

coincide with business cycle peaks and to make low rates coincide with cycle troughs.

The argument that is least familiar involves the long run where increases (or decreases) in monetary growth could be expected to increase (or decrease) interest rates. This involves a reformulation of expectations of future prices on the basis of observed effects of monetary growth on prices. Suppose that an increase in the rate of monetary growth supports an increase in demand. This would tend to increase prices which in turn would eventually induce savers and investors to anticipate further price increases. Borrowers would be willing to pay more interest for dollars whose purchasing power was expected to depreciate. And savers would demand to be paid enough interest to compensate them for their sacrifice of present purchasing power in real terms and for the expected decline in the value of money. Under these circumstances policies to accelerate (or decelerate) monetary growth would increase (or decrease) interest rates.

One cannot be sure what effect moderation in variation in monetary growth would have on overall interest rate variability over the business cycle. But it is reasonable to expect that interest rates would tend to lead economic activity more than presently where rates of monetary growth have tended to lead, and that cyclical extremes in interest rates would be damped. It is eminently clear that limiting variation in monetary growth would be associated with less long term variation in interest rates than has been observed historically. The extremely low interest rates that obtained after the financial collapse of the banks in the 1930's resulted from an extremely low level of demand at least partly accountable to unduly restrictive monetary policies that had occurred earlier. The extremely high interest rates that obtain today are at least partly accountable to the high rates of monetary expansion and aggregate demand that have occurred over recent years. To the extent that moderating variation in monetary growth could damp cumulating inflation or deflation in the economy, it is reasonable to conclude that it would limit interest rate variability too. I believe that lessening variability in monetary growth would have this effect.

V. WOULD LIMITED VARIATION IN MONETARY GROWTH REDUCE VARIATION IN UNEMPLOYMENT AND INCREASE ECONOMIC EFFICIENCY IN THE LONG RUN?

There is a question whether monetary policy actions have been counter-cyclical in their effects, and whether limiting variation in monetary growth would increase or reduce the counter-cyclical effects of monetary policy actions. This is an issue about which there is a lively argument presently in the economics profession.

Those who have argued that monetary policy actions are perverse and play a major role in the pro-cyclical variation in monetary growth rates would conclude that limiting such variation would reduce the amplitude of the business cycle. This implies reduced variability in capacity utilization or unemployment and an increase in economic efficiency. But even if monetary policy actions have affected the economy in the right direction, the question is whether that effect is as great over the cycle as the effect that would have resulted if monetary growth had been stabilized. This depends on the timing of the reaction of policy to economic performance and the effect of policy action on objectives. Empirical results suggest a relatively short lag in the response of policy aims to changes in economic conditions but a rather long lag in the response of the economy to policy actions. Part of this response comes in a very short time but overall it is distributed over many months and is variable from cycle to cycle. Empirical results would suggest important responses in expenditure to interest rate changes in six months to a year though much longer average lags have been estimated.⁹ An interesting theoretical model has been developed in recent years that suggests that changes in the money supply, if made an independent factor, would tend to cause augmented changes in market interest rates which would have the effect of speeding the adjustment to monetary policy actions in comparison with

⁹ Michael J. Hamburger "The Impact of Monetary Variables: A Selected Survey of the Recent Empirical Literature," "Staff Economic Studies" (August 1966); and Robert H. Strotz, "Empirical Evidence on the Impact of Monetary Variables on Aggregate Expenditure" in George Horwich (Editor), "Monetary Process and Policy: A Symposium," Homewood, Ill.: Richard D. Irwin, Inc., 1967; and such unpublished econometric studies as those of Stephen M. Goldfeld and Albert Ando, Ronald Teigen, and the MIT-Fed model.