Macroeconomics

Cheng Wang
Department of Economics
Iowa State University

Fall, 2003

Part of this note is taken from Mankiw (2002). All rights reserved.
1 Fiscal and Monetary Policy Design

The central bank sees inflation rising in the future. It then wants to tighten up monetary policy to fight that. But a tight monetary policy is likely to raise interest rate and that in turn may have a negative effect on the stock market.

Can you design a monetary and fiscal policy combination to slow down the economy while not raising the interest rate?
2 Creating a Recession

Suppose you given a toy economy to play with. Suppose this toy economy is described by the equations you are familiar with. How can you create a recession in this economy?
3 The Great Depression

See Table 11-2 for the statistics regarding the great depression. What caused the great depression?

**Theory 1** A downward shift in the consumption function caused the contractionary shift in the IS curve. The stock market crash of 1929 may have been partly responsible for this shift: by reducing wealth and increasing uncertainty about the future prospects of the U.S. economy, the crash may have induced consumers to save more of their income rather than spending it.

**Theory 2** The great depression was caused by the large drop in investment in housing. Some economists believe that the residential investment boom of the 1920s was excessive and that once this overbuilding became apparent, the demand for residential investment declined drastically. Another possible explanation for the fall in residential investment is the reduction in immigration in the 1930s: a more slowly growing population demands less new housing.

**Theory 3** Many banks failed in the early 1930s, in part because of inadequate bank regulation, and these bank failures may have exacerbated the fall in investment spend-
Banks play the crucial role of getting the funds available for investment to those households and firms that can best use them. The closing of many banks in the early 1930s may have prevented some businesses from getting the funds they needed for capital investment and, therefore, may have led to a further contractionary shift in the investment function.

**Theory 4** In addition, the fiscal policy of the 1930s caused a contractionary shift in the IS curve. Politicians at that time were more concerned with balancing the budget than with using fiscal policy to keep production and employment at their natural rates. The Revenue Act of 1932 increased various taxes, especially those falling on lower- and middle-income consumers.

**Theory 5** The money supply fell 25 percent from 1929 to 1933, during which time the unemployment rate rose from 3.2 percent to 25.2 percent. Friedman and Schwartz argue that contractions in the money supply have caused most economic downturns and that the Great Depression is a particularly vivid example.

A problem for this hypothesis is the behavior of interest rates. If a contractionary shift in the LM curve triggered the Depression, we should have observed higher interest
rates. Yet nominal interest rates fell continuously from 1929 to 1933.

Theory 6 From 1929 to 1933 the price level fell 25 percent. Many economists argue that the deflation may have turned what in 1931 was a typical economic downturn into an unprecedented period of high unemployment and depressed income.
4 The Effects of Deflation

Effect 1 For any given supply of money M, a lower price level implies higher real money balances M/P. An increase in real money balances causes an expansionary shift in the LM curve, which leads to higher income.

Effect 2 Another channel through which falling prices expand income is called the Pigou effect. As prices fall and real money balances rise, consumers should feel wealthier and spend more. This increase in consumer spending should cause an expansionary shift in the IS curve, also leading to higher income.

Effect 3: The debt-deflation theory An unexpected deflation makes debtors poorer and creditors richer. Debtors thus spend less and creditors spend more. If these two groups have equal spending propensities, there is no aggregate impact. But it seems reasonable to assume that debtors have higher propensities to spend than creditors perhaps that is why the debtors are in debt in the first place. In this case, debtors reduce their spending by more than creditors raise theirs. The net effect is a reduction in spending.

Effect 4 When firms come to expect deflation, they be-
come reluctant to borrow to buy investment goods because they believe they will have to repay these loans later in more valuable dollars. The fall in investment depresses planned expenditure, which in turn depresses income.
5 The Japanese Slump

During the 1990s, after many years of rapid growth and enviable prosperity, the Japanese economy experienced a prolonged downturn. Real GDP grew at an average rate of only 1.3 percent over the decade, compared with 4.3 percent over the previous twenty years. The unemployment rate, which had historically been very low in Japan, rose from 2.1 percent in 1990 to 4.7 percent in 1999. In August 2001, unemployment hit 5.0 percent, the highest rate since 1953.

Although the Japanese slump of the 1990s is not even close in magnitude to the Great Depression of the 1930s, the episodes are similar in several ways.

First, both episodes are traced in part to a large decline in stock prices. In Japan, stock prices at the end of the 1990s were less than half the peak level they had reached about a decade earlier. Like the stock market, Japanese land prices had also skyrocketed in the 1980s before crashing in the 1990s.

Second, during both episodes, banks ran into trouble and exacerbated the slump in economic activity. Japanese banks in the 1990s had made many loans that were backed
by stock or land. When the value of this collateral fell, borrowers started defaulting on their loans. These defaults on the old loans reduced the banks ability to make new loans. The resulting credit crunch made it harder for firms to finance investment projects and, thus, depressed investment spending.

Third, both episodes saw a fall in economic activity coincide with very low interest rates. This fact suggests that the cause of the slump was primarily a contractionary shift in the IS curve, because such a shift reduces both income and the interest rate. The obvious suspects to explain the IS shift are the crashes in stock and land prices and the problems in the banking system.

Finally, the policy debate in Japan mirrored the debate over the Great Depression. Some economists recommended that the Japanese government pass large tax cuts to encourage more consumer spending. Although this advice was followed to some extent, Japanese policymakers were reluctant to enact very large tax cuts because, like the U.S. policymakers in the 1930s, they wanted to avoid budget deficits. In Japan, this is in part because the government was facing a large unfounded pension liability and a rapidly aging population.
Other economists recommended that the Bank of Japan expand the money supply more rapidly. Even if nominal interest rates could not go much lower, they perhaps more rapid money growth could raise expected inflation, lower real interest rates, and stimulate investment spending. Thus, although economists differed about whether fiscal or monetary policy was more likely to be effective, there was wide agreement that the solution to Japan’s slump, like the solution to the Great Depression, rested in more aggressive expansion of aggregate demand.
6 The Liquidity Trap

In Japan in the 1990s and the United States in the 1930s, interest rates reached very low levels. As Table 11-2 shows, U.S. interest rates were well under 1 percent throughout the second half of the 1930s. The same was true in Japan during the second half of the 1990s. In 1999, Japanese short-term interest rates fell to about one-tenth of 1 percent.

Some economists describe this situation as a liquidity trap. According to the IS-LM model, expansionary monetary policy works by reducing interest rates and stimulating investment spending. But if interest rates have already fallen almost to zero, then perhaps monetary policy is no longer effective.

Other economists are skeptical about this argument. One response is that expansionary monetary policy might raise inflation expectations. Even if nominal interest rates cannot fall any further, higher expected inflation can lower real interest rates by making them negative, which would stimulate investment spending. A second response is that monetary expansion would cause the currency to lose value in the market for foreign-currency exchange. This depreciation would make the nations goods cheaper
abroad, stimulating export demand.