

Monetary policy, made to measure

How closely does central banks' behaviour follow simple monetary-policy rules? And how closely should it?

IT MIGHT seem that central bankers can rest easy these days. The great beast, inflation, seems tamed, having fallen to only 2.8% in America, 1.4% in Germany and nil in Japan. Have monetary policy-makers got it licked?

Central bankers will tell you that they have not, and not just out of modesty. Although plenty of them have targets for inflation, none is sure precisely how, or how rapidly, changes in monetary policy affect the economy. So they cannot be certain that a sensible-looking interest-rate cut will not revive inflation—or that a cautious-looking rise will not tip the economy into recession.

Hence the search for the holy grail: a simple rule for choosing an optimal monetary policy that keeps inflation down without hitting the economy too hard. Several have been tried. One was the gold standard, under which national currencies could be exchanged for the metal at a fixed price. Another, in vogue in the early 1980s, was a target for the growth rate of the money supply. However, sooner or later—in severe recessions, say—it has proved necessary to ditch such rules and act pragmatically. So is there a possible rule for all seasons, which will tell central banks how to adapt their policies to circumstances without compromising their anti-inflationary zeal?

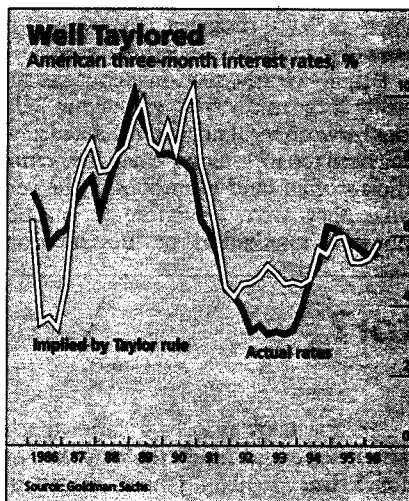
One such rule was developed in 1993 by John Taylor, an economist at Stanford University who now advises Bob Dole, the Republican Party's presidential candidate. Mr Taylor's argument is that central banks ought to "lean against the wind" when setting interest rates. Therefore, he suggested, short-term nominal interest rates should be equal to the sum of four things.

The first is the real short-term rate that is consistent with "neutral" monetary policy—ie, one that is neither expansionary nor contractionary. The second is the expected inflation rate. Then, in the simplest and commonest version of the Taylor rule, 0.5 percentage points should be added to, or lopped from, short-term rates for every percentage point by which the current inflation rate is above or below its target. And fourth, the same adjustment should be made for the "output gap"—ie, for every percentage point by which GDP is above or below its long-term trend level. The idea is that output above trend is a signal of inflation on the way; below

ECONOMICS FOCUS

trend, the reverse.

Several studies have found that central banks have, in effect, been following the Taylor rule for some time. Mr Taylor himself found that America's Federal Reserve tracked it between 1987 and 1992. Most striking, in a recent paper* Richard Clarida of Columbia University and Mark Gertler of New York University argue that despite its professed adherence to monetary targets, Germany's Bund-



esbank actually acts as if it is following a sophisticated version of the Taylor rule. It adjusts rates on the basis of expected, not current, inflation; and it raises rates sharply when inflation threatens to rise, but cuts them less readily when the pressure is off.

According to Gavyn Davies, Martin Brookes and Stuart Culverhouse of Goldman Sachs, an American investment bank, American, German and Japanese three-month rates have tracked the simple Taylor rule fairly closely in the past ten years. In America policy has deviated greatly only twice (see chart): in 1986, after the oil-price collapse, rates were kept too high; and in 1992-93, the Fed held rates down to bolster the fragile balance sheets of American banks.

The Goldman Sachs team goes on to

* "How the Bundesbank Conducts Monetary Policy." NBER Working Paper No. 5581, May 1996.

† "Simple Monetary Policy Rules." *Bank of England Quarterly Bulletin*, August 1996.

assess whether, according to the Taylor rule, the G7 economies' central banks are on track now. They say that in Britain, France, Germany and Japan, rates are about right. But in Canada and Italy, the Taylor rule implies that rates should be more than 1.5 percentage points below their current levels. And in America, there is a case for a rate rise of a percentage point or so within a year.

Looser than it looks

But how exact can such calculations be? As the Goldman Sachs team acknowledges, estimating the Taylor-rule rate is tricky. In a new paper† Alison Stuart, an economist at the Bank of England, describes some of the difficulties.

Take the neutral short rate. A common procedure is to use an average of inflation-adjusted past rates, which on the Goldman Sachs estimates yields about 2% for America and 3.5% for Britain, France and Germany. But Ms Stuart points out that in theory the rate should be quite close to the long-run trend rate of economic growth; so while 2% is fine for America, 3.5% looks on the high side for Britain. A percentage-point change in the estimated real rate leads to the same change in the nominal rate prescribed by the Taylor rule.

Similarly, estimates of the output gap can vary a great deal, because no one knows for certain how fast an economy can grow. A rise of half a percentage point in the trend growth rate adds up, over five years, to an increase in the estimated output gap of 2.5 percentage points; in the Taylor rule, this would imply a reduction in the optimal short-term interest rate of 1.25 percentage points.

Thus a central bank could pitch rates anywhere in a fairly broad range and still comply with the rule. No wonder, then, that most central bankers seem to be observing it. But even if precision were possible, would the Taylor rule be the answer to monetary authorities' worries?

No, because it includes only part of the information available to central bankers. And at times, it may make more sense to act on other information—about the exchange rate, say—than to stick to the rule. Indeed, as the Goldman Sachs team notes, exchange-rate movements explain much of French and Italian monetary policy, making the Taylor rule a poorer guide for those countries. So although the rule is a useful check on monetary policy, it is not reliably safe. Central bankers will probably never be able to take it easy.