

pegged rates. The scale of open market operations, and the growth in the money supply, would then have to be stepped up. The process would lead to accelerating inflation. In the unlikely case that the pegged rates should be above equilibrium rates, an accelerating deflation would follow.

The same is true with respect to a rule that would try to peg the level of unemployment. In the long run, there is only one level of unemployment consistent with stable prices: the unemployment at which real wage increases are equal to nationwide productivity gains. At a lower level of unemployment, labor demands, and business is willing to grant, higher money wage increases than are consistent with productivity gains. This leads to price increases. These reduce nominal wage increases to less than what labor and business had anticipated. In the following bargaining round, therefore, the existing rate of inflation will be taken into account; nominal wage increases will be higher. Then the process repeats itself, the bargaining parties always vainly trying, by higher nominal settlements, to achieve a rate of real wage increase that, because it is in excess of productivity gains, the economy cannot provide. A policy rule seeking to peg the level of unemployment above or, more likely, below its equilibrium value will lead to increasing deflation or inflation. In this it resembles a fixed interest rate policy, both contrasting with a fixed money growth rule. This, however, does not show that a fixed money growth rule is superior to discretionary monetary policy. I shall argue the case by pointing to the difficulties that a fixed money growth rule is likely to encounter. Obviously this does not prove that discretionary policy is bound to be better. Discretionary policy *can* be worse. All that can be done is to compare the probable defects of the two systems. In doing so, I shall draw on some findings in a study I recently completed, the text of which is appended to this paper. ("Quantity Theory and Quantity Policy", in *Ten Economic Studies in the Tradition of Irving Fisher*, John Wiley & Sons, Inc., 1967). (Page 25.)

1. Can the Money Supply be Controlled?

The fixed money growth rule takes for granted that the central bank can make the money supply anything it pleases. That assumption is made also, of course, by all those who argue for a discretionary money supply target. The process of money creation encounters leakages, however. These may slow down attainment of the desired money volume. In the extreme case, they may prevent it altogether. At the level of the banking system, changes in excess reserves and in rediscounts can temporarily prevent the central bank from achieving its objective. The tendency of banks, after a period of great stringency, to rebuild liquidity by paying off rediscounts rather than purchasing assets is familiar. The central bank can overcome these obstacles, by operating on a scale sufficiently large to make its objective prevail. This involves some danger, of course, of overshooting if the banking system later makes fuller use of the reserves supplied.

At the level of the money holding public, shifts from demand deposits into time deposits may frustrate the central bank's effort to increase the money supply. Again, operations on a sufficiently large scale will overcome the resistance of the public, again with some danger of overshooting later. Because the relative expansiveness of an added dollar of demand deposits and of time deposits, respectively, is not known, the ultimate effects of a monetary expansion that increases time deposits along with demand deposits are difficult to estimate. The same applies in the case of relative or absolute contraction.

In the longer run, however, the most serious leakage is that via the balance of payments. A monetary policy that generates either interest rates much below foreign rates, or prices much above foreign prices, will produce a deficit on capital or current account, or both. This deficit reduces the money supply. If the central bank increases the scales of its expansive operations to compensate, it will increase the leakage. In the United States, the desired money supply may prove attainable most of the time despite this leakage. In a smaller economy, where the balance of payments leakage is proportionately larger, it is quite obvious that the central bank cannot put the money supply at any level it pleases so long as the currency is to be kept stable and convertible.

For all these reasons, control over the money supply on the part of the central bank is less than complete.

2. A Fixed Rule Requires Flexible Exchange Rates

Let us assume that the Federal Reserve achieves its money supply objective. This may, however, lead to large international reserve losses if the money supply