (12% of GDP) finally were set aside in 1998-1999 to recapitalize banks. A number of institutions have used these funds (via the issuance of special equity shares to the government) to increase capital-asset ratios significantly. In principle, this should ease the credit squeeze and induce banks–particularly with further injections of liquidity into the banking system–to increase lending. Long-delayed capital injections and restructuring of the banking system should finally help push Japan's economy into an expansion. The analysis here suggests that bank recapitalization should ease the credit crunch, and, if the BOJ keeps interest rates low, economic growth will soon follow.

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